

IP67 WEARABLE ENCLOSURE

A stylish design enclosure with wrist strap,
perfect solution for wearable devices.

SMW series



**Stylish and luxurious mirror
finish enclosure body**



**Water-repellent comfortable
silicone wrist strap**

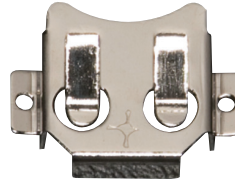


High water resistance of IP67 withstands submersion in 1m depth for 30 minutes.

Degradation resistant silicone gasket for long-lasting performance.



Tabbed battery and coin battery holder can be installed.



For various wearable IoT devices

Suitable for small IoT devices including LoRaWAN and Sigfox, detectors, RFID tags, GPS terminals and others.

Environmental sensor



Access control system



GPS tracker



Emergency alert system



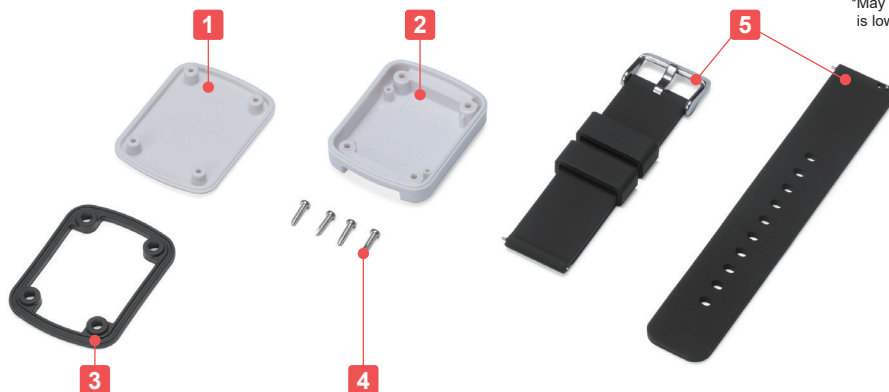


- Wearable enclosure with IP67 waterproof rating (30min / 1m-depth).
- Off-white models are made of weather-resistant ASA material. Suitable for devices intended to be used under direct sunlight.
- Stylish and easy-to-wear design that suits any situations.
- Suitable for detectors, GPS terminals, RFID devices, small IoT devices and others.

Technical Data

Protection class : IP67 (30min / 1m-depth)
 Operating temperature
 Black (ABS) : -10°C ~ +60°C
 Off-white (ASA) : -30°C ~ +60°C
 Recommended torque : SMW-46□ : 0.2N • m
 SMW-50□ : 0.35N • m

*May become brittle and break under impact when temperature is lowered close to -30°C.



Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS (UL94HB)	Black / Polished
			ASA (UL94HB)	Off-white / Polished
2	Bottom cover	1	ABS (UL94HB)	Black / Polished
			ASA (UL94HB)	Off-white / Polished
3	Gasket	1	Silicon	Black
4	Tapping screw	4	Stainless steel	Unfinished
5	Wrist strap	1	Silicon • Stainless steel	Black • Polished

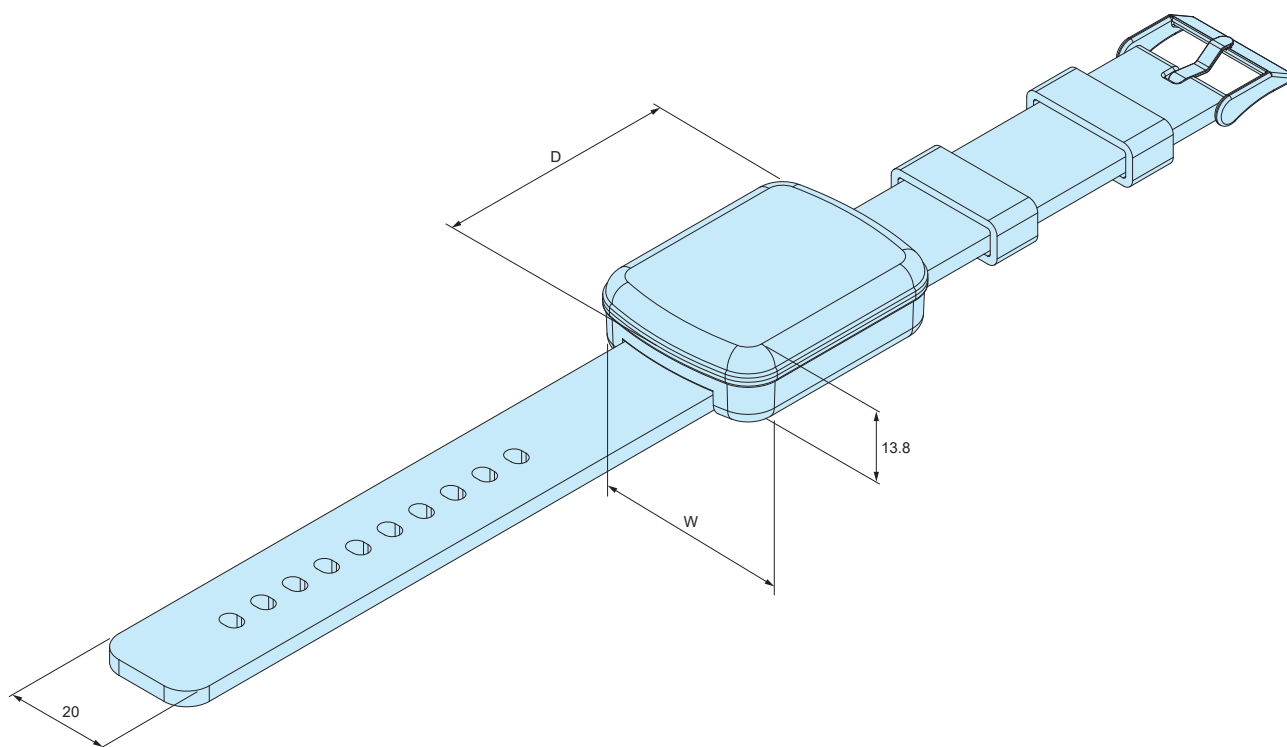
Accessories (Optional parts)



PCB mounting screw
EM-1.6
See page 398

SMW dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



Product no. / Details

Product no.		External dimensions		Weight (g)
● Black	● Off-white	W	D	
SMW-46B	SMW-46W	36	46	28
SMW-50B	SMW-50W	44	50	30.5

Accessories (Optional parts) – COIN CELL BATTERY HOLDERS



- Various coin cell battery holders can be stored.
See coin cell battery holders on our website for more details.
- Chart on the right is based upon mounting onto a 1.0mm thick PCB and attached to the top cover.
- Please note that depending on the mounting location, PCB may not be able to be properly affixed on.

COMPATIBLE COIN CELL BATTERY HOLDERS CHART

Product no.	Compatible coin cell battery holders
SMW-46□	PB621 BK-879 • 2032M BS-M-1225 • BS-S-1225 • SMTM1632
SMW-50□	PB621 BK-879 • 5067 • 2430SM • 2032M BS-M-1225 • BS-S-1225 • SMTM1632 • 2032

NEW COMPACT PLASTIC CASE for NEXT GENERATION IoT

Stylish and elegant plastic case for use with all your IoT related devices

SIC•SIM series



Sleek & Glossy Finish High Performance Case



Multipurpose & Wall Mount Models Available

Multipurpose Model
SIC series



Wall Mount Model
SIM series



COMPACT PLASTIC CASE for IoT DEVICES

SIC • SIM series are snap-in type compact-sized plastic case without screws.

Despite the small size, ample internal space is achieved by a snap-in assembly construction.

A rounded design yet having flat surfaces enables easy customization such as hole milling or printing.

Ideal for small IoT appliances such as LoRa WAN or Sigfox power-saving communication devices, RFID or GPS gadgets, or network sensors.

Wall Mount Communication Network Device



RFID Reader



Remote Controller

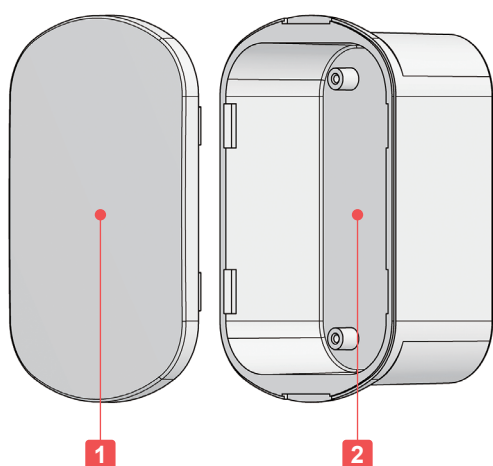


Security Sensor



USB Data Logger





Technical Data

Protection class : IP40
 Operating temperature
 Black (ABS) : -10°C ~ +60°C
 Off-white (ASA) : -30°C ~ +60°C

*May become brittle and break under impact when temperature is lowered close to -30°C.

- 8 new sizes added for a total of 19 different sizes available for selection.
- Small rounded design plastic case ideal for use as IoT devices.
- Easy and tool-less assembly snap-in case.
- While being small in size, there is ample internal space by utilization of the snap-in structure.
- The polished surface also provides a high-end finish and gives off a superior quality and feel while having superb cost performance.
- Off-white models are made of weather-resistant ASA material. Suitable for devices intended to be used under direct sunlight.
- Optional universal PCB, PCB32-53 is compatible with SIC5-7-2 and 5-7-3 models. See PCB series on our website for more details.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	ABS UL94HB	Black / Polished
			Weather-resistant ASA UL94HB	Off-white / Polished
2	Base	1	ABS UL94HB	Black / Polished
			Weather-resistant ASA UL94HB	Off-white / Polished

Accessories (Optional parts)



Rubber strain relief cord protector
 CBS series
 See page 385

Double-sided mounting tape DST series
 See page 393

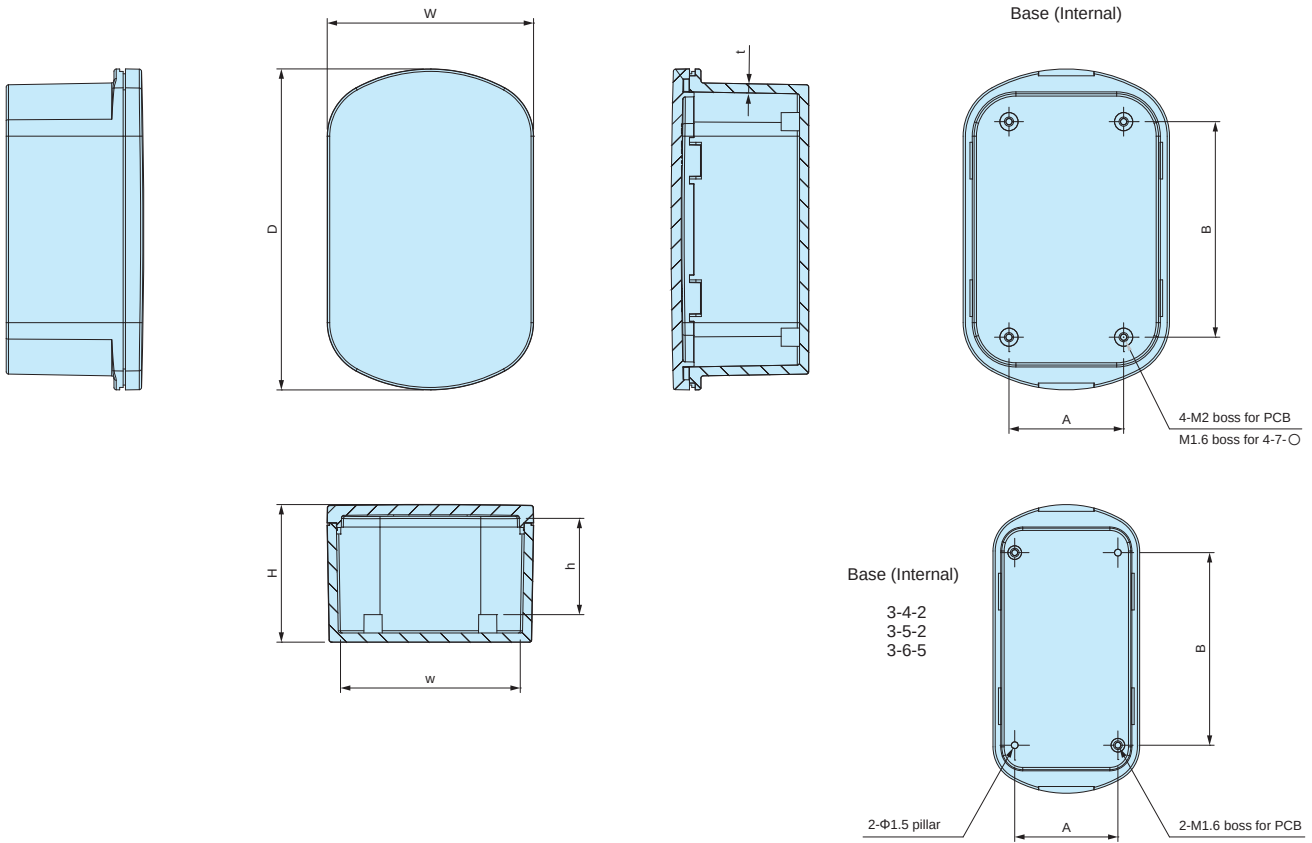
Neodymium magnet NMG series
 See page 392

PCB mounting screw EM-2
 See page 398

Universal PCB PCB series
 See website

SIC dimensions

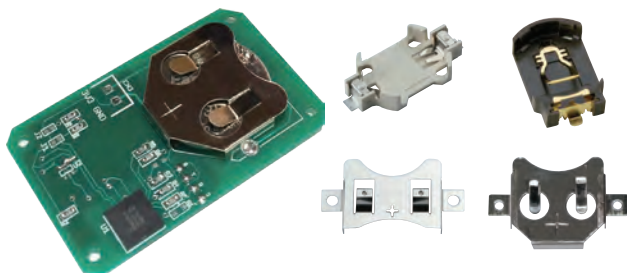
■ DXF/DWG/PDF/STP drawings available on our website.



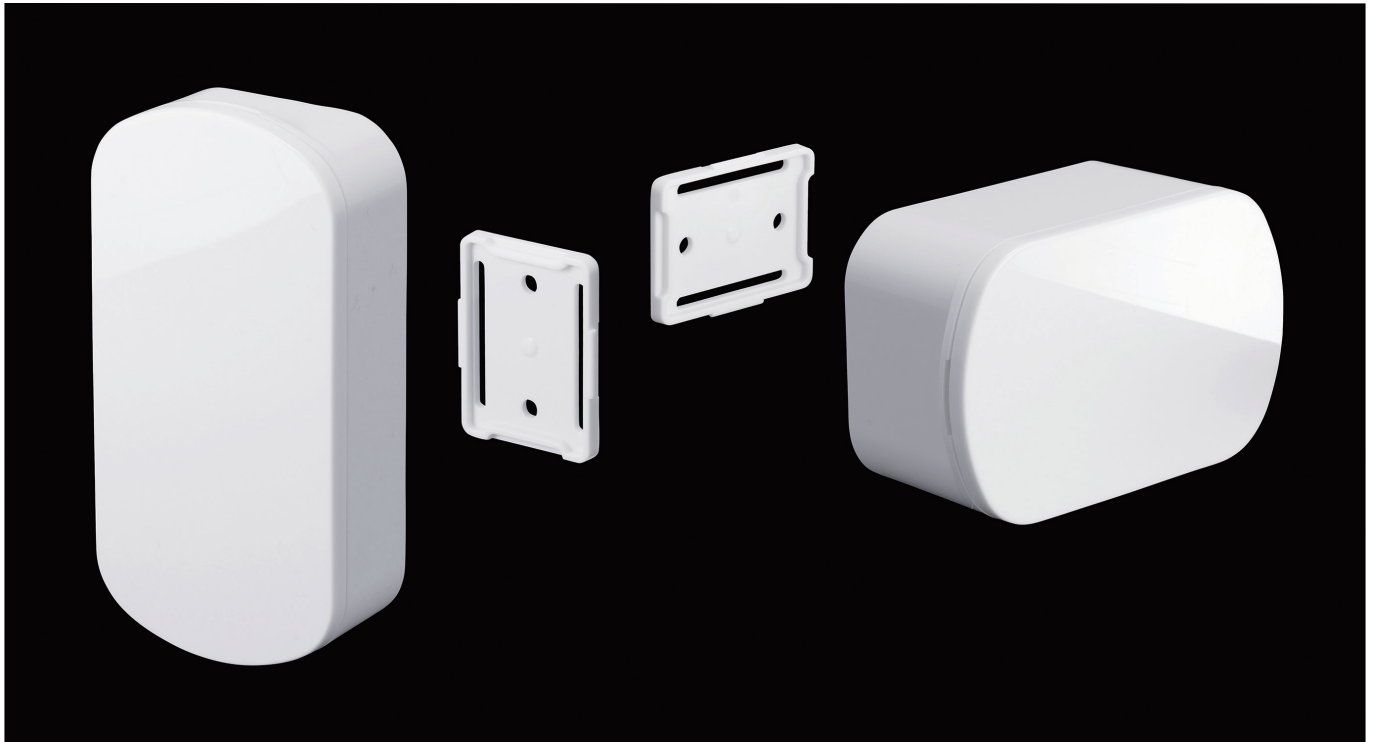
Product no. / Details

Product no.		External dimensions			Internal dimensions			Boss pitch		t	Weight (g)
● Black	● Off-white	W	D	H	w	d	h	A	B		
NEW SIC2- 4-1B	NEW SIC2- 4-1W	20	35	13	15.3	23.6	8.7	—	—	1.7	4.4
NEW SIC2- 5-1B	NEW SIC2- 5-1W	20	50	13	15.3	38.6	8.6	—	—	1.7	6.2
SIC3- 4-2B	SIC3- 4-2W	30	40	18	25.1	28.6	11.1	16.5	24	1.7	7.8
SIC3- 5-2B	SIC3- 5-2W	25	54	18	20.1	42.6	11.1	15.5	35	1.7	9.2
SIC3- 6-2B	SIC3- 6-2W	32	63	20	27.1	51.6	13	22.5	42	1.7	13.2
SIC4- 7-1B	SIC4- 7-1W	38	65	14	32.7	53.3	6.4	24	45.5	2	14.8
SIC4- 7-2B	SIC4- 7-2W	38	65	22	32.4	53	14.4	24	45.5	2	17.7
SIC5- 5-2B	SIC5- 5-2W	45	50	20	39.5	38.5	10.9	25	27	2	14.9
SIC5- 5-3B	SIC5- 5-3W	45	50	30	39.1	38.1	20.9	25	27	2	18.1
SIC5- 7-2B	SIC5- 7-2W	45	70	20	39.5	58.5	10.9	25	47	2	20.1
SIC5- 7-3B	SIC5- 7-3W	45	70	30	39.1	58.1	20.9	25	47	2	24.1
SIC5- 9-2B	SIC5- 9-2W	45	90	20	39.5	78.5	10.9	25	67	2	24.9
SIC5- 9-3B	SIC5- 9-3W	45	90	30	39.1	78.1	20.9	25	67	2	29.4
NEW SIC6- 7-3B	NEW SIC6- 7-3W	60	65	25	54.3	53.6	15.9	40	40	2	26.8
NEW SIC6- 7-4B	NEW SIC6- 7-4W	60	65	38	53.9	53.1	28.9	40	40	2	32.6
NEW SIC6- 9-3B	NEW SIC6- 9-3W	60	90	25	54.3	78.6	15.9	40	65	2	36.3
NEW SIC6- 9-4B	NEW SIC6- 9-4W	60	90	38	53.9	78.1	28.9	40	65	2	43.6
NEW SIC6-12-3B	NEW SIC6-12-3W	60	120	25	54.3	108.6	15.9	40	95	2	46.9
NEW SIC6-12-4B	NEW SIC6-12-4W	60	120	38	53.9	108.1	28.9	40	95	2	55.9

Accessories (Optional parts) COIN CELL BATTERY HOLDERS



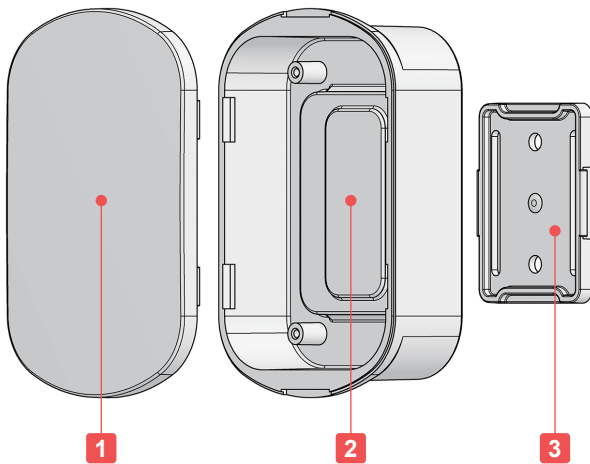
- Various coin cell battery holders can be utilized.
See coin cell battery holders on our website for more details.
- Please note that depending on the mounting location, PCB may not be able to be properly affixed on.



Technical Data

Protection class: IP40
Operating temperature: -30°C ~ +60°C

*May become brittle and break under impact when temperature is lowered close to -30°C.

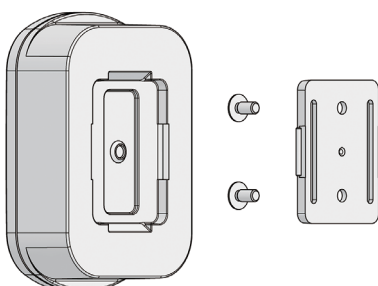


- 6 new sizes added for a total of 14 different sizes available for selection.
- Small rounded design plastic case ideal for use as IoT devices.
- Easily attached to, or detached from the wall by using the wall mounting bracket.
- Made of weather-resistant ASA material.
Suitable for devices intended to be used under direct sunlight.
- Optional universal PCB, PCB32-53 is compatible with SIM5-7-2 and 5-7-3 models. See PCB series on our website for more details.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	Weather-resistant ASA UL94HB	Off-white / Polished
2	Base	1	Weather-resistant ASA UL94HB	Off-white / Polished
3	Wall mounting bracket	1	Weather-resistant ASA UL94HB	Off-white / Polished

Bracket installation



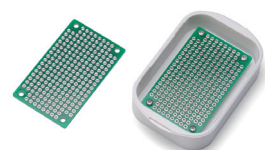
Accessories (Optional parts)



Rubber strain relief cord protector
CBS series
See page 385



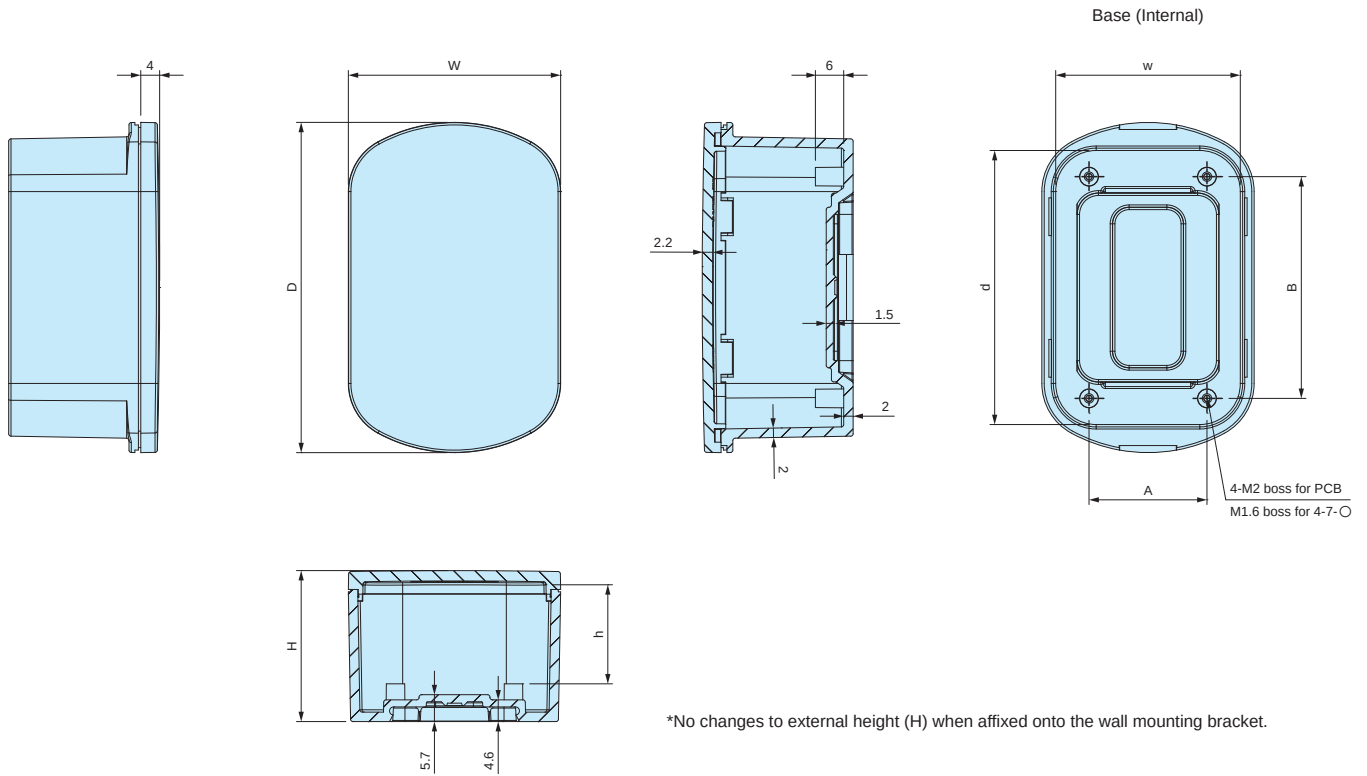
PCB mounting screw EM-2
See page 398



Universal PCB PCB series
See website

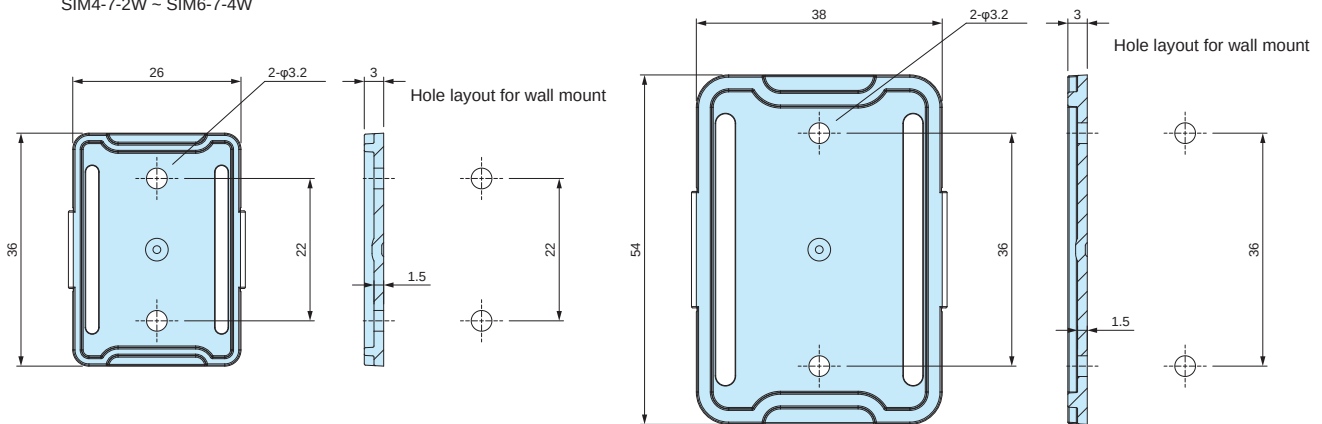
SIM dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



SIM6-9-3W ~ SIM6-12-4W

SIM4-7-2W ~ SIM6-7-4W

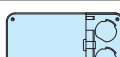


■ M3 screws for installation of bracket on walls are not included.

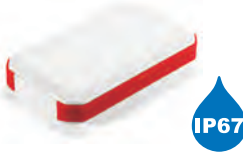
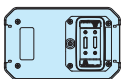
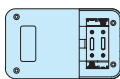
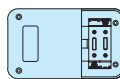
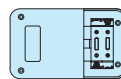
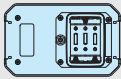
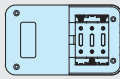
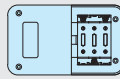
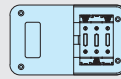
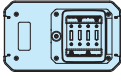
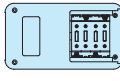
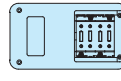
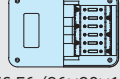
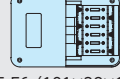
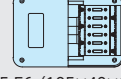
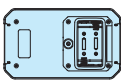
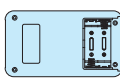
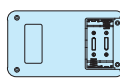
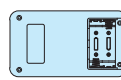
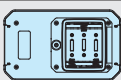
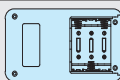
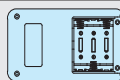
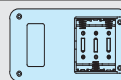
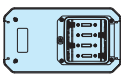
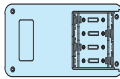
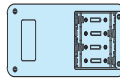
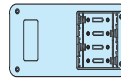
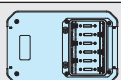
Product no. / Details

Product no.	External dimensions			Internal dimensions			Boss pitch		Weight (g)
	W	D	H	w	d	h	A	B	
SIM4- 7-2W	38	65	17	32.7	53.2	6.4	24	45.5	17.8
SIM4- 7-3W	38	65	25	32.4	52.9	14.4	24	45.5	20.7
SIM5- 5-2W	45	50	23	39.4	38.5	10.9	25	27	17.8
SIM5- 5-3W	45	50	33	39	38.1	20.9	25	27	20.9
SIM5- 7-2W	45	70	22	39.4	58.4	10.9	25	47	22.8
SIM5- 7-3W	45	70	32	39.1	58	20.9	25	47	25.9
SIM5- 9-2W	45	90	22	39.4	78.4	10.9	25	67	27.7
SIM5- 9-3W	45	90	32	39.1	78	20.9	25	67	32.3
NEW SIM6- 7-3W	60	65	27	54.2	53.5	15.9	40	40	29.3
NEW SIM6- 7-4W	60	65	40	53.8	53	28.9	40	40	34.9
NEW SIM6- 9-3W	60	90	27	54.2	78.5	15.9	40	65	40.9
NEW SIM6- 9-4W	60	90	40	53.8	78	28.9	40	65	47.9
NEW SIM6-12-3W	60	120	27	54.2	108.5	15.9	40	95	53.1
NEW SIM6-12-4W	60	120	40	53.8	108	28.9	40	95	62.1

BUILT-IN BATTERY COMPARTMENT MODEL CHART

Series Battery Compartment	WC series Page 29 ~ 32	CS series Page 19 ~ 20	CSS series Page 17 ~ 18
			
CR2032 x 1	 WC72-15 (43×15.5×72) WC72-21 (43×21.5×72) WC90-15 (44.2×15.7×90)	 CS75 (35×12×75) CS90 (45×12×90)	 CSS75 (38.6×15.5×78.6) CSS90 (48.6×15.5×93.6)
CR2032 x 2		 CS115 (63×12×115)	 CSS115 (67.1×16×119.1)
CR2450 / CR2477 x1	 WC100-20-R (49×20.5×100)	 CS100 (50×16.8×100)	 CSS100 (54.1×20.8×104.1)
AAA x 2	 WC105-28-F2 (50.5×28.2×105)		
AAA x 3			
AAA x 4			
AAA x 6			
AA x 2			
AA x 3			
AA x 4			
AA x 6			
9V x 1			

■ Enclosure shape, model number, and dimensions (W x H x D) are listed.

WH series Page 39 ~ 40	LC series Page 53 ~ 54	LCS series Page 49 ~ 52	LCT series Page 45 ~ 48
			
 WH125-20-F2 (79×20×126) WH125-28-F2 (79×28×126)	 LC115-F2 (69×19.5×115) LC115H-F2 (69×28×115)	 LCS115-F2 (74×24×120) LCS115H-F2 (74×32.5×120)	 LCT115-F2 (76×28×121.9) LCT115H-F2 (76×36.5×121.9)
 WH125-20-F3 (79×20×126) WH125-28-F3 (79×28×126)	 LC115-F3 (69×19.5×115) LC115H-F3 (69×28×115)	 LCS115-F3 (74×24×120) LCS115H-F3 (74×32.5×120)	 LCT115-F3 (76×28×121.9) LCT115H-F3 (76×36.5×121.9))
 WH145-20-F4 (88×20×146)	 LC135-F4 (76×27×135) LC135H-F4 (76×35×135)	 LCS135-F4 (81×32×141) LCS135H-F4 (81×40×141)	 LCT135-F4 (85×40×143.9) LCT135H-F4 (85×48×143.9)
	 LC145S-F6 (96×20×145) LC145-F6 (96×27×145) LC145H-F6 (96×35×145)	 LCS145-F6 (101×32×151) LCS145H-F6 (101×40×151)	 LCT145-F6 (105×40×153.9) LCT145H-F6 (105×48×153.9)
 WH145-25-M2 (88×25×146) WH145-33-M2 (88×33×146)	 LC115H-M2 (69×28×115) LC135-M2 (76×27×135) LC135H-M2 (76×35×135) LC145-M2 (96×27×145) LC145H-M2 (96×35×145)	 LCS115H-M2 (74×32.5×120) LCS135-M2 (81×32×141) LCS135H-M2 (81×40×141) LCS145-M2 (101×32×151) LCS145H-M2 (101×40×151)	 LCT115H-M2 (76×36.5×121.9) LCT135-M2 (85×40×143.9) LCT135H-M2 (85×48×143.9) LCT145-M2 (105×40×153.9) LCT145H-M2 (105×48×153.9)
 WH145-25-M3 (88×25×146) WH145-33-M3 (88×33×146)	 LC135-M3 (76×27×135) LC135H-M3 (76×35×135)	 LCS135-M3 (81×32×141) LCS135H-M3 (81×40×141)	 LCT135-M3 (85×40×143.9) LCT135H-M3 (85×48×143.9)
 WH170-25-M4 (95×25×171) WH170-33-M4 (95×33×171)	 LC145-M4 (96×27×145) LC145H-M4 (96×35×145) LC165-M4 (80×27×165) LC165H-M4 (80×35×165)	 LCS145-M4 (101×32×151) LCS145H-M4 (101×40×151) LCS165-M4 (85×32×171) LCS165H-M4 (85×40×171)	 LCT145-M4 (105×40×153.9) LCT145H-M4 (105×48×153.9) LCT165-M4 (89×40×173.9) LCT165H-M4 (89×48×173.9)
 WH190-25-M6 (126×25×191) WH190-33-M6 (126×33×191)			
	 LC115H-9V (69×28×115) LC135-9V (76×27×135) LC135H-9V (76×35×135)	 LCS115H-9V (74×32.5×120) LCS135-9V (81×32×141) LCS135H-9V (81×40×141)	 LCT115H-9V (76×36.5×121.9) LCT135-9V (85×40×143.9) LCT135H-9V (85×48×143.9)

*Dimensions shown for CSS, LCT and LCS series are with silicone cover attached.

CSS·CS series

Slim designed small type handheld enclosures with built-in coin cell battery compartment.

Suitable for IoT device, Remote controller, Portable GPS, Wireless key-fob, RFID tag, small device, and more.

4 different sizes with 10 color variations each are available.



• Built-in battery compartment



Black



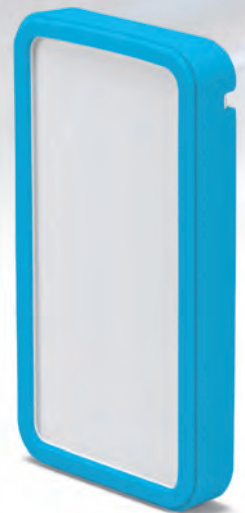
Light gray



Orange



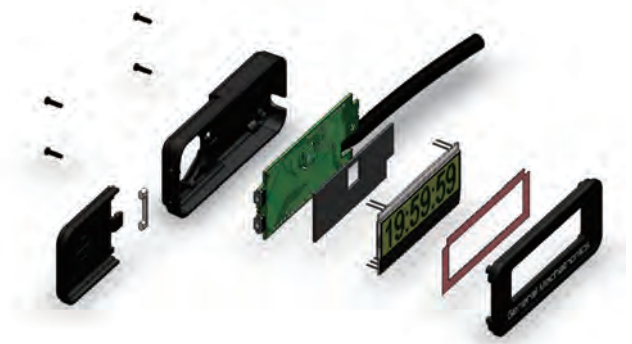
Green



Cyan

APPLICATION EXAMPLE

Motor Sport Infrared Laptimer (Bluetooth 4.0 & Android Application)



Bluetooth Temperature Data Logger



Impact Detection Sensor for Relay Tester



Wireless Remote Control Switch



Handi Quilter Easy-Set Tension™ Kit



Wireless Microphone for Hearing Aid



USB Noise Remover



High Frequency Preamplifier



Indoor Environment Sensor



Detection Sensor for Wandering Behavior



Serial EEPROM Programmers



RFID Reader



HoneyBee Proximity Switch



Restroom Monitoring System



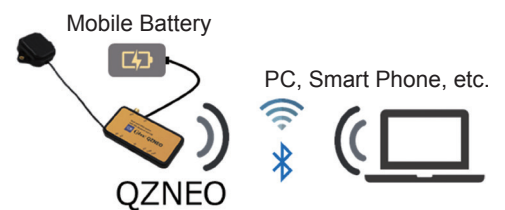
CO2 Meter



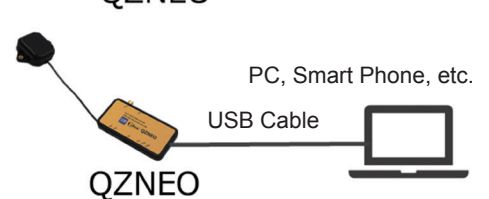
Dual-frequency GNSS Receiver



Wireless Connection



Wired Connection





- Small plastic case with silicone cover. Strong against drop impact while providing a secure grip.
- Select proper models by enclosure dimensions and capacity of the batteries.
Typical Capacity : CR2032 : 225mAh / CR2450 : 620mAh / CR2477 : 1000mAh
- Suitable for remote controller, wireless key fob, small tester/device and more.
- Available in 4 sizes with 16 models and selectable in 10 different color combinations.
- 2 types of silicone cover available with (Open) and without (Closed) rectangular cutout on the top side.

Technical Data

Protection class: IP40
Operating temperature: -10°C ~ +60°C

No battery compartment type



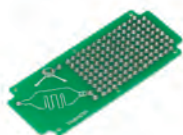
Battery compartment type



Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94HB	White • Black
2	Bottom cover	1	ABS UL94HB	White • Black
3	Battery cover	1	ABS UL94HB	White • Black
4	Battery contact	1 set / 2 sets (CSS115)	Stainless steel SUS304	Nickel plated
5	Silicone cover	1	Silicone	Orange • Green • Cyan • Light gray • Black
6	Self-tapping screw	4	Steel M1.6-6	Nickel plated • Black trivalent chromate

Accessories (Optional parts)



Exclusive PCB CSPB series
See page 22



Strap STPS series
See page 34



PCB mounting screw EM-1.6
See page 398



TORX screw MR1.6-6S
See page 398

Silicone Cover Type

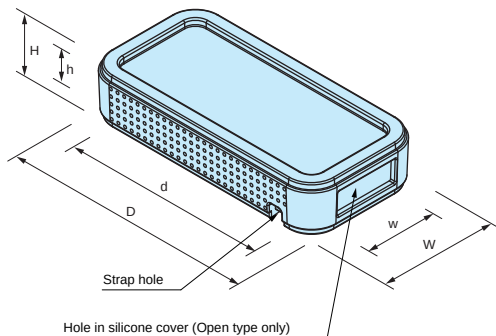
Code	CL Closed	OP Open
Shape		

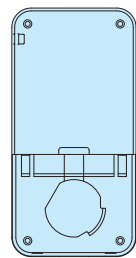
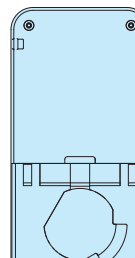
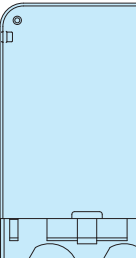
Color Type

Code	B O Black / Orange	B G Black / Green	B C Black / Cyan	B L Black / Light gray	B B Black / Black
Color					
Code	W O White / Orange	W G White / Green	W C White / Cyan	W L White / Light gray	W B White / Black
Color					

CSS dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



Type	CSS N Type	CSS75/90	CSS100 ^{*1}	CSS115
Battery compartment	None	CR2032 × 1	CR2450 × 1 or CR2477 ^{*2} × 1	CR2032 × 2
				

^{*1} CSS100 battery type varies by PCB placement: CR2450 with PCB on bottom cover, or CR2477 with PCB on top cover. See page 20 for the details.

^{*2} Not compatible with Renata CR2477N battery.

Product no. / Details

■ Please suffix color code at the end of the product number.

Product no.	External dimensions			Internal dimensions			Battery compartment	Weight (g)
	W	H	D	w	h	d		
CSS 75N -CL -□□	38.6 (35)	15.5 (12)	78.6 (75)	26.6	5.3	59	None	24
CSS 75N -OP -□□	38.6 (35)	15.5 (12)	78.6 (75)	26.6	5.3	59	None	24
CSS 75 -CL -□□	38.6 (35)	15.5 (12)	78.6 (75)	26.6	5.3	25.4	CR2032×1	25
CSS 75 -OP -□□	38.6 (35)	15.5 (12)	78.6 (75)	26.6	5.3	25.4	CR2032×1	25
CSS 90N -CL -□□	48.6 (45)	15.5 (12)	93.6 (90)	36.6	5.3	74	None	36
CSS 90N -OP -□□	48.6 (45)	15.5 (12)	93.6 (90)	36.6	5.3	74	None	35
CSS 90 -CL -□□	48.6 (45)	15.5 (12)	93.6 (90)	36.6	5.3	40.4	CR2032×1	38
CSS 90 -OP -□□	48.6 (45)	15.5 (12)	93.6 (90)	36.6	5.3	40.4	CR2032×1	37
CSS100N -CL -□□	54.1 (50)	20.8 (16.8)	104.1 (100)	41.6	10.1	82	None	52
CSS100N -OP -□□	54.1 (50)	20.8 (16.8)	104.1 (100)	41.6	10.1	82	None	51
CSS100 -CL -□□	54.1 (50)	20.8 (16.8)	104.1 (100)	44.1	6.8	46	CR2450×1 / CR2477×1	54
CSS100 -OP -□□	54.1 (50)	20.8 (16.8)	104.1 (100)	44.1	6.8	46	CR2450×1 / CR2477×1	53
CSS115N -CL -□□	67.1 (63)	16 (12)	119.1 (115)	54.6	5.3	98	None	62
CSS115N -OP -□□	67.1 (63)	16 (12)	119.1 (115)	54.6	5.3	98	None	61
CSS115 -CL -□□	67.1 (63)	16 (12)	119.1 (115)	54.6	5.3	64.9	CR2032×2	65
CSS115 -OP -□□	67.1 (63)	16 (12)	119.1 (115)	54.6	5.3	64.9	CR2032×2	64

■ () value = enclosure dimension.

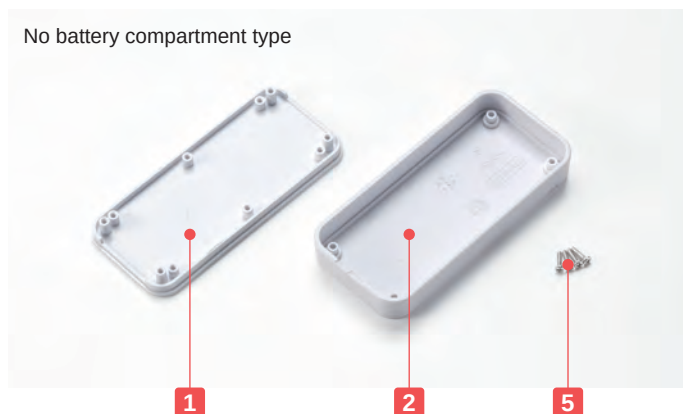


- Easy replacement of batteries. Battery contact included in each case (except for N type).
- Select proper models by enclosure dimensions and capacity of the batteries.
Typical Capacity : CR2032 : 225mAh / CR2450 : 620mAh / CR2477 : 1000mAh
- Suitable for remote controller, wireless key fob, or small tester/device, and more.
- Available in 4 sizes with 8 models and selectable in 2 different color types (Black or White).

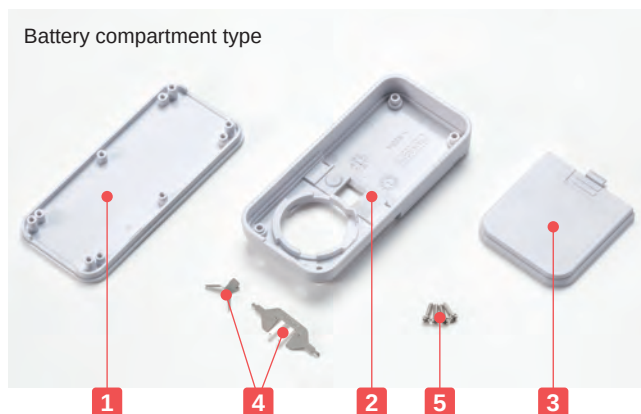
Technical Data

Protection class: IP40
Operating temperature: -10°C ~ +60°C

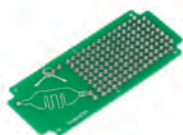
No battery compartment type



Battery compartment type


Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94HB	White • Black
2	Bottom cover	1	ABS UL94HB	White • Black
3	Battery cover	1	ABS UL94HB	White • Black
4	Battery contact	1 set / 2 sets (CS115)	Stainless steel SUS304	Nickel plated
5	Self-tapping screw	4	Steel M1.6-6	Nickel plated • Black trivalent chromate

Accessories (Optional parts)


Exclusive PCB CSPB series
See page 22



Strap STPS series
See page 34



PCB mounting screw EM-1.6
See page 398



TORX screw MR1.6-6S
See page 398



Neodymium magnet
NMG series
See page 392

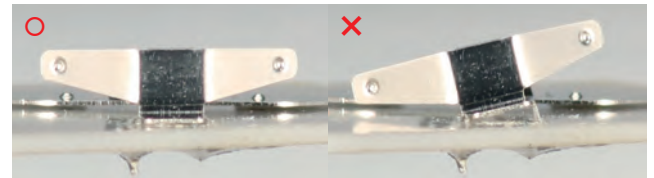
Coin Battery Contact Installation Steps



- Exclusive PCB is available as an optional part. See page 22 for more details. Refer to drawings on page 22 for suitable PCB dimensions and screw hole layout.
- Battery contact parts are sold separately in case of damage or loss. See our website (CST series) for details.

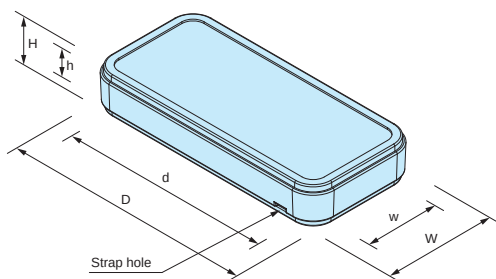
CAUTION

- When installing the battery terminal, make sure that it is parallel to the PCB. The battery may become stuck if installed at an angle. In addition, when mounting PCB, use a 1mm PCB. Please note batteries cannot be used with PCB thicker than 1mm.



CS dimensions

- DXF/DWG/PDF/STP drawings available on our website.

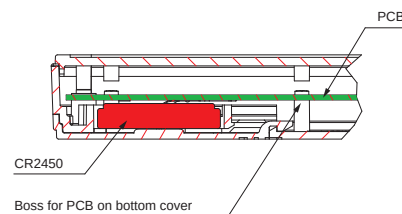


Type	CS N Type	CS75/90	CS100 ^{*1}	CS115
Battery compartment	None	CR2032 × 1	CR2450 × 1 or CR2477 ^{*2} × 1	CR2032 × 2

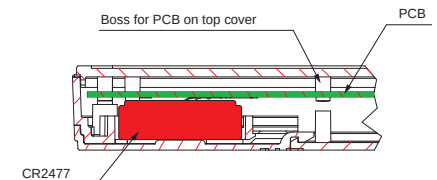
^{*1} CS100 battery type varies by PCB placement: CR2450 with PCB on bottom cover, or CR2477 with PCB on top cover. See below for the details.

^{*2} Not compatible with Renata CR2477N battery.

CR2450 × 1 on CS100 (PCB on bottom cover)



CR2477 × 1 on CS100 (PCB on top cover)



^{*}Not compatible with Renata CR2477N battery

Product no. / Details

Product no.		External dimensions			Internal dimensions			Battery compartment	Weight (g)
● Black	● White	W	H	D	w	h	d		
CS 75N-B	CS 75N-W	35	12	75	26.6	5.3	59	None	12
CS 75 -B	CS 75 -W	35	12	75	26.6	5.3	25.4	CR2032×1	13
CS 90N-B	CS 90N-W	45	12	90	36.6	5.3	74	None	18
CS 90 -B	CS 90 -W	45	12	90	36.6	5.3	40.4	CR2032×1	20
CS100N-B	CS100N-W	50	16.8	100	41.6	10.1	82	None	24
CS100 -B	CS100 -W	50	16.8	100	44.1	6.8	46	CR2450×1 / CR2477×1	26
CS115N-B	CS115N-W	63	12	115	54.6	5.3	98	None	30
CS115 -B	CS115 -W	63	12	115	54.6	5.3	64.9	CR2032×2	33

CSSC series

SILICONE COVER for CS

Silicone Cover Type

Code	CL Closed	OP Open
Shape		

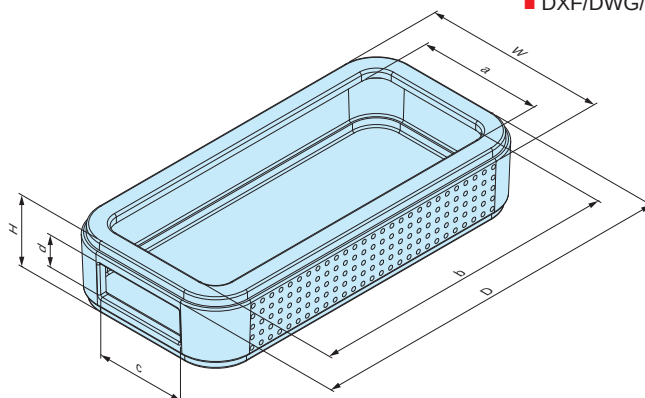
- 2 types of silicone cover which have with (Open) and without (Closed) rectangular cutout on the front side; selectable in 5 different colors.

Color Type

Code	Orange	Green	Cyan	Light gray	Black
Color					

CSSC dimensions

- DXF/DWG/PDF drawings available on our website.



Components

Part name	Material	Color
Silicone cover	Silicone	Orange • Green • Cyan • Light gray • Black

Product no. / Details

- Please suffix color code at the end of the product number.

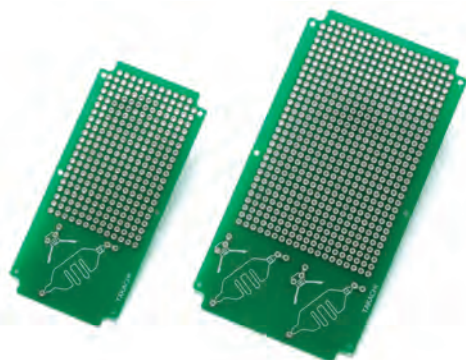
Product no.	W	H	D	a	b	c	d	Suitable models	Weight (g)
CSSC 75-CL-□	38.6	15.5	78.6	28.4	68.4	—	—	CS 75	12
CSSC 75-OP-□	38.6	15.5	78.6	28.4	68.4	20	7.4	CS 75	12
CSSC 90-CL-□	48.6	15.5	93.6	37.4	82.4	—	—	CS 90	18
CSSC 90-OP-□	48.6	15.5	93.6	37.4	82.4	30	7.4	CS 90	17
CSSC100-CL-□	54.1	20.8	104.1	42.4	92.4	—	—	CS100	28
CSSC100-OP-□	54.1	20.8	104.1	42.4	92.4	33	12.2	CS100	27
CSSC115-CL-□	67.1	16	119.1	55.4	107.4	—	—	CS115	32
CSSC115-OP-□	67.1	16	119.1	55.4	107.4	45	7.4	CS115	31

- Custom color is available from just 1 pc. For 500 pcs or more, manufacture costs will be similar to a standard color. Please inquire for more details. For custom color order, please specify **PANTONE®** color code.



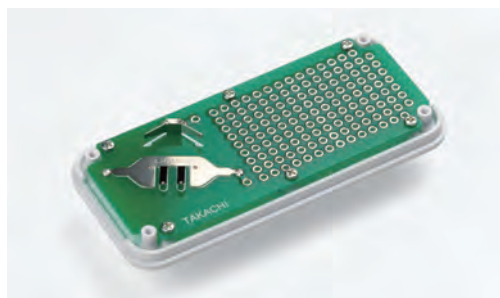
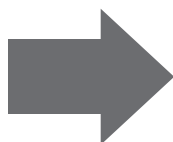
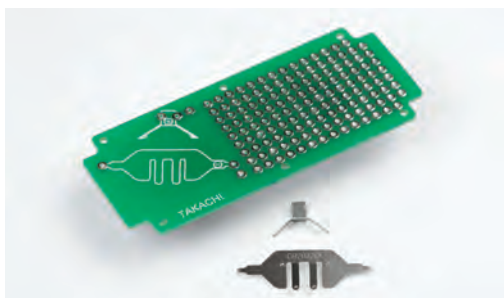
CSPB series

EXCLUSIVE PCB for CS • CSS



- Exclusive PCB for CS and CSS series.
- Glass epoxy board (FR-4), through-hole on both sides and 2.54mm hole distance.
- Prefabricated holes for battery contact use with CS • CSS case. The contact directions are printed on the PCB.

Soldering the battery contacts (included with each case) onto the PCB



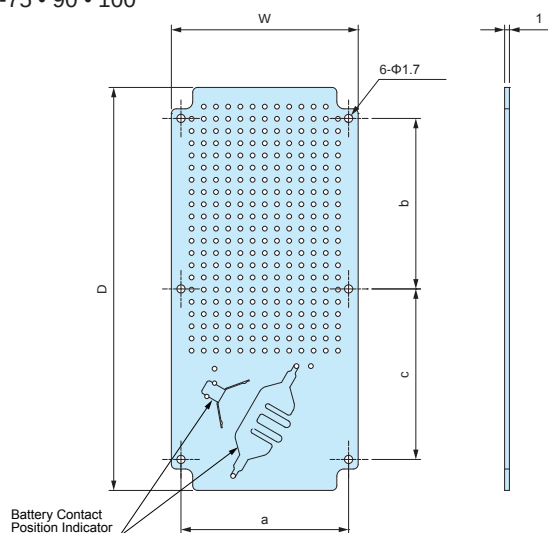
Components

Part name	Pcs	Material	Color / Finish
PCB	1	Glass epoxy (FR-4) t=1.0	Through-hole • Lead-free solder • Solder resist
Self-tapping screw	6	Steel M1.6	Trivalent chromate

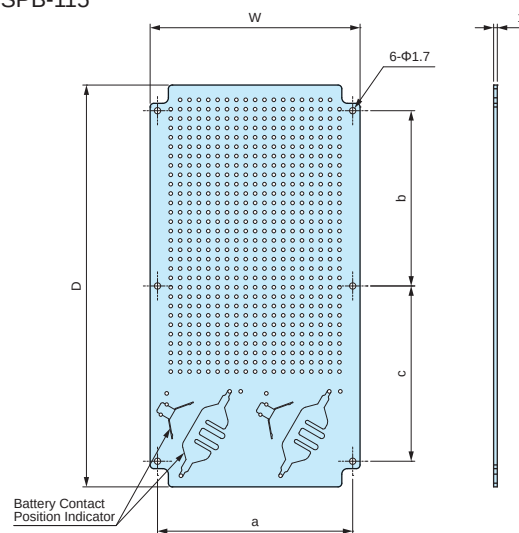
CSPB dimensions

■ DXF/DWG/PDF drawings available on our website.

CSPB-75 • 90 • 100



CSPB-115



Note : Holes (6- Φ 1.7) for PCB mount bosses are un-soldered.

Product no. / Details

Product no.	W	D	a	b	c	Suitable models
CSPB- 75	28.9	68.9	24.9	28	28	CSS 75 • CS 75
CSPB- 90	38.9	83.9	34.9	35.5	35.5	CSS 90 • CS 90
CSPB-100	45	94	38	31	38	CSS100 • CS100
CSPB-115	56.9	108.9	52.9	47.5	47.5	CSS115 • CS115

PS series PORTABLE PLASTIC CASE

Suitable for wireless device, remote controller, key fob, and more.

Available in 4 different sizes with 4 selectable colors.

Portable SIGFOX Multi-Sensor System



Multi-sensor system which detects motion, temperature, humidity and sound. Warnings are sent to the owner, or 3rd parties via SMS, X (Twitter) or Facebook when events such as a home invasion, or when a fire occurs.



SIGFOX is:

A French company that builds wireless ultra-narrow band (UNB) networks, for the connection of low-energy consumption devices such as electricity meters, smart-watches, and washing machines, which needs to be continuously on and emitting small amounts of data. This wireless network technology, which is aimed at the Internet of Things (IoT), is starting to gain popularity and rolling out in the fields such as housing, automobiles, transportation and logistics, smart city connectivity, healthcare, and so on.

GPS Tracker Tag (via SIGFOX Network)



Example: Locating your car in a large parking area

APPLICATION EXAMPLE

Remote Controller for Undercover Investigation



Re-Mote Suite-IoT Development Platform



Beacon Receiver



GPS Tracker with Temperature Data Logger



Portable Radiation Detector



Remote Controller for Metal Sensor Reel



LPWA Receiver





Technical Data

Protection class: IP40
Operating temperature: -10°C ~ +60°C



- Simple snap-in case without screws.
- Comfortable shape and hold.
- 4 different colors are available for selection.
- Suitable for use as a wireless device, remote control, key fob etc.
- Designed with an easily accessible hole for strap attachment.

Components

No.	Part name	Material	Color / Finish
1	Rounded cover	ABS UL94HB	White • Black • Cobalt • Green
2	Flat cover	ABS UL94HB	White • Black • Cobalt • Green

Product no. / Details

Product no.				Dimensions			Weight (g)
● White	● Black	● Cobalt	● Green	W	H	D	
PS- 50W	PS- 50B	PS- 50C	PS- 50G	50	14	50	9
PS- 65W	PS- 65B	PS- 65C	PS- 65G	35	11	65	9
PS- 85W	PS- 85B	PS- 85C	PS- 85G	48	15	85	20
PS-100W	PS-100B	PS-100C	PS-100G	58	18	100	27

Accessories (Optional parts)



PCB mounting screw EM-1.6
See page 398



Strap STPS series
See page 34

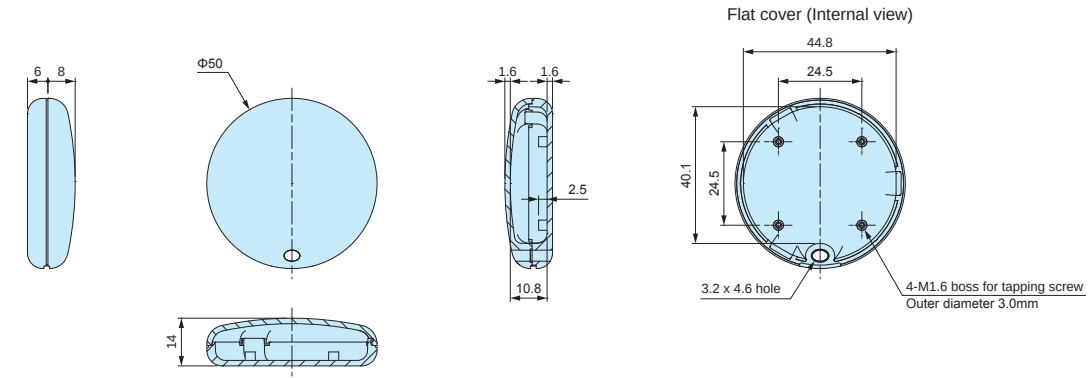


Neodymium magnet NMG series
See page 392

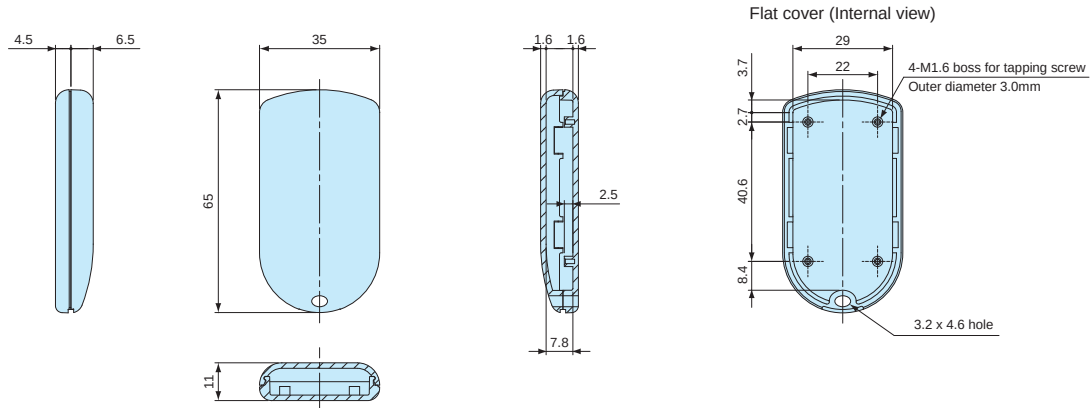
PS dimensions

■ DXF/DWG/PDF/STP drawings available on our website.

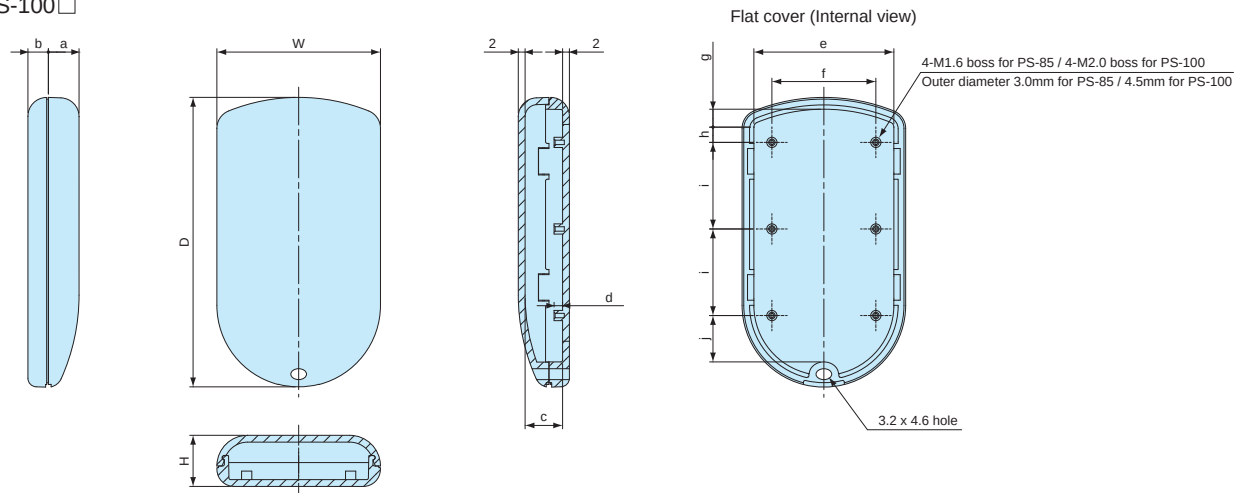
PS-50□



PS-65□

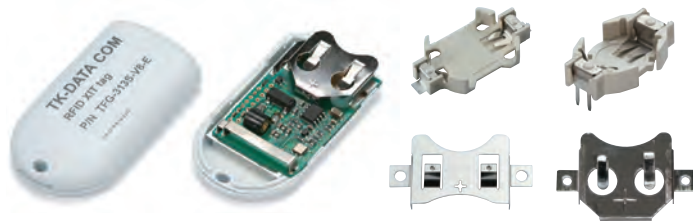


PS-85□ / PS-100□



Product no.	W	H	D	a	b	c	d	e	f	g	h	i	j
PS- 85□	48	15	85	9	6	11	2.5	41.1	33	5.3	4.5	25.4	13.6
PS-100□	58	18	100	11.5	6.5	14	4	51.2	40	6.4	4.2	29	20.4

Accessories (Optional parts) - coin cell battery holders



- Various coin cell battery holders can be utilized.
See coin cell battery holders on our website for more details.
Refer to the chart for compatible holders.
- Chart on the right is based upon mounting onto a 1.0mm thick PCB.
- Please note that depending on the mounting location, PCB may not be able to be properly affixed on.

COMPATIBLE COIN CELL BATTERY HOLDERS CHART

Product no.	Compatible coin cell battery holders
PS- 50□	SMTU1220(G) / 1225 / 1632(G) / 2-2016 / 2032(G) PB621 / SMTM1632 / 2032 BK-879 / 5067 / 888
PS- 65□	BK-879 / 5091 / 5067 / 888 PB621 / SMTM1225 / 1632 / 2032
PS- 85□	PB621 / SMTM1632 / 2032 BK-879 / 5091 / 5067 / 888 SMTU1220(G) / 1225 / 1632(G) / 2-2016 / 2032(G) / 2430
PS-100□	PB621 / SMTM1632 / 2032 BK-879 / 5091 / 5067 / 888 SMTU1220(G) / 1225 / 1632(G) / 2-2016 / 2032(G) / 2430 / 2450 BCR20H4 / BCR20H5

IP67 PORTABLE CASE WC series



● The protection rating against dust and water which applies to the enclosure used for electrical equipment, represented with a code based on the IEC60529 standard.

IP6x : No ingress of dust; complete protection against contact (dust tight)

IPx7 : No ingress of water when submerged up to a depth of 1 m for 30 min

High waterproof performance with both TPE and silicone gasket

ABS and TPE double-shot molded top & bottom covers allow for a good waterproof seal.
The durable silicone gasket maintains the battery lid seal.
Insert nut and screw help to maintain the waterproofing performance of the battery compartment even after repeated opening/closing.



Great protection by TPE sides

Side grips of TPE material provide a comfortable grip and protection against drop impact.



Available in 3 different color combinations



APPLICATION EXAMPLE

Best for outdoor use as a remote control, RFID tag, compact GPS, wireless device, simplified measurement gadget and more.

Multi-function Infrared Remote Controller



Emergency Call Receiver / Transmitter



Long Range Keyfob Remote Controller



GPS Vehicle Tracker



Custom embossed or standard overlay sheets with low initial costs are available

Waterproof performance may be lost by drilling/milling holes or cut-outs for buttons or switches on waterproof enclosures. Use an IP rated overlay sheet, or membrane keypad in order to allow the milled area to remain waterproof.



- Advantage 1** Reduce initial cost with digital inkjet printing.
- Advantage 2** Reduce initial tooling cost for cutting die with digital cutting plotter.
- Advantage 3** Reduce initial tooling cost for embossing with in-house mold processing.
- Advantage 4** Shorter lead-time made possible by having all production be in-house.

*applicable to small quantity orders



- Double shot injection molded TPE Grip and ABS Body.
- New CR2450/CR2477 battery compartment model added. Case with a CR2032 coin battery, 2x AAA battery compartment and no battery types are also available.
- TPE side grip provides not only a comfortable grip, but also protects from drop impact.
- Suitable to be used as a remote controller, key fob, wireless device, RFID tag, and so on.
- See page 31 for coin battery contact installation steps.

Technical Data

Protection class : IP67
 Operating temperature : -10°C ~ +50°C
 Recommended torque :
 WC72 • 90 • 100 : 0.06 ~ 0.08N • m
 WC105 : 0.13 ~ 0.15N • m

WC72-□, WC90-□, WC100-20



WC105-28

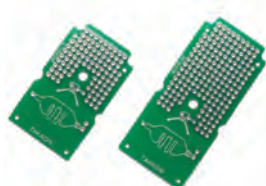


Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94HB : Elastomer	Black & Black • Black & Marine • White & Light gray
2	Bottom cover	1	ABS UL94HB : Elastomer	Black & Black • Black & Marine • White & Light gray
3	Battery lid*	1	ABS UL94HB	Black • White
4	Battery contact*	1 set	WC72 • WC90 • WC100 : Stainless steel SUS304 WC105 : Brass • Hard steel wire	Nickel plated
5	O-ring*	1	Silicone	Black
6	Screw	7	Stainless steel SUS304	Unfinished

*Not applicable to the N (no battery compartment type) models.

Accessories (Optional parts)



Exclusive PCB WCPB series
See page 33



Strap STPS series
See page 34



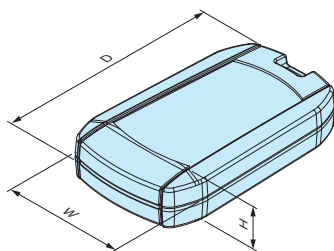
PCB mounting screw EM-1.6
See page 398



Neodymium magnet NMG series
See page 392

WC dimensions

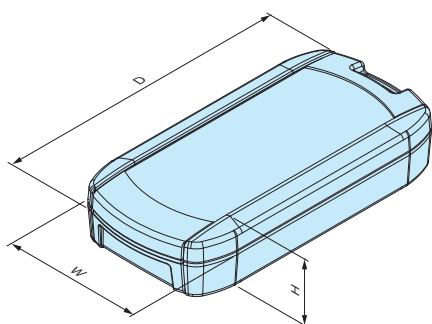
WC72-□, WC90-□



Battery Compartment Types

Type	N	C	R	F2
	None	CR2032 × 1	CR2450 / 2477 × 1	AAA × 2
Battery Compartment				

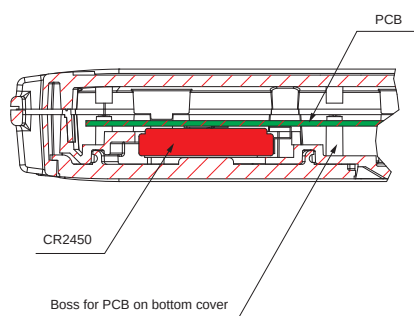
WC100-20, WC105-28



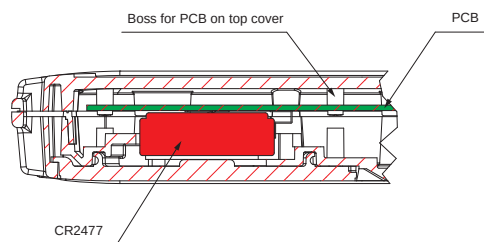
Color Type

Code	B B	B M	W L
Body	Black	Black	White
Grip	Black	Marine	Light gray
Color			

CR2450 × 1 on WC100-20-R -□□ (PCB on bottom cover)



CR2477 × 1 on WC100-20-R -□□ (PCB on top cover)



*Not compatible with Renata CR2477N battery

Product no. / Details

■ Please suffix color code at the end of the product number.

Product no.	W	H	D	Battery Compartment	Weight (g)
WC 72-15-N -□□	43	15.5	72	None	18.5
WC 72-15-C -□□	43	15.5	72	CR2032	22
WC 72-21-N -□□	43	21.5	72	None	22
WC 72-21-C -□□	43	21.5	72	CR2032	25.5
WC 90-15-N -□□	44.2	15.7	90	None	23
WC 90-15-C -□□	44.2	15.7	90	CR2032	26.5
WC 90-21-N -□□	44.2	21.7	90	None	27
NEW WC100-20-N -□□	49	20.5	100	None	35
NEW WC100-20-R -□□	49	20.5	100	CR2450×1 / CR2477×1	40
WC105-28-N -□□	50.5	28.2	105	None	47
WC105-28-F2-□□	50.5	28.2	105	AAA × 2	58.5

Coin Battery Contact Installation Steps



Solder the contacts onto the PCB. Install the PCB on the top or bottom cover.

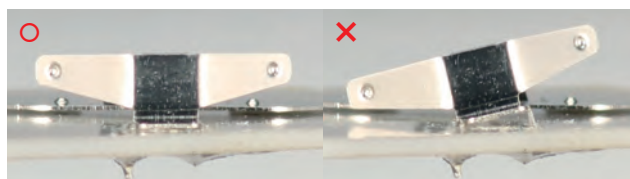
All set!



■ Battery direction is incised on the inner side of the battery lid.

CAUTION

- When installing the battery terminal, make sure that it is parallel to the PCB. The battery may become stuck if installed at an angle. In addition, when mounting PCB, use a 1mm PCB. Please note batteries cannot be used with PCB thicker than 1mm.



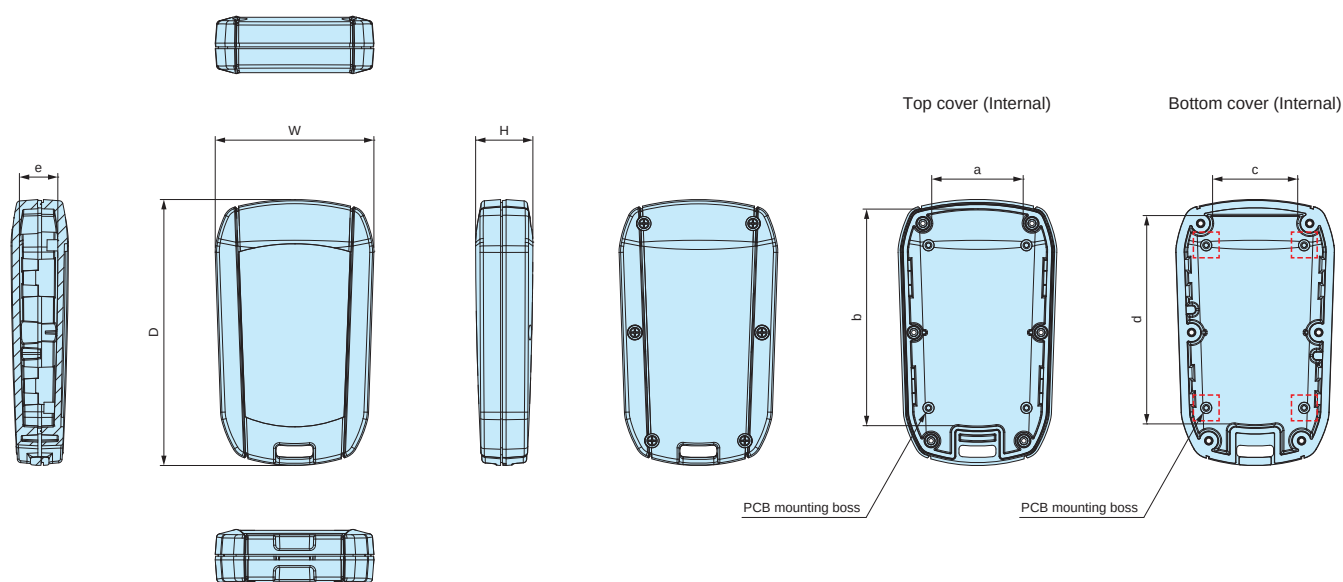
WC dimensions

■ DXF/DWG/PDF/STP drawings available on our website.

WC72-15-N / WC72-21-N
WC90-15-N / WC90-21-N
WC100-20-N / WC105-28-N

*WC72-15-N and WC90-15-N have no bosses for PCB on bottom cover.

*WC100-20-N and WC105-28-N have different design from shown in the figure.



Product no.	W	H	D	a	b	c	d	e
WC 72-15-N-□□	43	15.5	72	24.7	58.6	23.6	58.4	10.4
WC 72-21-N-□□	43	21.5	72	24.7	58.6	23	56.3	16.3
WC 90-15-N-□□	44.2	15.7	90	26.1	76.6	25	76.4	10.4
WC 90-21-N-□□	44.2	21.7	90	26.1	76.6	24.4	74.3	16.4
WC100-20-N-□□	49	20.5	100	29	84.4	27.7	81.6	14.5
WC105-28-N-□□	50.5	28.2	105	26.4	87.9	24.2	84.1	22.4

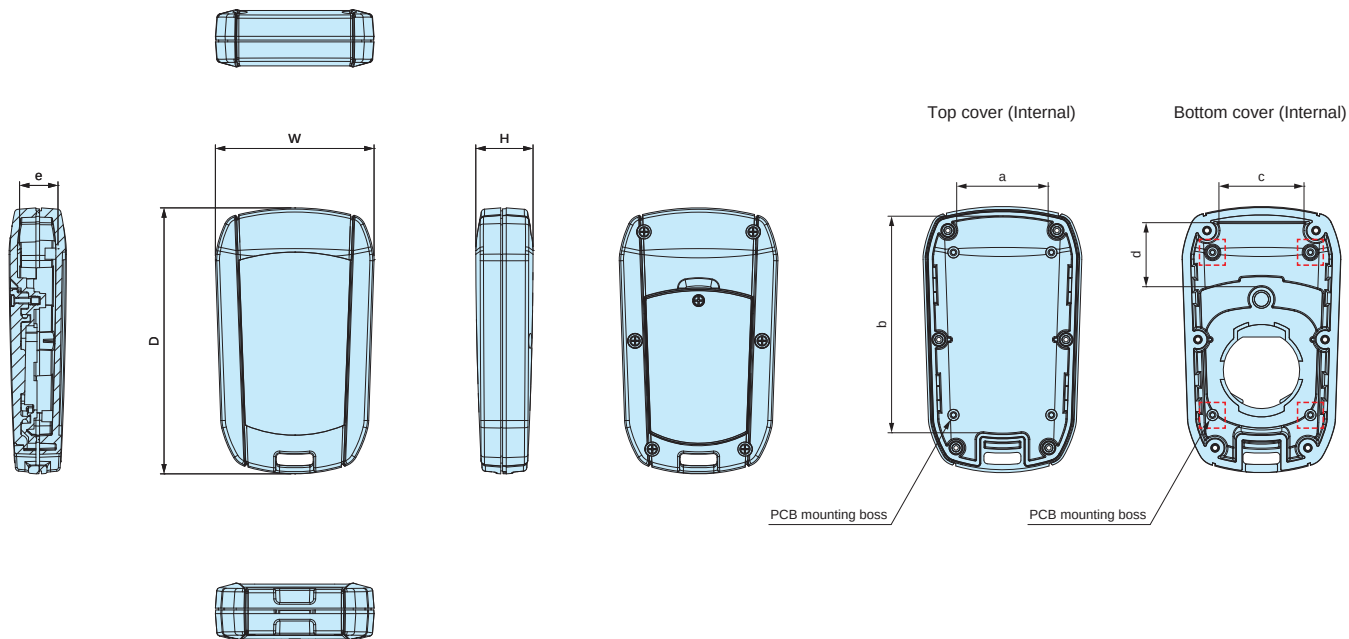
WC dimensions

■ DXF/DWG/PDF/STP drawings available on our website.

WC72-15-C / WC72-21-C
WC90-15-C / WC100-20-R

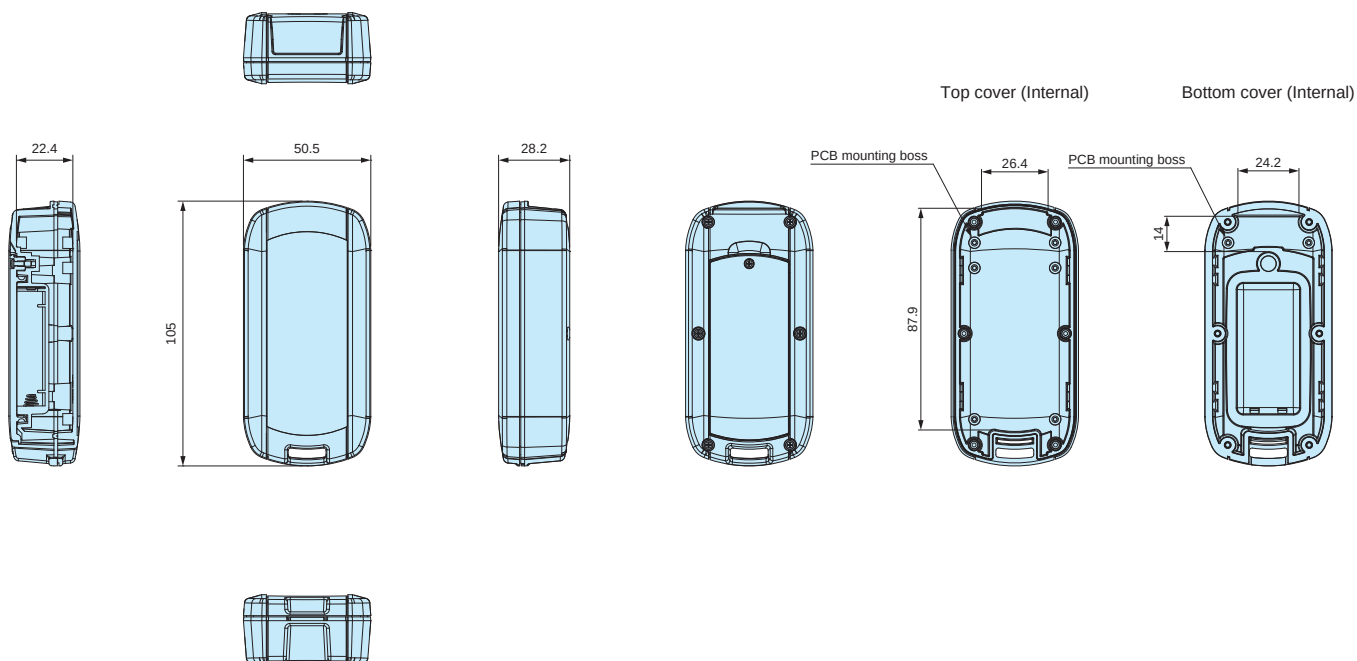
*WC72-21-C and WC100-20-R have bosses for PCB on bottom cover.

*WC100-20-R has different design from shown in the figure.



Product no.	W	H	D	a	b	c	d	e
WC 72-15-C-□□	43	15.5	72	24.7	58.6	23.8	19	10.4
WC 72-21-C-□□	43	21.5	72	24.7	58.6	23	17.3	16.3
WC 90-15-C-□□	44.2	15.7	90	26.1	76.6	25	36.9	10.4
WC100-20-R-□□	49	20.5	100	29	84.4	27.7	31.3	14.5

WC105-28-F2-□□



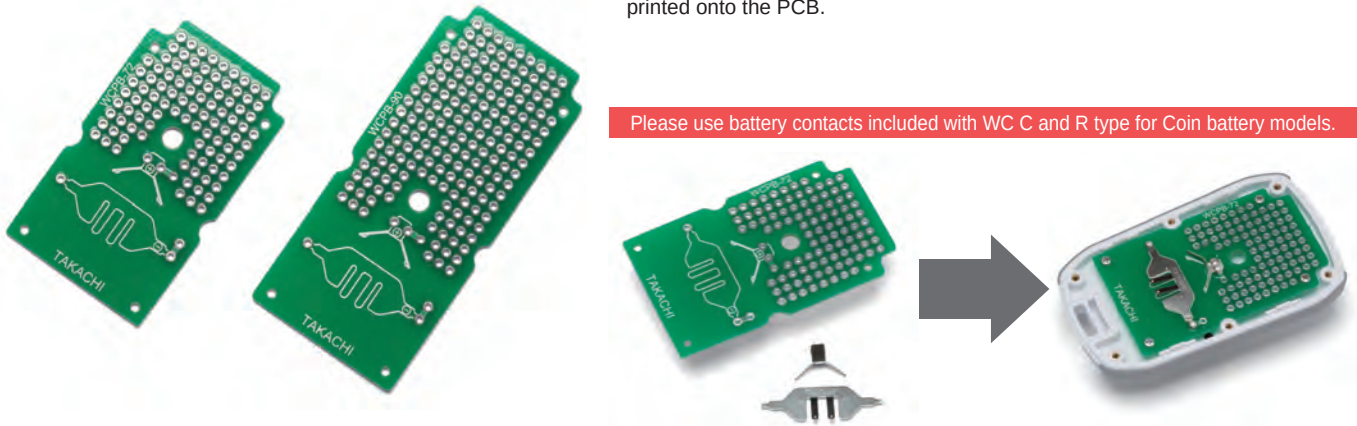


WCPB series

EXCLUSIVE PCB for WC

- Exclusive PCB for WC C and R type for Coin battery models.
- Glass epoxy board (FR-4), through-holes on both sides, 2.54mm hold pitch.
- Designed with a battery contact hole. Battery contact position and direction are printed onto the PCB.

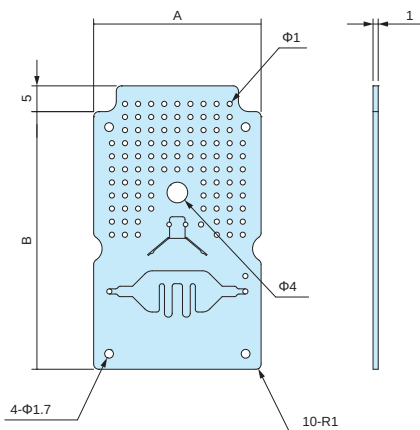
Please use battery contacts included with WC C and R type for Coin battery models.



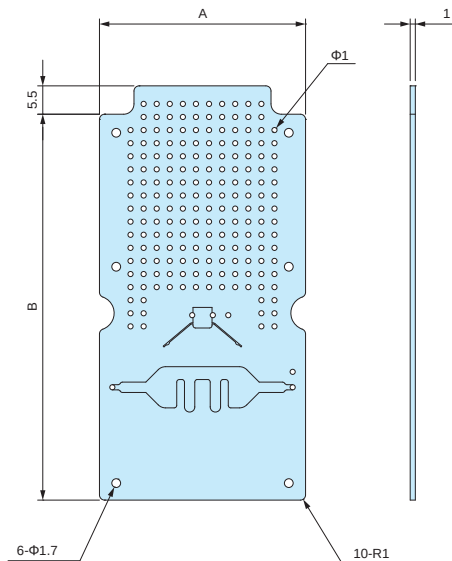
WCPB dimensions

- DXF/DWG/PDF/STP drawings available on our website.

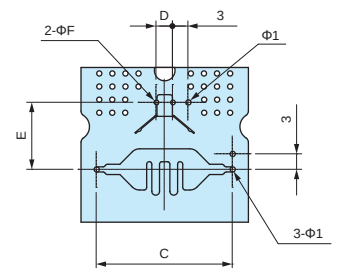
WCPB-72 / WCPB-90



WCPB-100



Battery contact position details



Note : Holes (4-Φ1.7) for PCB mounting bosses are un-soldered.

Components

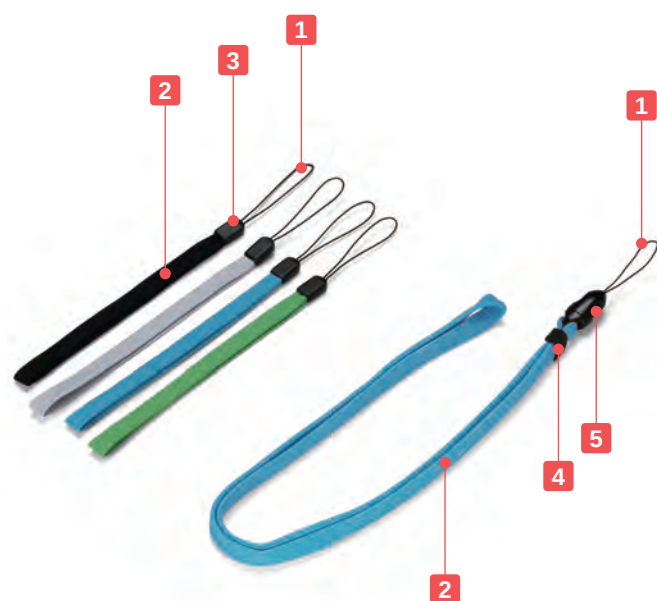
Part name	Pcs	Material	Color / Finish
PCB	1	Glass epoxy (FR-4) t=1.0	Through-hole • Lead-free solder resist
Screw	4 or 6	Steel (Tapping M1.6-4)	Steel (Tapping M1.6-4)

Product no. / Details

Product no.	A	B	C	D	E	F	Screw pcs	Suitable models
WCPB- 72	32.5	49.8	26.4	3.2	13	0.9	4	WC72-15-C • WC72-21-C
WCPB- 90	32.9	68	26.4	3.2	13	0.9	4	WC90-15-C
NEW WCPB-100	40	74.9	35	4	14	1	6	WC100-20-R

STPS series

STRAP



APPLICATION EXAMPLE

Wrist strap (STPS-140G)



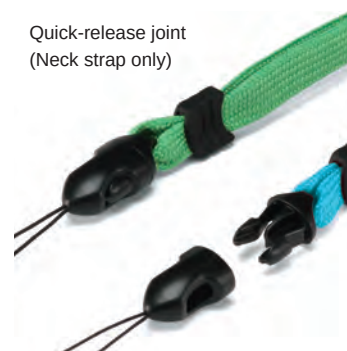
Neck strap (STPS-450C)



- Colorful and sturdy straps best used with CSS, CS, PS, and WC series.
- Wrist and Neck straps are available in 4 unique colors.
- Neck strap comes with a quick-release joint, making removal and attachment quick and easy.

Color Type

Code	G Green	C Cyan	L Light gray	B Black
Color				

Quick-release joint
(Neck strap only)

Components

No.	Part name	Material	Color
1	String	Polyester	Black
2	Strap	Polyester	Green • Cyan • Light gray • Black
3	Cap (wrist strap only)	ABS	Black
4	Clamp (neck strap only)	Elastomer	Black
5	Joint (neck strap only)	Polyacetal	Black

Product no. / Details

Product no.				Strap width	Strap length
● Green	● Cyan	● Light gray	● Black		
STPS-140G	STPS-140C	STPS-140L	STPS-140B	8	140
STPS-450G	STPS-450C	STPS-450L	STPS-450B	10	450

WH series

IP67 WATERPROOF HAND-HELD ENCLOSURE



● The protection rating against dust and water which applies to the enclosure used for electrical equipment, represented with a code based on the IEC60529 standard.

IP6x : No ingress of dust; complete protection against contact (dust tight)

IPx7 : No ingress of water when submerged up to a depth of 1 m for 30 min

High waterproof performance with a silicone gasket

High elasticity and good durability for maintaining waterproofing capability.
Built-in insert nut use for great long lasting water protection even after frequent opening and closing. Battery compartment is also waterproofed.
Various battery compartment types are available, ranging from AAA x2 to AA x6.

Side grip provides great protection

Elastic TPE grips provide a more secured hold.
Side grips are designed to be on the sides and corners of the enclosure to minimize drop impact.



Available in 10 different color combinations



Information on waterproofing overlay sheets



APPLICATION EXAMPLE

Ultrasonic Thickness Gauge



Note that waterproofing will be lost if a hole is made for button or switch on waterproof enclosures.
Please utilize a waterproof (IP67 rated equivalent) membrane keypad or switch, or overlay sheet for maintaining IP67.
See page Custom-11 and 12 for further details on digital printed overlay.



APPLICATION EXAMPLE

Suitable for industrial measuring instruments, transceivers, controllers, medical equipment and more.

Portable Signal Generator



Wireless CO₂ Microclimate Sensor



Wireless Food Probe Sensor



Wireless Temperature Detector



Sigfox Network Measurement Device



IoT Temperature Monitoring Sensor for HACCP



*See page 23 for further details on Sigfox.

Competition Time Measurement System



Portable Airflow Meter



Honey Bee Tracker



Digital X-ray System





Technical Data

Protection class : IP67
 Operating temperature : -10°C ~ +60°C
 Recommended torque:
 0.2N • m ~ 0.3N • m
 (2kgf • cm ~ 3kgf • cm)



- Stylish and elegantly designed with chamfered edge construction.
- IP67 protection class enclosure.
- Manufactured from flame-resistant ABS UL94V-0 material.
- 8 different internal compartment types are available: AAA x 2, AAA x 3, AAA x 4, AA x 2, AA x 3, AA x 4, AA x 6 and no battery type. Battery compartments have positive (+) / negative (-) pole mark to prevent incorrect insertion.
- The TPE side grips are available in 5 unique colors, and function as an anti-slip grip pad and drop impact protection.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94V-0	Off-white • Black
2	Bottom cover	1	ABS UL94V-0	Off-white • Black
3	Battery cover *	1	ABS UL94V-0	Off-white • Black
4	Gasket	1	Silicone	N • F2 • F3 • M4 type : Black
5	O-ring *	1	Silicone	M2 • M6 type : Blue M3 • F4 • type : Light gray
6	Side grip	2	TPE	Black • Light gray • Navy • Red • Yellow
7	Battery cover screw *	1	Stainless steel M2.5-8	Unfinished
8	Screw	6	Stainless steel M2.5-10	Unfinished
9	Battery contact *	1 set	Brass	Nickel plated

*Not applicable to the N (no battery compartment type) models.

Accessories (Optional parts)



PCB mounting screw EM-2.3
See page 398



Tapping standoff TPS series
See page 397



Cable gland
See page 181 ~ 193



Neodymium magnet NMG series
See page 392

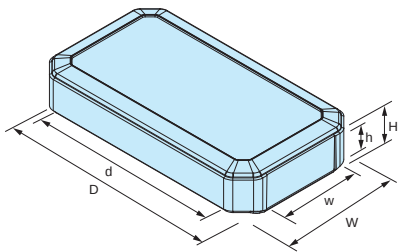
Battery Compartment Types

Type	N None	F2 AAA x 2	F3 AAA x 3	F4 AAA x 4	M2 AA x 2	M3 AA x 3	M4 AA x 4	M6 AA x 6
Battery Compartment								

Color Type

Code	[B][B] Black / Black	[B][L] Black / Light gray	[B][N] Black / Navy	[B][R] Black / Red	[B][Y] Black / Yellow
Color					
Code	[W][B] Off-white / Black	[W][L] Off-white / Light gray	[W][N] Off-white / Navy	[W][R] Off-white / Red	[W][Y] Off-white / Yellow
Color					

WH dimensions



Product no. / Details

Product no.	External dimensions			Internal dimensions			Battery compartment	Weight (g)
	W	H	D	w	h	d		
WH125-20-N -□□	79	20	126	39	9	107.7	None	101.0
WH125-20-F2 -□□	79	20	126	60	9	46.4	AAA x 2	102.0
WH125-20-F3 -□□	79	20	126	60	9	35.9	AAA x 3	109.0
WH125-28-N -□□	79	28	126	39	17	106.3	None	119.0
WH125-28-F2 -□□	79	28	126	60	17	46.4	AAA x 2	121.0
WH125-28-F3 -□□	79	28	126	60	17	35.9	AAA x 3	127.0
WH145-20-N -□□	88	20	146	45	8	129.6	None	125.5
WH145-20-F4 -□□	88	20	146	69.4	8	36.5	AAA x 4	129.5
WH145-25-N -□□	88	25	146	45	13	129.6	None	137.5
WH145-25-M2 -□□	88	25	146	69.2	13	51.5	AA x 2	161.5
WH145-25-M3 -□□	88	25	146	69.2	13	36.5	AA x 3	159.5
WH145-33-N -□□	88	33	146	45	21	129.6	None	162.0
WH145-33-M2 -□□	88	33	146	69.2	21	51.5	AA x 2	180.5
WH145-33-M3 -□□	88	33	146	69.2	21	36.5	AA x 3	181.5
WH170-25-N -□□	95	25	171	51	13	154.4	None	169.0
WH170-25-M4 -□□	95	25	171	73.2	13	54.8	AA x 4	195.0
WH170-33-N -□□	95	33	171	50.9	21	150.7	None	191.0
WH170-33-M4 -□□	95	33	171	73.2	21	54.8	AA x 4	220.0
WH190-25-N -□□	126	25	191	81	13	170.3	None	226.0
WH190-25-M6 -□□	126	25	191	107.6	13	72.6	AA x 6	276.0
WH190-33-N -□□	126	33	191	81	21	170.3	None	252.0
WH190-33-M6 -□□	126	33	191	107	21	72.3	AA x 6	307.0

■ DXF/DWG/PDF/STP drawings available on our website.

LCT•LCS•LC•LCE HAND-HELD PLASTIC CASE

Hand-held case suitable for industrial measuring equipment, wireless communication devices and medical equipment.

9 different sizes with 8 different battery compartment types line-up available.

Consisting of a line-up of 4 different series: LC - plastic case, LCT - case with shockproof silicone cover, LCS - case with silicone cover, and LCE - EMC shielded plastic case.

LCT Plastic Case with Shockproof Silicone Cover - 4 Rugged Shockproof Silicone Cover Colors



LCS Plastic Case with Silicone Cover - 5 Silicone Cover Colors



CUSTOMIZATION



Machining



Custom cut on silicone cover



Custom color, custom shaped silicone cover



Digital printed overlay



APPLICATION EXAMPLE

Metal Coating Thickness Gauge



Solar Panel Trouble Checker



Solar Cell Connection Checker



Digital Pressure Gauge Setter



Fluorescent Portable Dissolved Oxygen Meter



Distribution Transformer Tester



Network Partial Discharge Checker



Radiation Survey Meter



Mini Radiation Survey Meter



Wireless Voltage Probe



Portable Anemometer



Ultrasonic Thickness Gauge



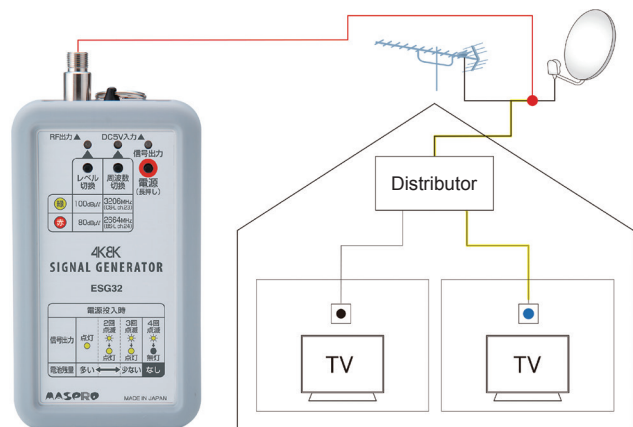
Hyperhidrosis Treatment Device



RF Scope



Satellite Broadcasting Signal Generator



Onboard Programmer



Code Debugger





Technical Data

Protection class: IP40
Operating temperature: -10°C ~ +60°C

- Plastic case with shockproof silicone cover. Protects the device from various impact.
- Manufactured with flame-resistant ABS UL94V-0 material. Selectable from a range of battery compartment types.
- Positive (+) / Negative (-) pole marks are incised on the inside of the battery compartments.
- Suitable for measuring instruments, test devices, wireless communication devices, medical devices and more.

Battery compartment type



No battery compartment type



Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94V-0	Off-white • Dark gray
2	Bottom cover	1	ABS UL94V-0	Off-white • Dark gray
3	Panel	1	ABS UL94V-0	Off-white • Dark gray
4	Self-tapping screw	4	Steel M2.6	Nickel plated • Black trivalent chromate
5	Battery cover	1	ABS UL94V-0	Off-white • Dark gray
6	Battery contact	1 set	Brass	Nickel plated
	Battery snap • Cushion sponge (only for 9V models)	1 set	Brass : PVC • Polyurethane foam (UL94HF-1)	Nickel plated • Black
7	Silicone cover	1	Silicone	Orange • Green • Navy • Dark gray

Accessories (Optional parts)



Tapping standoff TPS series
See page 397



PCB mounting screw EM-2.3
See page 398



TORX screw MR series
See page 398

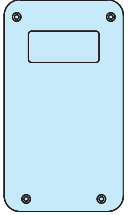
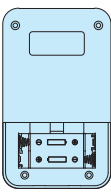
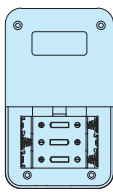
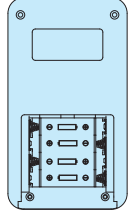
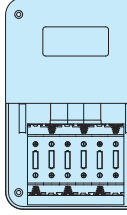
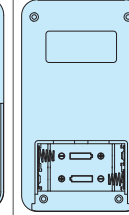
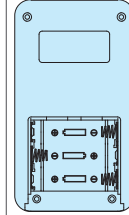
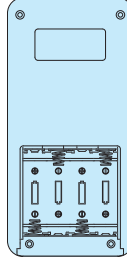
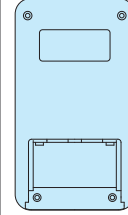


Key ring CR-20
See page 389



Strap STP series
See page 389

Battery Compartment Type

Type	N None	F2 AAA x 2	F3 AAA x 3	F4 AAA x 4	F6 AAA x 6	M2 AA x 2	M3 AA x 3	M4 AA x 4	9V 9V x 1
Battery compartment									

Color Type

Code	D O Dark gray / Orange	D G Dark gray / Green	D N Dark gray / Navy	D D Dark gray / Dark gray
Color				
Code	W O Off-white / Orange	W G Off-white / Green	W N Off-white / Navy	W D Off-white / Dark gray
Color				

Product no. / Details

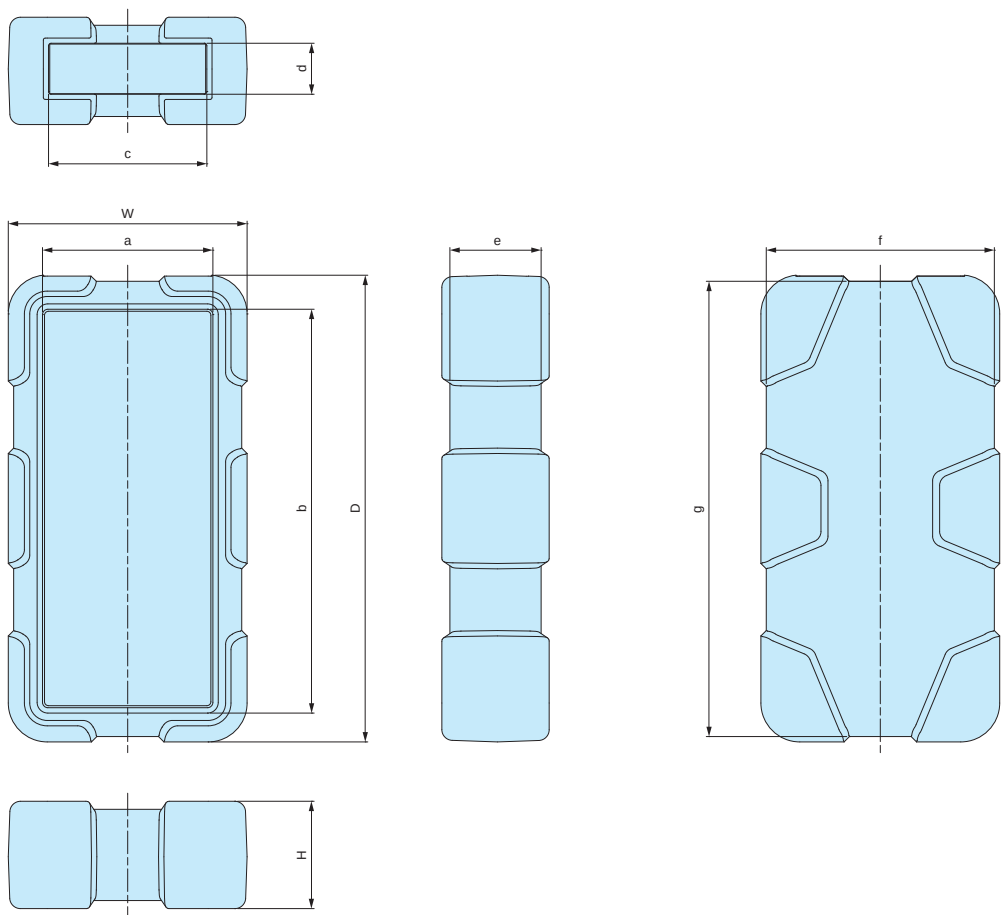
■ Please suffix color code at the end of the product number.

Product no.	W	H	D	Battery compartment	Weight (g)
LCT115 -N -□□	76(69)	28(19.5)	121.9(115)	None	123.5
LCT115 -F2 -□□	76(69)	28(19.5)	121.9(115)	AAA x 2	128
LCT115 -F3 -□□	76(69)	28(19.5)	121.9(115)	AAA x 3	130
LCT115H-N -□□	76(69)	36.5(28)	121.9(115)	None	141
LCT115H-F2 -□□	76(69)	36.5(28)	121.9(115)	AAA x 2	145.5
LCT115H-F3 -□□	76(69)	36.5(28)	121.9(115)	AAA x 3	147
LCT115H-M2-□□	76(69)	36.5(28)	121.9(115)	AA x 2	149.5
LCT115H-9V-□□	76(69)	36.5(28)	121.9(115)	9V x 1	149
LCT135 -N -□□	85(76)	40(27)	143.9(135)	None	210.5
LCT135 -F4 -□□	85(76)	40(27)	143.9(135)	AAA x 4	225.5
LCT135 -M2-□□	85(76)	40(27)	143.9(135)	AA x 2	223.5
LCT135 -M3-□□	85(76)	40(27)	143.9(135)	AA x 3	229
LCT135 -9V-□□	85(76)	40(27)	143.9(135)	9V x 1	227
LCT135H-N -□□	85(76)	48(35)	143.9(135)	None	231.5
LCT135H-F4 -□□	85(76)	48(35)	143.9(135)	AAA x 4	246
LCT135H-M2-□□	85(76)	48(35)	143.9(135)	AA x 2	245
LCT135H-M3-□□	85(76)	48(35)	143.9(135)	AA x 3	250
LCT135H-9V-□□	85(76)	48(35)	143.9(135)	9V x 1	247.5
LCT145 -N -□□	105(96)	40(27)	153.9(145)	None	258.5
LCT145 -F6 -□□	105(96)	40(27)	153.9(145)	AAA x 6	278.5
LCT145 -M2-□□	105(96)	40(27)	153.9(145)	AA x 2	272.5
LCT145 -M4-□□	105(96)	40(27)	153.9(145)	AA x 4	279.5
LCT145H-N -□□	105(96)	48(35)	153.9(145)	None	282
LCT145H-F6 -□□	105(96)	48(35)	153.9(145)	AAA x 6	302.5
LCT145H-M2-□□	105(96)	48(35)	153.9(145)	AA x 2	296
LCT145H-M4-□□	105(96)	48(35)	153.9(145)	AA x 4	303
LCT165 -N -□□	89(80)	40(27)	173.9(165)	None	263.5
LCT165 -M4-□□	89(80)	40(27)	173.9(165)	AA x 4	283
LCT165H-N -□□	89(80)	48(35)	173.9(165)	None	286
LCT165H-M4-□□	89(80)	48(35)	173.9(165)	AA x 4	305

■ () value = enclosure dimension.

Silicone cover dimensions

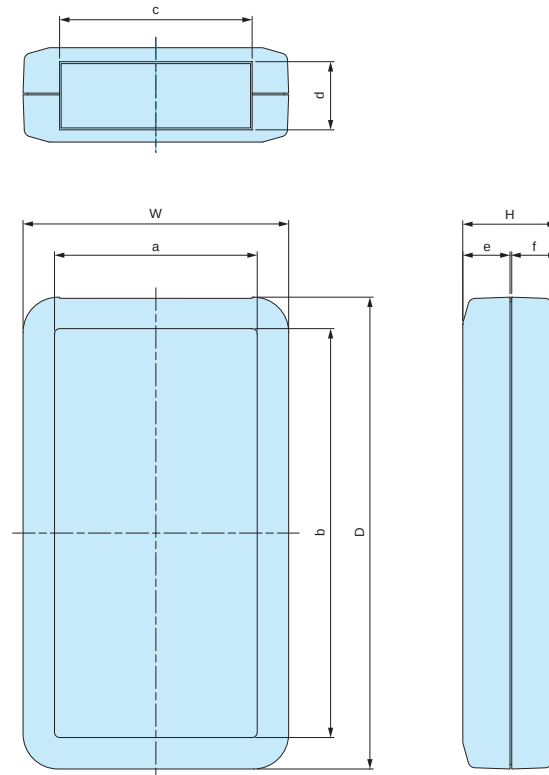
■ DXF/DWG/PDF drawings available on our website.



Product no.	W	H	D	a	b	c	d	e	f	g
LCT115 -N -□□	76	28	121.9	55.5	101.5	48.3	12	24	72	117.8
LCT115 -F2 -□□	76	28	121.9	55.5	101.5	48.3	12	24	72	117.8
LCT115 -F3 -□□	76	28	121.9	55.5	101.5	48.3	12	24	72	117.8
LCT115H -N -□□	76	36.5	121.9	55.5	101.5	48.3	20.5	32.5	72	117.8
LCT115H -F2 -□□	76	36.5	121.9	55.5	101.5	48.3	20.5	32.5	72	117.8
LCT115H -F3 -□□	76	36.5	121.9	55.5	101.5	48.3	20.5	32.5	72	117.8
LCT115H -M2 -□□	76	36.5	121.9	55.5	101.5	48.3	20.5	32.5	72	117.8
LCT115H -9V -□□	76	36.5	121.9	55.5	101.5	48.3	20.5	32.5	72	117.8
LCT135 -N -□□	85	40	143.9	59.5	118.5	55	19	34	81	139.7
LCT135 -F4 -□□	85	40	143.9	59.5	118.5	55	19	34	81	139.7
LCT135 -M2 -□□	85	40	143.9	59.5	118.5	55	19	34	81	139.7
LCT135 -M3 -□□	85	40	143.9	59.5	118.5	55	19	34	81	139.7
LCT135 -9V -□□	85	40	143.9	59.5	118.5	55	19	34	81	139.7
LCT135H -N -□□	85	48	143.9	59.5	118.5	55	27	42	81	139.6
LCT135H -F4 -□□	85	48	143.9	59.5	118.5	55	27	42	81	139.6
LCT135H -M2 -□□	85	48	143.9	59.5	118.5	55	27	42	81	139.6
LCT135H -M3 -□□	85	48	143.9	59.5	118.5	55	27	42	81	139.6
LCT135H -9V -□□	85	48	143.9	59.5	118.5	55	27	42	81	139.6
LCT145 -N -□□	105	40	153.9	76.5	125.5	71	19	34	101	149.7
LCT145 -F6 -□□	105	40	153.9	76.5	125.5	71	19	34	101	149.7
LCT145 -M2 -□□	105	40	153.9	76.5	125.5	71	19	34	101	149.7
LCT145 -M4 -□□	105	40	153.9	76.5	125.5	71	19	34	101	149.7
LCT145H -N -□□	105	48	153.9	76.5	125.5	71	27	42	101	149.7
LCT145H -F6 -□□	105	48	153.9	76.5	125.5	71	27	42	101	149.7
LCT145H -M2 -□□	105	48	153.9	76.5	125.5	71	27	42	101	149.7
LCT145H -M4 -□□	105	48	153.9	76.5	125.5	71	27	42	101	149.7
LCT165 -N -□□	89	40	173.9	63.5	148.5	59	19	34	85	169.7
LCT165 -M4 -□□	89	40	173.9	63.5	148.5	59	19	34	85	169.7
LCT165H -N -□□	89	48	173.9	63.5	148.5	59	27	42	85	169.6
LCT165H -M4 -□□	89	48	173.9	63.5	148.5	59	27	42	85	169.6

Enclosure dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



■ Please suffix color code at the end of the product number.

Product no.	W	H	D	a	b	c	d	e	f	Battery compartment
LCT115 -N -□□	69	19.5	115	54	100	48.1	12	10	9	None
LCT115 -F2 -□□	69	19.5	115	54	100	48.1	12	10	9	AAA x 2
LCT115 -F3 -□□	69	19.5	115	54	100	48.1	12	10	9	AAA x 3
LCT115H -N -□□	69	28	115	54	100	48.1	20.5	18.5	9	None
LCT115H -F2 -□□	69	28	115	54	100	48.1	20.5	18.5	9	AAA x 2
LCT115H -F3 -□□	69	28	115	54	100	48.1	20.5	18.5	9	AAA x 3
LCT115H -M2 -□□	69	28	115	54	100	48.1	20.5	18.5	9	AA x 2
LCT115H -9V -□□	69	28	115	54	100	48.1	20.5	18.5	9	9V x 1
LCT135 -N -□□	76	27	135	58	117	55.1	19.5	13.5	13	None
LCT135 -F4 -□□	76	27	135	58	117	55.1	19.5	13.5	13	AAA x 4
LCT135 -M2 -□□	76	27	135	58	117	55.1	19.5	13.5	13	AA x 2
LCT135 -M3 -□□	76	27	135	58	117	55.1	19.5	13.5	13	AA x 3
LCT135 -9V -□□	76	27	135	58	117	55.1	19.5	13.5	13	9V x 1
LCT135H -N -□□	76	35	135	58	117	55.1	27.5	21.5	13	None
LCT135H -F4 -□□	76	35	135	58	117	55.1	27.5	21.5	13	AAA x 4
LCT135H -M2 -□□	76	35	135	58	117	55.1	27.5	21.5	13	AA x 2
LCT135H -M3 -□□	76	35	135	58	117	55.1	27.5	21.5	13	AA x 3
LCT135H -9V -□□	76	35	135	58	117	55.1	27.5	21.5	13	9V x 1
LCT145 -N -□□	96	27	145	75	124	71.1	19.5	14.5	12	None
LCT145 -F6 -□□	96	27	145	75	124	71.1	19.5	14.5	12	AAA x 6
LCT145 -M2 -□□	96	27	145	75	124	71.1	19.5	14.5	12	AA x 2
LCT145 -M4 -□□	96	27	145	75	124	71.1	19.5	14.5	12	AA x 4
LCT145H -N -□□	96	35	145	75	124	71.1	27.5	22.5	12	None
LCT145H -F6 -□□	96	35	145	75	124	71.1	27.5	22.5	12	AAA x 6
LCT145H -M2 -□□	96	35	145	75	124	71.1	27.5	22.5	12	AA x 2
LCT145H -M4 -□□	96	35	145	75	124	71.1	27.5	22.5	12	AA x 4
LCT165 -N -□□	80	27	165	62	147	59.1	19.5	13.5	13	None
LCT165 -M4 -□□	80	27	165	62	147	59.1	19.5	13.5	13	AA x 4
LCT165H -N -□□	80	35	165	62	147	59.1	27.5	21.5	13	None
LCT165H -M4 -□□	80	35	165	62	147	59.1	27.5	21.5	13	AA x 4



Technical Data

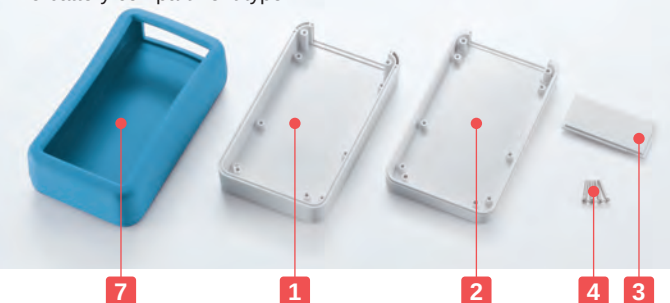
Protection class: IP40
Operating temperature: -10°C ~ +60°C

- Plastic case with silicone cover providing not only comfortable and anti-slip grip, but also protection from drop impact.
- Manufactured with flame-resistant ABS UL94V-0. Several battery compartment types are available.
- Positive (+) / negative (-) pole mark are incised on the inside of the battery compartments.
- Suitable for measuring instruments, test devices, wireless communication devices, medical devices and more.

Battery compartment type



No battery compartment type



Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94V-0	Off-white • Dark gray
2	Bottom cover	1	ABS UL94V-0	Off-white • Dark gray
3	Panel	1	ABS UL94V-0	Off-white • Dark gray
4	Self-tapping screw	4	Steel M2.6	Nickel plated • Black trivalent chromate
5	Battery cover	1	ABS UL94V-0	Off-white • Dark gray
6	Battery contact	1 set	Brass	Nickel plated
	Battery snap • Cushion sponge (only for 9V models)	1 set	Brass : PVC • Polyurethane foam (UL94HF-1)	Nickel plated • Black
7	Silicone cover	1	Silicone	Red • Green • Blue • Light gray • Dark gray

Accessories (Optional parts)



Tapping standoff TPS series
See page 397



PCB mounting screw EM-2.3
See page 398



TORX screw MR series
See page 398



Key ring CR-20
See page 389



Strap STP series
See page 389

Battery Compartment Type

Type	N None	F2 AAA x 2	F3 AAA x 3	F4 AAA x 4	F6 AAA x 6	M2 AA x 2	M3 AA x 3	M4 AA x 4	9V 9V x 1
Battery compartment									

Color Type

Code	D R Dark gray / Red	D G Dark gray / Green	D B Dark gray / Blue	D D Dark gray / Dark gray	D L Dark gray / Light gray
Color					
Code	W R Off-white / Red	W G Off-white / Green	W B Off-white / Blue	W D Off-white / Dark gray	W L Off-white / Light gray
Color					

Product no. / Details

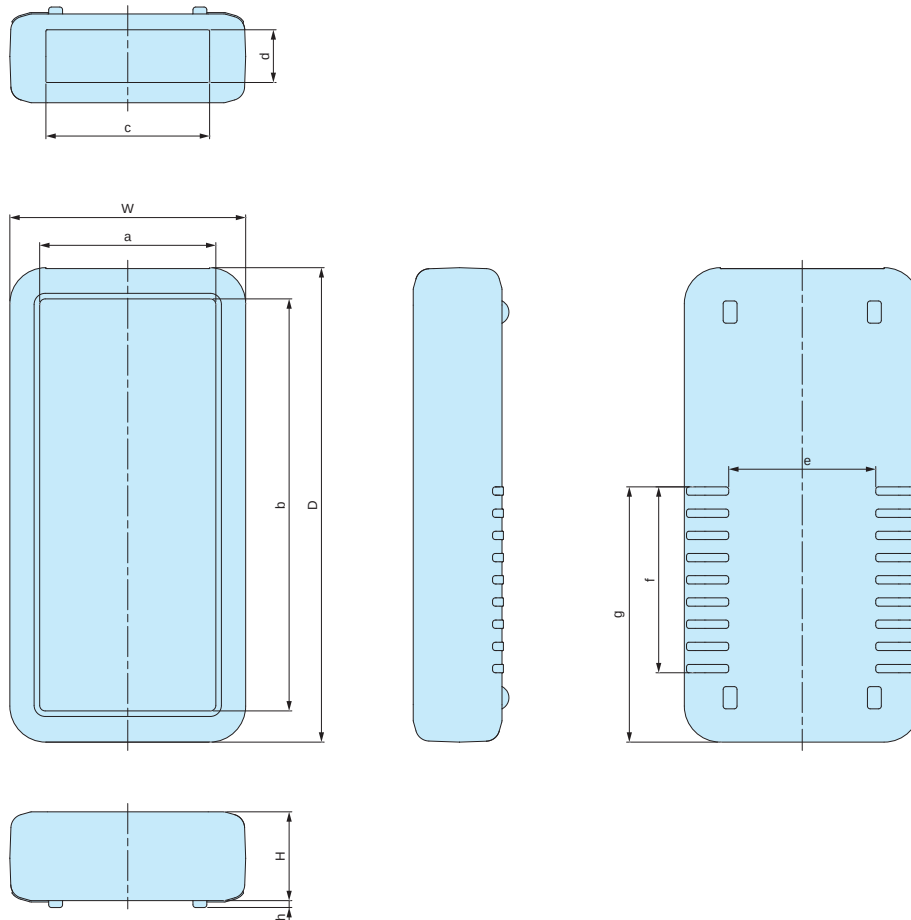
■ Please suffix color code at the end of the product number.

Product no.	W	H	D	Battery compartment	Weight (g)
LCS115 -N -□□	74(69)	24(19.5)	120(115)	None	113
LCS115 -F2 -□□	74(69)	24(19.5)	120(115)	AAA x 2	117.5
LCS115 -F3 -□□	74(69)	24(19.5)	120(115)	AAA x 3	119.5
LCS115H -N -□□	74(69)	32.5(28)	120(115)	None	130
LCS115H -F2 -□□	74(69)	32.5(28)	120(115)	AAA x 2	134.5
LCS115H -F3 -□□	74(69)	32.5(28)	120(115)	AAA x 3	136
LCS115H -M2 -□□	74(69)	32.5(28)	120(115)	AA x 2	138.5
LCS115H -9V -□□	74(69)	32.5(28)	120(115)	9V x 1	138
LCS135 -N -□□	81(76)	32(27)	141(135)	None	165
LCS135 -F4 -□□	81(76)	32(27)	141(135)	AAA x 4	180
LCS135 -M2 -□□	81(76)	32(27)	141(135)	AA x 2	178
LCS135 -M3 -□□	81(76)	32(27)	141(135)	AA x 3	183.5
LCS135 -9V -□□	81(76)	32(27)	141(135)	9V x 1	181.5
LCS135H -N -□□	81(76)	40(35)	141(135)	None	183
LCS135H -F4 -□□	81(76)	40(35)	141(135)	AAA x 4	197.5
LCS135H -M2 -□□	81(76)	40(35)	141(135)	AA x 2	196.5
LCS135H -M3 -□□	81(76)	40(35)	141(135)	AA x 3	201.5
LCS135H -9V -□□	81(76)	40(35)	141(135)	9V x 1	199
LCS145 -N -□□	101(96)	32(27)	151(145)	None	202
LCS145 -F6 -□□	101(96)	32(27)	151(145)	AAA x 6	222
LCS145 -M2 -□□	101(96)	32(27)	151(145)	AA x 2	216
LCS145 -M4 -□□	101(96)	32(27)	151(145)	AA x 4	223
LCS145H -N -□□	101(96)	40(35)	151(145)	None	224
LCS145H -F6 -□□	101(96)	40(35)	151(145)	AAA x 6	244.5
LCS145H -M2 -□□	101(96)	40(35)	151(145)	AA x 2	238
LCS145H -M4 -□□	101(96)	40(35)	151(145)	AA x 4	245
LCS165 -N -□□	85(80)	32(27)	171(165)	None	203
LCS165 -M4 -□□	85(80)	32(27)	171(165)	AA x 4	222.5
LCS165H -N -□□	85(80)	40(35)	171(165)	None	220.5
LCS165H -M4 -□□	85(80)	40(35)	171(165)	AA x 4	239.5

■ () value = enclosure dimension.

Silicone cover dimensions

■ DXF/DWG/PDF drawings available on our website.

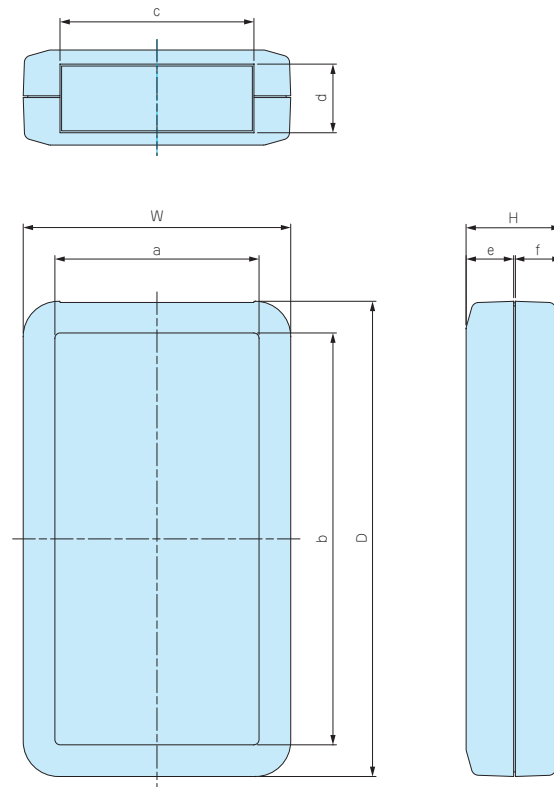


■ Please suffix color code at the end of the product number.

Product no.	W	H	D	a	b	c	d	e	f	g	h
LCS115 -N -□□	74	24	120	55.5	101.5	48.3	12	46	44.5	60.5	2
LCS115 -F2 -□□	74	24	120	55.5	101.5	48.3	12	46	44.5	60.5	2
LCS115 -F3 -□□	74	24	120	55.5	101.5	48.3	12	46	44.5	60.5	2
LCS115H -N -□□	74	32.5	120	55.5	101.5	48.3	20.5	46	44.5	60.5	2
LCS115H -F2 -□□	74	32.5	120	55.5	101.5	48.3	20.5	46	44.5	60.5	2
LCS115H -F3 -□□	74	32.5	120	55.5	101.5	48.3	20.5	46	44.5	60.5	2
LCS115H -M2 -□□	74	32.5	120	55.5	101.5	48.3	20.5	46	44.5	60.5	2
LCS115H -9V -□□	74	32.5	120	55.5	101.5	48.3	20.5	46	44.5	60.5	2
LCS135 -N -□□	81	32	141	59.5	118.5	55	19	53	59	79	2.5
LCS135 -F4 -□□	81	32	141	59.5	118.5	55	19	53	59	79	2.5
LCS135 -M2 -□□	81	32	141	59.5	118.5	55	19	53	59	79	2.5
LCS135 -M3 -□□	81	32	141	59.5	118.5	55	19	53	59	79	2.5
LCS135 -9V -□□	81	32	141	59.5	118.5	55	19	53	59	79	2.5
LCS135H -N -□□	81	40	141	59.5	118.5	55	27	53	59	79	2.5
LCS135H -F4 -□□	81	40	141	59.5	118.5	55	27	53	59	79	2.5
LCS135H -M2 -□□	81	40	141	59.5	118.5	55	27	53	59	79	2.5
LCS135H -M3 -□□	81	40	141	59.5	118.5	55	27	53	59	79	2.5
LCS135H -9V -□□	81	40	141	59.5	118.5	55	27	53	59	79	2.5
LCS145 -N -□□	101	32	151	76.5	125.5	71	19	71	59	81	2.5
LCS145 -F6 -□□	101	32	151	76.5	125.5	71	19	71	59	81	2.5
LCS145 -M2 -□□	101	32	151	76.5	125.5	71	19	71	59	81	2.5
LCS145 -M4 -□□	101	32	151	76.5	125.5	71	19	71	59	81	2.5
LCS145H -N -□□	101	40	151	76.5	125.5	71	27	71	59	81	2.5
LCS145H -F6 -□□	101	40	151	76.5	125.5	71	27	71	59	81	2.5
LCS145H -M2 -□□	101	40	151	76.5	125.5	71	27	71	59	81	2.5
LCS145H -M4 -□□	101	40	151	76.5	125.5	71	27	71	59	81	2.5
LCS165 -N -□□	85	32	171	63.5	148.5	59	19	53	67	92	2.5
LCS165 -M4 -□□	85	32	171	63.5	148.5	59	19	53	67	92	2.5
LCS165H -N -□□	85	40	171	63.5	148.5	59	27	53	67	92	2.5
LCS165H -M4 -□□	85	40	171	63.5	148.5	59	27	53	67	92	2.5

Enclosure dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



■ Please suffix color code at the end of the product number.

Product no.	W	H	D	a	b	c	d	e	f	Battery compartment
LCS115 -N -□□	69	19.5	115	54	100	48.1	12	10	9	None
LCS115 -F2 -□□	69	19.5	115	54	100	48.1	12	10	9	AAA x 2
LCS115 -F3 -□□	69	19.5	115	54	100	48.1	12	10	9	AAA x 3
LCS115H -N -□□	69	28	115	54	100	48.1	20.5	18.5	9	None
LCS115H -F2 -□□	69	28	115	54	100	48.1	20.5	18.5	9	AAA x 2
LCS115H -F3 -□□	69	28	115	54	100	48.1	20.5	18.5	9	AAA x 3
LCS115H -M2 -□□	69	28	115	54	100	48.1	20.5	18.5	9	AA x 2
LCS115H -9V -□□	69	28	115	54	100	48.1	20.5	18.5	9	9V x 1
LCS135 -N -□□	76	27	135	58	117	55.1	19.5	13.5	13	None
LCS135 -F4 -□□	76	27	135	58	117	55.1	19.5	13.5	13	AAA x 4
LCS135 -M2 -□□	76	27	135	58	117	55.1	19.5	13.5	13	AA x 2
LCS135 -M3 -□□	76	27	135	58	117	55.1	19.5	13.5	13	AA x 3
LCS135 -9V -□□	76	27	135	58	117	55.1	19.5	13.5	13	9V x 1
LCS135H -N -□□	76	35	135	58	117	55.1	27.5	21.5	13	None
LCS135H -F4 -□□	76	35	135	58	117	55.1	27.5	21.5	13	AAA x 4
LCS135H -M2 -□□	76	35	135	58	117	55.1	27.5	21.5	13	AA x 2
LCS135H -M3 -□□	76	35	135	58	117	55.1	27.5	21.5	13	AA x 3
LCS135H -9V -□□	76	35	135	58	117	55.1	27.5	21.5	13	9V x 1
LCS145 -N -□□	96	27	145	75	124	71.1	19.5	14.5	12	None
LCS145 -F6 -□□	96	27	145	75	124	71.1	19.5	14.5	12	AAA x 6
LCS145 -M2 -□□	96	27	145	75	124	71.1	19.5	14.5	12	AA x 2
LCS145 -M4 -□□	96	27	145	75	124	71.1	19.5	14.5	12	AA x 4
LCS145H -N -□□	96	35	145	75	124	71.1	27.5	22.5	12	None
LCS145H -F6 -□□	96	35	145	75	124	71.1	27.5	22.5	12	AAA x 6
LCS145H -M2 -□□	96	35	145	75	124	71.1	27.5	22.5	12	AA x 2
LCS145H -M4 -□□	96	35	145	75	124	71.1	27.5	22.5	12	AA x 4
LCS165 -N -□□	80	27	165	62	147	59.1	19.5	13.5	13	None
LCS165 -M4 -□□	80	27	165	62	147	59.1	19.5	13.5	13	AA x 4
LCS165H -N -□□	80	35	165	62	147	59.1	27.5	21.5	13	None
LCS165H -M4 -□□	80	35	165	62	147	59.1	27.5	21.5	13	AA x 4

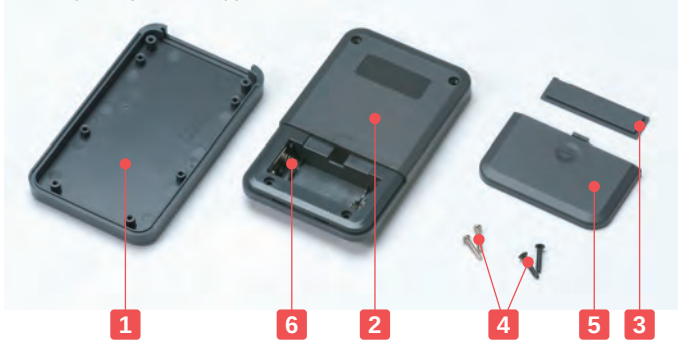


Technical Data

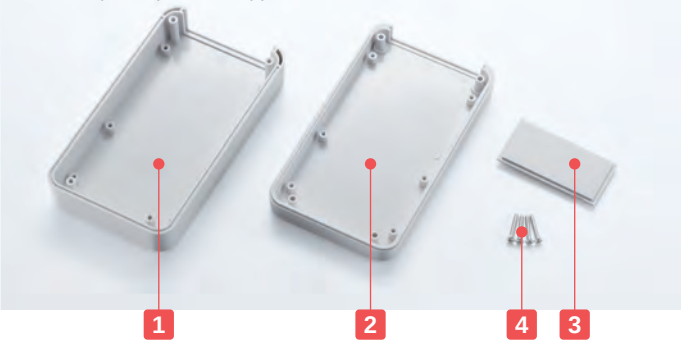
Protection class: IP40
Operating temperature: -10°C ~ +60°C

- Designed with beveled edges and rounded corners, and manufactured from flame-retardant ABS UL94V-0 material.
- Available in 9 different compartment types: AAx2, AAx3, AAx4, AAAx2, AAAx3, AAAx4, AAAx6, 9Vx1, and no battery compartment type.
- Positive (+) / negative (-) pole mark are incused within each battery compartment.
- Recommended to be used as measuring instruments, testing devices, wireless communication gadgets, medical equipment, and more.

Battery compartment type



No battery compartment type



Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94V-0	Off-white • Dark gray
2	Bottom cover	1	ABS UL94V-0	Off-white • Dark gray
3	Panel	1	ABS UL94V-0	Off-white • Dark gray
4	Self-tapping screw	4	Steel M2.6	Nickel plated • Black trivalent chromate
5	Battery cover	1	ABS UL94V-0	Off-white • Dark gray
6	Battery contact	1 set	Brass	Nickel plated
	Battery snap • Cushion sponge (only for 9V models)	1 set	Brass : PVC • Polyurethane foam (UL94HF-1)	Nickel plated • Black

Accessories (Optional parts)



Tapping standoff TPS series
See page 397



PCB mounting screw EM-2.3
See page 398



Belt clip GDH series
See page 390



Key ring • Strap CR-20 • STP series
See page 389



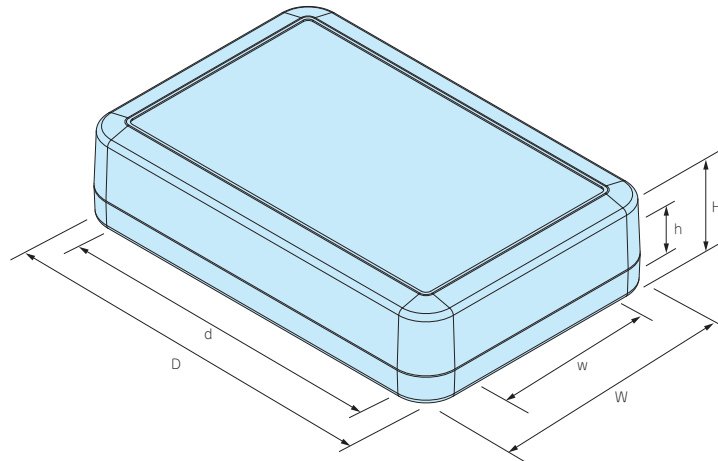
Suspension bracket WM series
See page 391



Neodymium magnet NMG series
See page 392

LC dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



Battery Compartment Type

Type	N None	F2 AAx2	F3 AAx3	F4 AAx4	F6 AAx6	M2 AAx2	M3 AAx3	M4 AAx4	9V 9Vx1
Battery compartment									

Product no. / Details

■ Please suffix color code at the end of the product number.

Product no.		External dimensions			Internal dimensions			Screw	Battery compartment	Weight (g)
● Dark gray	● Off-white	W	H	D	w	h	d			
LC115 -N -D	LC115 -N -W	69	19.5	115	61.5	9.5	86.5	M2.6-14 flat head x 4 pcs	None	70
LC115 -F2 -D	LC115 -F2 -W	69	19.5	115	61.5	9.5	63	M2.6-14 flat head x 2 pcs / M2.6-12 pan head x 2 pcs	AAA x 2	74.5
LC115 -F3 -D	LC115 -F3 -W	69	19.5	115	61.5	9.5	52	M2.6-14 flat head x 2 pcs / M2.6-12 pan head x 2 pcs	AAA x 3	76.5
LC115H -N -D	LC115H -N -W	69	28	115	60.9	18	86.5	M2.6-18 flat head x 4 pcs	None	80
LC115H -F2 -D	LC115H -F2 -W	69	28	115	60.9	18	63	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AAA x 2	84.5
LC115H -F3 -D	LC115H -F3 -W	69	28	115	60.9	18	52	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AAA x 3	86
LC115H -M2 -D	LC115H -M2 -W	69	28	115	60.9	18	54.8	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AA x 2	88.5
LC115H -9V -D	LC115H -9V -W	69	28	115	60.9	18	55.7	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	9V x 1	88
LC135 -N -D	LC135 -N -W	76	27	135	68.2	16	107	M2.6-18 flat head x 4 pcs	None	95
LC135 -F4 -D	LC135 -F4 -W	76	27	135	68.2	16	59.2	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AAA x 4	110
LC135 -M2 -D	LC135 -M2 -W	76	27	135	68.2	16	74.3	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AA x 2	108
LC135 -M3 -D	LC135 -M3 -W	76	27	135	68.2	16	59.2	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AA x 3	113.5
LC135 -9V -D	LC135 -9V -W	76	27	135	68.2	16	74.3	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	9V x 1	111.5
LC135H -N -D	LC135H -N -W	76	35	135	67.7	24	107	M2.6-18 flat head x 4 pcs	None	107.5
LC135H -F4 -D	LC135H -F4 -W	76	35	135	67.7	24	59.2	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AAA x 4	122
LC135H -M2 -D	LC135H -M2 -W	76	35	135	67.7	24	74.3	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AA x 2	121
LC135H -M3 -D	LC135H -M3 -W	76	35	135	67.7	24	59.2	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AA x 3	126
LC135H -9V -D	LC135H -9V -W	76	35	135	67.7	24	74.3	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	9V x 1	123.5
LC145S -N -D	LC145S -N -W	96	20	145	87.9	9.5	112.9	M2.6-14 flat head x 4 pcs	None	110
LC145S -F6 -D	LC145S -F6 -W	96	20	145	88.1	9.2	67.8	M2.6-14 flat head x 2 pcs / M2.6-12 pan head x 2 pcs	AAA x 6	130
LC145 -N -D	LC145 -N -W	96	27	145	87.8	16.5	112.9	M2.6-18 flat head x 4 pcs	None	121
LC145 -F6 -D	LC145 -F6 -W	96	27	145	87.8	16.5	67.8	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AAA x 6	141
LC145 -M2 -D	LC145 -M2 -W	96	27	145	87.8	16.5	86.8	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AA x 2	135
LC145 -M4 -D	LC145 -M4 -W	96	27	145	87.8	16.5	63.4	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AA x 4	142
LC145H -N -D	LC145H -N -W	96	35	145	87.2	24.5	112.9	M2.6-18 flat head x 4 pcs	None	135
LC145H -F6 -D	LC145H -F6 -W	96	35	145	87.2	24.5	67.8	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AAA x 6	155.5
LC145H -M2 -D	LC145H -M2 -W	96	35	145	87.2	24.5	86.8	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AA x 2	149
LC145H -M4 -D	LC145H -M4 -W	96	35	145	87.2	24.5	63.4	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AA x 4	156
LC165 -N -D	LC165 -N -W	80	27	165	72.2	16	137	M2.6-18 flat head x 4 pcs	None	120.5
LC165 -M4 -D	LC165 -M4 -W	80	27	165	72.2	16	79	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AA x 4	140
LC165H -N -D	LC165H -N -W	80	35	165	71.7	24	137	M2.6-18 flat head x 4 pcs	None	134.5
LC165H -M4 -D	LC165H -M4 -W	80	35	165	71.7	24	79	M2.6-18 flat head x 2 pcs / M2.6-14 pan head x 2 pcs	AA x 4	153.5

EMC
Shielding

Technical Data

Protection class: IP40
Operating temperature: -10°C ~ +60°C

- LCE series is an EMC shielded version of LC hand-held plastic case coated internally with DOTITE conductive paint (acrylic paint mixed with nickel filler).
- Designed with beveled edges and rounded corners, and manufactured from flame-resistant ABS UL94V-0 material.
- Recommended to be used as measuring instruments, testing devices, wireless communication gadgets, medical equipment, and more.

Components

No.	Part name	Pcs	Material	Color / Finish	Conductive paint
1	Top cover	1	ABS UL94V-0	Dark gray	DOTITE
2	Bottom cover	1	ABS UL94V-0	Dark gray	DOTITE
3	Panel	1	ABS UL94V-0	Dark gray	DOTITE
4	Self-tapping screw	4	Steel M2.6	Black trivalent chromate	—

Accessories (Optional parts)



Silicone cover LCTP • LCSC series
See page 57 ~ 58



Tapping standoff TPS series
See page 397



PCB mounting screw EM-2.3
See page 398



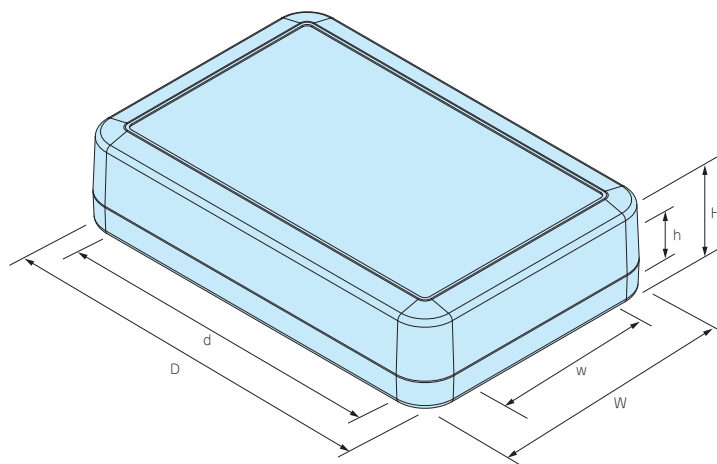
TORX screw MR series
See page 398



Suspension bracket WM series
See page 391

LCE dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



Product no. / Details

Product no.	External dimensions			Internal dimensions			Screw	Weight (g)
	W	H	D	w	h	d		
LCE115 -N -D	69	19.5	115	61.5	9.5	86.5	M2.6-14 flat head x 4 pcs	72.5
LCE115H -N -D	69	28	115	60.9	18	86.5	M2.6-18 flat head x 4 pcs	84
LCE135 -N -D	76	27	135	68.2	16	107	M2.6-18 flat head x 4 pcs	97
LCE145H -N -D	96	35	145	87.2	24.5	112.9	M2.6-18 flat head x 4 pcs	137
LCE165H -N -D	80	35	165	71.7	24	137	M2.6-18 flat head x 4 pcs	139

CONDUCTIVE PAINT CUSTOMIZATION AVAILABLE for LC series

The LCE series are a selected few models of the LC series, customized with conductive paint.

Other LC series enclosures not listed can also be customized with conductive paint.

Contact us for more details.

E-mail : sales@takachi-el.co.jp



LCTP series

SHOCKPROOF SILICONE COVER for LC • LCE

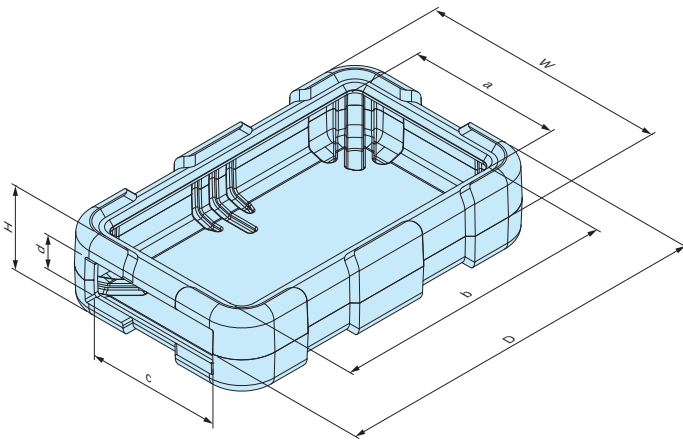
Color Type

Code	 Orange	 Green	 Navy	 Dark gray
Color				

- Shock-proof silicone cover for LC and LCE series.

LCTP dimensions

- DXF/DWG/PDF drawings available on our website.



APPLICATION EXAMPLE

Ultrasonic Hardness Tester



Components

Part name	Material	Color
Silicone cover	Silicone	Orange • Green • Navy • Dark gray

Product no. / Details

- Please suffix color code at the end of the product number.

Product no.	W	H	D	a	b	c	d	Suitable models	Weight (g)
LCTP115 -□	76	28	121.9	55.5	101.5	48.3	12	LC115 • LCE115	53.5
LCTP115H-□	76	36.5	121.9	55.5	101.5	48.3	20.5	LC115H • LCE115H	61
LCTP135 -□	85	40	143.9	59.5	118.5	55	19	LC135 • LCE135	115.5
LCTP135H-□	85	48	143.9	59.5	118.5	55	27	LC135H	124
LCTP145 -□	105	40	153.9	76.5	125.5	71	19	LC145	137.5
LCTP145H-□	105	48	153.9	76.5	125.5	71	27	LC145H • LCE145H	147
LCTP165 -□	89	40	173.9	63.5	148.5	59	19	LC165	143
LCTP165H-□	89	48	173.9	63.5	148.5	59	27	LC165H • LCE165H	151.5

- Custom color is available from just 1 pc. For 500 pcs or more, manufacturing costs will be similar to a standard color. Please inquire for more details. For custom color order, please specify **PANTONE®** color code.



LCSC series

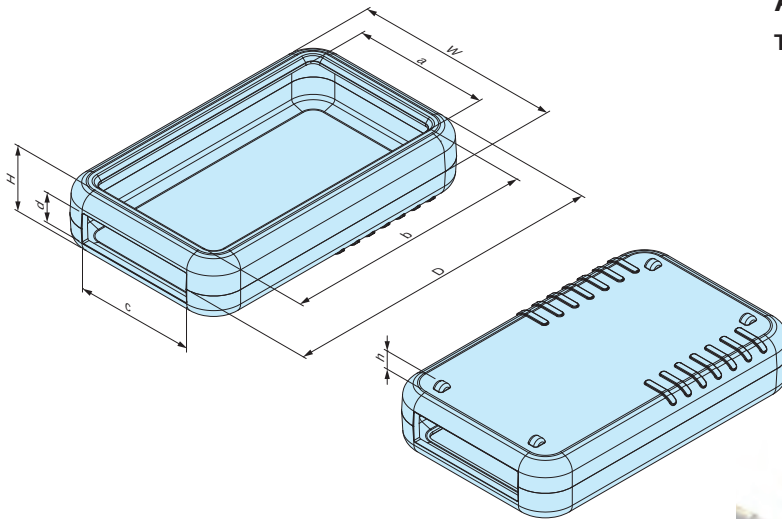
SILICONE COVER for LC • LCE

Color Type

Code	[R] Red	[G] Green	[B] Blue	[D] Dark gray	[L] Light gray
Color					

■ Silicone cover for LC and LCE series.

LCSC dimensions



■ DXF/DWG/PDF drawings available on our website.

APPLICATION EXAMPLE

Temperature Surveillance Sensor



Components

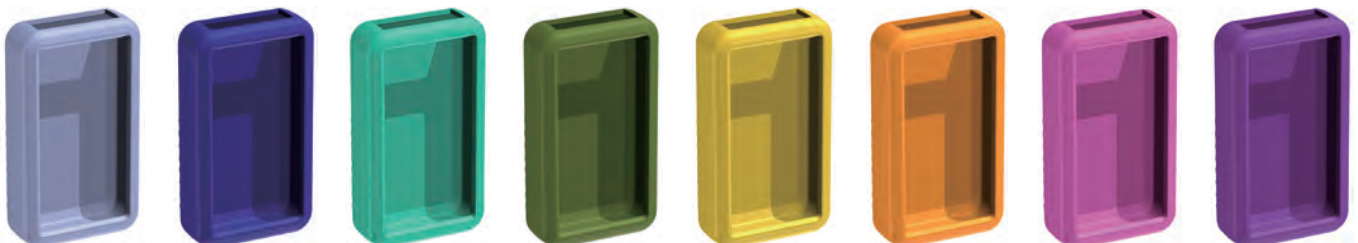
Part name	Material	Color
Silicone cover	Silicone	Red • Green • Blue • Dark gray • Light gray

Product no. / Details

■ Please suffix color code at the end of the product number.

Product no.	W	H	D	a	b	c	d	h	Suitable models	Weight (g)
LCSC115 -□	74	24	120	55.5	101.5	48.3	12	2	LC115 • LCE115	43
LCSC115H -□	74	32.5	120	55.5	101.5	48.3	20.5	2	LC115H • LCE115H	50
LCSC135 -□	81	32	141	59.5	118.5	55	19	2.5	LC135 • LCE135	70
LCSC135H -□	81	40	141	59.5	118.5	55	27	2.5	LC135H	75.5
LCSC145 -□	101	32	151	76.5	125.5	71	19	2.5	LC145	81
LCSC145H -□	101	40	151	76.5	125.5	71	27	2.5	LC145H • LCE145H	89
LCSC165 -□	85	32	171	63.5	148.5	59	19	2.5	LC165	82.5
LCSC165H -□	85	40	171	63.5	148.5	59	27	2.5	LC165H • LCE165H	86

■ Custom color is available from just 1 pc. For 500pcs or more, manufacturing costs will be similar to a standard color. Please inquire for more details. For custom color order, please specify **PANTONE®** color code.



WSC series

IP67 SLOPED PLASTIC CASE

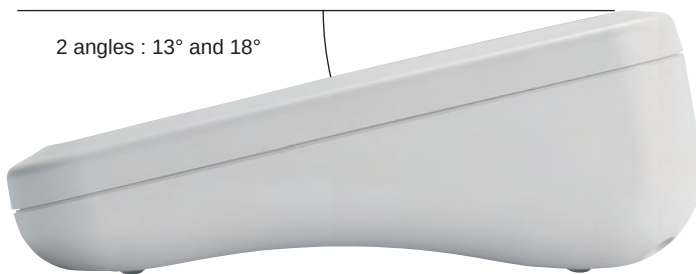


Ergonomic design and streamlined shape

Best suited for desktop operation with its sloped surface.

2 different inclined angles, 13° and 18° are available to select for various operating environments.

Streamlined shape enables the unit to be gripped better when used as a handheld instrument.



2 angles : 13° and 18°

Photo : 13° type



IP67 water- and dust-proof structure that can withstand various environments

High elasticity and good durability for maintaining waterproofing capability.

Built-in insert nut use for long-lasting protection even after frequent opening and closing.



APPLICATION EXAMPLE

Medical Measurement Device • Medical Controller



Transmitter • Network Equipment



RFID Card Reader



RFID Reader for ICT Entry/Exit System "KIDSNA connect" for Daycare/Preschool



Information on waterproofing after hole milling for switches

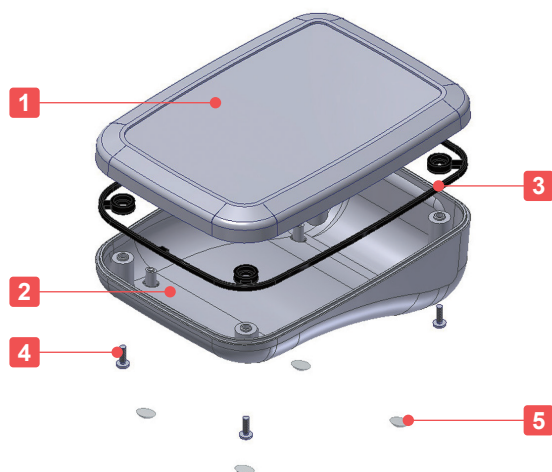
The waterproof performance will be lost once hole or cutout is machined on an IP rated enclosure.
To ensure it remains waterproof after hole/cutout machining, IP rated membrane pad or overlay is required.



Information on affixing of cables into waterproof enclosures

Please utilize a cable gland from our available range of cable gland accessories.





Technical Data

Protection class : IP67
 Operating temperature : -10°C ~ +60°C
 Recommended torque : 0.2 ~ 0.3N · m

- Suitable as a desktop controller or measurement instrument with its ergonomic design.
- Streamlined shape enables the unit to be gripped better when used as a handheld instrument.
- IP67 protection class allows the unit to be used outdoors or under environments with water splashes, such as for medical research or measuring equipment.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Top Cover	1	Flame-resistant ABS UL94V-0	Off-white • Black
2	Bottom base	1	Flame-resistant ABS UL94V-0	Off-white • Black
3	Gasket	1	Silicone	Black
4	Screw	4	Stainless steel binding head M2.5-8	Unfinished
5	Rubber feet	4	Polyurethane	Transparent

Accessories (Optional parts)



PCB mounting screw EM series
See page 398



Adhesive standoff AST series
See page 394



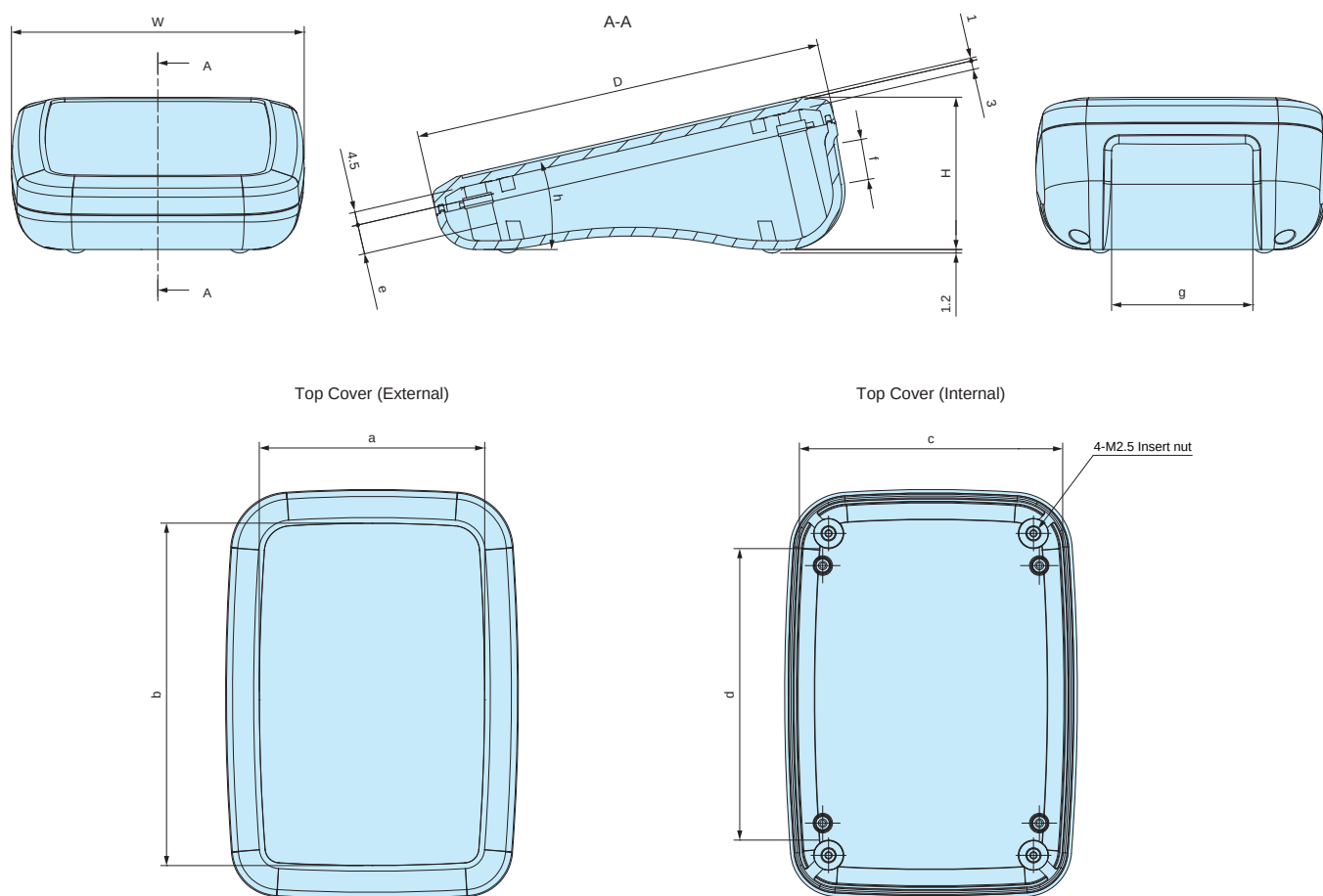
TORX screw MR series
See page 398



Cable gland
See page 181 ~ 193

WSC dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



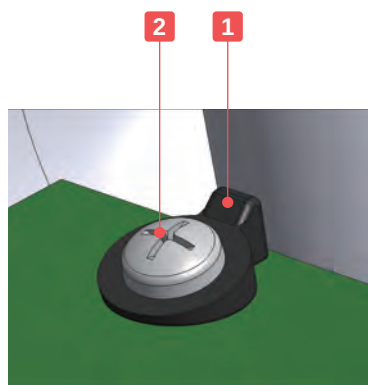
Product no. / Details

Product no.		Dimensions										Face angle	Weight (g)
● Off-white	● Black	W	D	H	a	b	c	d	e	f	g	h	
WSC10-14-5W	WSC10-14-5B	100	140	52	77	117	87	100	10	13.9	48.2	13°	145
WSC10-14-7W	WSC10-14-7B	100	140	72	77	117	87	100	22	27.4	48.2	18°	168
WSC14-14-5W	WSC14-14-5B	140	140	52	117	117	128	100	10	13.8	80.5	13°	190
WSC14-14-7W	WSC14-14-7B	140	140	72	117	117	128	100	22	27.4	80.5	18°	218
WSC18-14-5W	WSC18-14-5B	175	140	52	152	117	163	95	11.3	13.8	103.5	13°	234
WSC18-14-7W	WSC18-14-7B	175	140	72	152	117	163	95	23.7	27.4	103.5	18°	262

Accessories (Optional parts)

WSP-M2.3

INCLINED SPACER for WSC



- Due to the sloped shape of the WSC series, boss-tops are also angled. Therefore when mounting PCB on, some gap between the screw head and PCB surface will occur as shown in the diagram. WSP-M2.3 helps to fill the gap.
- EM-2.3-8 as PCB mounting screws are available for bosses in bottom base. (See page 398)



Components

No.	Part name	Pcs	Material	Color / Finish
1	Inclined spacer	4	POM	Black
2	Screw (Tapping M2.3-8)	4	Steel	Trivalent chromate

■ Recommended torque : 0.1N • m

Product no. / Details

Product no.	Suitable models	Pack of
WSP-M2.3	WSC (for bottom base PCB boss)	4

SHOCKPROOF PLASTIC ENCLOSURE

Ensure your industrial tablet, measuring equipment and controllers are protected with the silicone corner guards

PFG series



6 DIFFERENT COLOR COMBINATIONS AVAILABLE

3 corner guard colors and 2 plastic box colors available for a total of 6 color combinations to choose from. Different color combinations can be freely chosen depending on your purpose of use.

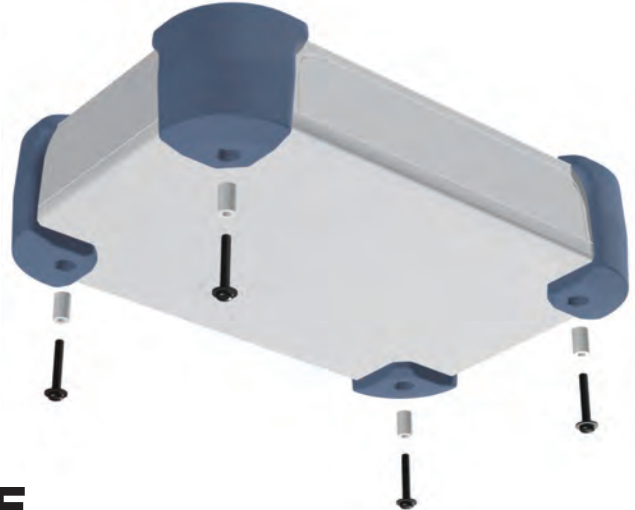


HOW TO ASSEMBLE CORNER GUARDS

1. Insert corner guards into designated holes on the top corners.



2. Insert spacers into the holes on the bottom of corner guards. Fasten bottom base and corner guards together with screws.



APPLICATION EXAMPLE

Industrial Tablet



Medical Equipment



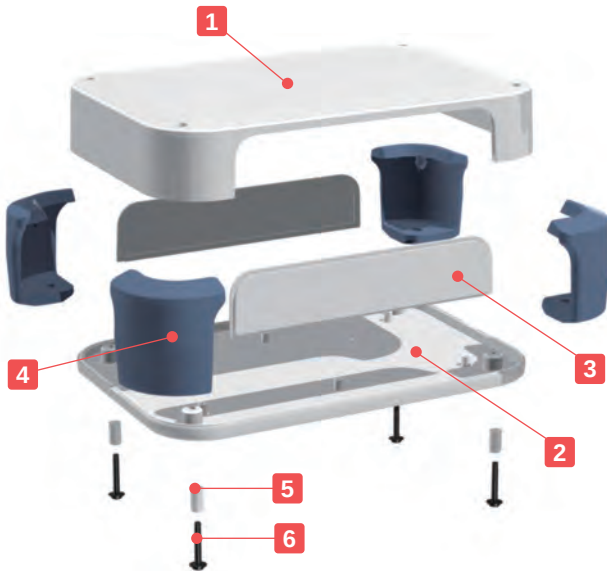
Network Device





Technical Data

Protection class: IP40
Operating temperature: -10°C ~ +60°C



- Network plastic box attached with shockproof silicone corner guards.
- Suitable for industrial tablet, measuring equipment, controller and various other applications.
- A total of 6 color combinations available with 3 corner guard colors - Dark gray, Emerald, Indigo - and 2 plastic box colors - Dark gray and Off-white.

Components

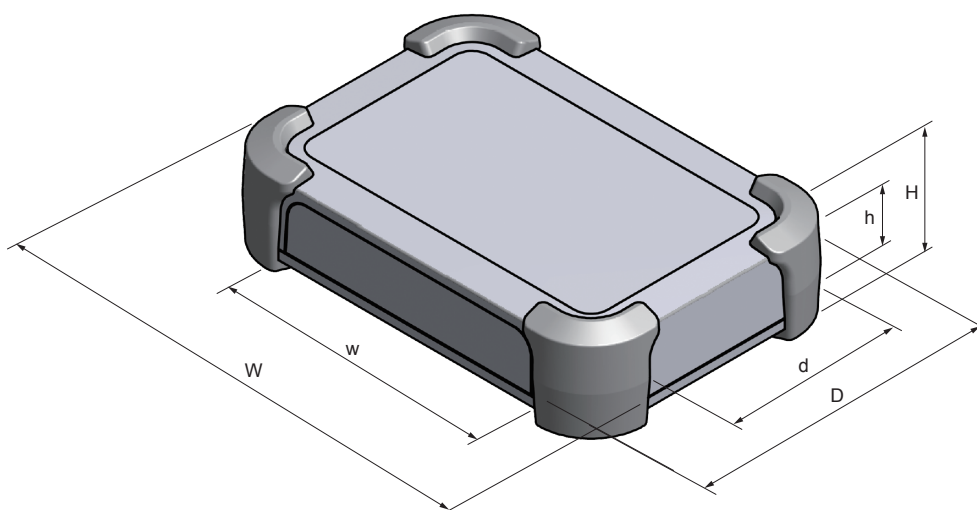
No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94V-0	Off-white • Dark gray
2	Bottom base	1	ABS UL94V-0	Off-white • Dark gray
3	Panel	2	ABS UL94V-0	Off-white • Dark gray
4	Corner guard	4	Silicone	Dark gray • Emerald • Indigo
5	Spacer	4	PA	White
6	Self-tapping screw	4	Steel	Nickel plated

Color Type

Code	D D Dark gray / Dark gray	D E Dark gray / Emerald	D I Dark gray / Indigo
Color			
Code	W D Off-white / Dark gray	W E Off-white / Emerald	W I Off-white / Indigo
Color			

PFG dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



Product no. / Details

■ Please suffix color code at the end of the product number.

Product no.	External dimensions			Internal dimensions			Weight (g)
	W	H	D	w	h	d	
PFG20-4-13 □□	208 (200)	51 (40)	143 (135)	151.6	27.3	124.4	346
PFG20-4-20 □□	208 (200)	51 (40)	208 (200)	151.6	27.3	189.4	450
PFG24-6-17 □□	248 (240)	71.5 (60)	173 (165)	187.6	47	153.2	520
PFG24-6-24 □□	248 (240)	71.5 (60)	248 (240)	187.6	47	228.2	696.5

■ () value = enclosure dimension.

Accessories (Optional parts)



Embedded battery box BC series
See page 381 ~ 383



Tapping standoff TPS series
See page 397



PCB mounting screw EM series
See page 398



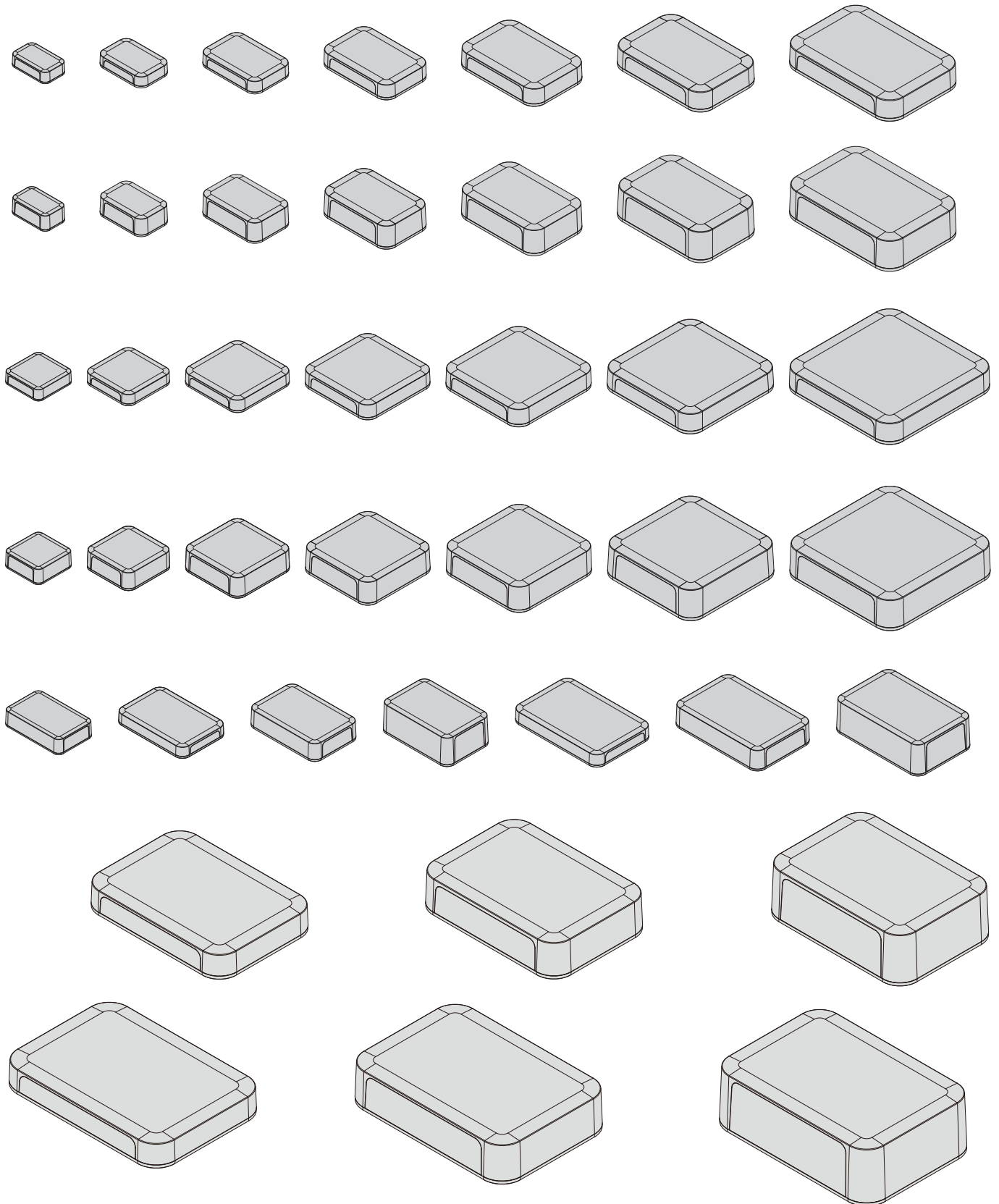
Tilt leg TLW series
See page 239

PF series **FLAT NETWORK CASE**

Huge selection, 41 different sizes are now available.

Suitable for IoT device, data transmitter/receiver, and access point.

From 80 x 50 x 22.5 to 320 x 225 x 100 mm.

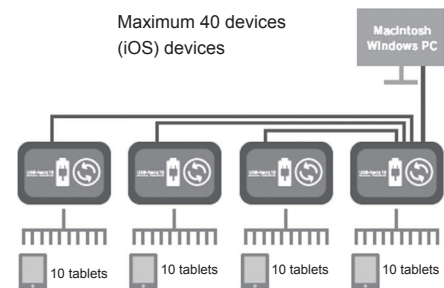


APPLICATION EXAMPLE

WiFi Access Point



USB Power Charging Hub + Data Hub



Simultaneous power charging and data transfer is possible.

Front Door Electric Opener System Controller



USB Hemodynamic Research Device



Multi Channel Data Logger



Storage Battery Monitoring System

Wireless CO₂ Monitoring System



Wireless Home Electronics Controller



Wireless Safety Confirmation System



G4 Flight Tracker



Advanced Trigger Station



iCONSE-T IoT and Sensor Network Training System



Wireless Network Data Logger



Analog Serial Converter



"SenSu" Communication Unit with Sensor



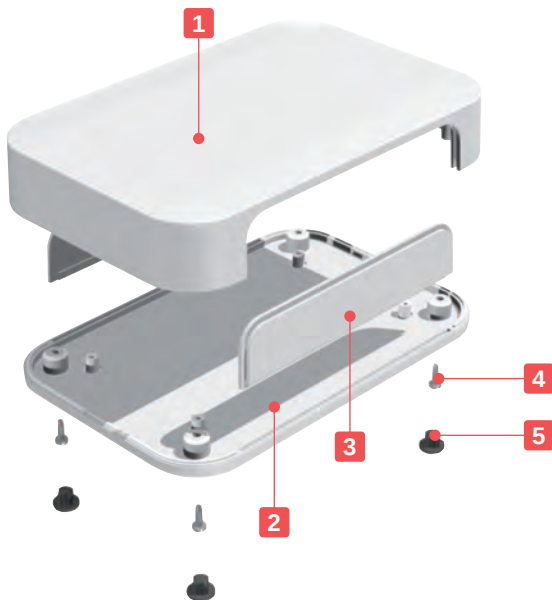
Modbus Converter





Technical Data

Protection class: IP40
Operating temperature: -10°C ~ +60°C



- A total of 41 different sizes available for selection.
- Flat designed plastic case with detachable panels.
- Made of flame-resistant ABS UL94V-0 and available in Off-white and Dark gray colors.
- Equipped with built-in bosses for PCB mounting.
- Suitable for Wi-Fi access point, measuring equipment, controller and various other applications.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94V-0	Off-white • Dark gray
2	Bottom base	1	ABS UL94V-0	Off-white • Dark gray
3	Panel	2	ABS UL94V-0	Off-white • Dark gray
4	Self-tapping screw	4	Steel	Nickel plated
5	Rubber feet*	4	Elastomer UL94HB	Dark gray

*Rubber feet are not included in PF8-□-5, PF8-□-8, PF8-3-13 models.

Accessories (Optional parts)



Embedded battery box BC series
See page 381 ~ 383



Tapping standoff TPS series
See page 397



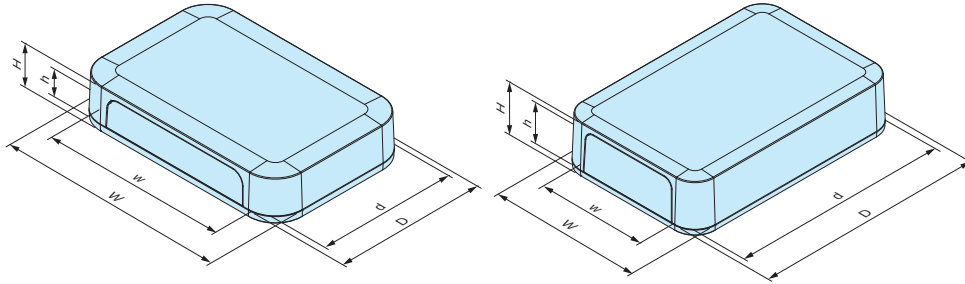
PCB mounting screw EM series
See page 398



Suspension bracket WM series
See page 391

PF dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



Product no. / Details

Product no.		External dimensions			Internal dimensions			Weight (g)
● Off-white	● Dark gray	W	H	D	w	h	d	
PF 8- 2- 5W	PF 8- 2- 5D	80	22.5	50	55.5	13.5	42.8	36.2
PF 8- 2- 8W	PF 8- 2- 8D	80	22.5	80	55.5	13.5	72.8	53.3
PF 8- 3- 5W	PF 8- 3- 5D	80	30	50	55.5	21	42.3	41.6
PF 8- 3- 8W	PF 8- 3- 8D	80	30	80	55.5	21	72.3	60.1
PF 8- 3-13W	PF 8- 3-13D	80	30	125	55.5	21	117.3	87.3
PF10- 2- 7W	PF10- 2- 7D	100	22.5	67	67.4	11.1	58.4	60
PF10- 2-10W	PF10- 2-10D	100	22.5	100	67.4	11.1	91.4	82.9
PF10- 2-15W	PF10- 2-15D	100	22.5	150	67.4	11.1	141.4	120.2
PF10- 4- 7W	PF10- 4- 7D	100	35	67	67.4	23.6	57.5	65
PF10- 4-10W	PF10- 4-10D	100	35	100	67.4	23.6	90.5	97.1
PF10- 4-15W	PF10- 4-15D	100	35	150	67.4	23.6	140.5	132.6
PF10- 6-15W	PF10- 6-15D	100	55	150	67.4	43.6	139.1	169.1
PF13- 3- 9W	PF13- 3- 9D	125	25	85	92.4	13.5	76.2	90.8
PF13- 3-13W	PF13- 3-13D	125	25	125	92.4	13.5	116.2	127.5
PF13- 3-19W	PF13- 3-19D	125	25	190	92.4	13.5	181.2	186.8
PF13- 4- 9W	PF13- 4- 9D	125	40	85	92.4	28.5	75.2	108.4
PF13- 4-13W	PF13- 4-13D	125	40	125	92.4	28.5	115.2	151.4
PF13- 4-19W	PF13- 4-19D	125	40	190	92.4	28.5	180.2	214.9
PF13- 6-19W	PF13- 6-19D	125	60	190	92.4	48.5	178.8	250.4
PF15- 3-10W	PF15- 3-10D	150	30	100	112.4	17.8	90	145.5
PF15- 3-15W	PF15- 3-15D	150	30	150	112.4	17.8	140	207.5
PF15- 5-10W	PF15- 5-10D	150	45	100	112.4	32.8	88.9	166
PF15- 5-15W	PF15- 5-15D	150	45	150	112.4	32.8	138.9	233.5
PF18- 4-12W	PF18- 4-12D	175	35	120	132.4	22.4	110.3	188.7
PF18- 4-18W	PF18- 4-18D	175	35	175	132.4	22.4	165.3	266.8
PF18- 5-12W	PF18- 5-12D	175	50	120	132.4	37.4	109.3	213.6
PF18- 5-18W	PF18- 5-18D	175	50	175	132.4	37.4	164.3	302.1
PF20- 4-13W	PF20- 4-13D	200	40	135	151.6	27.3	124.4	264
PF20- 4-20W	PF20- 4-20D	200	40	200	151.6	27.3	189.4	368.5
PF20- 6-13W	PF20- 6-13D	200	60	135	151.6	47.3	123	302.5
PF20- 6-20W	PF20- 6-20D	200	60	200	151.6	47.3	188	417
PF24- 4-17W	PF24- 4-17D	240	42.5	165	187.6	29.5	154.5	370.4
PF24- 4-24W	PF24- 4-24D	240	42.5	240	187.6	29.5	229.5	521.4
PF24- 6-17W	PF24- 6-17D	240	60	165	187.6	47	153.2	408.8
PF24- 6-24W	PF24- 6-24D	240	60	240	187.6	47	228.2	568.7
PF28- 5-20W	PF28- 5-20D	280	45	200	223.6	31.4	189.3	564.1
PF28- 7-20W	PF28- 7-20D	280	65	200	223.6	51.4	187.9	618.4
PF28- 9-20W	PF28- 9-20D	280	90	200	223.6	76.4	186.2	709.2
PF32- 5-23W	PF32- 5-23D	320	45	225	259.6	31.3	214.3	697.1
PF32- 7-23W	PF32- 7-23D	320	70	225	259.6	56.3	212.6	782.1
PF32-10-23W	PF32-10-23D	320	100	225	259.6	86.3	210.5	899.8

* H dimension does not include the height of rubber feet. (Rubber feet height = +2mm)

EMC
Shielding

- PFE series is an EMC shielded version of the PF series network plastic box coated internally with DOTITE conductive paint (acrylic paint mixed with nickel filler).
- Flat designed plastic case with detachable panels.
- Made of flame-resistant ABS UL94V-0.
- Equipped with built-in bosses for PCB mounting.
- Suitable for Wi-Fi access point, measuring equipment, controller or various other applications for desktop, wall mounting use and more.

Technical Data

Protection class: IP40
Operating temperature: -10°C ~ +60°C

Components

No.	Part name	Pcs	Material	Color / Finish	Conductive paint
1	Top cover	1	ABS UL94V-0	Off-white	DOTITE
2	Bottom base	1	ABS UL94V-0	Off-white	DOTITE
3	Panel	2	ABS UL94V-0	Off-white	DOTITE
4	Self-tapping screw	4	Steel	Nickel plated	—
5	Rubber feet	4	Elastomer	Dark gray	—

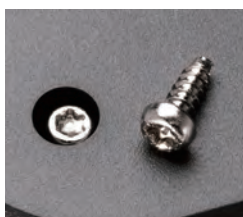
Accessories (Optional parts)



Tapping standoff TPS series
See page 397



PCB mounting screw EM series
See page 398



TORX screw MR series
See page 398



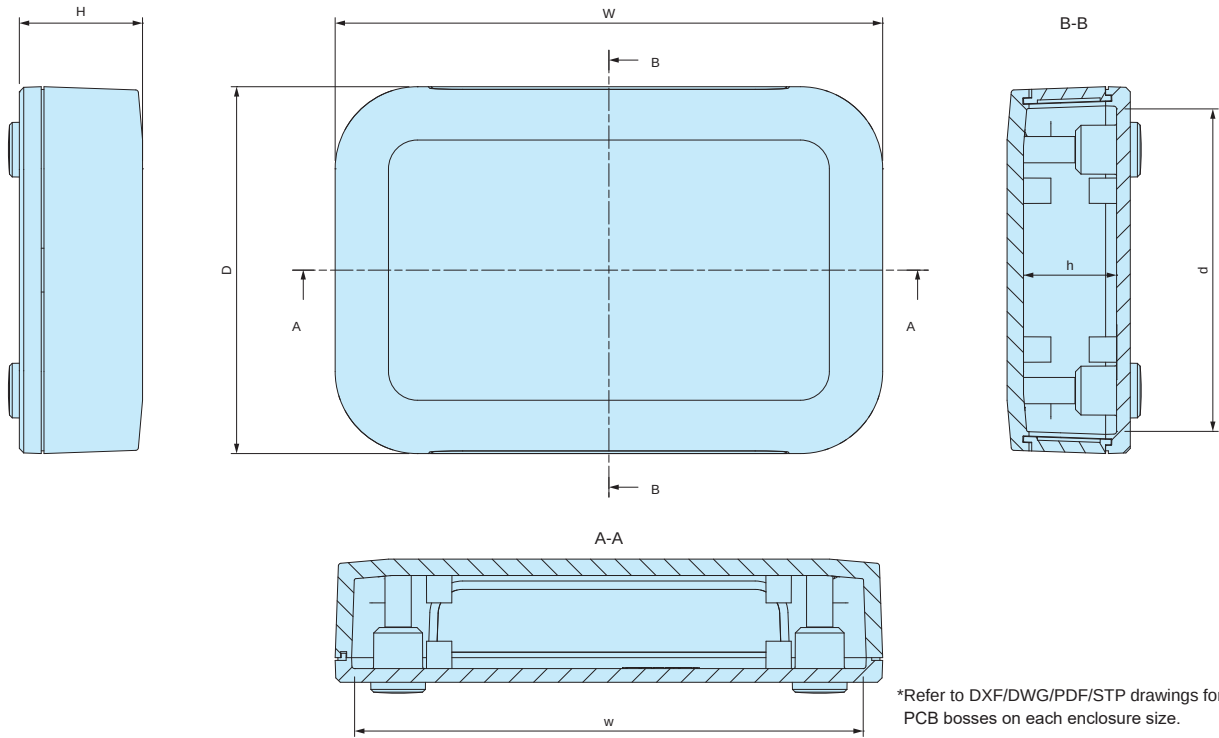
Suspension bracket WM series
See page 391



Embedded battery box BC series
See page 381 ~ 383

PFE dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



*Refer to DXF/DWG/PDF/STP drawings for number of PCB bosses on each enclosure size.

Product no. / Details

*H dimension does not include the height of rubber feet. (Rubber feet height = +2mm)

Product no.	External dimensions			Internal dimensions			Screw	Weight (g)
	W	H	D	w	h	d		
PFE13-4- 9W	125	40	85	116	75	34.5	M2.5-8 x 4 pcs	114
PFE15-3-10W	150	30	100	142	90	24	M2.5-8 x 4 pcs	152
PFE15-5-15W	150	45	150	141	139	39	M2.5-8 x 4 pcs	244.5
PFE20-4-13W	200	40	135	191.5	124.5	34	M3-8 x 4 pcs	274.5

Accessories (Optional parts)

PFRF series

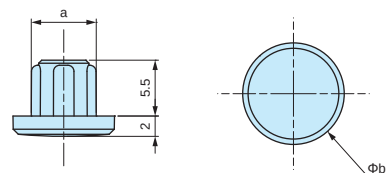
RUBBER FEET for PF • PFE



- Rubber feet for PF • PFE series.
- Inserted into the screw holes on the underside of box.
- Elastomer material is resistant against color migration.
- PF • PFE boxes comes with PFRF rubber feet. Utilize PFRF as spare or replacement.

PFRF dimensions

■ STP drawings available on our website.



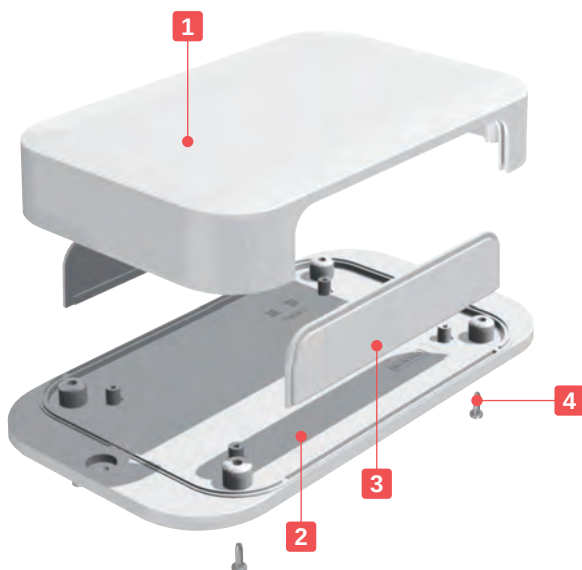
Product no. / Details

Product no.	Dimensions		Suitable models	Material	Color	Pack of
	a	b				
PFRF-M2.5D	6.4	10	PF10-2-7,10-2-10,10-2-15,10-4-7,10-4-10,10-4-15 PF10-6-15,13-3-9,13-3-13,13-3-19,13-4-9,13-4-13 PF13-4-19,13-6-19,15-3-10,15-3-15,15-5-10,15-5-15 PF18-4-12,18-4-18,18-5-12,18-5-18 PFE13-4-9,15-3-10,15-5-15	Elastomer	Dark gray	4
PFRF-M3D	7.2	11	PF20-4-13,20-4-20,20-6-13,20-6-20,24-4-17 PF24-4-24,24-6-17,24-6-24,28-5-20,28-7-20 PF28-9-20,32-5-23,32-7-23,32-10-23 PFE20-4-13	Elastomer	Dark gray	4



Technical Data

Protection class: IP40
Operating temperature: -10°C ~ +60°C



- PF plastic case with wall mounting flange bottom design.
- Made of flame-resistant ABS UL94V-0 and available in Off-white color.
- Flat designed plastic case with detachable panels.
- Total of 30 different sizes available for selection.
- Suitable for wireless LAN, Wi-Fi access point, HUB, controller and other applications.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94V-0	Off-white
2	Flanged base	1	ABS UL94V-0	Off-white
3	Panel	2	ABS UL94V-0	Off-white
4	Self-tapping screw	4	Steel	Nickel plated

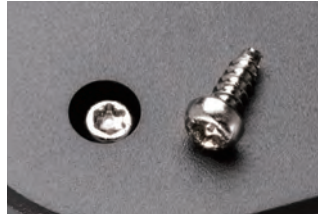
Accessories (Optional parts)



Tapping standoff TPS series
See page 397



PCB mounting screw EM series
See page 398



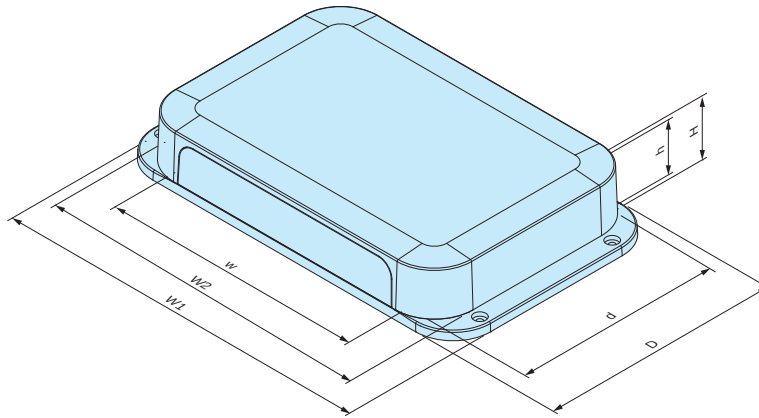
TORX screw MR series
See page 398



Adhesive standoff AST series
See page 394

PFF dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



Product no. / Details

Product no.	External dimensions				Internal dimensions			Weight (g)
	W1	W2	H	D	w	h	d	
PFF10- 2- 7W	124.3	100	22.5	67.3	67.4	11.1	58.4	60.8
PFF10- 2-10W	124.3	100	22.5	100.3	67.4	11.1	91.4	84.6
PFF10- 4- 7W	124.3	100	35	67.3	67.4	23.6	57.5	72
PFF10- 4-10W	124.3	100	35	100.3	67.4	23.6	90.5	99.1
PFF13- 3- 9W	149.3	125	25	85.3	92.4	13.5	76.2	90.8
PFF13- 3-13W	155.3	125	25	125.3	92.4	13.5	116.2	128.6
PFF13- 4- 9W	149.3	125	40	85.3	92.4	28.5	75.2	108.4
PFF13- 4-13W	155.3	125	40	125.3	92.4	28.5	115.2	152.3
PFF15- 3-10W	180.4	150	30	100.4	112.4	17.8	90	145.2
PFF15- 3-15W	180.4	150	30	150.4	112.4	17.8	140	211.3
PFF15- 5-10W	180.4	150	45	100.4	112.4	32.8	88.9	168.6
PFF15- 5-15W	180.4	150	45	150.4	112.4	32.8	138.9	235
PFF18- 4-12W	205.4	175	35	120.4	132.4	22.4	110.3	192.1
PFF18- 4-18W	205.4	175	35	175.4	132.4	22.4	165.3	209.8
PFF18- 5-12W	205.4	175	50	120.4	132.4	37.4	109.3	215.8
PFF18- 5-18W	205.4	175	50	175.4	132.4	37.4	164.3	299.7
PFF20- 4-13W	230.5	200	40	135.5	151.6	27.3	124.4	267.7
PFF20- 4-20W	230.5	200	40	200.5	151.6	27.3	189.4	376
PFF20- 6-13W	230.5	200	60	135.5	151.6	47.3	123	309.7
PFF20- 6-20W	230.5	200	60	200.5	151.6	47.3	188	422.9
PFF24- 4-17W	270.5	240	42.5	165.5	187.6	29.5	154.5	366.9
PFF24- 4-24W	270.5	240	42.5	240.5	187.6	29.5	229.5	513.5
PFF24- 6-17W	270.5	240	60	165.5	187.6	47	153.2	403.8
PFF24- 6-24W	270.5	240	60	240.5	187.6	47	228.2	560.8
PFF28- 5-20W	310.5	280	45	200.5	223.2	31.4	189.3	547.5
PFF28- 7-20W	310.5	280	65	200.5	223.2	51.4	187.9	606.6
PFF28- 9-20W	310.5	280	90	200.5	223.2	76.4	186.2	694.1
PFF32- 5-23W	350.5	320	45	225.5	259.2	31.3	214.3	679.9
PFF32- 7-23W	350.5	320	70	225.5	259.2	56.3	212.6	767.4
PFF32-10-23W	350.5	320	100	225.5	259.2	86.3	210.5	887.4

TWF series FLANGED PLASTIC ENCLOSURE

Multi-purpose flanged enclosure designed for use as a wall-mounted device/terminal.

23 different sizes in 2 colors available.

Recommended to be used as measurement instruments, wireless communication gadgets, controller devices and more.

APPLICATION EXAMPLE

EtherCAT Device



Solar Panel Charge Controller



Wireless RFID Tag Search Device



RFID Tag



CO₂ Sensor



Temperature • Humidity Sensor



**Remote Power
Control Unit**



**Communication
Converter**



Roof Sprinkler Controller



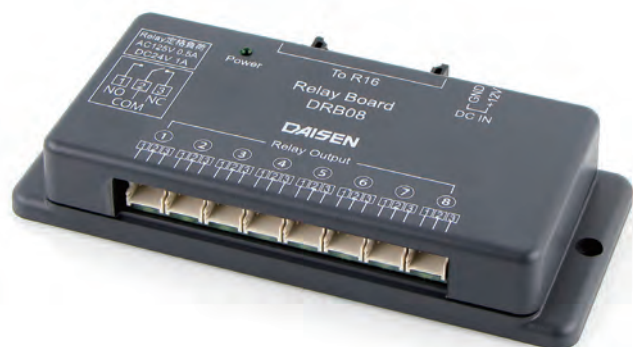
LED Lighting RGB Controller



Private LoRA Gateway



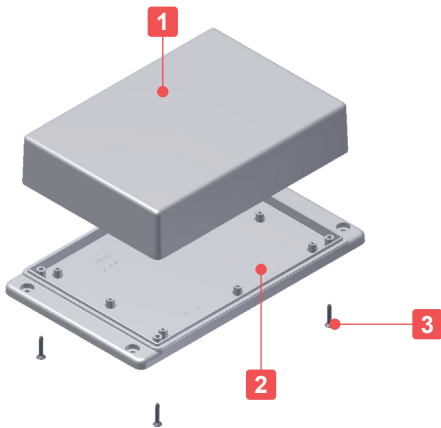
Contact Relay Output Converter





Technical Data

Protection class: IP40
Operating temperature: -10°C ~ +60°C



- Multi-purpose flanged enclosure designed for use as a wall-mounted device/terminal.
- 23 different sizes in 2 colors. Made of ABS UL94V-0.
- Equipped with screwing bosses for PCB.
- Recommended to be used as measurement instruments, wireless communication gadgets, controller devices and more.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	ABS UL94V-0	Off-white • Dark gray
2	Flanged base	1	ABS UL94V-0	Off-white • Dark gray
3	Self-tapping screw	2 / 4	Steel	Nickel plated • Black trivalent chromate

Accessories (Optional parts)



Tapping standoff TPS series
See page 397



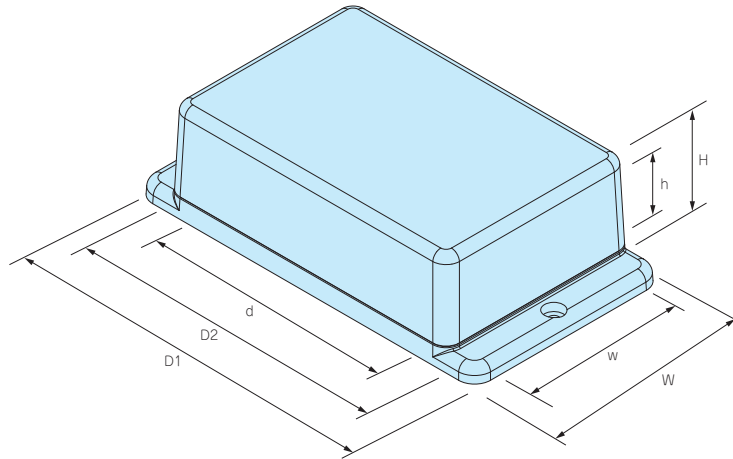
PCB mounting screw EM-2.3
See page 398



TORX screw MR series
See page 398

TWF dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



Color Type

Code	Cover	Flanged base	Screw
W	Off-white	Off-white	Nickel plated
D	Dark gray	Dark gray	Black trivalent chromate

Product no. / Details

Product no.		External dimensions				Internal dimensions			Screw	Weight (g)
● Off-white	● Dark gray	W	H	D1	D2	w	h	d		
TWF 4-2- 5W	TWF 4-2- 5D	35.4	22	70.4	50	27.2	13.2	32.4	M2.6-12 x 2 pcs	19.7
TWF 5-2- 5W	TWF 5-2- 5D	50.4	17	70.4	50	42.7	8	31.9	M2.6-12 x 4 pcs	21.5
TWF 5-2- 7W	TWF 5-2- 7D	50.4	17	90.4	70	43.1	8	52.9	M2.6-12 x 4 pcs	29
TWF 5-3- 5W	TWF 5-3- 5D	50.4	27	70.4	50	42.7	18	31.9	M2.6-12 x 4 pcs	26.5
TWF 5-3- 7W	TWF 5-3- 7D	50.4	29.5	90.4	70	43.1	20.5	52.9	M2.6-12 x 4 pcs	36
TWF 5-3- 9W	TWF 5-3- 9D	45.6	27.5	111	90	37.2	17.5	70.4	M2.6-12 x 4 pcs	43
TWF 5-4- 7W	TWF 5-4- 7D	50.4	42	90.4	70	42.5	33	52.9	M2.6-12 x 4 pcs	43.5
TWF 7-2-11W	TWF 7-2-11D	70.6	20.5	127	105	61.4	10.5	83	M2.6-12 x 4 pcs	66.5
TWF 7-3-13W	TWF 7-3-13D	65.5	25.5	150	130	57.7	14.2	105	M3 -16 x 4 pcs	87
TWF 7-4-11W	TWF 7-4-11D	70.6	35.5	127	105	61.4	25.5	83	M2.6-12 x 4 pcs	82
TWF 7-5-11W	TWF 7-5-11D	70.6	50.5	127	105	61.1	40.5	83	M2.6-12 x 4 pcs	96.5
TWF 7-5-13W	TWF 7-5-13D	65.5	50	150	130	55.9	38.7	105	M3 -16 x 4 pcs	114
TWF 8-2- 8W	TWF 8-2- 8D	80.6	23.5	100.6	80	71.5	13.5	59	M2.6-12 x 4 pcs	62
TWF 8-4- 8W	TWF 8-4- 8D	80.6	43.5	100.6	80	71.5	33.5	59	M2.6-12 x 4 pcs	82
TWF 9-4-17W	TWF 9-4-17D	86	35	190	170	76.5	23.7	143	M3 -16 x 4 pcs	150
TWF 9-6-17W	TWF 9-6-17D	86	60	190	170	75.7	48.7	143	M3 -16 x 4 pcs	184
TWF11-5-22W	TWF11-5-22D	110.3	45	250.6	220	100.8	33.7	191	M3 -16 x 4 pcs	250
TWF11-8-22W	TWF11-8-22D	110.3	75	250.6	220	99.3	63.7	191	M3 -16 x 4 pcs	303
TWF13-3-13W	TWF13-3-13D	125.6	25	155.6	125	114.5	13.7	100	M3 -16 x 4 pcs	155
TWF13-3-18W	TWF13-3-18D	125.6	25	205.6	175	114.5	13.7	148	M3 -16 x 4 pcs	199
TWF13-5-13W	TWF13-5-13D	125.6	45	155.6	125	114.5	33.7	100	M3 -16 x 4 pcs	189
TWF13-5-18W	TWF13-5-18D	125.6	45	205.6	175	114.5	33.7	148	M3 -16 x 4 pcs	242
TWF13-7-18W	TWF13-7-18D	125.6	65	205.6	175	114.2	53.7	148	M3 -16 x 4 pcs	281

TWS series

PLASTIC ENCLOSURE with SILICONE PROTECTOR

Universal plastic enclosure with protective silicone protectors which functions both as an anti-slip grip and impact protection. Available in 9 sizes and selectable in 8 different color combinations. Suitable for measuring instruments, wireless communication devices, portable controller, data logger, and more.

APPLICATION EXAMPLE

Digital Power Amplifier



GPS Data Logger



6 Channel Data Logger



Battery Voltage Recorder



Tester for Photovoltaic System



Solar Cell Bypass Diode Checker



PV Insulation Resistance Checker for Solar Cell



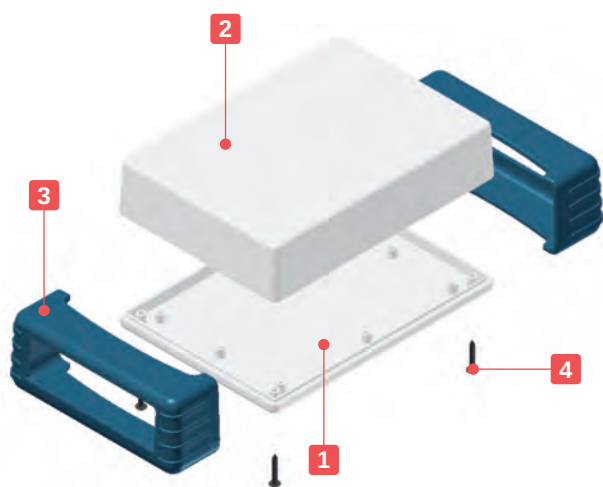
Vibration Monitor





Technical Data

Protection class : IP40
Operating temperature : -10°C ~ +60°C



- Universal plastic enclosure with protective silicone protectors which functions both as an anti-slip grip and impact protection.
- Available in 9 sizes and selectable in 8 different color combinations.
- Enclosure is in B (Black - ABS UL94HB) and W (Off-white - ABS UL94V-0) model.
- Plastic case and protective silicone with screw fastening.
*Note: utilize screws packaged with the silicone protectors for assembly.
- Use caution when assembling. Overtightening may damage the enclosure and silicone protectors.
- Custom color silicone protector is available from just 1 set. For 500 sets or more, manufacturing costs will be similar to a standard color. Please inquire for more details.

Components

No.	Part name	Pcs	Material : Color / Finish
1	Cover	1	ABS UL94HB : Black • ABS UL94V-0 : Off-white
2	Bottom base	1	ABS UL94HB : Black • ABS UL94V-0 : Off-white
3	Silicone protector	2	Silicone : Yellow • Navy • Light gray • Black
4	Self-tapping screw	4	Steel M3-20 / Black trivalent chromate

Accessories (Optional parts)



Embedded battery box BC series
See page 381 ~ 383



Adhesive standoff AST series
See page 394



Tapping standoff TPS series
See page 397



PCB mounting screw EM series
See page 398

Color Type

Code	B Y Black / Yellow	B N Black / Navy	B L Black / Light gray	B B Black / Black
Color				
Code	W Y Off-white / Yellow	W N Off-white / Navy	W L Off-white / Light gray	W B Off-white / Black
Color				

ABS UL94HB (Black enclosure)

Product no. / Details

■ Please suffix color code at the end of the product number.

Product no.	W	H	D	Weight (g)
TWS 7-3-13B□	71 (65)	32 (25.6)	136 (130)	117
TWS 7-5-13B□	71 (65)	56 (50.1)	136 (130)	147.5
TWS 9-4-17B□	91.5 (85.5)	41.5 (35.5)	176 (170)	193
TWS 9-6-17B□	91.5 (85.5)	66.5 (60.5)	176 (170)	243
TWS11-5-22B□	116 (110)	51.5 (45.3)	226 (220)	325.5
TWS11-8-22B□	116 (110)	81.5 (75.3)	226 (220)	399
TWS13-5-13B□	131 (125)	51 (45)	131 (125)	269.5
TWS13-5-18B□	131 (125)	51 (45)	181 (175)	322
TWS13-7-18B□	131 (125)	71 (65)	181 (175)	371

■ () value = enclosure dimension.

ABS UL94V-0 (Off-white enclosure)

Product no. / Details

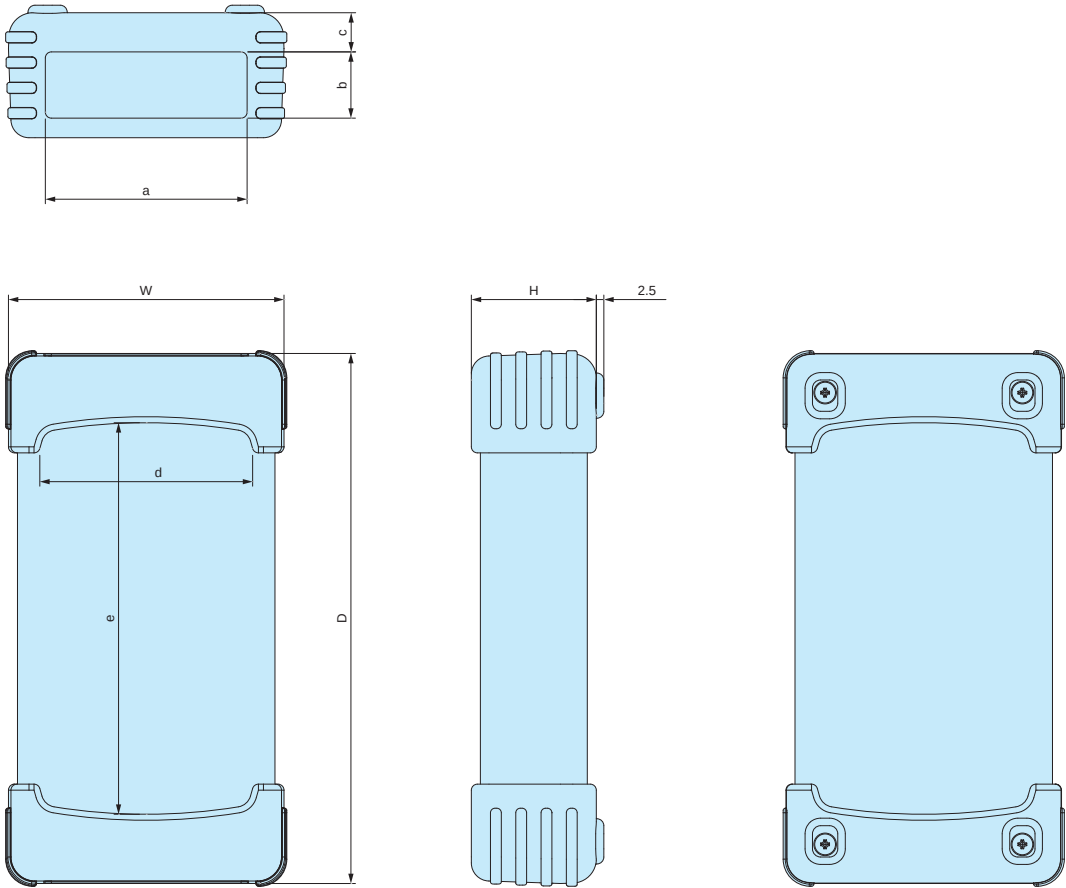
■ Please suffix color code at the end of the product number.

Product no.	W	H	D	Weight (g)
TWS 7-3-13W□	71 (65)	32 (25.6)	136 (130)	126
TWS 7-5-13W□	71 (65)	56 (50.1)	136 (130)	163
TWS 9-4-17W□	91.5 (85.5)	41.5 (35.5)	176 (170)	211
TWS 9-6-17W□	91.5 (85.5)	66.5 (60.5)	176 (170)	266
TWS11-5-22W□	116 (110)	51.5 (45.3)	226 (220)	356.5
TWS11-8-22W□	116 (110)	81.5 (75.3)	226 (220)	438
TWS13-5-13W□	131 (125)	51 (45)	131 (125)	294
TWS13-5-18W□	131 (125)	51 (45)	181 (175)	353
TWS13-7-18W□	131 (125)	71 (65)	181 (175)	407.5

■ () value = enclosure dimension.

TWS dimensions

■ DXF/DWG/PDF/STP drawings available on our website.

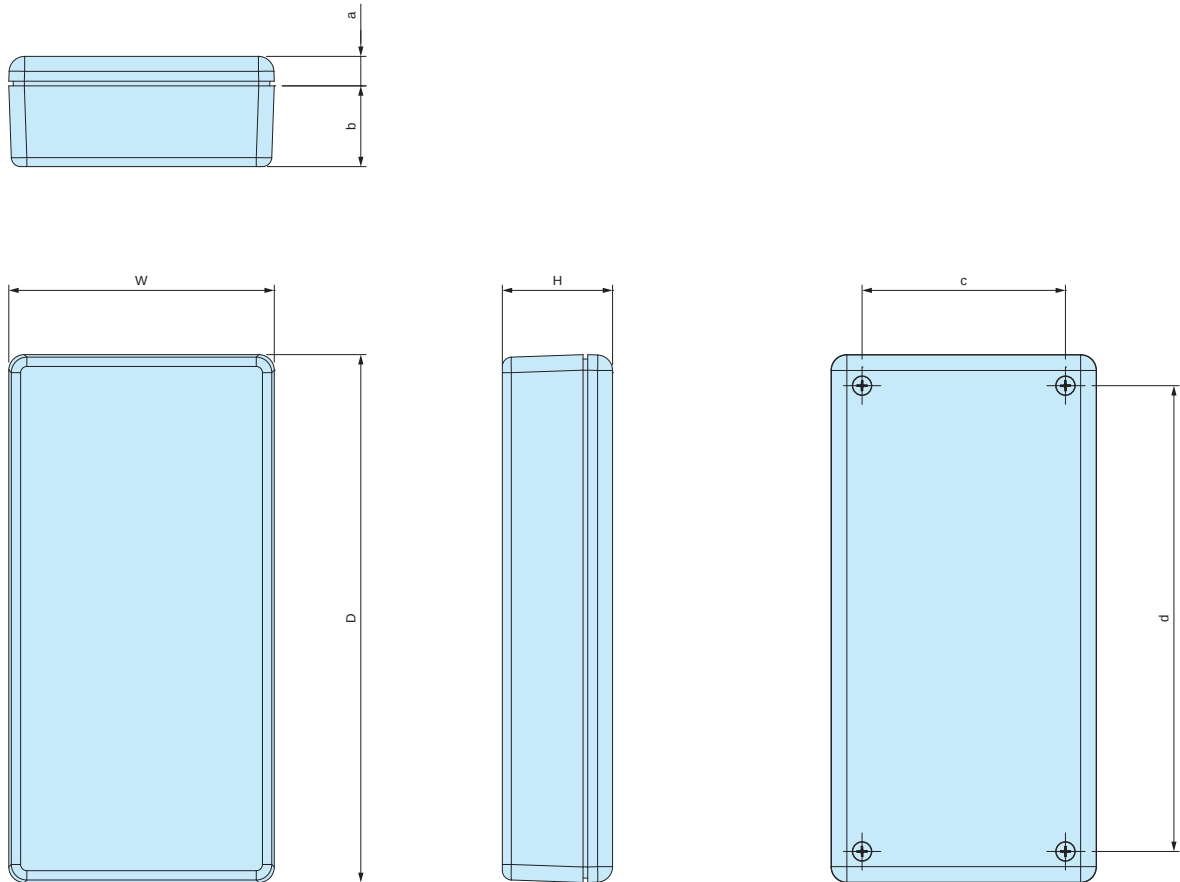


■ Please suffix color code at the end of the product number.

Product no.	W	H	D	a	b	c	d	e
TWS 7-3-13□□	71	32	136	52	13.5	11.8	54	98
TWS 7-5-13□□	71	56	136	52	37.5	11.9	54	98
TWS 9-4-17□□	91.5	41.5	176	67	22	13	71	130
TWS 9-6-17□□	91.5	66.5	176	67	46.5	13.3	71	130
TWS11-5-22□□	116	51.5	226	80	29	14.3	89	166
TWS11-8-22□□	116	81.5	226	80	58	14.5	89	166
TWS13-5-13□□	131	51	131	101	29.5	13.5	104	76
TWS13-5-18□□	131	51	181	101	29.5	13.5	104	126
TWS13-7-18□□	131	71	181	101	48.5	14	104	126

Enclosure dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



■ Please suffix color code at the end of the product number.

Product no.	W	H	D	a	b	c	d
TWS 7-3-13□□	65	25.6	130	8.1	17.5	47	112
TWS 7-5-13□□	65	50.1	130	8.1	42	47	112
TWS 9-4-17□□	85.5	35.5	170	9.5	26	65.5	150
TWS 9-6-17□□	85.5	60.5	170	9.5	51	65.5	150
TWS11-5-22□□	110	45.3	220	10.3	35	88	198
TWS11-8-22□□	110	75.3	220	10.3	65	88	198
TWS13-5-13□□	125	45	125	8.5	36.5	107	107
TWS13-5-18□□	125	45	175	8.5	36.5	105	155
TWS13-7-18□□	125	65	175	8.5	56.5	105	155



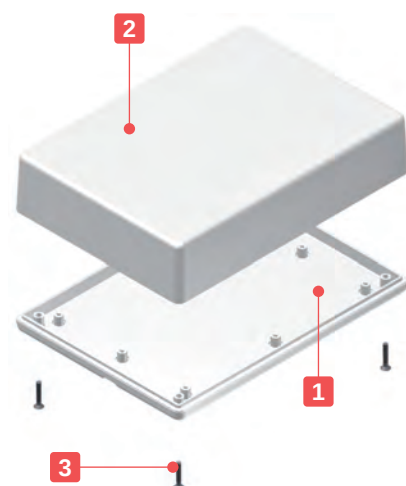
Technical Data

Protection class : IP40
Operating temperature : -10°C ~ +60°C

- Universal plastic enclosure with screw fastening.
- 26 sizes are available in 2 colors; Black (ABS UL94HB) and Off-white (ABS UL94V-0).
- Suitable for measuring instruments, testing devices, wireless communication devices, medical devices, and more.

Components

No.	Part name	Pcs	Material : Color / Finish
1	Cover	1	TW : ABSUL94HB / Black
			TWN : ABS UL94V-0 / Off-white
2	Bottom base	1	TW : ABSUL94HB / Black
			TWN : ABS UL94V-0 / Off-white
3	Self-tapping screw	2 or 4	TW : Steel / Black trivalent chromate
			TWN : Steel / Nickel plated



Accessories (Optional parts)



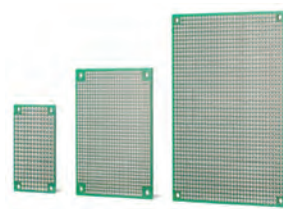
Silicone band SIB series
See page 90



Suspension bracket WM series
See page 391



Embedded battery box BC series
See page 381 ~ 383



Universal PCB PCB series
See website



Adhesive standoff AST series
See page 394



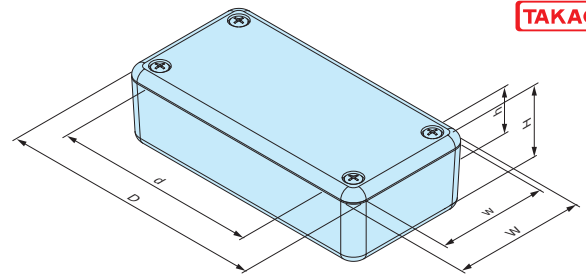
PCB mounting screw EM series
See page 398



Tapping standoff TPS series
See page 397

Color Type

Series	Code	Color	Screw
TW	B	Black	Black trivalent chromate
TWN	W	Off-white	Nickel plated



TW series (ABS UL94HB)

■ DXF/DWG/PDF/STP drawings available on our website.

Product no. / Details

Product no.	External dimensions			Internal dimensions			Screw (Self-tapping flat head)	Weight (g)
	W	H	D	w	h	d		
TW 4-2- 5B	35	20	50	28.2	12	32.6	M2.6-12 x 2 pcs	13.5
TW 4-2- 6B	35	20	60	28.2	12	42.6	M2.6-12 x 2 pcs	15.5
TW 4-2- 8B	40.3	20	80.3	33.5	12	62.5	M2.6-12 x 2 pcs	22
TW 5-2- 5B	50	15	50	42.8	7	31.9	M2.6-12 x 4 pcs	18
TW 5-2- 7B	50	15	70	43.2	7	52.9	M2.6-12 x 4 pcs	22
TW 5-3- 5B	50	25	50	42.8	17	31.9	M2.6-12 x 4 pcs	22
TW 5-3- 7B	50	27.5	70	43.2	19.5	52.9	M2.6-12 x 4 pcs	29
TW 5-3- 9B	45	25	90	37.7	16	69.4	M3-12 x 4 pcs	30.5
TW 5-3-10B	50	30	100	42.4	20.8	80.8	M2.6-12 x 4 pcs	41.5
TW 5-4- 7B	50	40	70	42.5	32	52.9	M2.6-12 x 4 pcs	35
TW 7-2-11B	70	20	105	61.2	10.5	83	M2.6-14 x 4 pcs	56.5
TW 7-3-13B	65	25.6	130	55.3	14.3	105	M3-16 x 4 pcs	76
TW 7-4-11B	70	35	105	61.2	25.5	83	M2.6-14 x 4 pcs	70
TW 7-5-11B	70	50	105	61.1	40.5	83	M2.6-14 x 4 pcs	83
TW 7-5-13B	65	50.1	130	55.3	38.8	105	M3-16 x 4 pcs	100
TW 8-2- 8B	80	20	80	71.6	10.5	59	M2.6-12 x 4 pcs	49
TW 8-4- 8B	80	40	80	71.6	30.5	59	M2.6-12 x 4 pcs	65
TW 9-4-17B	85.5	35.5	170	75.7	24	143	M3-16 x 4 pcs	133
TW 9-6-17B	85.5	60.5	170	75.7	49	143	M3-16 x 4 pcs	168
TW11-5-22B	110	45.3	220	100.1	33.8	191	M3-16 x 4 pcs	223
TW11-8-22B	110	75.3	220	99.3	63.8	191	M3-16 x 4 pcs	277
TW13-3-13B	125	25	125	114.5	13.7	100	M3-16 x 4 pcs	135
TW13-3-18B	125	25	175	114.5	13.7	148	M3-16 x 4 pcs	184.5
TW13-5-13B	125	45	125	114.5	33.7	100	M3-16 x 4 pcs	165.5
TW13-5-18B	125	45	175	114.5	33.7	148	M3-16 x 4 pcs	218
TW13-7-18B	125	65	175	114.2	53.7	148	M3-16 x 4 pcs	254

TWN series (ABS UL94V-0)

Product no. / Details

Product no.	External dimensions			Internal dimensions			Screw (Self-tapping flat head)	Weight (g)
	W	H	D	w	h	d		
TWN 4-2- 5W	35	20	50	28.2	12	32.6	M2.6-12 x 2 pcs	16.5
TWN 4-2- 6W	35	20	60	28.2	12	42.6	M2.6-12 x 2 pcs	18
TWN 4-2- 8W	40.3	20	80.3	33.5	12	62.5	M2.6-12 x 2 pcs	26
TWN 5-2- 5W	50	15	50	42.8	7	31.9	M2.6-12 x 4 pcs	20
TWN 5-2- 7W	50	15	70	43.2	7	52.9	M2.6-12 x 4 pcs	24.5
TWN 5-3- 5W	50	25	50	42.8	17	31.9	M2.6-12 x 4 pcs	26
TWN 5-3- 7W	50	27.5	70	43.2	19.5	52.9	M2.6-12 x 4 pcs	33
TWN 5-3- 9W	45	25	90	37.7	16	69.4	M3-16 x 4 pcs	35
TWN 5-3-10W	50	30	100	42.4	20.8	80.8	M2.6-12 x 4 pcs	46.5
TWN 5-4- 7W	50	40	70	42.5	32	52.9	M2.6-12 x 4 pcs	39.5
TWN 7-2-11W	70	20	105	61.2	10.5	83	M2.6-14 x 4 pcs	64.5
TWN 7-3-13W	65	25.6	130	55.3	14.3	105	M3-16 x 4 pcs	85
TWN 7-4-11W	70	35	105	61.2	25.5	83	M2.6-14 x 4 pcs	80
TWN 7-5-11W	70	50	105	61.1	40.5	83	M2.6-14 x 4 pcs	94.5
TWN 7-5-13W	65	50.1	130	55.3	38.8	105	M3-16 x 4 pcs	115.5
TWN 8-2- 8W	80	20	80	71.6	10.5	59	M2.6-12 x 4 pcs	55.5
TWN 8-4- 8W	80	40	80	71.6	30.5	59	M2.6-12 x 4 pcs	75
TWN 9-4-17W	85.5	35.5	170	75.7	24	143	M3-16 x 4 pcs	151
TWN 9-6-17W	85.5	60.5	170	75.7	49	143	M3-16 x 4 pcs	191
TWN11-5-22W	110	45.3	220	100.1	33.8	191	M3-16 x 4 pcs	254
TWN11-8-22W	110	75.3	220	99.3	63.8	191	M3-16 x 4 pcs	316
TWN13-3-13W	125	25	125	114.5	13.7	100	M3-16 x 4 pcs	156.5
TWN13-3-18W	125	25	175	114.5	13.7	148	M3-16 x 4 pcs	206.5
TWN13-5-13W	125	45	125	114.5	33.7	100	M3-16 x 4 pcs	190
TWN13-5-18W	125	45	175	114.5	33.7	148	M3-16 x 4 pcs	249
TWN13-7-18W	125	65	175	114.2	53.7	148	M3-16 x 4 pcs	290.5

TWSC series

SILICONE PROTECTOR for TW•TWN

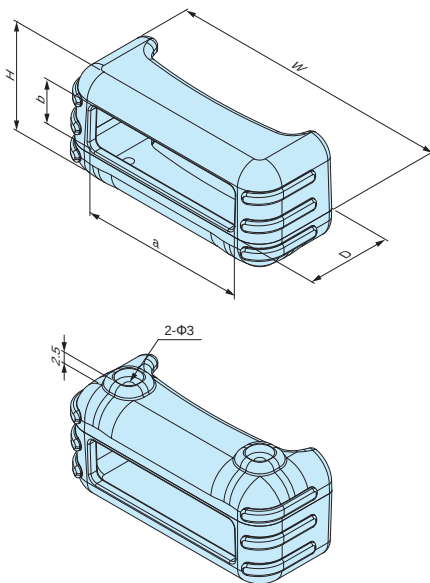
Color Type

Code	Y Yellow	N Navy	L Light gray	B Black
Color				

- Silicone Protector for TW and TWN series. Selectable in 4 colors.
- Available as a set of 2 pcs.
- Use caution when assembling. Overtightening may damage the enclosure and silicone protectors.

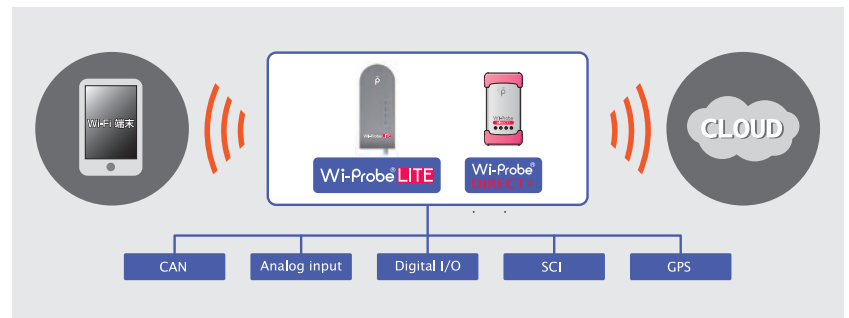
TWSC dimensions

■ DXF/DWG/PDF drawings available on our website.



APPLICATION EXAMPLE

Wi-Probe DIRECT2 Monitoring Device



*Pink shown above is custom color.

Components

Part name	Pcs	Material	Color / Finish
Silicone protector	1 set (2 pcs)	Silicone	Yellow • Navy • Light gray • Black
Self-tapping screw	4	Steel M3-20	Black trivalent chromate

Product no. / Details

■ Please suffix color code at the end of the product number.

Product no.	W	H	D	a	b	Suitable models	Weight (g)
TWSC 7-3□	71	32	27	52	13.5	TW • TWN 7-3-13	41
TWSC 7-5□	71	56	27	52	37.5	TW • TWN 7-5-13	47.5
TWSC 9-4□	91.5	41.5	33	67	22	TW • TWN 9-4-17	60
TWSC 9-6□	91.5	66.5	33	67	46.5	TW • TWN 9-6-17	75
TWSC11-5□	116	51.5	40	80	29	TW • TWN11-5-22	102.5
TWSC11-8□	116	81.5	40	80	58	TW • TWN11-8-22	122
TWSC13-5□	131	51	38	101	29.5	TW • TWN13-5-13 TW • TWN13-5-18	104
TWSC13-7□	131	71	38	101	48.5	TW • TWN13-7-18	117

- Custom color is available from just 1 set. For 500 sets or more, manufacturing costs will be similar to a standard color. Please inquire for more details. For custom color order, please specify **PANTONE®** color code.



SIB series

SILICONE BAND

Utilization example

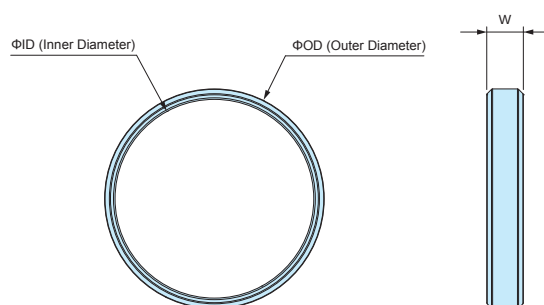


- Silicone band designed to fit TW and TWN series.
Refer to the table below for size suitability.
- Silicone band provides both shock resistance and non-slip grips for the TW & TWN enclosures.

Color Type

Code	R Red	O Orange	Y Yellow	G Green	C Cyan	N Navy	L Light gray	B Black
Color								

SIB dimensions



Components

Part name	Pcs	Material	Color
Silicone band	Pair (2 pcs)	Silicone	Red • Orange • Yellow • Green • Cyan • Navy • Light gray • Black

Product no. / Details

■ Please suffix color code at the end of the product number.

Product no.	W	ID	OD	Suitable models	Weight (g)
SIB-21□	6	21	25	TW • TWN4-2-5 • 4-2-6 • 4-2-8 • 5-2-5 • 5-2-7 • 5-3-9	2
SIB-38□	7	38	42	TW • TWN5-3-5 • 5-3-7 • 5-4-7 • 5-3-10 • 7-2-11 • 7-4-11 7-3-13 • 8-2-8	4
SIB-58□	8	58	63	TW • TWN7-5-11 • 7-5-13 • 8-4-8 • 9-4-17	10
SIB-72□	10	72	77	TW • TWN9-6-17 • 11-5-22 • 11-8-22 • 13-3-13 • 13-5-13 13-3-18 • 13-5-18 • 13-7-18	14

ECONOMICAL OUTDOOR NETWORK BOX

Unique construction rainproof box

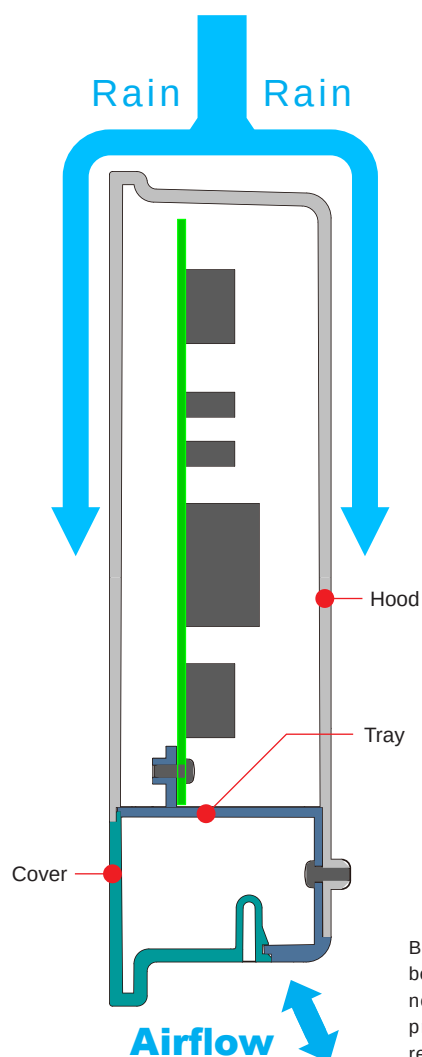
OB series

REASONS for ECONOMICAL

1. No Gasket required by the unique construction
2. Wall/Pole bracket integrated

Unique seamless construction

No rain entry by the seamless construction without gasket nor joint.



By having a slight gap between the cover and tray, no ventilation plug for the pressure equalization is required.

Wall • Pole mounting bracket integrated

The slit of the integrated bracket in the backside can hold the pole mounting belts. And the hanging holes can be utilize for wall mounting.



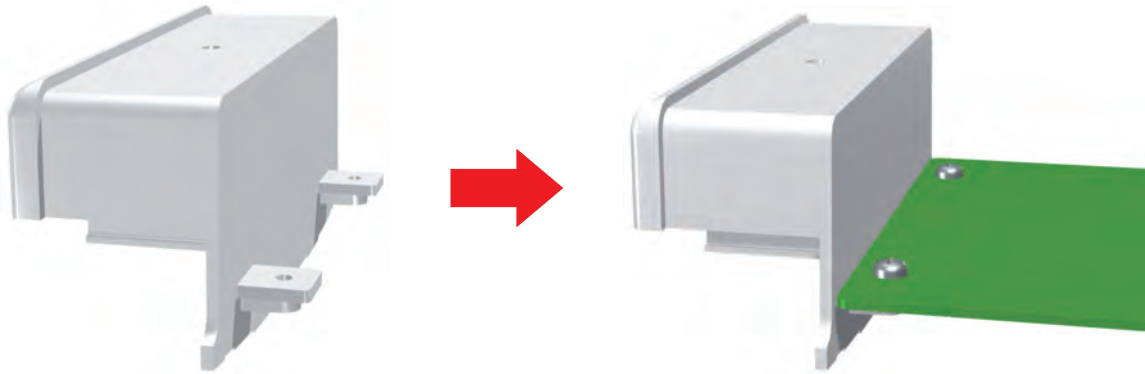
Weather-resistant ASA material

ASA material is resistant to deterioration and discoloration from ultraviolet rays. Perfect for use as outdoor communication or network devices.

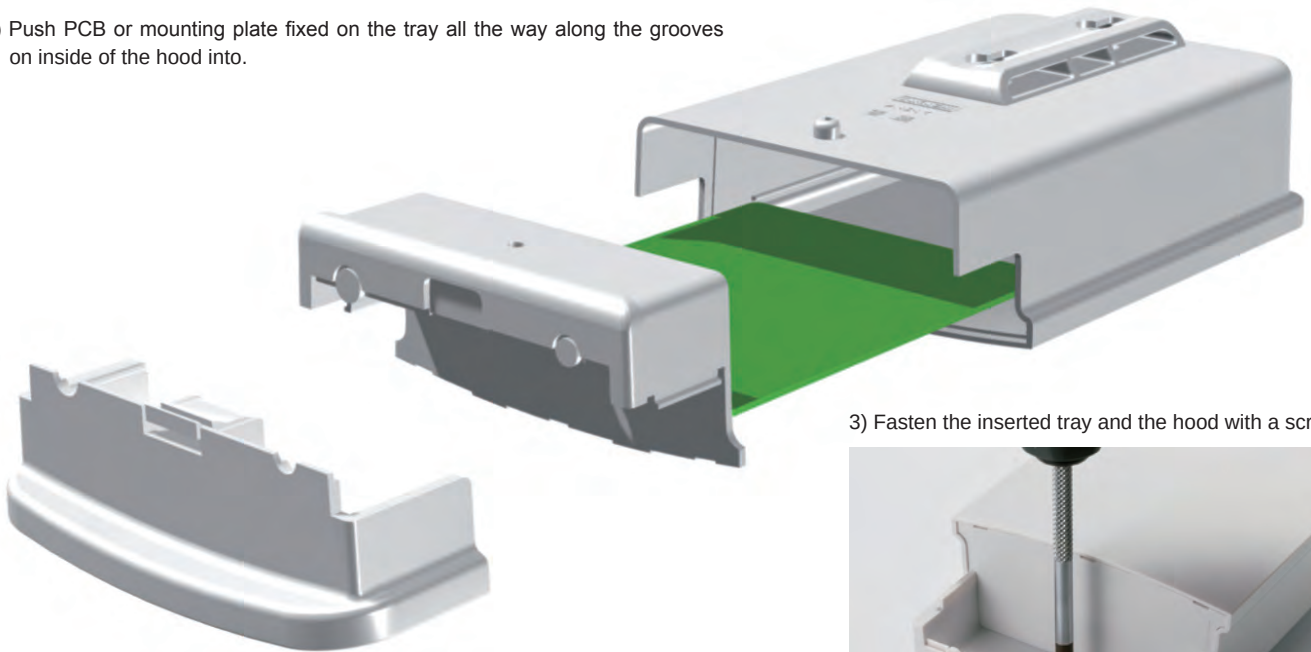


How to install PCB • Mounting plate

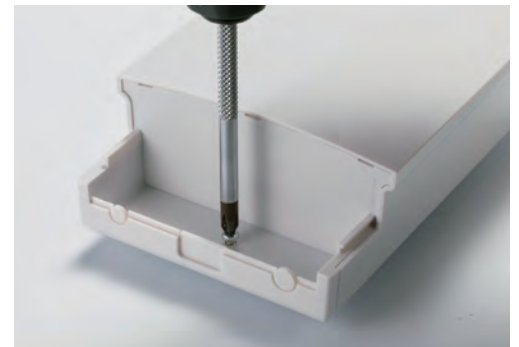
1) Fix PCB or mounting plate on the tray with screws.



2) Push PCB or mounting plate fixed on the tray all the way along the grooves on inside of the hood into.



3) Fasten the inserted tray and the hood with a screw.



Easy knock-out hole punching & cover replacement

Tray comes with knock-out holes for wiring. Knock-out holes can easily be punched out through with a plier or a nipper. The cover can be easily removed with one touch, hence it is an excellent structure for performing maintenance. For wiring, please machine cutout/hole on the side-wall of the tray as shown in the installation example below.



Connector installation example





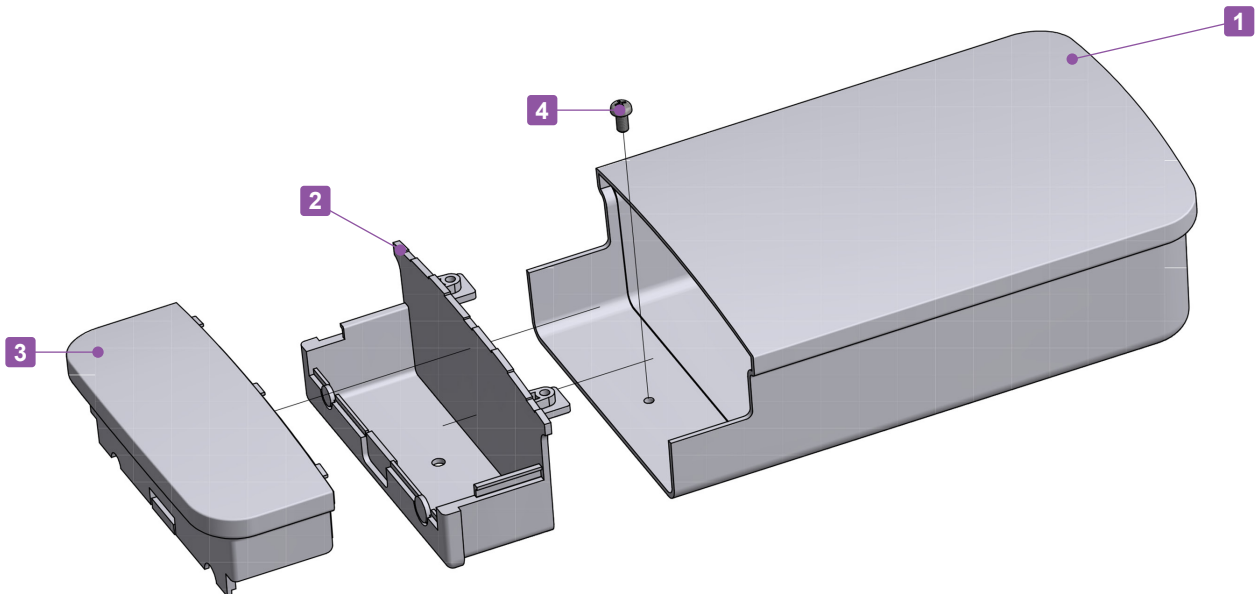
- Unique seamless construction and rainproof outdoor network box.
Although it is IP44, it can completely protect the internal components against rain when installed vertically.
- ASA material is resistant to deterioration and discoloration from ultraviolet rays.
Perfect for use as outdoor communication devices.
- Bracket integrated in the backside equipped with the slits allows for pole mounting belt to be passed through the slit for pole mounting, while the hanging holes enable it to be secured onto wall hooks or brackets.
- Tray comes with knock-out holes for wiring. Knock-out holes can easily be punched out through with a plier or a nipper.



Technical Data

Protection class : IP44
Operating temperature :
-30°C ~ +60°C

*May become brittle and break under impact when temperature is lowered close to -30°C.

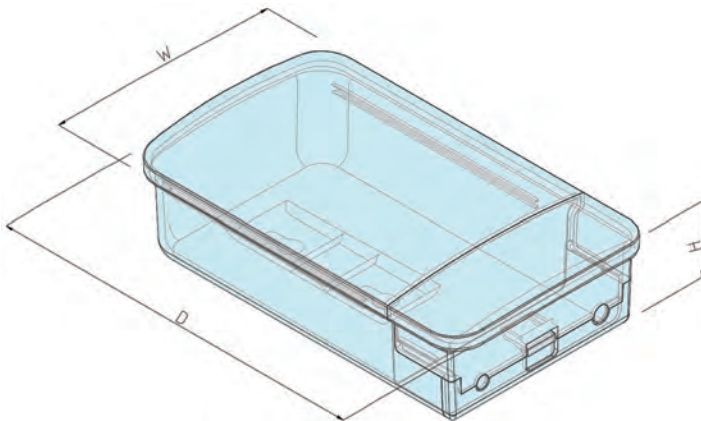


Components

No.	Part name	Pcs	Material / Color
1	Hood	1	ASA UL94HB / Off-white
2	Tray	1	ASA UL94HB / Off-white
3	Cover	1	ASA UL94HB / Off-white
4	Screw (Tray/PCB installation)	3	Stainless steel / Unfinished

OB dimensions

■ DXF/DWG/PDF/STP drawings available on our website.

APPLICATION EXAMPLE
Network Device

Product no. / Details

Product no.	External dimensions			Knock-out holes
	W	D	H	
OB 8-14-4W	75	140	35	5.6Φ x1 • 7.2Φ x1
OB10-17-5W	100	170	45	5.6Φ x1 • 7.2Φ x1
OB13-21-6W	125	210	55	7Φ x1 • 10Φ x1

Accessories (Optional parts)

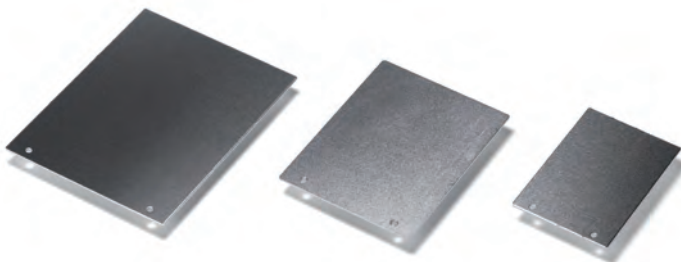


Pole mounting belt SNB • PKB series
See page 207 ~ 208

Accessories (Optional parts)

OBP series

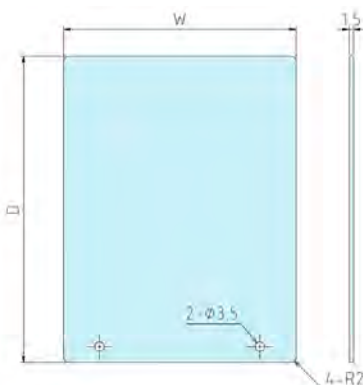
MOUNTING PLATE for OB



- Material / Finish : A1050P / Unfinished
- Aluminium mounting plate for OB series outdoor network box.
- Recommended to be used for installing network module, sensor, terminal block, etc.

OBP dimensions

■ DXF/DWG/PDF drawings available on our website.



Product no. / Details

Product no.	W	D	Suitable models	Weight (g)
OBP 8-14	61.8	85	OB 8-14-4W	22.5
OBP10-17	87.1	115	OB10-17-5W	40
OBP13-21	110.5	135	OB13-21-6W	61

IP68

HIGH PERFORMANCE

Outdoor Waterproof Box
for 5G Technology!

WG series

WGPC series



IP68 High performance at 24-hours/1m-depth immersion



*Do not use underwater/underground.



With a silicone waterproof gasket, and supported by multiple enclosing screws from the rear side, it allows the enclosure to maintain a stable high waterproofing capability.

Weather-resistant ASA material



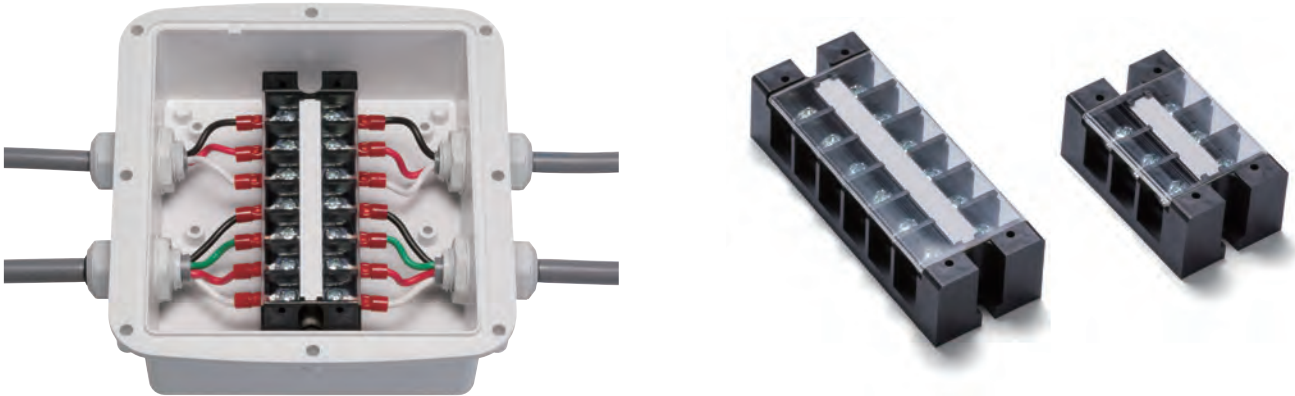
ASA material is resistant to deterioration and discoloration due to ultraviolet rays. Perfect for outdoor communication or network devices.

Captive screws for easy maintenance



There is no risk of screws dropping out and lost during maintenance. Captive screw is able to lock into a pre-drilled hole to provide a secure hold.

Optional terminal blocks compatible



Optional terminal blocks, WTB series can be installed onto the existing bosses inside the WG • WGPC and WGV series box without additional processing or customization, hence can also function as a terminal junction box. (See page 115~116 for WTB terminal blocks.)

Easy installation on walls & poles

WALL MOUNTING BRACKET



POLE MOUNTING BRACKET



POLE MOUNTING STRAP



WG series

IP68 WATERPROOF ASA BOX

NEW SIZE

WGPC series

IP68 WATERPROOF PC+ASA BOX

★ ★ NEW



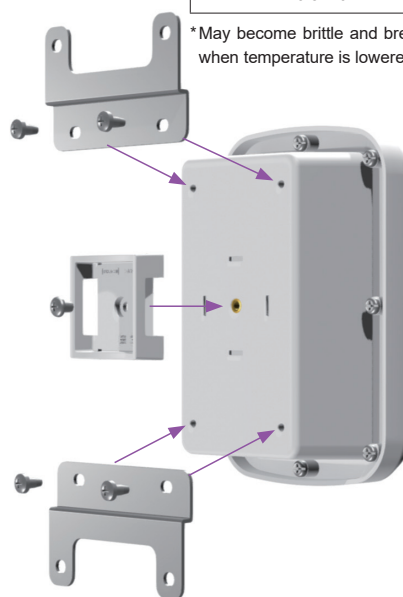
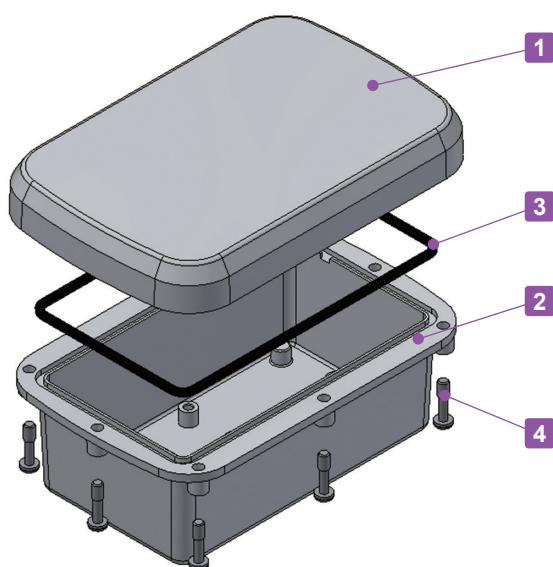
- IP68 high performance plastic box protected from immersion as long as 24 hours at 1m depth.
- ASA material is resistant to deterioration and discoloration from ultraviolet rays. PC/ASA material provides superior heat resistance and flame retardancy. Perfect for use as outdoor communication or network devices.
- Self-tapping captive screws which are able to lock into a pre-drilled hole and provide a secure hold for fastening the cover. Please drive the self-tapping captive screws for cutting a thread into the holes at first so that the cover and body can be secured together properly.



Technical Data

Protection class :
IP68 (24-hours/1m-depth)
Operating temperature :
WG : -30°C ~ +60°C
WGPC : -30°C ~ +75°C
Recommended torque :
0.5 ~ 0.7N · m

*May become brittle and break under impact when temperature is lowered close to -30°C.



There are 5 holes on the backside of the body (4 at each corner, 1 in center). 4 corner holes are for wall mounting bracket, and 1 center hole is for pole mounting bracket.

WG Components

No.	Part name	Pcs	Material / Color
1	Cover	1	ASA UL94HB / Off-white
2	Body	1	ASA UL94HB / Off-white
3	Gasket	1	Silicone / Black
4	Self-tapping captive screw	8 ~ 10	Stainless steel / Unfinished

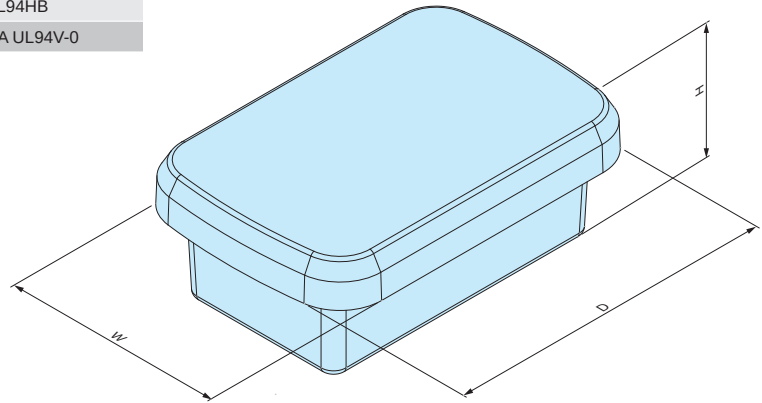
WGPC Components

No.	Part name	Pcs	Material / Color
1	Cover	1	PC/ASA UL94V-0 / Light gray
2	Body	1	PC/ASA UL94V-0 / Light gray
3	Gasket	1	Silicone / Black
4	Self-tapping captive screw	8 ~ 10	Stainless steel / Unfinished

Color

Series	Code	Color	Material
WG	W	Off-White	ASA UL94HB
WGPC	G	Light gray	PC/ASA UL94V-0

■ DXF/DWG/PDF/STP drawings available on our website.



Product no. / Details

Product no.	External dimensions			Weight (g)
	W	D	H	
WG10-15- 6W	100	150	55	169.5
WG10-15- 8W	100	150	75	192
WG15-16- 6W	145	155	55	232
WG15-16- 8W	145	155	80	266.5
WG15-21- 6W	145	210	60	314
WG15-21- 9W	145	210	90	367
WG17-25- 8W	170	250	80	470
WG17-25-11W	170	250	110	534
WG23-25- 8W	225	245	80	570
WG23-25-11W	225	245	110	645
NEW WG25-33- 9W	245	325	90	965
NEW WG25-33-12W	245	325	120	1,073
NEW WG30-33- 9W	300	325	90	1,151
NEW WG30-33-13W	300	325	130	1,285.5
NEW WG28-40-10W	280	400	100	1,332.5
NEW WG28-40-15W	280	400	150	1,529.5

Product no. / Details

Product no.	External dimensions			Weight (g)
	W	D	H	
NEW WGPC10-15- 6G	100	150	55	188.5
NEW WGPC10-15- 8G	100	150	75	213.5
NEW WGPC15-16- 6G	145	155	55	258
NEW WGPC15-16- 8G	145	155	80	296.5
NEW WGPC15-21- 6G	145	210	60	349.5
NEW WGPC15-21- 9G	145	210	90	408.5
NEW WGPC17-25- 8G	170	250	80	523
NEW WGPC17-25-11G	170	250	110	594
NEW WGPC23-25- 8G	225	245	80	634
NEW WGPC23-25-11G	225	245	110	717.5
NEW WGPC25-33- 9G	245	325	90	1,073.5
NEW WGPC25-33-12G	245	325	120	1,193.5
NEW WGPC30-33- 9G	300	325	90	1,280
NEW WGPC30-33-13G	300	325	130	1,430
NEW WGPC28-40-10G	280	400	100	1,482
NEW WGPC28-40-15G	280	400	150	1,701

Accessories (Optional parts)



Wall mounting bracket WGF series
See page 112



Pole mounting bracket WGMB • WPMB • SSK series
See page 113 ~ 114 and 205 ~ 206



Pole mounting strap • belt SNB • PKB series
See page 207 ~ 208



Tapping Standoff TPS series
See page 397



Mounting plate WGP series
See page 111



PCB mounting screw MT4-8T
See page 112



Terminal block WTB series
See page 115



DIN Rail FDR series
See page 97



Protective vent PMF series
See page 197 ~ 198



Cable gland
See page 181 ~ 193



- IP68 high performance plastic box protected from immersion as long as 24 hours at 1m depth where external (surroundings) and internal (inside box) pressure are different.
- ASA material is resistant to deterioration and discoloration from ultraviolet rays. Perfect for use as outdoor communication or network devices.
- Self-tapping captive screws which are able to lock into a pre-drilled hole and provide a secure hold for fastening the cover. Please drive the self-tapping captive screws for cutting a thread into the holes at first so that the cover and body can be secured together properly.

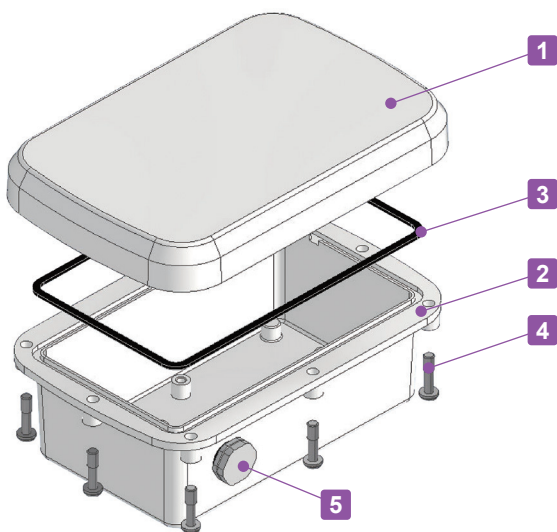


Technical Data

Protection class :	IP68 (24-hours/1m-depth)
Operating temperature :	-30°C ~ +60°C
Recommended torque :	0.5 ~ 0.7N • m
Ventilation plug recommended torque :	0.6 ~ 0.8N • m

*May become brittle and break under impact when temperature is lowered close to -30°C.

Ventilation plug protects the enclosure from deformation by equalizing pressure in environments where there are differences between strong daytime and low nighttime temperatures, as well as venting the gas generated within.

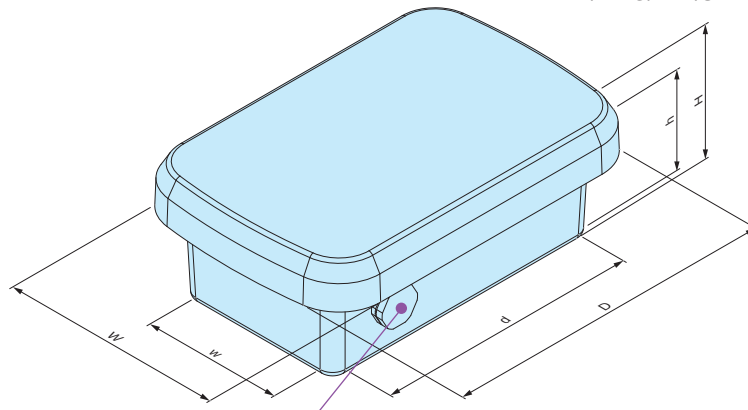


Components

No.	Part name	Pcs	Material / Color
1	Cover	1	ASA UL94HB / Off-white
2	Body	1	ASA UL94HB / Off-white
3	Gasket	1	Silicone / Black
4	Self-tapping captive screw	8 ~ 10	Stainless steel / Unfinished
5	Ventilation plug	1	PA66 + PA6 • PTFE / Light gray

WGV dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



The location of the ventilation plug is pre-fixed.
*Customization for location change possible.

Product no. / Details

Product no.	External dimensions			Internal dimensions			Screw	Weight (g)
	W	D	H	w	d	h		
WGV10-15- 6W	100	150	55	58	115	43	M4× 8pcs	171
WGV10-15- 8W	100	150	75	57	114	63	M4× 8pcs	193.5
WGV15-16- 6W	145	155	55	102	120	43	M4× 8pcs	233.5
WGV15-16- 8W	145	155	80	100	118	68	M4× 8pcs	268
WGV15-21- 6W	145	210	60	102	174	48	M4×10pcs	315.5
WGV15-21- 9W	145	210	90	100	172	78	M4×10pcs	368.5
WGV17-25- 8W	170	250	80	125	209	67.5	M4×10pcs	471.5
WGV17-25-11W	170	250	110	122	206	97.5	M4×10pcs	535.5
WGV23-25- 8W	225	245	80	180	194	67.5	M4×10pcs	571.5
WGV23-25-11W	225	245	110	177	191	97.5	M4×10pcs	646.5
NEW WGV25-33- 9W	245	325	90	189	268	74	M4×10pcs	966.5
NEW WGV25-33-12W	245	325	120	186	265	104	M4×10pcs	1,075.5
NEW WGV30-33- 9W	300	325	90	244	268	74	M4×10pcs	1,152.5
NEW WGV30-33-13W	300	325	130	240	264	114	M4×10pcs	1,288
NEW WGV28-40-10W	280	400	100	223	338	84	M4×10pcs	1,335
NEW WGV28-40-15W	280	400	150	218	333	134	M4×10pcs	1,532

Accessories (Optional parts)



Wall mounting bracket WGF series
See page 112



Pole mounting bracket WGMB • WPMB • SSK series
See page 113 ~ 114 and 205 ~ 206



Pole mounting strap • belt SNB • PKB series
See page 207 ~ 208



Tapping Standoff TPS series
See page 397



Mounting plate WGP series
See page 111



PCB mounting screw MT4-8T
See page 112



Terminal block WTB series
See page 115



DIN Rail FDR series
See page 97



Protective vent PMF series
See page 197 ~ 198



Cable gland
See page 181 ~ 193

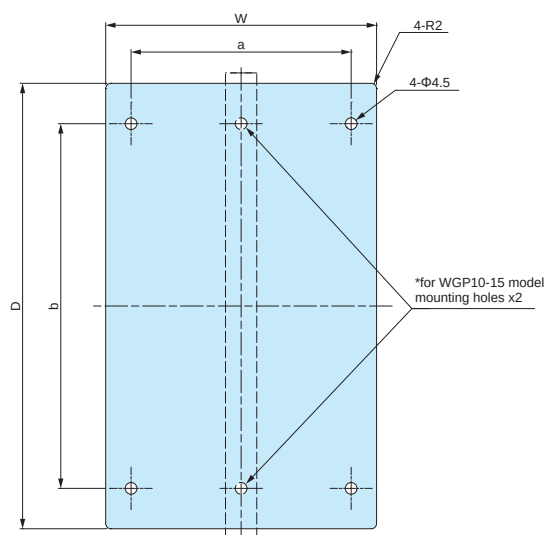
WGP series

MOUNTING PLATE for WG • WGPC • WGV

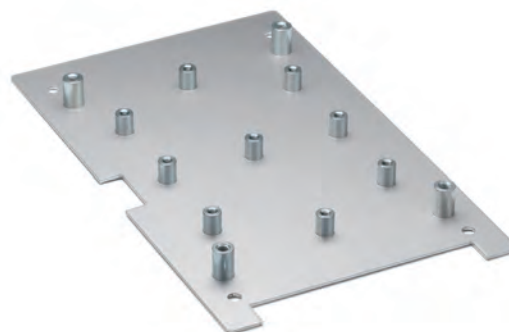


WGP dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



■ Material / Finish : A1100P (t=1.5mm) / Silver anodized

■ Hole milling, clinching spacer customizations are available.
See page Custom-6 and our website for more details.

Product no. / Details

■ Mounting screws included.

Product no.	W	D	a	b	Suitable models	Weight (g)
WGP10-15	60	112	—	97	WG • WGPC • WGV10-15-□	30
WGP15-16	105	117	84.5	90	WG • WGPC • WGV15-16-□	54
WGP15-21	104	171	84.5	140	WG • WGPC • WGV15-21-□	76
WGP17-25	120	200	100	176	WG • WGPC • WGV17-25-□	100
WGP23-25	175	185	152	168	WG • WGPC • WGV23-25-□	133
NEW WGP25-33	178	254	154	230	WG • WGPC • WGV25-33-□	190
NEW WGP30-33	232	254	208	230	WG • WGPC • WGV30-33-□	247.5
NEW WGP28-40	210	322	184	298	WG • WGPC • WGV28-40-□	283

MT4-8T

PCB MOUNTING SCREW



- Self-tapping screws for board mounting on bosses inside WG, WGPC and WGV series enclosures.

Product no. / Details

Product no.	Material	Finish	Pack of
MT4-8T (Bind tapping M4-8)	Steel	Trivalent chromate	20

WGF series

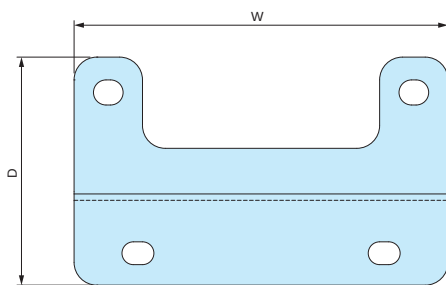
WALL MOUNTING BRACKET for WG • WGPC • WGV



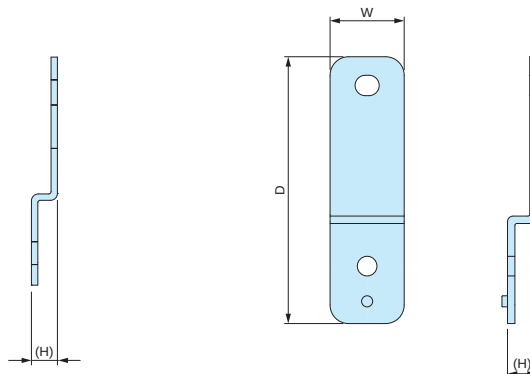
WGF dimensions

- DXF/DWG/PDF/STP drawings available on our website.

WGF-10 ~ WGF-25



WGF-L



Product no. / Details

- Stainless steel mounting screws included.

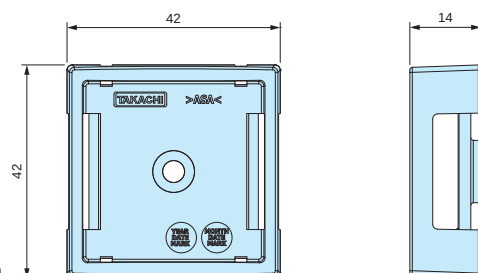
Product no.	W	D	(H)	Suitable models	Material / Finish	Pack of
WGF-10	82	50	(5.8)	WG • WGPC • WGV10-15-□ (W direction)	Stainless steel t=1.5mm / Barrel finish	2
WGF-15	132	50	(5.8)	WG • WGPC • WGV10-15-□ (D direction)		2
				WG • WGPC • WGV15-16-□ (W • D direction)		
				WG • WGPC • WGV15-21-□ (W direction)		
				WG • WGPC • WGV17-25-□ (W direction)		
WGF-23	184	55	(8.0)	WG • WGPC • WGV15-21-□ (D direction)	Stainless steel t=2.0mm / Barrel finish	2
WGF-25	210	55	(8.0)	WG • WGPC • WGV23-25-□ (W direction)		2
				WG • WGPC • WGV17-25-□ (D direction)		
NEW WGF-L	20	72	(8.0)	WG • WGPC • WGV23-25-□ (D direction)		4
				WG • WGPC • WGV25-33-□ (W • D direction)		
				WG • WGPC • WGV30-33-□ (W • D direction)		
				WG • WGPC • WGV28-40-□ (W • D direction)		

WGMB-1W POLE MOUNTING BRACKET for WG • WGPC • WGV



■ DXF/DWG/PDF/STP drawings available on our website.

WGMB dimensions



- Pole mount bracket made from weather resistant ASA material.
- Hole milling is not required when installing the mount bracket, thus allowing the enclosure to maintain its IP rating.
- WG • WGPC • WGV10-15-□ and 15-16-□ can be installed in both the W or D direction.
- Pole mount is possible with the use of SNB or PKB series mounting belt. (See website)

* Operating temperature : -30°C ~ +60°C

Product no. / Details

■ Mounting stainless steel screw included.

Product no.	Suitable models	Material / Color	Weight (g)	Pack of
WGMB-1W	WG • WGPC • WGV10-15-□ / 1 pc required WG • WGPC • WGV15-16-□ / 1 pc required WG • WGPC • WGV15-21-□ / 2 pcs required	ASA UL94HB / Off-white	9	1

Installation example

Installation (1 pc)

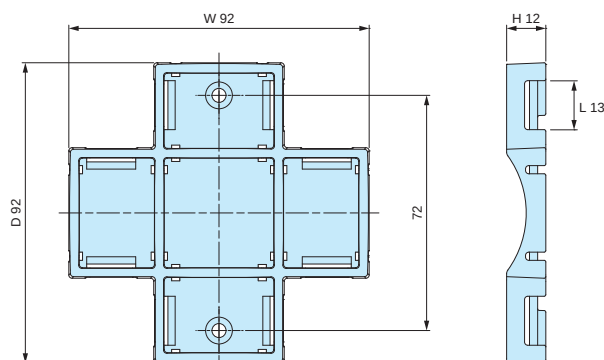
Installation (2 pcs)



WPMB-M4-2G POLE MOUNTING BRACKET

■ DXF/DWG/PDF/STP drawings available on our website.

WPMB-M4-2 dimensions



- Pole mount bracket made from weather resistant ASA material.
- Pole mounting belt can be installed in either W or D direction.
- Pole mount is possible with the use of PKB series mounting belt. (See page 208)
- Hole milling is not required when installing the mount bracket, thus allowing the enclosure to maintain its protection class.

*Stainless steel screw belt SNB series is not usable on WPMB-M4-2 series.

* Operating temperature : -30°C ~ +60°C

Color

White gray

Product no. / Details

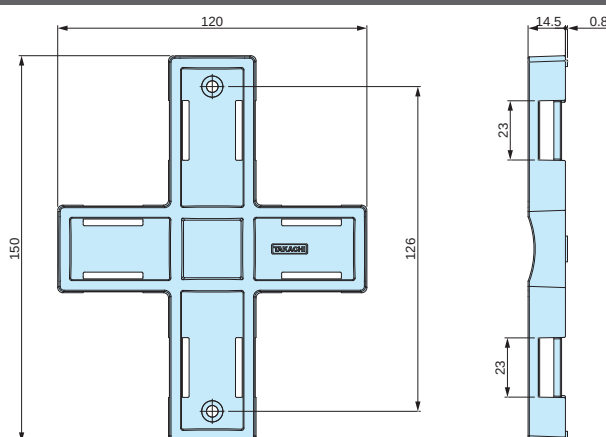
■ Mounting stainless steel screw included.

Product no.	Suitable models	Recommended torque (N • m)	Weight (g)	Pack of
WPMB-M4-2G	WG • WGPC • WGV15-21-□	0.45 ~ 0.5	24	1

■ Recommended torque listed is for reference only; actual may differ. Assemble after testing torque.

WGMB-2N

DIECAST ALUMINIUM POLE MOUNTING BRACKET for WG • WGPC • WGV



■ DXF/DWG/PDF/STP drawings available on our website.

- Pole mount bracket made from robust diecast aluminium.
- Hole milling is not required when installing the mount bracket, thus allowing the enclosure to maintain its protection class.
- Can be used for WG • WGPC • WGV17-25-□ and 23-25-□ models.
- Pole mounting belt can be installed in either W or D direction.
- Pole mount is possible with the use of SNB or PKB series mounting belt. (See page 207 ~ 208)

Product no. / Details

■ Stainless steel mounting screws included.

Product no.	Suitable models	Material / Finish	Weight (g)	Pack of
WGMB-2N	WG • WGPC • WGV17-25-□ WG • WGPC • WGV23-25-□	Diecast aluminium ADC12 / Shot blast	126	1

Installation example

WGMB-2N



Vertical mounting



Horizontal mounting



SSK series (Pole mounting bracket for WG • WGPC • WGV25-33-9 ~ 28-40-15)

SSK series

Vertical mounting



Suitable model

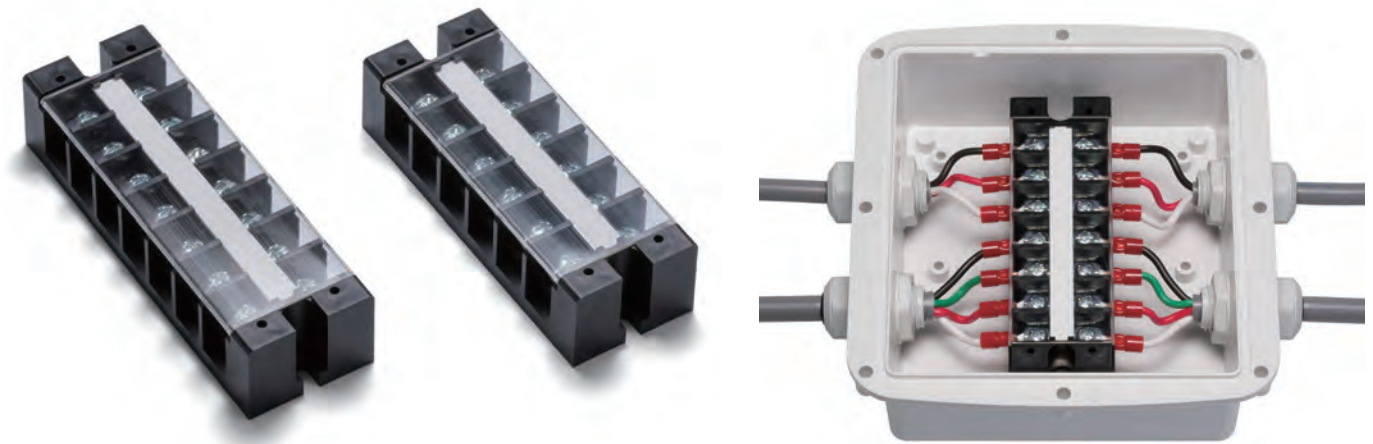
Product no.		Pole mounting bracket product no.		Screw type
		For vertical	For horizontal	
WG WGPC WGV	25-33- 9 25-33-12	SSK-250	SSK-300	Use included screw
	30-33- 9 30-33-13	SSK-300	SSK-300	
	28-40-10 28-40-15	SSK-280	SSK-400	

* See page 205 for details.

WTB series

TERMINAL BLOCK for WG • WGPC • WGV

FW2



- Compatible terminal blocks for WG • WGPC • WGV series.
- Not suitable for WG • WGPC • WGV25-33-□ ~ 28-40-□.

Components

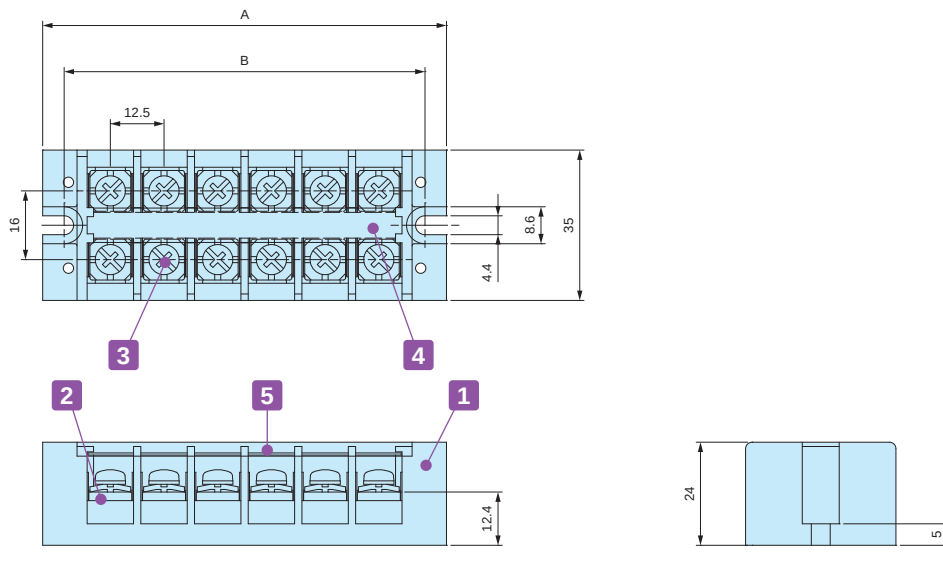
No.	Part name	Pcs	Material	Color or Finish
1	Base	1	PBT UL94V-0	Black
2	Conductive plate	1	Brass	Nickel plated
3	Terminal screw (M4-10)	2 x P	Steel	Trivalent chromate
4	Symbol board	1	PET	White
5	Cover	1	Polycarbonate UL94V-0	Transparent
—	Screw (Bind tapping M4-10)	2	Steel	Trivalent chromate

Specification

- Electrical Rating 600V • 35A
- Insulation Resistance DC500V 1000MΩ ~
- Withstand Voltage AC2500V (Tested for 1 min.)
- Rising Temp. 30°C or less
- Operating Temp. Range -40°C ~ +90°C
- Storage Temp. Range -40°C ~ +90°C

WTB dimensions

- DXF/DWG/PDF drawings available on our website.



Product no. / Details

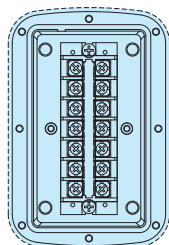
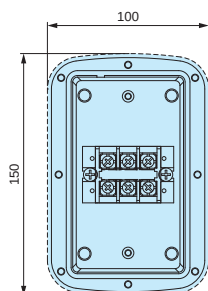
Product no.	P (Number of poles)	A	B	Suitable models
WTB-240- 3P-FB	3	56.5	46.5	WG • WGPC • WGV10-15-□ (W direction)
WTB-240- 6P-FB	6	94.0	84.0	WG • WGPC • WGV15-16-□, WG • WGPC • WGV15-21-□ (W direction)
WTB-240- 7P-FB	7	106.5	96.5	WG • WGPC • WGV10-15-□, WG • WGPC • WGV15-16-□ (D direction) WG • WGPC • WGV17-25-□ (W direction)
WTB-240-10P-FB	10	144.0	134.0	WG • WGPC • WGV15-21-□ (D direction) WG • WGPC • WGV23-25-□ (W direction)
WTB-240-12P-FB	12	169.0	159.0	WG • WGPC • WGV17-25-□, WG • WGPC • WGV23-25-□ (D direction)

WTB mounting layout

WG • WGPC • WGV10-15-□

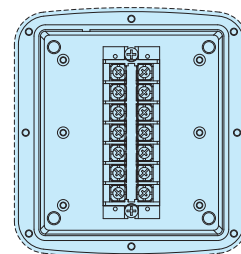
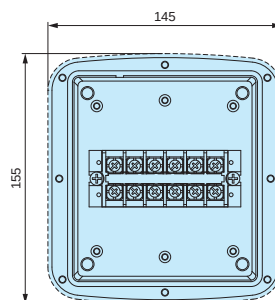
WTB-240-3P

WTB-240-7P

**WG • WGPC • WGV15-16-□**

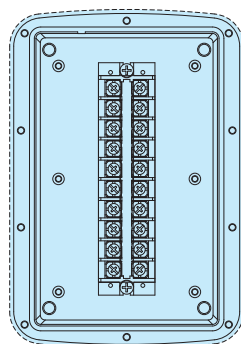
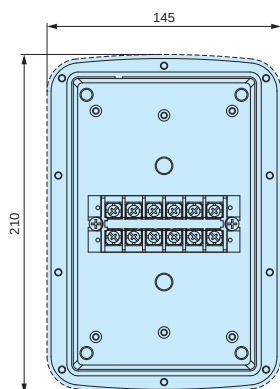
WTB-240-6P

WTB-240-7P

**WG • WGPC • WGV15-21-□**

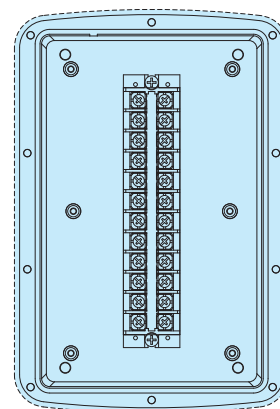
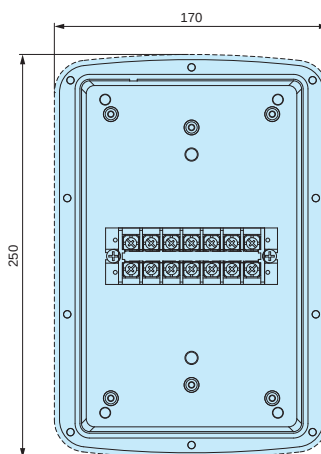
WTB-240-6P

WTB-240-10P

**WG • WGPC • WGV17-25-□**

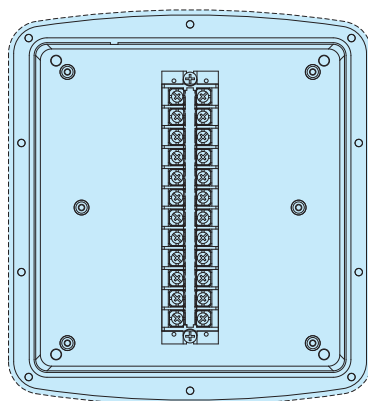
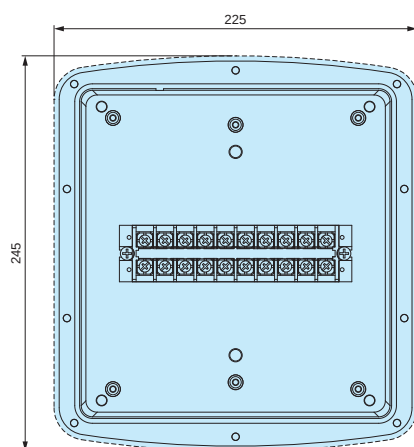
WTB-240-7P

WTB-240-12P

**WG • WGPC • WGV23-25-□**

WTB-240-10P

WTB-240-12P

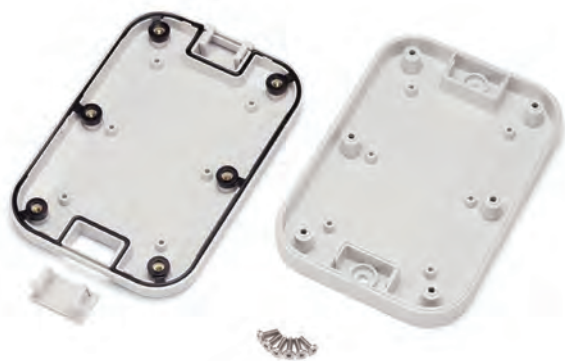


IP68 / IP67 UV-PROTECT NETWORK PLASTIC BOX WP series



Waterproofing ability by using silicone gasket

Highly elastic and durable silicone gasket for high waterproof ability. The use of insert nuts allows the unit to retain its waterproof ability even after multiple opening and closing.



Weather-resistant ASA material

The white gray "G" type utilize a UV resistant, durable ASA material. Recommended for outdoor usage as a communication device type equipment.



Outdoors Use Example
Weather Station

Easy installation on walls

Easy mounting onto walls by opening the blind lids. A clean and sleek appearance can be maintained as screws are hidden away by the blind lids.



Easy installation on electrical poles

By using a pole mounting accessory, it can be attached to poles with ease.



Information on waterproofing after hole milling for switches

The waterproof performance will be lost once hole or cutout is milling on IP rated enclosure.
To ensure it remains waterproof after hole/cutout milling, IP rated membrane pad or overlay is required.



WP series APPLICATION EXAMPLE

Outdoor Lighting Remote Controller

Leak Guard - Home Water Leak Detector



Clay Pigeon Shooting Controller

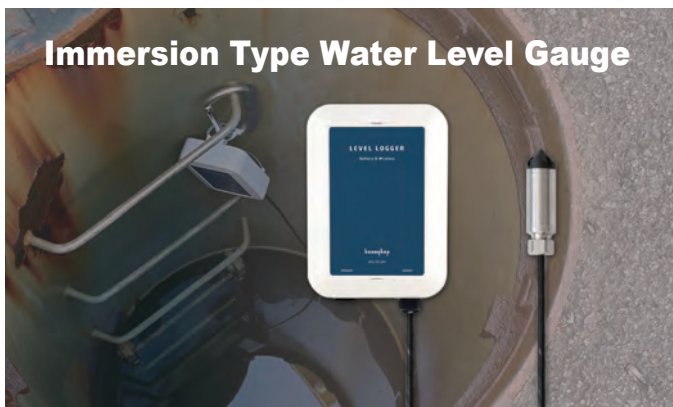
Wireless Temperature / Humidity Transmitter



WP series APPLICATION EXAMPLE



LoRaWAN Gateway



Outdoor Cloud Data Logger



Wireless Indoor Air Monitoring System

LoRa WAN Pressure Transmitter

Sigfox Multi Sensor



Network Sensor for Agriculture



Argonomic Parameter Surveillance Unit



Crop Growing Remote Monitoring Device



Bird/Beast Damage Control Sensor





- IP68 (IP67 for WP20-28-○) high performance plastic box protected from immersion as long as 24 hours at 1m depth.
- 24 different sizes available in white gray UV-resistant ASA and charcoal gray flame-resistant ABS. Recommended for use as outdoor communication or network devices.
- Mount on walls or brackets by simply opening the blind lids.
- Pole mounting is possible via an optional pole mounting bracket accessory.



Technical Data

Protection class :

IP68 (24-hours/1m-depth)
 WP20-28-5□ } IP67
 WP20-28-7□ }

Operating temperature :

Models = 5-7-□ ~ 20-20-□:
 ASA¹-20 ~ +60°C
 ABS -10 ~ +50°C

Models = 20-28-□² :
 ASA¹-20 ~ +55°C
 ABS -10 ~ +45°C

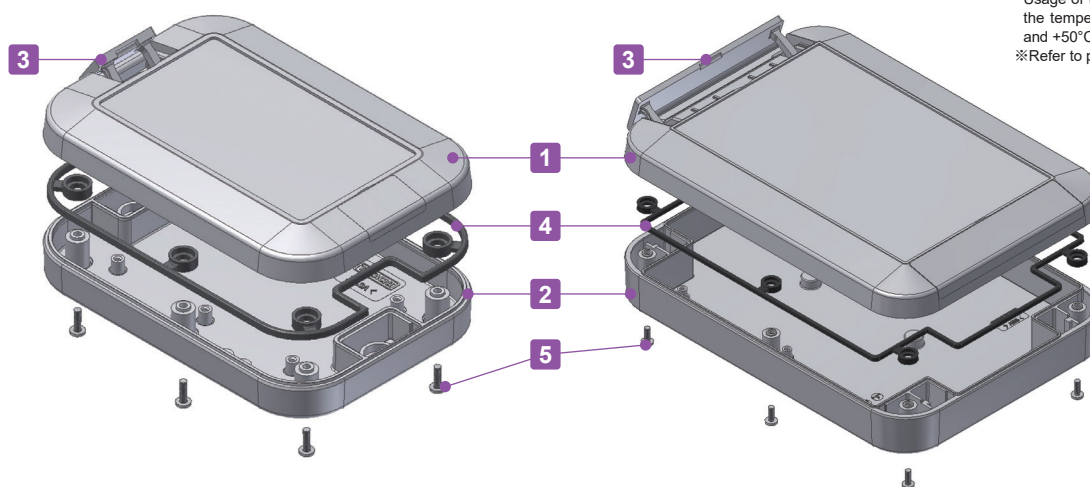
¹ May become brittle and break under impact when temperature is lowered close to -20°C.

² Usage of the PMF series protective vent will raise the temperature limit for ASA and ABS to +60°C and +50°C respectively.

※Refer to page 125 for more information.

WP5-7-2 ~ WP13-18-5

WP15-15-4 ~ WP20-28-7

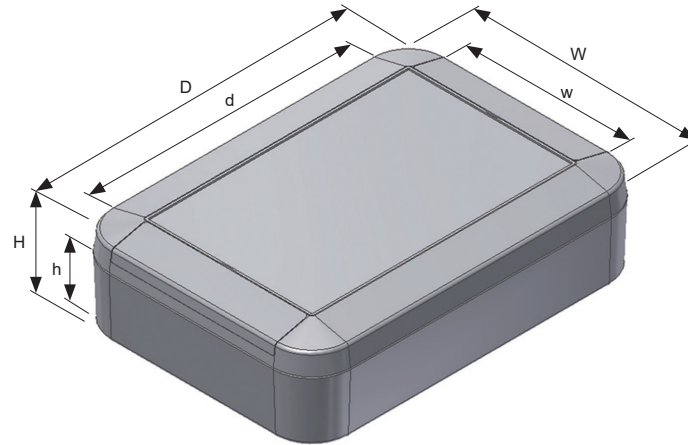


Components

No.	Part name	Pcs	Material / Color
1	Top cover	1	ASA UL94HB / White gray : Flame-resistant ABS UL94V-0 / Charcoal gray
2	Bottom base	1	ASA UL94HB / White gray : Flame-resistant ABS UL94V-0 / Charcoal gray
3	Blind lids	2	ASA UL94HB / White gray : Flame-resistant ABS UL94V-0 / Charcoal gray
4	Gasket	1	Silicone / Black
5	Screw	4 ~ 8	Stainless steel binding head screw / Unfinished

WP dimensions

■ DXF/DWG/PDF/3D PDF/STP drawings available on our website.



Product no. / Details

Product no.		IP Code	External dimensions			Internal dimensions			Screw	Recommended torque (N · m)	Weight (g)
● White gray (ASA)	● Charcoal gray (ABS)		W	D	H	w	d	h			
WP 5- 7-2G	WP 5- 7-2C	IP68	52	65	18	46	37	13	M2-8 × 4pcs	0.2 ~ 0.25	31.5
WP 5- 7-3G	WP 5- 7-3C	IP68	52	65	27	45	36.5	22	M2-8 × 4pcs	0.2 ~ 0.25	39.5
WP 6- 8-2G	WP 6- 8-2C	IP68	60	80	20	53.5	52	14.7	M2-8 × 4pcs	0.25 ~ 0.3	41.5
WP 6- 8-3G	WP 6- 8-3C	IP68	60	80	30	53	51	24.7	M2-8 × 4pcs	0.25 ~ 0.3	49
WP 8- 8-2G	WP 8- 8-2C	IP68	75	75	22	67	42	16.4	M2.5-8 × 4pcs	0.25 ~ 0.35	57.5
WP 8- 8-4G	WP 8- 8-4C	IP68	75	75	35	66	42	29.4	M2.5-16 × 4pcs	0.25 ~ 0.35	88.5
WP 8-10-2G	WP 8-10-2C	IP68	75	100	22	67	67	16	M2.5-8 × 4pcs	0.25 ~ 0.35	74
WP 8-10-4G	WP 8-10-4C	IP68	75	100	35	66	67	29	M2.5-16 × 4pcs	0.25 ~ 0.35	95
WP 9-13-3G	WP 9-13-3C	IP68	90	130	25	81	91	18	M2.5-8 × 6pcs	0.25 ~ 0.35	113
WP 9-13-4G	WP 9-13-4C	IP68	90	130	40	81	91	33	M2.5-16 × 6pcs	0.25 ~ 0.35	141
WP10-10-3G	WP10-10-3C	IP68	100	100	25	90	61	18	M2.5-8 × 4pcs	0.25 ~ 0.35	96
WP10-10-4G	WP10-10-4C	IP68	100	100	40	90	61	33	M2.5-16 × 4pcs	0.25 ~ 0.35	121
WP11-15-3G	WP11-15-3C	IP68	110	150	27	100	110	20	M2.5-8 × 6pcs	0.25 ~ 0.35	153
WP11-15-4G	WP11-15-4C	IP68	110	150	40	100	110	33	M2.5-16 × 6pcs	0.25 ~ 0.35	181
WP13-18-3G	WP13-18-3C	IP68	130	175	30	120	135	23	M2.5-8 × 6pcs	0.25 ~ 0.35	225
WP13-18-5G	WP13-18-5C	IP68	130	175	45	120	135	38	M2.5-16 × 6pcs	0.25 ~ 0.35	266
WP15-15-4G	WP15-15-4C	IP68	150	150	40	141	100	33.5	M3-8 × 4pcs	0.35 ~ 0.45	239
WP15-15-6G	WP15-15-6C	IP68	150	150	55	140	100	48.5	M3-8 × 4pcs	0.35 ~ 0.45	282.5
WP15-21-4G	WP15-21-4C	IP68	150	210	40	141	160	33.5	M3-8 × 6pcs	0.35 ~ 0.45	323
WP15-21-6G	WP15-21-6C	IP68	150	210	55	140	160	48.5	M3-8 × 6pcs	0.35 ~ 0.45	367.5
WP20-20-5G	WP20-20-5C	IP68	200	200	45	190	150	38.5	M3-8 × 8pcs	0.45 ~ 0.55	446
WP20-20-7G	WP20-20-7C	IP68	200	200	65	189	149	58.5	M3-8 × 8pcs	0.45 ~ 0.55	524.5
WP20-28-5G	WP20-28-5C	IP67	200	280	45	190	230	38.5	M3-8 × 8pcs	0.45 ~ 0.55	557.5
WP20-28-7G	WP20-28-7C	IP67	200	280	65	189	229	58.5	M3-8 × 8pcs	0.45 ~ 0.55	646

■ Recommended torque listed is for reference only; actual may differ. Assemble after testing torque.

Accessories (Optional parts)

Pole mount bracket WPMB series
See page 123

Rubber feet PFRF series

TORX screw MR series
See page 124PCB mounting screw EM series
See page 398Protective vent PMF • CVP series
See page 197 ~ 200Cable gland
See page 181 ~ 193Pole mounting belt PKB-10 series
See page 208Tapping standoff TPS series
See page 397

WPMB series

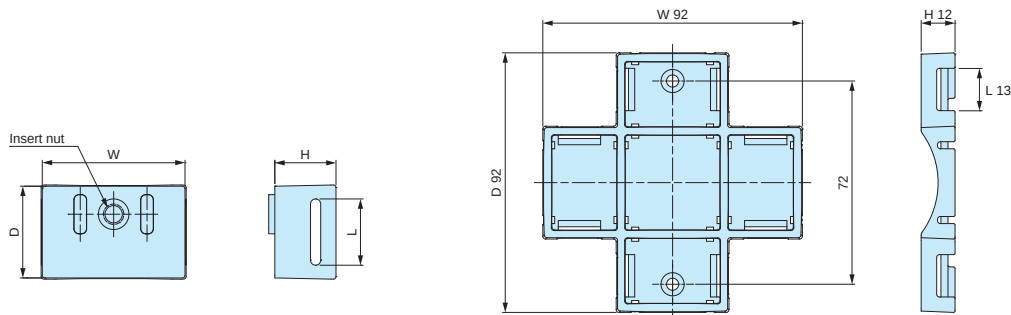
POLE MOUNTING BRACKET for WP



- Pole mount bracket made from weather resistant ASA material.
- Hole milling is not required when installing the mount bracket, thus allowing the enclosure to maintain its IP67 protection.
- WPMB-M4-2 can be used for both vertical and horizontal installation.
- Together with WPMB series, the PKB series mounting belt allows the unit to be mounted onto a pole.

WPMB dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



Color Type

Code	Color
G	White gray
D	Dark gray

WPMB-M3 • WPMB-M4

WPMB-M4-2

Product no. / Details

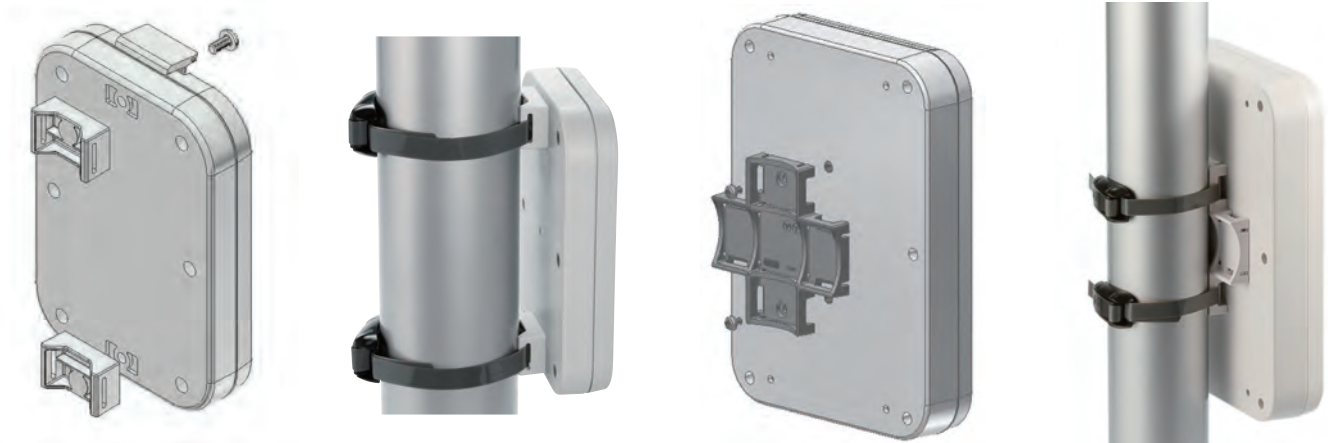
■ Please suffix color code at the end of the product number.

Product no.	Dimensions				Screw	Suitable models	Recommended torque (N • m)	Weight (g)	Pack of
	W	D	H	L					
WPMB-M3□	18	14	9.5	11	Stainless steel M3-6 x 2 pcs	WP5-7-2 • 5-7-3 • 6-8-2 • 6-8-3 • 8-8-2 • 8-8-4 • 8-10-2 • 8-10-4	0.4 ~ 0.45	3	2
WPMB-M4□	28	18	12	13	Stainless steel M4-8 x 2 pcs	WP9-13-3 • 9-13-4 • 10-10-3 • 10-10-4 • 11-15-3 • 11-15-4 • 13-18-3 • 13-18-5	0.45 ~ 0.5	10	2
WPMB-M4-2□	92	92	12	13	Stainless steel M4-6 x 2 pcs	WP15-15-4 • 15-15-6 • 15-21-4 • 15-21-6 • 20-20-5 • 20-20-7 • 20-28-5 • 20-28-7	0.45 ~ 0.5	24	1

■ Recommended torque listed is for reference only; actual may differ. Assemble after testing torque.

WPMB-M3 / WPMB-M4

WPMB-M4-2

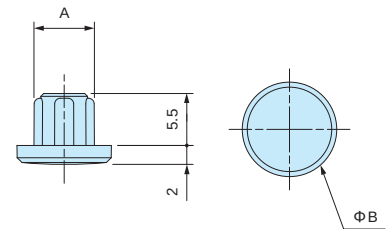


PFRF series

RUBBER FEET



PFRF dimensions



■ STP drawings available on our website.

- Recommended to be used with WP series as a desktop-type unit.
- No additional hole milling is required as the rubber feet fits snugly into the screw holes.
- Made from elastomer material.
- Unavailable for use with WP5-7-2, 5-7-3, 6-8-2, and 6-8-3 models.

Product no. / Details

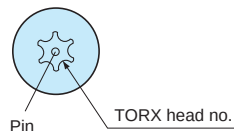
Product no.	Dimensions		Material	Color	Suitable models	Pack of
	A	B				
PFRF-M2.5D	6.4	10	Elastomer UL94HB	Dark gray	WP8-8-2 • 8-8-4 • 8-10-2 • 8-10-4 • 9-13-3 • 9-13-4 • 10-10-3 • 10-10-4 • 11-15-3 • 11-15-4 • 13-18-3 • 13-18-5	4
PFRF-M3D	7.2	11	Elastomer UL94HB	Dark gray	WP15-15-4 • 15-15-6 • 15-21-4 • 15-21-6 • 20-20-5 • 20-20-7 • 20-28-5 • 20-28-7	4

MR series

TORX SCREW



Head type (with pin)



- Recommended to be used for tamper resistance, or for an elegant look and feel.
- Requires the use of a specialized screwdriver.
- Unavailable for use with WP5-7-2, 5-7-3, 6-8-2, and 6-8-3 models.

Product no. / Details

Product no.	Dimensions		TORX head no.	Material	Finish	Suitable models	Pack of
	M	L					
MR2.5-8ST	2.5	8	T 8 (with pin)	Stainless steel	Unfinished	WP8-8-2 • 8-10-2 • 9-13-3 • 10-10-3 • 11-15-3 • 13-18-3/WSC series	20
MR2.5-16ST	2.5	16	T 8 (with pin)	Stainless steel	Unfinished	WP8-8-4 • 8-10-4 • 9-13-4 • 10-10-4 • 11-15-4 • 13-18-5	20
MR3-8ST	3	8	T 10 (with pin)	Stainless steel	Unfinished	WP15-15-4 • 15-15-6 • 15-21-4 • 15-21-6 • 20-20-5 • 20-20-7 • 20-28-5 • 20-28-7	20

Effect of PMF protective vent on WP series box

WP series enclosure comes with a silicone gasket, which allows the enclosure to be airtight when assembled.

When used in environments where there are large temperature fluctuations or differences, the internal and external pressure will become uneven. If this pressure within is unable to be properly vented, it may cause the enclosure to deform and warp.

By installing the PMF series protective vent, it will assist in equalizing the air pressure, and prevent potential deformation.

Evaluation Target

1. WP20-28-7G - 2 pcs / 2. WP20-28-7G with PMF-12HAS - 2 pcs

Test Conditions

Device : Constant temperature/humidity test chamber - LH43-W14P

Make : NAGANO SCIENCE CO., LTD.

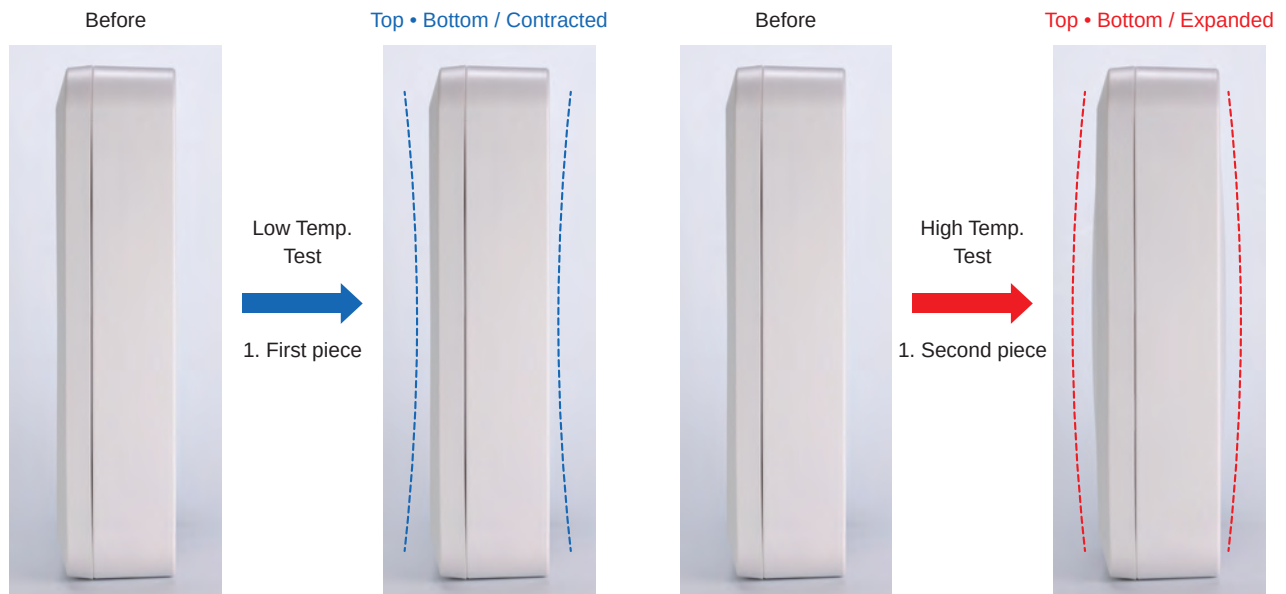
Testing in -20°C ~ +60°C (Operating temperature for WP series)

Low Temperature : -20°C / 96 hours • High Temperature : +60°C / 96 hours

Test Result

1. WP20-28-7G - 2 pcs

Uneven internal and external pressure causes deformation of the enclosure.



Test Result

2. WP20-28-7G with PMF-12HAS - 2 pcs

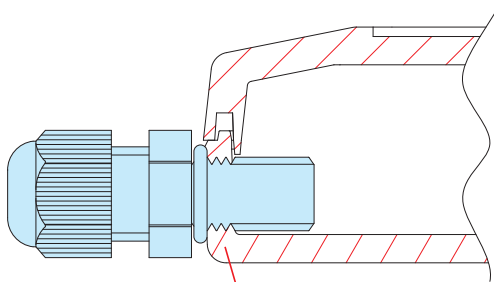
Equalized pressure from the usage of a protective vent prevents deformation of the enclosure.



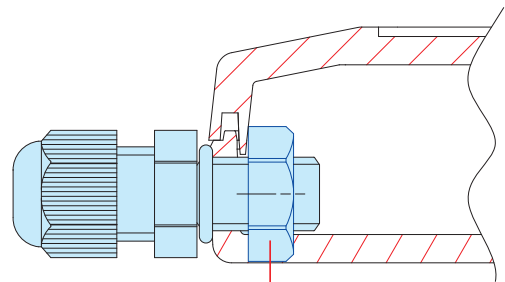
Information on installation of cable glands



- When affixing on cable glands to areas without sufficient space, the nut may not be able to be properly secured on.
For such instances, a thread-hole should be made for the cable gland to be directly screwed into without utilizing the nut.

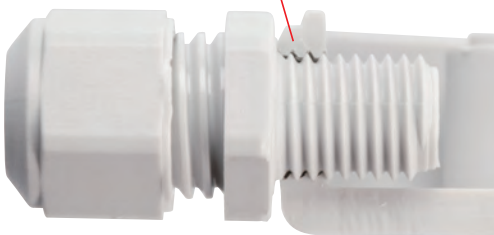


Cross-section



Obstruction

- Thread-hole sizes from M6-M32, and PG7-PG21 are possible with our customization services



- Please utilize a cable gland from our available range of cable gland accessories.
Refer to page 181 ~ 193 for more information.



IP65 LATCH-HINGED PLASTIC BOX



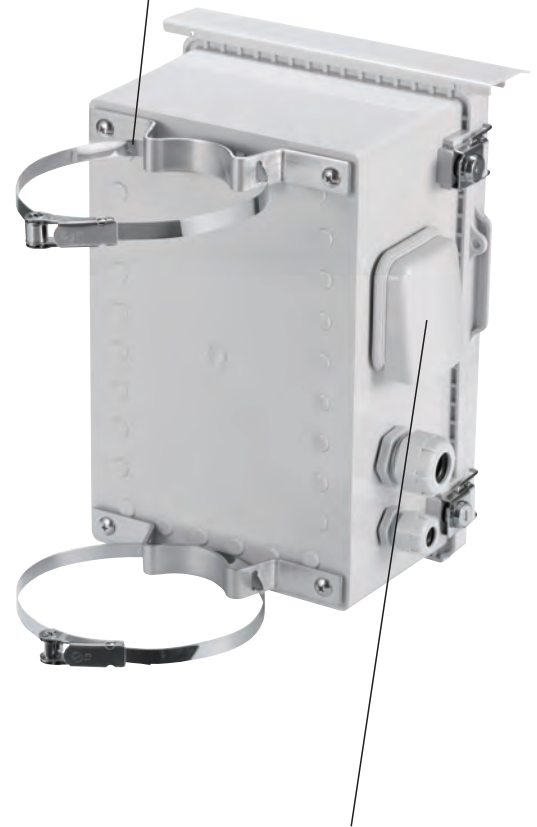
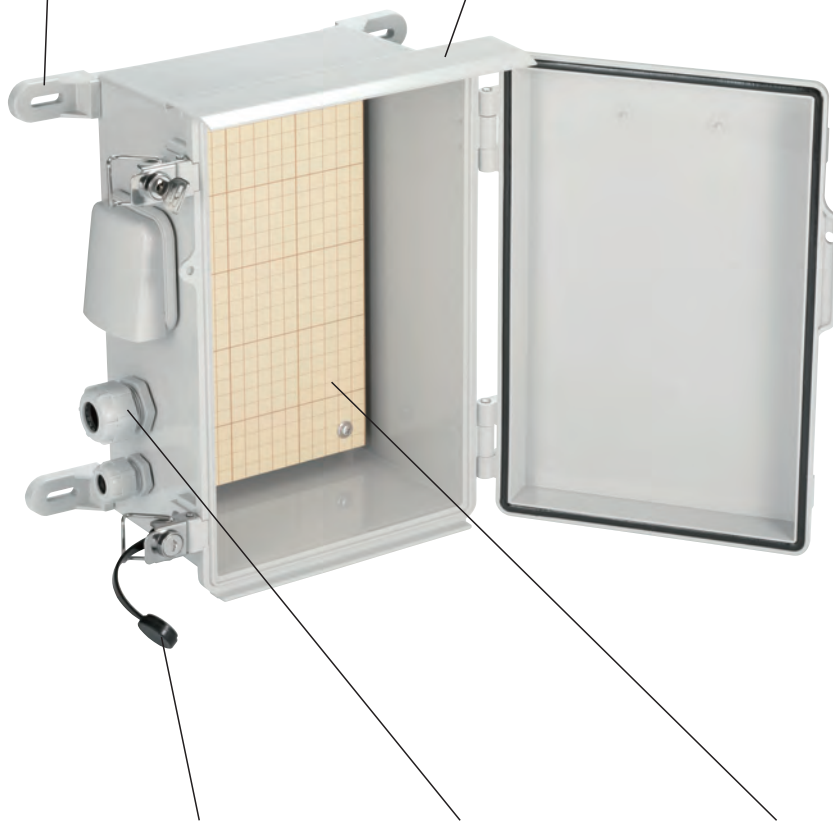
Stainless steel and plastic mounting brackets are available.
See page 146



BCAR • BCPR series come with an attachable BRF series outdoor roof.
See page 135 ~ 136



Pole mounting bracket for pole installation
See page 205 ~ 208



Dust protection cap (for lock/key type)
See page 142



Cable gland
For waterproofing enclosure openings to insert cables and wires
See page 181 ~ 193



Mounting plate
3 types of mounting plates are available (plastic / steel / wood)
See page 143 ~ 145



Ventilation cover
For heat dissipation and prevention of condensation build-up
See page 202

APPLICATION EXAMPLE

Universal plastic enclosure series suitable for a wide range of applications such as FA/control, electrical switchboard, network communication and more.

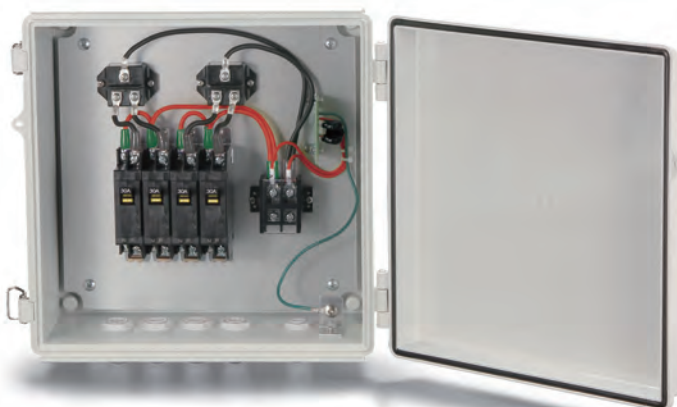
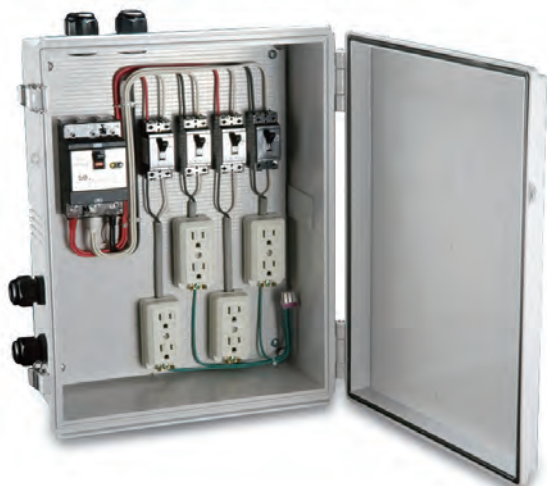
Outdoor WiFi Spot



Solar Power Junction Box



Power Switchboard Box



8 Channel Data Logger for Agriculture



Environmental Data Measurement and Controller Unit



"SenSu" Communication Unit with Sensor



Network Sensor System for Agriculture



Wildlife Damage Monitoring System



Valve Controller



Building Surveillance Unit



Digital Pressure Gauge



Radiation Monitor



Power Saver for Air Conditioning



Anemometer



Water Gauge



Ground Extensometer

Monitoring Camera

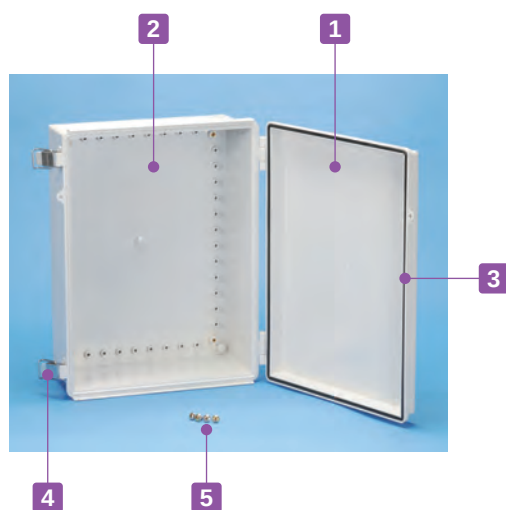


BCAP series

IP65 LATCH-HINGED ABS PLASTIC BOX

BCPC series

IP65 LATCH-HINGED POLYCARBONATE PLASTIC BOX



Technical Data

Protection class: IP65
 Operating temperature:
 BCAP -10°C ~ +60°C
 BCPC -20°C ~ +75°C

■ UL certified BC-C series is also available.
 See website for details.

- IP65 latch-hinged box for easy opening and closing.
- 50 different sizes available.
- Applicable for various uses in fields such as FA, network communication, power switch controls and more.
- BCAP series is made of white gray ABS with 2 different cover types (white gray ABS and transparent polycarbonate) available.
- BCPC series is made of light gray UL94V-0 polycarbonate, which has good heat resistant properties.

Components : BCAP series

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94HB • Polycarbonate UL94V-0	White gray • Transparent
2	Base	1	ABS UL94HB	White gray
3	Gasket	1	Polyurethane	Black
4	Latch	1 ~ 3	Stainless steel	Unfinished
5	Screw for mounting plate	2 ~ 8	Steel	Trivalent chromate

■ Stainless steel mounting brackets are included together with the following models : 506018, 506025, 507018, 507025, 608018, and 608028.

Components : BCPC series

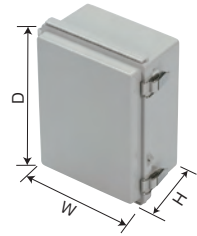
No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	Polycarbonate UL94V-0	Light gray
2	Base	1	Glass fiber filled polycarbonate UL94V-0	Light gray
3	Gasket	1	Polyurethane	Black
4	Latch	1 ~ 3	Stainless steel	Unfinished
5	Screw for mounting plate	2 ~ 8	Steel	Trivalent chromate

■ Stainless steel mounting brackets are included together with the following models : 506018, 506025, 507018, 507025, 608018, and 608028.

Color Type

Color code	Top cover color / Material	Base color / Material
BCAP[G]	White gray / ABS	White gray / ABS
BCAP[T]	Transparent / Polycarbonate	White gray / ABS
BCPC[S]	Light gray / Polycarbonate	Light gray / Glass fiber filled polycarbonate

■ Please suffix color code at the end of the product number.



BCAP Product no. / Details

Product no.	W	D	H	Weight (g)	
				G type	T type
BCAP091207□	90	120	70	196	204
BCAP091208□	90	120	85	212	221
BCAP101507□	100	150	70	272	281
BCAP101508□	100	150	85	291	300
BCAP112107□	110	210	75	359	378
BCAP112110□	110	210	100	422	420
BCAP112607□	110	260	75	431	446
BCAP112610□	110	260	100.5	484	500
BCAP131508□	135	155	85	356	357
BCAP131808□	135	185	85.5	381	410
BCAP131810□	135	185	100.5	396	402
BCAP151509□	150	150	90	343	353
BCAP151512□	150	150	120.5	411	425
BCAP162110□	160	210	100	468	486
BCAP162113□	160	210	130	517	537
BCAP162610□	160	260	100	577	601
BCAP162613□	160	260	130	673	701
BCAP172210□	170	220	105	545	581
BCAP172711□	170	270	110.5	670	680
BCAP192810□	190	280	100.5	722	746
BCAP192814□	190	280	141	877	901
BCAP203013□N	200	300	130	921	954
BCAP203015□N	200	300	150	989	1,022
BCAP203018□N	200	300	180	1,110	1,143
BCAP212110□	210	210	100	630	656
BCAP212113□	210	210	130	704	726
BCAP253515□N	250	350	150	1,278	1,320
BCAP253518□N	250	350	180	1,415	1,456
BCAP282813□	280	280	130.5	1,167	1,200
BCAP283813□	280	380	130	1,455	1,512
BCAP303015□	300	300	151	1,339	1,418
BCAP303018□	300	300	181	1,495	1,576
BCAP304012□	300	400	120	1,508	1,575
BCAP304015□	300	400	150	1,563	1,675
BCAP304018□	300	400	181	1,719	1,853
BCAP353515□	350	350	150	1,693	1,764
BCAP353518□	350	350	181	1,845	1,906
BCAP354512□	350	450	120	2,068	2,167
BCAP354516□	350	450	160	2,382	2,514
BCAP354520□	350	450	201	2,646	2,794
BCAP405016□	400	500	160	2,660	2,839
BCAP405020□	400	500	201	3,119	3,232
BCAP406018□	400	600	181	3,542	3,652
BCAP406023□	400	600	231	3,870	4,044
BCAP506018□	530	630	185	5,438	5,611
BCAP506025□	530	630	255	6,078	6,273
BCAP507018G	530	730	188	6,241	—
BCAP507025G	530	730	258	6,911	—
BCAP608018G	630	830	188	8,131	—
BCAP608028G	630	830	288	9,570	—

■ BCAP507018, 507025, 608018, and 608028 models are only available as G color type.

BCPC Product no. / Details

Product no.	W	D	H	Weight (g)
BCPC091207S	90	120	70	226
BCPC091208S	90	120	85	247
BCPC101507S	100	150	70	312
BCPC101508S	100	150	85	336
BCPC112107S	110	210	75	420
BCPC112110S	110	210	100	473
BCPC112607S	110	260	75	493
BCPC112610S	110	260	100.5	569
BCPC131508S	135	155	85	406
BCPC131808S	135	185	85.5	452
BCPC131810S	135	185	100.5	448
BCPC151509S	150	150	90	395
BCPC151512S	150	150	120.5	482
BCPC162110S	160	210	100	556
BCPC162113S	160	210	130	611
BCPC162610S	160	260	100	671
BCPC162613S	160	260	130	779
BCPC172210S	170	220	105	642
BCPC172711S	170	270	110.5	775
BCPC192810S	190	280	100.5	858
BCPC192814S	190	280	141	1,028
BCPC203013SN	200	300	130	1,070
BCPC203015SN	200	300	150	1,150
BCPC203018SN	200	300	180	1,295
BCPC212110S	210	210	100	742
BCPC212113S	210	210	130	827
BCPC253515SN	250	350	150	1,485
BCPC253518SN	250	350	180	1,648
BCPC282813S	280	280	130.5	1,371
BCPC283813S	280	380	130	1,695
BCPC303015S	300	300	151	1,610
BCPC303018S	300	300	181	1,760
BCPC304012S	300	400	120	1,846
BCPC304015S	300	400	150	1,862
BCPC304018S	300	400	181	2,030
BCPC353515S	350	350	150	2,045
BCPC353518S	350	350	181	2,142
BCPC354512S	350	450	120	2,397
BCPC354516S	350	450	160	2,826
BCPC354520S	350	450	201	3,151
BCPC405016S	400	500	160	3,188
BCPC405020S	400	500	201	3,811
BCPC406018S	400	600	181	4,153
BCPC406023S	400	600	231	4,637
BCPC506018S	530	630	185	6,305
BCPC506025S	530	630	255	7,213
BCPC507018S	530	730	188	7,410
BCPC507025S	530	730	258	8,200
BCPC608018S	630	830	188	9,820
BCPC608028S	630	830	288	11,550

■ Refer to page 137 ~ 140 for detailed dimensions.

Accessories (Optional parts)



Mounting plate BMP series
See page 143 ~ 145



Mounting bracket CK • BFL series
See page 146



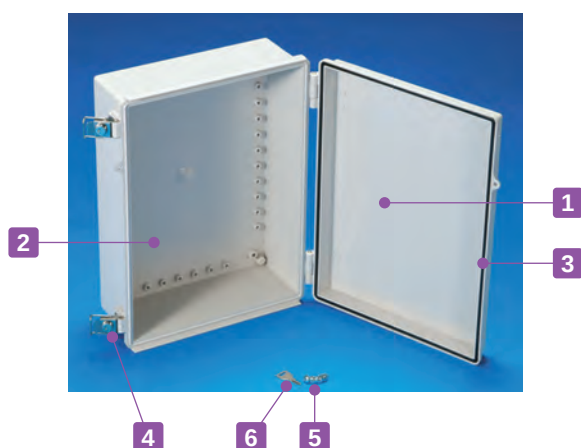
Pole mounting bracket SSK series
See page 205 ~ 208



Cable gland
See page 181 ~ 193



Ventilation parts
See page 195 ~ 202



Technical Data

Protection class : IP65
Operating temperature : -20°C ~ +75°C

*Lock types vary according to box size.



- Lockable enclosure best used for tamper prevention in FA, control box, and network communication fields.
- BCPK polycarbonate box is resistant against heat and flames.
50 different sizes available and selectable from 2 different cover types, Light gray and Transparent (BTO).

Box size
BCPK091207 ~ 172711
BCPK212110, 212113

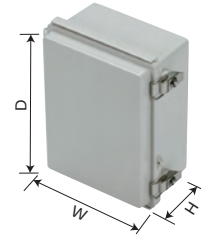
Box size
BCPK192810 ~ 203018
BCPK253515 ~ 608028

- BCPK507018, 507025, 608018, and 608028 models are only available as S color type.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	Polycarbonate UL94V-0	Light gray
2	Base	1	Glass fiber filled polycarbonate UL94V-0	Light gray
3	Gasket	1	Polyurethane	Black
4	Latch	1 ~ 3	Stainless steel	Unfinished
5	Screw for mounting plate	2 ~ 8	Steel	Trivalent chromate
6	Key	1 ~ 3	Diecast zinc • Brass	Chrome plated • Nickel plated

- Stainless steel mounting brackets are included together with the following models : 506018, 506025, 507018, 507025, 608018, and 608028.
- Quantity of keys provided vary by the number of locks present.



Product no. / Details

Product no.	W	D	H	Weight (g)	Delivery time
BCPK091207S	90	120	70	242	In stock
BCPK091208S	90	120	85	264	In stock
BCPK101507S	100	150	70	339	In stock
BCPK101508S	100	150	85	360	In stock
BCPK112107S	110	210	75	437	In stock
BCPK112110S	110	210	100	501	In stock
BCPK112607S	110	260	75	520	In stock
BCPK112610S	110	260	100.5	585	In stock
BCPK131508S	135	155	85	430	In stock
BCPK131808S	135	185	85.5	474	In stock
BCPK131810S	135	185	100.5	471	In stock
BCPK151509S	150	150	90	419	In stock
BCPK151512S	150	150	120.5	507	In stock
BCPK162110S	160	210	100	563	In stock
BCPK162113S	160	210	130	630	In stock
BCPK162610S	160	260	100	728	In stock
BCPK162613S	160	260	130	805	In stock
BCPK172210S	170	220	105	664	In stock
BCPK172711S	170	270	110.5	771	In stock
BCPK192810S	190	280	100.5	875	In stock
BCPK192814S	190	280	141	1,065	In stock
BCPK203013SN	200	300	130	1,098	In stock
BCPK203015SN	200	300	150	1,179	In stock
BCPK203018SN	200	300	180	1,324	In stock
BCPK212110S	210	210	100	743	In stock
BCPK212113S	210	210	130	822	In stock
BCPK253515SN	250	350	150	1,513	In stock
BCPK253518SN	250	350	180	1,676	In stock
BCPK282813S	280	280	130.5	1,391	In stock
BCPK283813S	280	380	130	1,811	In stock
BCPK303015S	300	300	151	1,670	In stock
BCPK303018S	300	300	181	1,782	In stock
BCPK304012S	300	400	120	1,858	In stock
BCPK304015S	300	400	150	1,912	In stock
BCPK304018S	300	400	181	2,083	In stock
BCPK353515S	350	350	150	2,067	In stock
BCPK353518S	350	350	181	2,175	In stock
BCPK354512S	350	450	120	2,442	In stock
BCPK354516S	350	450	160	2,863	In stock
BCPK354520S	350	450	201	3,156	In stock
BCPK405016S	400	500	160	3,149	In stock
BCPK405020S	400	500	201	3,725	In stock
BCPK406018S	400	600	181	4,159	In stock
BCPK406023S	400	600	231	4,639	In stock
BCPK506018S	530	630	185	5,339	In stock
BCPK506025S	530	630	255	7,136	In stock
BCPK507018S	530	730	188	7,470	In stock
BCPK507025S	530	730	258	8,260	In stock
BCPK608018S	630	830	188	9,880	In stock
BCPK608028S	630	830	288	11,610	In stock

Product no. / Details

Product no.	W	D	H	Weight (g)	Delivery time
BCPK091207T	90	120	70	237	2 months
BCPK091208T	90	120	85	261	2 months
BCPK101507T	100	150	70	337	2 months
BCPK101508T	100	150	85	335	2 months
BCPK112107T	110	210	75	444	2 months
BCPK112110T	110	210	100	509	2 months
BCPK112607T	110	260	75	528	2 months
BCPK112610T	110	260	100.5	594	2 months
BCPK131508T	135	155	85	421	2 months
BCPK131808T	135	185	85.5	475	2 months
BCPK131810T	135	185	100.5	478	2 months
BCPK151509T	150	150	90	422	2 months
BCPK151512T	150	150	120.5	508	2 months
BCPK162110T	160	210	100	721	2 months
BCPK162113T	160	210	130	639	2 months
BCPK162610T	160	260	100	738	2 months
BCPK162613T	160	260	130	825	2 months
BCPK172210T	170	220	105	681	2 months
BCPK172711T	170	270	110.5	794	2 months
BCPK192810T	190	280	100.5	900	2 months
BCPK192814T	190	280	141	1,094	2 months
BCPK203013TN	200	300	130	1,097	2 months
BCPK203015TN	200	300	150	1,178	2 months
BCPK203018TN	200	300	180	1,323	2 months
BCPK212110T	210	210	100	756	2 months
BCPK212113T	210	210	130	847	2 months
BCPK253515TN	250	350	150	1,510	2 months
BCPK253518TN	250	350	180	1,673	2 months
BCPK282813T	280	280	130.5	1,433	2 months
BCPK283813T	280	380	130	1,733	2 months
BCPK303015T	300	300	151	1,682	2 months
BCPK303018T	300	300	181	1,795	2 months
BCPK304012T	300	400	120	1,872	2 months
BCPK304015T	300	400	150	1,926	2 months
BCPK304018T	300	400	181	2,098	2 months
BCPK353515T	350	350	150	1,999	2 months
BCPK353518T	350	350	181	2,163	2 months
BCPK354512T	350	450	120	2,429	2 months
BCPK354516T	350	450	160	2,848	2 months
BCPK354520T	350	450	201	3,140	2 months
BCPK405016T	400	500	160	3,152	2 months
BCPK405020T	400	500	201	3,729	2 months
BCPK406018T	400	600	181	4,164	2 months
BCPK406023T	400	600	231	4,645	2 months
BCPK506018T	530	630	185	6,151	2 months
BCPK506025T	530	630	255	8,220	2 months
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—

■ Refer to page 137 ~ 140 for detailed dimensions.

Accessories (Optional parts)



Dust protection cap BCC series
See page 142



Mounting plate BMP series
See page 143 ~ 145



Mounting bracket CK • BFL series
See page 146



Cable gland
See page 181 ~ 193



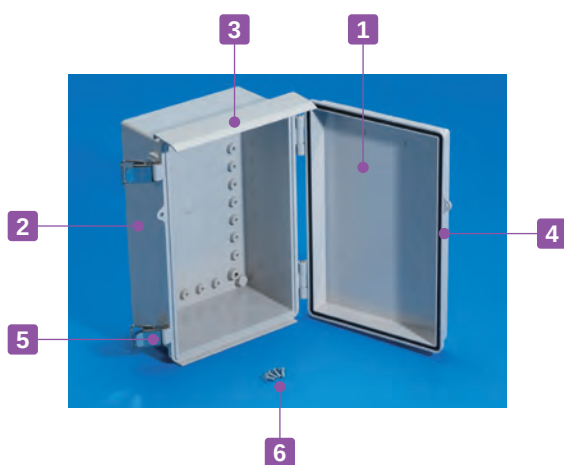
Ventilation parts
See page 195 ~ 202

BCAR series

IP65 ABS PLASTIC BOX with OUTDOOR ROOF

BCPR series

IP65 POLYCARBONATE PLASTIC BOX with OUTDOOR ROOF



Technical Data

Protection class : IP65
 Operating temperature:
 BCAR -10°C ~ +60°C
 BCPR -20°C ~ +75°C

- Suitable for outdoor use by equipping easy snap-on roof attachment.
- 44 different sizes available.
- Applicable for various uses in fields such as FA, network communication, power switch controls and more.
- BCAR series is made of white gray ABS with 2 different cover types (white gray ABS and transparent polycarbonate) available.
- BCPR series is made of light gray UL94V-0 polycarbonate, which has good heat resistant properties.
- Transparent cover type is not available for BCAR507018, 507025, 608018, and 608028 models.

Components : BCAR series

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94HB • Polycarbonate UL94V-0	White gray • Transparent
2	Base	1	ABS UL94HB	White gray
3	Roof	1	PVC	White gray
4	Gasket	1	Polyurethane	Black
5	Latch	1 ~ 3	Stainless steel	Unfinished
6	Screw for mounting plate	2 ~ 8	Steel	Trivalent chromate

■ Stainless steel mounting brackets are included together with the following models : 506018, 506025, 507018, 507025, 608018, and 608028.

Components : BCPR series

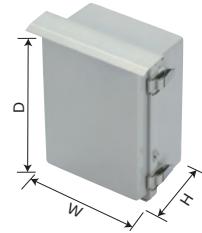
No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	Polycarbonate UL94V-0	Light gray
2	Base	1	Glass fiber filled polycarbonate UL94V-0	Light gray
3	Roof	1	PVC	Light gray
4	Gasket	1	Polyurethane	Black
5	Latch	1 ~ 3	Stainless steel	Unfinished
6	Screw for mounting plate	2 ~ 8	Steel	Trivalent chromate

■ Stainless steel mounting brackets are included together with the following models : 506018, 506025, 507018, 507025, 608018, and 608028.

Color Type

Color code	Top cover color / Material	Base color / Material
BCAR[G]	White gray / ABS	White gray / ABS
BCAR[T]	Transparent / Polycarbonate	White gray / ABS
BCPR[S]	Light gray / Polycarbonate	Light gray / Glass fiber filled polycarbonate

■ Please suffix color code at the end of the product number.



BCAR Product no. / Details

Product no.	W	D	H	Weight (g)	
				G type	T type
BCAR091207□	90	120	70	213	220
BCAR091208□	90	120	85	228	237
BCAR101507□	100	150	70	291	300
BCAR101508□	100	150	85	309	318
BCAR112107□	110	210	75	379	398
BCAR112110□	110	210	100	442	440
BCAR112607□	110	260	75	451	466
BCAR112610□	110	260	100.5	504	519
BCAR131508□	135	155	85	379	381
BCAR131808□	135	185	85.5	404	434
BCAR131810□	135	185	100.5	420	426
BCAR162110□	160	210	100	495	513
BCAR162113□	160	210	130	544	564
BCAR162610□	160	260	100	605	629
BCAR162613□	160	260	130	701	729
BCAR172210□	170	220	105	570	606
BCAR172711□	170	270	110.5	700	710
BCAR192810□	190	280	100.5	755	778
BCAR192814□	190	280	141	909	933
BCAR203013□N	200	300	130	959	992
BCAR203015□N	200	300	150	1,027	1,060
BCAR203018□N	200	300	180	1,148	1,181
BCAR212110□	210	210	100	666	692
BCAR212113□	210	210	130	740	762
BCAR253515□N	250	350	150	1,324	1,366
BCAR253518□N	250	350	180	1,461	1,503
BCAR282813□	280	280	130.5	1,218	1,251
BCAR283813□	280	380	130	1,506	1,563
BCAR303015□	300	300	151	1,393	1,472
BCAR303018□	300	300	181	1,549	1,630
BCAR304012□	300	400	120	1,562	1,629
BCAR304015□	300	400	150	1,617	1,729
BCAR304018□	300	400	181	1,773	1,907
BCAR353515□	350	350	150	1,757	1,827
BCAR353518□	350	350	181	1,908	1,970
BCAR354512□	350	450	120	2,140	2,239
BCAR354516□	350	450	160	2,454	2,586
BCAR354520□	350	450	201	2,718	2,866
BCAR506018□	530	630	185	5,564	5,737
BCAR506025□	530	630	255	6,203	6,399
BCAR507018G	530	730	188	6,366	—
BCAR507025G	530	730	258	7,037	—
BCAR608018G	630	830	188	8,279	—
BCAR608028G	630	830	288	9,719	—

■ BCAR507018, 507025, 608018, and 608028 models are only available as G color type.

BCPR Product no. / Details

Product no.	W	D	H	Weight (g)
BCPR091207S	90	120	70	242
BCPR091208S	90	120	85	264
BCPR101507S	100	150	70	330
BCPR101508S	100	150	85	354
BCPR112107S	110	210	75	439
BCPR112110S	110	210	100	493
BCPR112607S	110	260	75	513
BCPR112610S	110	260	100.5	589
BCPR131508S	135	155	85	429
BCPR131808S	135	185	85.5	475
BCPR131810S	135	185	100.5	471
BCPR162110S	160	210	100	583
BCPR162113S	160	210	130	638
BCPR162610S	160	260	100	699
BCPR162613S	160	260	130	806
BCPR172210S	170	220	105	667
BCPR172711S	170	270	110.5	803
BCPR192810S	190	280	100.5	889
BCPR192814S	190	280	141	1,060
BCPR203013SN	200	300	130	1,108
BCPR203015SN	200	300	150	1,188
BCPR203018SN	200	300	180	1,333
BCPR212110S	210	210	100	777
BCPR212113S	210	210	130	862
BCPR253515SN	250	350	150	1,531
BCPR253518SN	250	350	180	1,694
BCPR282813S	280	280	130.5	1,422
BCPR283813S	280	380	130	1,747
BCPR303015S	300	300	151	1,665
BCPR303018S	300	300	181	1,814
BCPR304012S	300	400	120	1,901
BCPR304015S	300	400	150	1,917
BCPR304018S	300	400	181	2,084
BCPR353515S	350	350	150	2,109
BCPR353518S	350	350	181	2,206
BCPR354512S	350	450	120	2,471
BCPR354516S	350	450	160	2,899
BCPR354520S	350	450	201	3,224
BCPR506018S	530	630	185	6,431
BCPR506025S	530	630	255	7,339
BCPR507018S	530	730	188	7,630
BCPR507025S	530	730	258	8,420
BCPR608018S	630	830	188	10,040
BCPR608028S	630	830	288	11,770

■ Refer to page 137 ~ 140 for detailed dimensions.

Accessories (Optional parts)



Mounting plate BMP series
See page 143 ~ 145



Mounting bracket CK • BFL series
See page 146



Pole mounting bracket SSK series
See page 205 ~ 208



Cable gland
See page 181 ~ 193

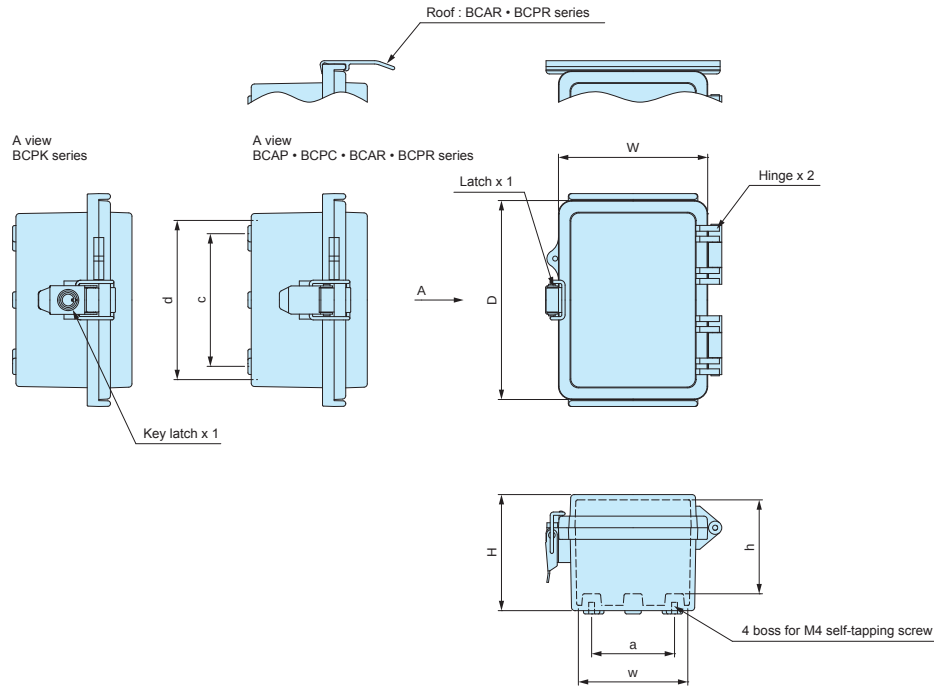


Ventilation parts
See page 195 ~ 202

BCAP • BCPC • BCPK • BCAR • BCPR dimensions

■ DXF/DWG/PDF drawings available on our website.

091207 • 091208



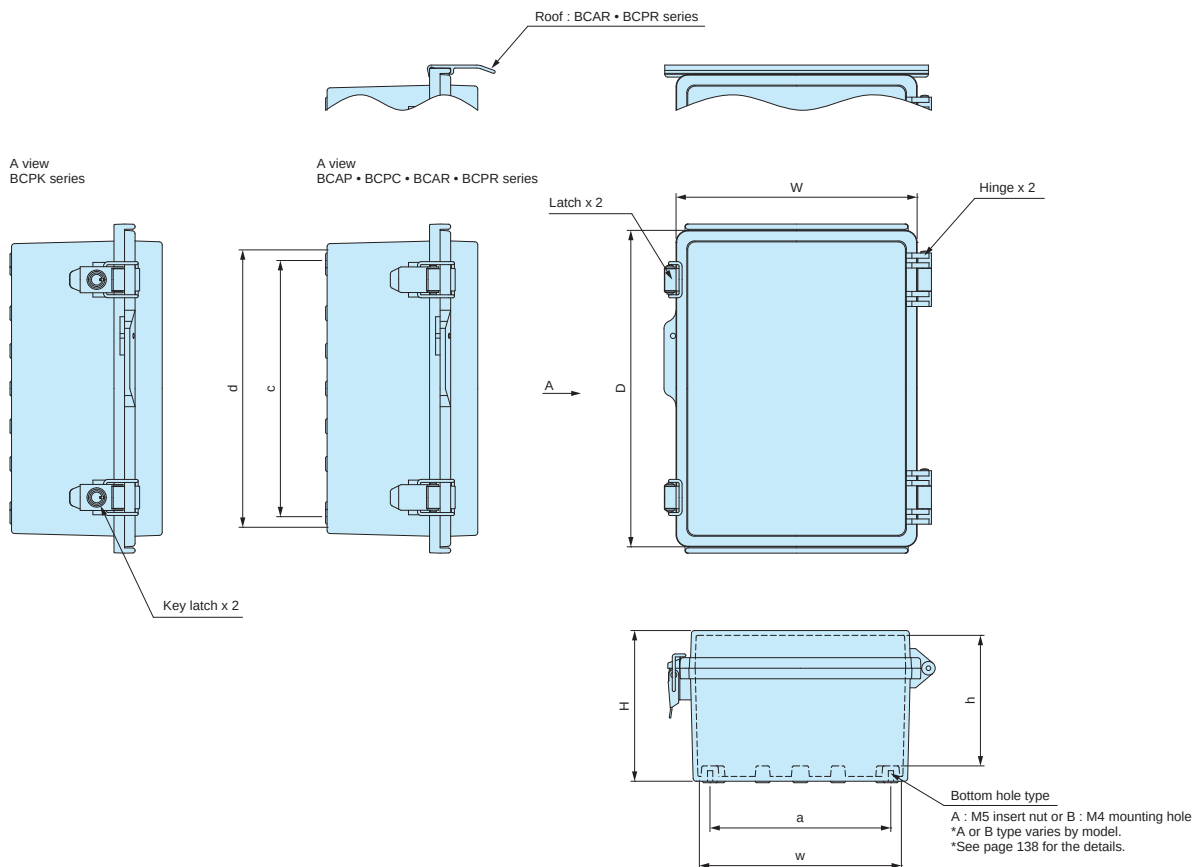
Product no. / Details

Product no.	W	D	H	Available range			Bottom hole pitch	
				w	d	h	a	c
BCAP • R, BCPC • K • R091207	90	120	70	66	96	56.5	50	80
BCAP • R, BCPC • K • R091208	90	120	85	66	96	71.5	50	80

■ K = BCPK series, R = BCAR • BCPR series.

101507 ~ 405020

※ Not available for BCAR • BCPR 151509, 151512, 405016, and 405020 models.





■ Number of bosses inside vary according to box size.
Refer to DXF/DWG/PDF drawings for more details.

APPLICATION EXAMPLE



Surveillance Video Data Cloud Router

Product no. / Details

Product no.	W	D	H	Available range			Bottom hole pitch		Bottom hole type
				w	d	h	a	c	
BCAP • R, BCPC • K • R101507	100	150	70	76	126	56.5	60	110	B
BCAP • R, BCPC • K • R101508	100	150	85	75.5	125.5	71.5	60	110	B
BCAP • R, BCPC • K • R112107	110	210	75	85.8	185.8	61.5	70	170	B
BCAP • R, BCPC • K • R112110	110	210	100	84.9	184.9	86.5	70	170	B
BCAP • R, BCPC • K • R112607	110	260	75	85.8	235.8	61.5	70	220	B
BCAP • R, BCPC • K • R112610	110	260	100.5	85.1	234.9	87.2	70	220	B
BCAP • R, BCPC • K • R131508	135	155	85	110.5	130.5	71.5	95	115	B
BCAP • R, BCPC • K • R131808	135	185	85.5	110.4	160.4	72.2	95	145	B
BCAP • R, BCPC • K • R131810	135	185	100.5	110.4	160.4	87.1	95	145	B
BCAP, BCPC • K 151509	150	150	90	125.7	125.7	75.5	120	120	B
BCAP, BCPC • K 151512	150	150	120.5	124	124	106	117	117	B
BCAP • R, BCPC • K • R162110	160	210	100	134	184	86.6	120	170	B
BCAP • R, BCPC • K • R162113	160	210	130	134	184	116.5	120	170	B
BCAP • R, BCPC • K • R162610	160	260	100	135.1	235.1	86.6	120	220	B
BCAP • R, BCPC • K • R162613	160	260	130	134	234	116.6	120	220	B
BCAP • R, BCPC • K • R172211	170	220	110.5	144.9	194.9	96.1	132	182	B
BCAP • R, BCPC • K • R172711	170	270	110.5	144.9	244.9	96.1	132	232	B
BCAP • R, BCPC • K • R192810	190	280	100.5	165.3	255.3	84.1	148	238	A
BCAP • R, BCPC • K • R192814	190	280	141	164.2	254.2	124.6	148	238	A
BCAP • R, BCPC • K • R203013□N	200	300	130	173.5	273.6	113.6	152	252	A
BCAP • R, BCPC • K • R203015□N	200	300	151.5	173.5	273.5	135.1	152	252	A
BCAP • R, BCPC • K • R203018□N	200	300	180.5	172.5	272.5	164.1	152	252	A
BCAP • R, BCPC • K • R212110	210	210	100	185.1	185.1	86.6	170	170	B
BCAP • R, BCPC • K • R212113	210	210	130	184	184	116.6	170	170	B
BCAP • R, BCPC • K • R253515□N	250	350	151	222.5	322.5	135.3	206	306	A
BCAP • R, BCPC • K • R253518□N	250	350	180	222.5	322.5	165.8	206	306	A
BCAP • R, BCPC • K • R282813	280	280	130.5	254	254	113.6	238	238	A
BCAP • R, BCPC • K • R283813	280	380	130	254	354	113.6	238	338	A
BCAP • R, BCPC • K • R303015	300	300	151	273	273	134.3	256	256	A
BCAP • R, BCPC • K • R303018	300	300	181	272.5	272.5	164.3	256	256	A
BCAP • R, BCPC • K • R304012	300	400	120	274.5	374.5	103.6	252	352	A
BCAP • R, BCPC • K • R304015	300	400	150	273.5	373.5	133.6	252	352	A
BCAP • R, BCPC • K • R304018	300	400	181	272.5	372.5	164.6	252	352	A
BCAP • R, BCPC • K • R353515	350	350	150	323.6	323.6	133.6	302	302	A
BCAP • R, BCPC • K • R353518	350	350	181	322.5	322.5	164.6	302	302	A
BCAP • R, BCPC • K • R354512	350	450	120	316.7	416.7	103.3	302	402	A
BCAP • R, BCPC • K • R354516	350	450	160	308.7	414.7	142.6	302	402	A
BCAP • R, BCPC • K • R354520	350	450	201	309.3	414.8	183.6	302	402	A
BCAP, BCPC • K 405016	400	500	160	360.4	466.6	144	352	452	A
BCAP, BCPC • K 405020	400	500	201	359.4	465.5	184	352.5	452.5	A

■ K = BCPK series, R = BCAR • BCPR series.

BCAP • BCPC • BCPK • BCAR • BCPR dimensions

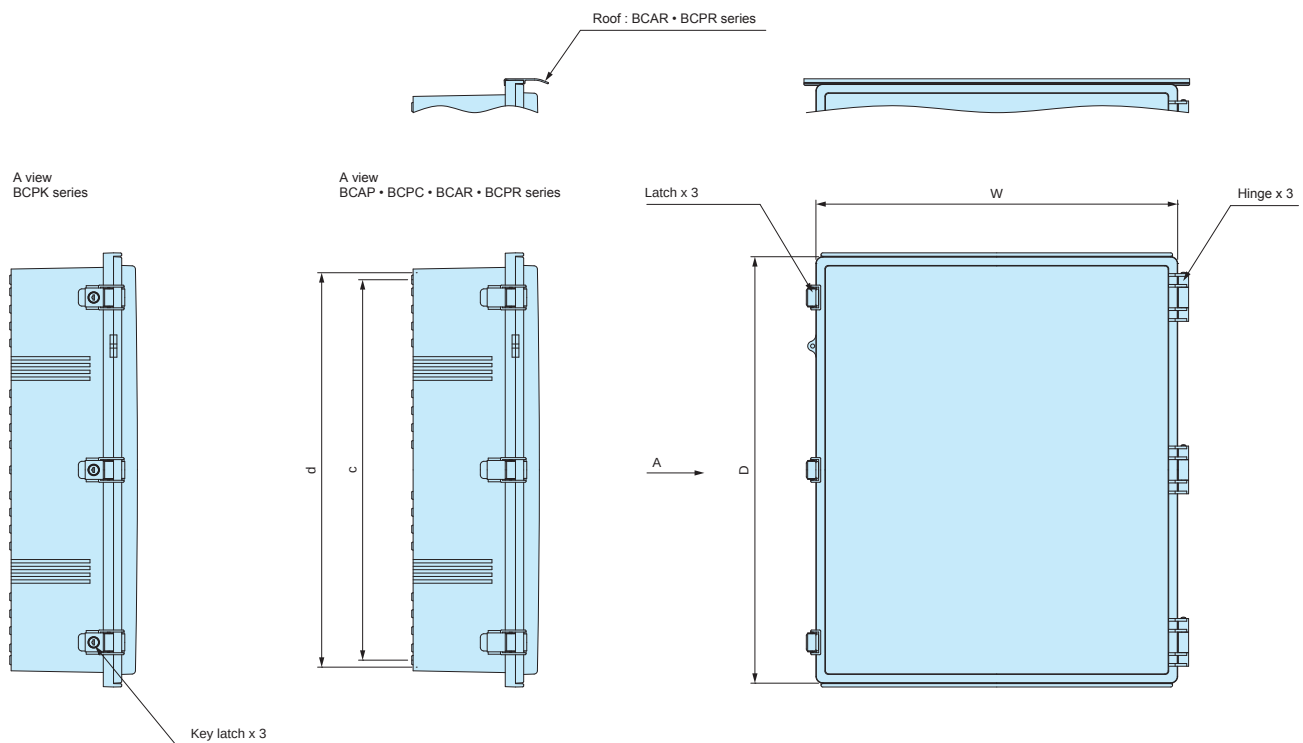
406018 ~ 507025

※ Not available for BCAR • BCPR 406018 and 406023 models.

■ DXF/DWG/PDF drawings available on our website.



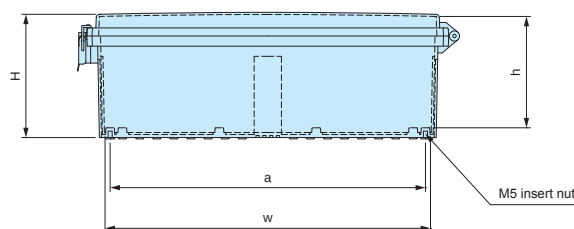
■ Number of bosses inside vary according to box size.
Refer to DXF/DWG/PDF drawings for more details.



Attention when locking the latch

1. Close latches on both ends first.
 2. Close center latch next.
- ※ Closing center latch first may cause a non-watertight seal.

Center latch must be closed last!

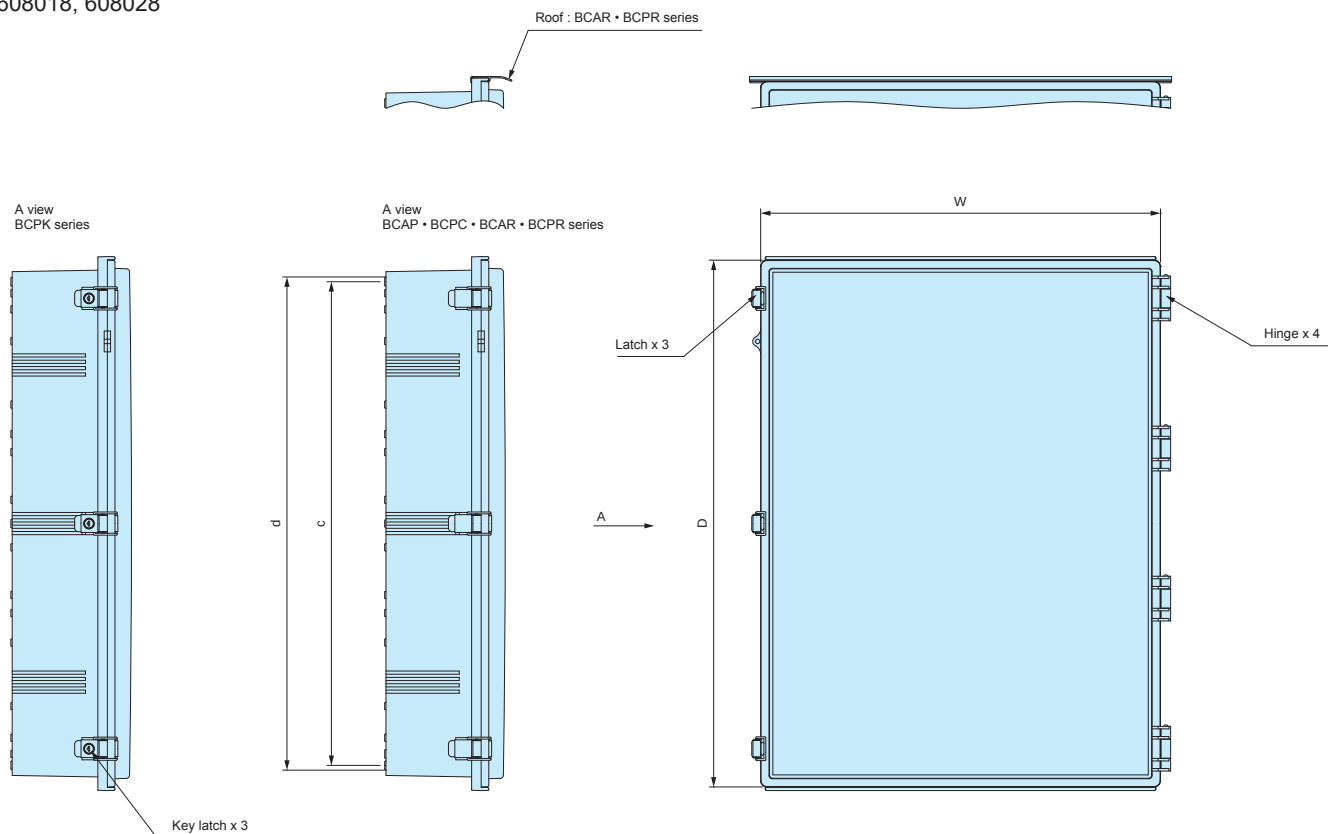


Product no. / Details

Product no.	W	D	H	Available range			Bottom hole pitch	
				w	d	h	a	c
BCAP, BCPC • K 406018	400	600	181	358.6	565.9	163.8	352.5	552.5
BCAP, BCPC • K 406023	400	600	231	356.9	564.1	213.8	352	552.5
BCAP, R, BCPC • K • R506018	530	630	185	476.8	576.8	163.6	462	562
BCAP, R, BCPC • K • R506025	530	630	255	474.6	574.6	233.6	462	562
BCAP, R, BCPC • K • R507018	530	730	188	477	677	166.1	462	662
BCAP, R, BCPC • K • R507025	530	730	255	475	676.2	236	462	662

■ K = BCPK series, R = BCAR • BCPR series.

608018, 608028

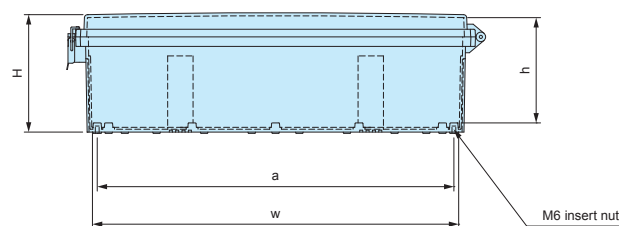


Attention when locking the latch

1. Close latches on both ends first.
2. Close center latch next.

※ Closing center latch first may cause a non-watertight seal.

Center latch must be closed last!

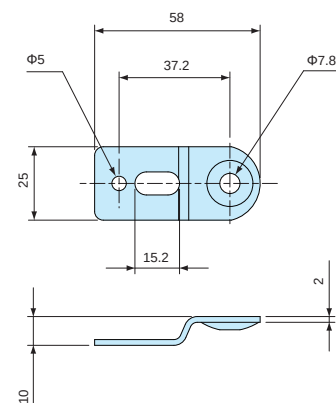


Product no. / Details

Product no.	W	D	H	Available range			Bottom hole pitch	
				w	d	h	a	c
BCAP • R, BCPC • K • R608018	630	830	188	575	777	165.6	562	762
BCAP • R, BCPC • K • R608028	630	830	288	573.5	773.5	265.8	562	762

■ K = BCPK series, R = BCAR • BCPR series.

Included stainless steel mounting bracket for 506018, 506025, 507018, 507025, 608018, and 608028



Components

Part name	Pcs	Material	Finish
Mounting bracket	6	Stainless steel	Unfinished
Screw	6	Steel	Trivalent chromate

BRF series

OUTDOOR ROOF



- Recommended to be used for outdoor environments for protection against rain etc.
- Snap-in easy installation.
- Available for use with BCAP, BCPC, and BCPK series' models except 151509, 151512, 405016, 405020, 406018, and 406023 models.

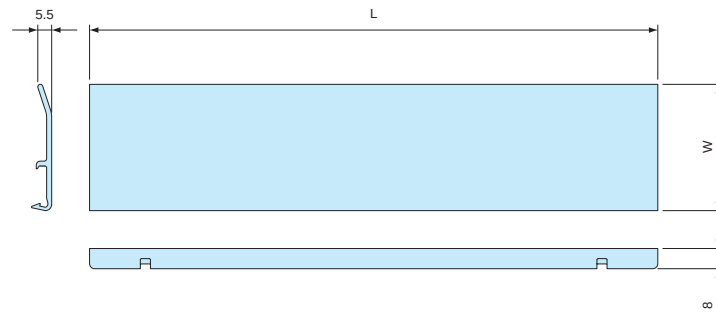
Color Type

Color code	Material	Color	Suitable models
G	PVC	White gray	BCAP
S	PVC	Light gray	BCPC • BCPK

BRF dimensions

Roof for 091207 ~ 353518

■ DXF/DWG/PDF drawings available on our website.

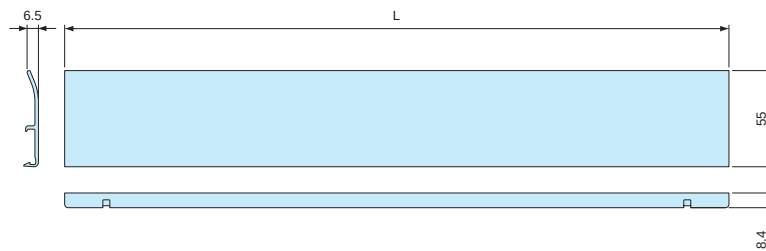


Product no. / Details

■ Please suffix the color code at the end of the product number.

Product no.	Suitable models	L	W
BRF- 90□	BCAP • BCPC • BCPK 091207 091208	105	45
BRF-100□	BCAP • BCPC • BCPK 101507 101508	115	45
BRF-110□	BCAP • BCPC • BCPK 112107 112110 112607 112610	125	45
BRF-135□	BCAP • BCPC • BCPK 131508 131808 131810	150	45
BRF-160□	BCAP • BCPC • BCPK 162110 162113 162610 162613	175	45
BRF-170□	BCAP • BCPC • BCPK 172711	185	45
BRF-1722□	BCAP • BCPC • BCPK 172210	180	45
BRF-190□	BCAP • BCPC • BCPK 192810 192814	205	45
BRF-210□	BCAP • BCPC • BCPK 212110 212113	225	45
BRF-200□N	BCAP • BCPC • BCPK 203013□N 203015□N 203018□N	225	50
BRF-250□N	BCAP • BCPC • BCPK 253515□N 253518□N	275	50
BRF-280□	BCAP • BCPC • BCPK 282813 283813	305	50
BRF-300□	BCAP • BCPC • BCPK 303015 303018 304012 304015 304018	325	50
BRF-350□	BCAP • BCPC • BCPK 353515 353518	375	50

Roof for 354512 ~ 354520



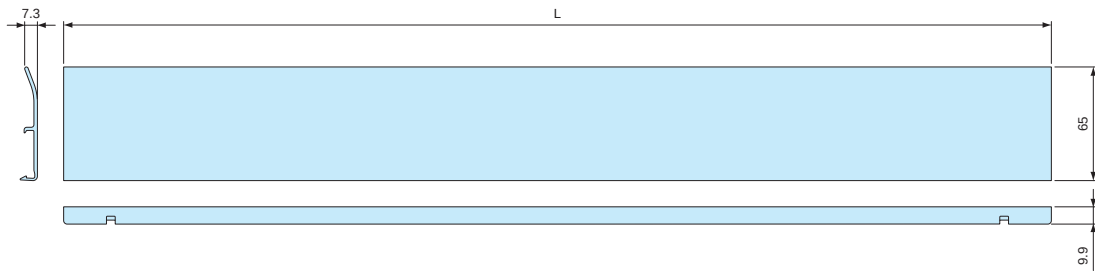
Product no. / Details

■ Please suffix the color code at the end of the product number.

Product no.	Suitable models	L
BRF-350L□	BCAP • BCPC • BCPK 354512 354516 354520	380

■ S color type is light gray painted.

Roof for 506018 ~ 608028



Product no. / Details

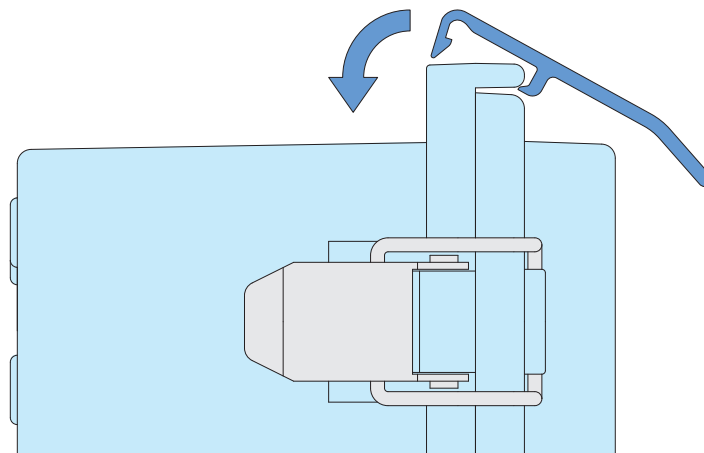
■ Please suffix the color code at the end of the product number.

Product no.	Suitable models	L
BRF-530□	BCAP • BCPC • BCPK 506018 506025 507018 507025	565
BRF-630□	BCAP • BCPC • BCPK 608018 608028	665

■ S color type is light gray painted.

■ How to install BRF outdoor roof

Refer to illustration.



BCC-1 DUST PROTECTION CAP



- Prevents dust and other foreign material entry.
- Protection against corrosion on key hole part in environments such as coastal areas.
- When ordering, please ensure that the quantity required corresponds to the number of latches on your selected model.

Product no. / Details

Product no.	Material	Color	Pack of
BCC-1	Silicone	Black	1

Suitable models

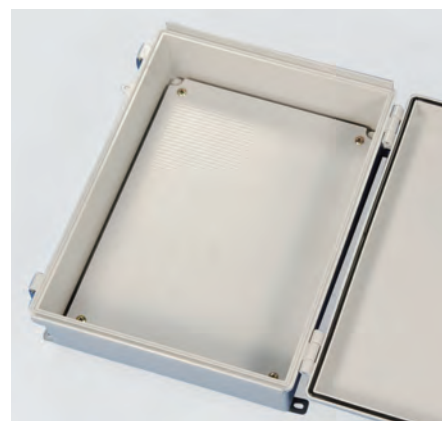
Suitable models	Required
BCPK192810 ~ 203018, 253515 ~ 405020	2
BCPK406018 ~ 608028	3

■ Not suitable for BCPK 212110, 212113, 172711 and smaller models.

BMP-P series

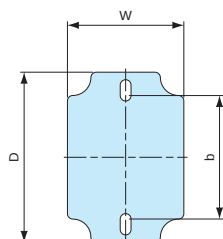
PLASTIC MOUNTING PLATE

- Light weight ABS plastic mounting plate.

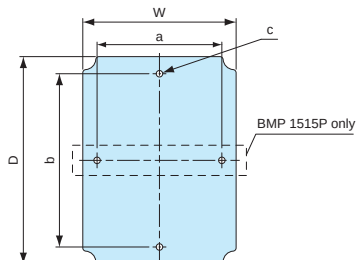


BMP-P dimensions

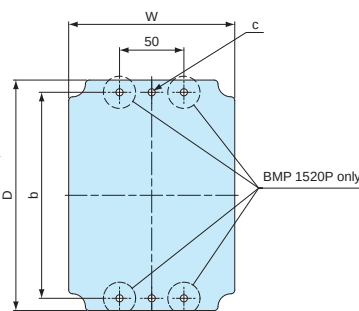
BMP0811P



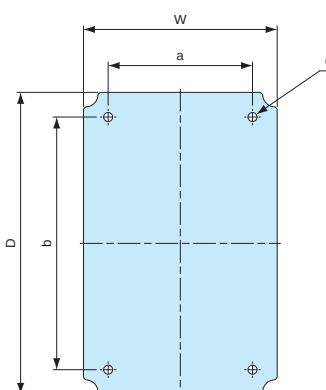
BMP0813P ~ 1515P



BMP1520P, 1525P



BMP1928P ~ 4050P



- DXF/DWG/PDF drawings available on our website.

Components

Part name	Material	Color
Mounting plate	ABS	White gray

Product no. / Details

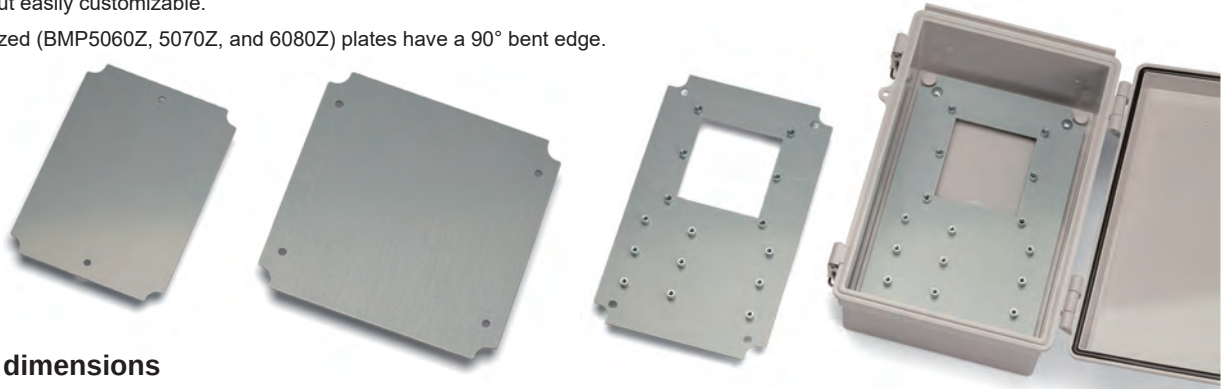
Product no.	W	D	a	b	c (Φ)	Thickness	Suitable models	Weight (g)
BMP0811P	64.5	94.3	—	68.4	—	3.5	BCAP • R, BCPC • K • R 091207, 091208	21
BMP0813P	64.6	114.5	—	88.4	—	3.5	BCAP • R, BCPC • K • R 101507, 101508	24
BMP1121P	76.5	176	—	157.8	6	3	BCAP • R, BCPC • K • R 112107, 112110	40
BMP1126P	76.5	226	—	208	6	3	BCAP • R, BCPC • K • R 112607, 112610	53
BMP1315P	101.5	121.5	—	110	5.5	3.5	BCAP • R, BCPC • K • R 131508	36
BMP1217P	110	160	—	140	6	3.5	BCAP • R, BCPC • K • R 131808, 131810	62
BMP1515P	123	123	110	110	6	3.5	BCAP BCPC • K 151509, 151512	52
BMP1520P	129	179	—	160	5.5	3.5	BCAP • R, BCPC • K • R 162110, 162113, 172210	92
BMP1525P	129	228.5	—	210	6	3.5	BCAP • R, BCPC • K • R 162610, 162613, 172711	112
BMP1928P	158.5	248	120	210	8	3.5	BCAP • R, BCPC • K • R 192810, 192814	162
BMP2020P	178.5	178.5	120	150	5.5	3.5	BCAP • R, BCPC • K • R 212110, 212113	125
BMP2030P	166.5	266	128	225.5	8	4	BCAP • R, BCPC • K • R 203013, 203015, 203018	188
BMP2535P	215.5	315	180	268.5	8	4	BCAP • R, BCPC • K • R 253515, 253518	292
BMP2828P	248.5	248.5	210	210	8	4	BCAP • R, BCPC • K • R 282813	237
BMP2838P	248	347.5	209	309.5	8	4	BCAP • R, BCPC • K • R 283813	368
BMP3030P	262.5	262.5	219	219	7.5	4	BCAP • R, BCPC • K • R 303015, 303018	281
BMP3040P	264	364	228	324	7	3.7	BCAP • R, BCPC • K • R 304012, 304015, 304018	437
BMP3535P	313.5	313.5	269.5	269.5	8	4	BCAP • R, BCPC • K • R 353515, 353518	424.5
BMP3545P	305	405.5	273	364	8	4	BCAP • R, BCPC • K • R 354512, 354516, 354520	539
BMP4050P	357	457	328	428	8.5	4	BCAP BCPC • K 405016, 405020	725.5

- K = BCPK series, R = BCAR • BCPR series.

BMP-Z series

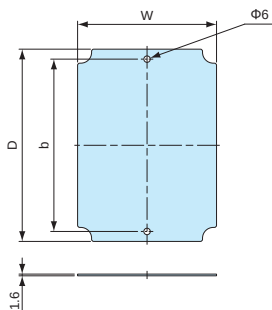
STEEL MOUNTING PLATE

- Customization services (machining, punch press or clinching nut insertion) are available. See website for more details.
- Tough but easily customizable.
- Large sized (BMP5060Z, 5070Z, and 6080Z) plates have a 90° bent edge.

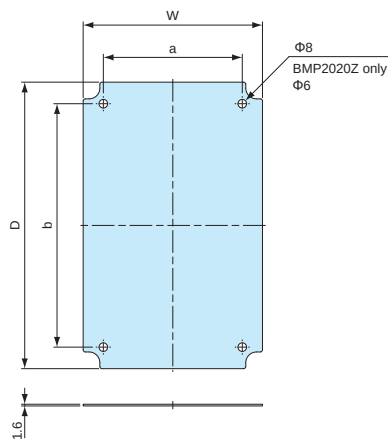


BMP-Z dimensions

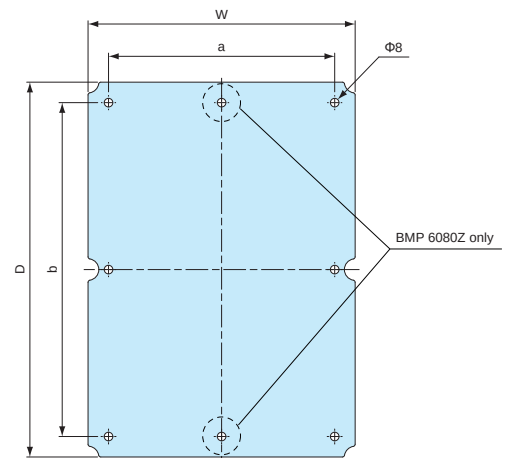
BMP0912Z ~ 1727Z



BMP1928Z ~ 4060Z



BMP5060Z ~ 6080Z



Components

Part name	Material	Finish
Mounting plate	Steel SECC t = 1.6	Zinc coated

Product no. / Details

■ DXF/DWG/PDF drawings available on our website.

Product no.	W	D	a	b	Suitable models	Screw	Weight (g)
BMP0912Z	58	88	—	69	BCAP • R, BCPC • K • R 091207, 091208	—	53
BMP0813Z	68	118	—	100	BCAP • R, BCPC • K • R 101507, 101508	—	87
BMP1121Z	77	177	—	158	BCAP • R, BCPC • K • R 112107, 112110	—	159
BMP1126Z	77	227	—	208	BCAP • R, BCPC • K • R 112607, 112610	—	210
BMP1315Z	102	122	—	110	BCAP • R, BCPC • K • R 131508	—	141
BMP1217Z	102	152	—	140	BCAP • R, BCPC • K • R 131808, 131810	—	180
BMP1515Z	121	121	—	110	BCAP BCPC • K 151509, 151512	—	172
BMP1520Z	126	176	—	160	BCAP • R, BCPC • K • R 162110, 162113	—	262
BMP1525Z	127	227	—	210	BCAP • R, BCPC • K • R 162610, 162613	—	346
BMP1722Z	137	187	—	160	BCAP • R, BCPC • K • R 172210	—	308
BMP1727Z	137	237	—	210	BCAP • R, BCPC • K • R 172711	—	391
BMP1928Z	157	247	120	210	BCAP • R, BCPC • K • R 192810, 192814	M5-8 × 4 pcs	462.5
BMP2020Z	176	176	120	150	BCAP • R, BCPC • K • R 212110, 212113	—	371
BMP2030Z	165	265	129	226	BCAP • R, BCPC • K • R 203013, 203015, 203018	M5-8 × 4 pcs	519
BMP2535Z	215	315	180	270	BCAP • R, BCPC • K • R 253515, 253518	M5-8 × 4 pcs	816
BMP2828Z	246	246	210	210	BCAP • R, BCPC • K • R 282813	M5-8 × 4 pcs	727.5
BMP2838Z	246	346	210	310	BCAP • R, BCPC • K • R 283813	M5-8 × 4 pcs	1,018
BMP3030Z	264	264	219	219	BCAP • R, BCPC • K • R 303015, 303018	M5-8 × 4 pcs	826.5
BMP3040Z	265	365	228	325	BCAP • R, BCPC • K • R 304012, 304015, 304018	M5-8 × 4 pcs	1,154
BMP3535Z	315	315	270	270	BCAP • R, BCPC • K • R 353515, 353518	M5-8 × 4 pcs	1,196.5
BMP3545Z	301	401	274	365	BCAP • R, BCPC • K • R 354512, 354516, 354520	M5-8 × 4 pcs	1,443
BMP4050Z	354	454	328	428	BCAP BCPC • K 405016, 405020	M5-8 × 4 pcs	1,998
BMP4060Z	354	551	328	525	BCAP BCPC • K 406018, 406023	M5-8 × 4 pcs	2,328
BMP5060Z	474	574	426	526	BCAP • R, BCPC • K • R 506018, 506025	M5-8 × 6 pcs	3,286
BMP5070Z	472	672	426	626	BCAP • R, BCPC • K • R 507018, 507025	M5-8 × 6 pcs	3,864
BMP6080Z	565	765	526	726	BCAP • R, BCPC • K • R 608018, 608028	—	5,288.5

■ K = BCPC series, R = BCAR • BCPR series.

BMP-W series

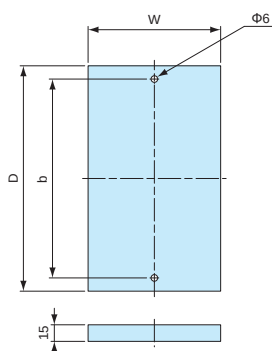
WOODEN MOUNTING PLATE

- Easily customizable hard wooden plate.
- Easy installation with screws provided.
- Plate comes with scales printed on for easy references.

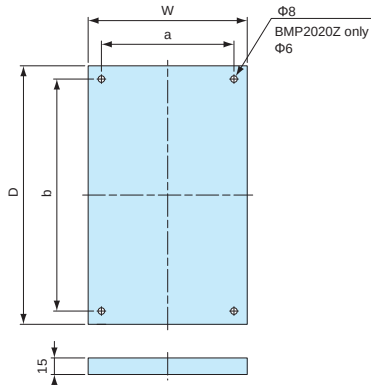


BMP-W dimensions

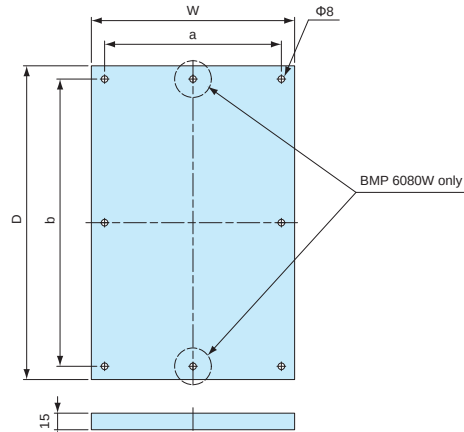
BMP0912W ~ 1727W



BMP1928W ~ 4060W



BMP5060W ~ 6080W



Components

■ DXF/DWG/PDF drawings available on our website.

Part name	Pcs	Material	Finish
Mounting plate	1	Wood board t=15	Scaled sheet
Screw (M5-20 pan washer head)	2 ~ 8	Steel	Trivalent chromate

Product no. / Details

Product no.	W	D	a	b	Suitable models	Screw	Weight (g)
BMP0912W	58	92	-	69	BCAP • R, BCPC • K • R 091207, 091208	M4×20 2 pcs	62
BMP0813W	68	122	-	99	BCAP • R, BCPC • K • R 101507, 101508	M4×20 2 pcs	94
BMP1121W	77	181	-	158	BCAP • R, BCPC • K • R 112107, 112110	M4×20 2 pcs	166
BMP1126W	77	231	-	208	BCAP • R, BCPC • K • R 112607, 112610	M4×20 2 pcs	191
BMP1315W	102	126	-	110	BCAP • R, BCPC • K • R 131508	M4×20 2 pcs	127
BMP1217W	102	156	-	140	BCAP • R, BCPC • K • R 131808, 131810	M4×20 2 pcs	190
BMP1515W	118	125	-	110	BCAP BCPC • K 151509, 151512	M4×20 2 pcs	172
BMP1520W	126	180	-	160	BCAP • R, BCPC • K • R 162110, 162113	M4×20 2 pcs	243
BMP1525W	127	231	-	210	BCAP • R, BCPC • K • R 162610, 162613	M4×20 2 pcs	352
BMP1722W	137	191	-	160	BCAP • R, BCPC • K • R 172210	M4×20 2 pcs	286
BMP1727W	137	241	-	210	BCAP • R, BCPC • K • R 172711	M4×20 2 pcs	212
BMP1928W	150	240	120	210	BCAP • R, BCPC • K • R 192810, 192814	M5×20 4 pcs	350
BMP2020W	170	174	120	150	BCAP • R, BCPC • K • R 212110, 212113	M4×20 4 pcs	336
BMP2030W	159	256	129	226	BCAP • R, BCPC • K • R 203013, 203015, 203018	M5×20 4 pcs	482
BMP2535W	210	300	180	270	BCAP • R, BCPC • K • R 253515, 253518	M5×20 4 pcs	688
BMP2828W	240	240	210	210	BCAP • R, BCPC • K • R 282813	M5×20 4 pcs	565
BMP2838W	240	340	210	310	BCAP • R, BCPC • K • R 283813	M5×20 4 pcs	893
BMP3030W	249	249	219	219	BCAP • R, BCPC • K • R 303015, 303018	M5×20 4 pcs	659
BMP3040W	258	355	228	324	BCAP • R, BCPC • K • R 304012, 304015, 304018	M5×20 4 pcs	965
BMP3535W	300	300	270	270	BCAP • R, BCPC • K • R 353515, 353518	M5×20 4 pcs	964
BMP3545W	301	395	274	365	BCAP • R, BCPC • K • R 354512, 354516, 354520	M5×20 4 pcs	1,314
BMP4050W	355	455	328	428	BCAP BCPC • K 405016, 405020	M5×20 4 pcs	1,754
BMP4060W	355	552	328	525	BCAP BCPC • K 406018, 406023	M5×20 4 pcs	2,015.5
BMP5060W	455	556	426	526	BCAP • R, BCPC • K • R 506018, 506025	M5×20 6 pcs	2,650
BMP5070W	455	656	426	626	BCAP • R, BCPC • K • R 507018, 507025	M5×20 6 pcs	3,152.5
BMP6080W	556	756	526	726	BCAP • R, BCPC • K • R 608018, 608028	M6×20 8 pcs	4,434

■ K = BCPK series, R = BCAR • BCPR series.

BFL series

PLASTIC MOUNTING BRACKET

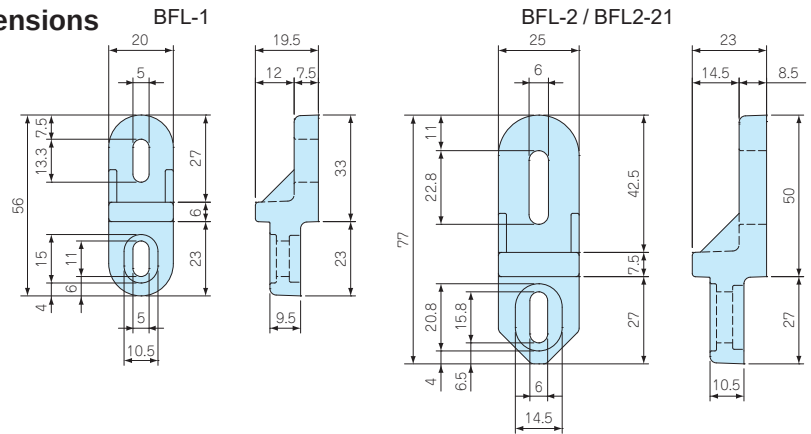


Color G

Color S

- 2 different colored types to match box colors.
- Tough and strong glass fiber filled polycarbonate.

BFL dimensions



Color Type

Code	Color	Suitable models
G	White gray	BCAP • BCAR
S	Light gray	BCPC • BCPK • BCPR

Components

■ DXF/DWG/PDF drawings available on our website.

Part name	Pcs	Material / Finish
Mounting bracket	4	Glass fiber filled polycarbonate • ABS
Screw	4	Stainless steel / Unfinished

Product no. / Details

Product no.	Suitable models	Screw
BFL-1□	BCAP • R, BCPC • K • R 0912, 1015, 1121, 1126, 1315, 1318, 1621, 1626, 1722, 1727, 212113	Self-tapping M4-12 bind head
BFL-2□	BCAP • R, BCPC • K • R 1928, 2030, 2535, 2828, 2838, 3030, 3040, 3535, 3545, 4050, 4060, 5060	M5-12 bind head
BFL-2-21□	BCAP • R, BCPC • K • R 212110	Self-tapping M4-12 bind head

■ Please suffix color code at the end of the product number.

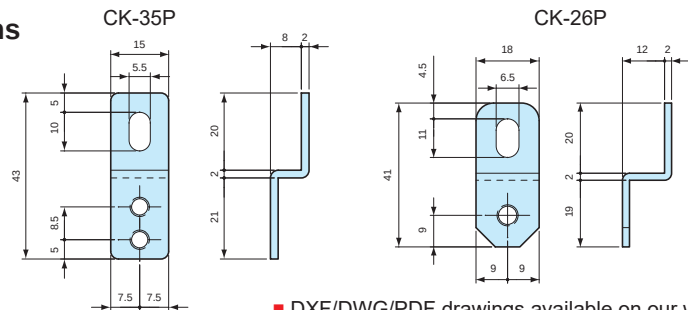
*Not suitable for BCAP1515 models. Use CK-35P (Stainless steel) instead.

CK series

STAINLESS STEEL MOUNTING BRACKET



CK dimensions



Components

■ DXF/DWG/PDF drawings available on our website.

Part name	Pcs	Material	Finish
Mounting bracket	4	Stainless steel SUS304	Barrel finish
Screw	4	Stainless steel	Unfinished

Product no. / Details

Product no.	Suitable models	Screw
CK-35P	BCAP • R, BCPC • K • R 0912, 1015, 1121, 1126, 1315, 1318, 1515, 1621, 1626, 1722, 1727, 2121	Self-tapping M4-10 pan head
CK-26P	BCAP • R, BCPC • K • R 1928, 2030, 2535, 2828, 2838, 3030, 3040, 3535, 3545, 4050, 4060	M5-10 pan head

MT series

PCB MOUNTING SCREW

- PCB mounting screws for inner bosses of BCAP • BCAR • BCPC • BCPK • BCPR series.



Product no. / Details

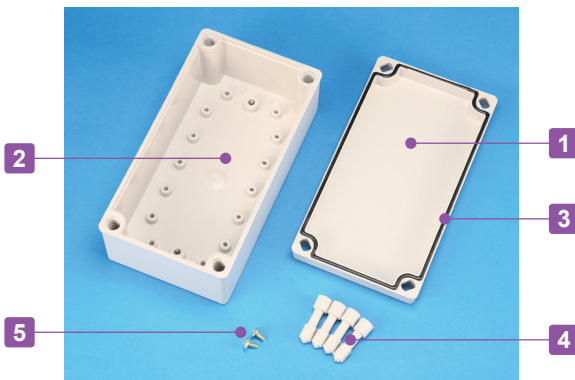
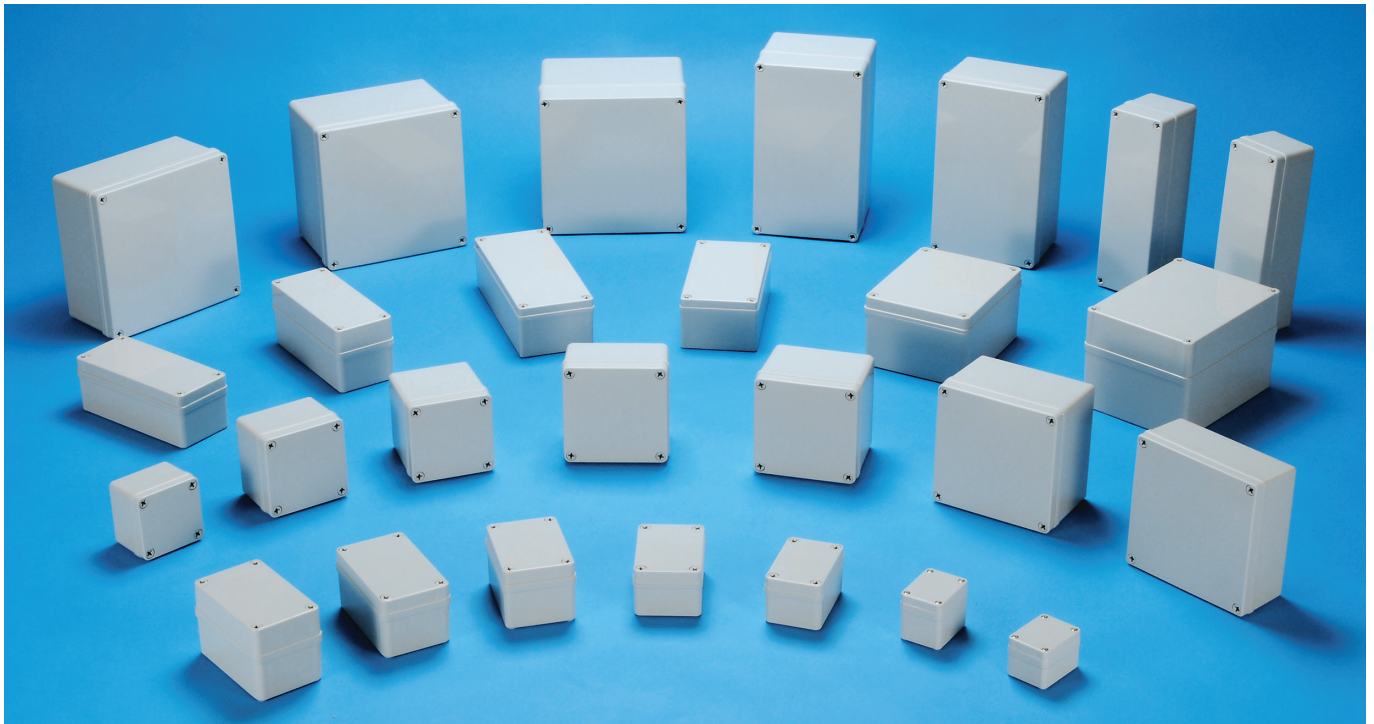
Product no.	Screw details	Material	Finish	Pack of
MT4-8T	Self-tapping M4-8 bind head	Steel	Trivalent chromate	20
MT5-8T	Self-tapping M5-8 bind head	Steel	Trivalent chromate	20

Product no. / Details

Product no.	Suitable models	Recommended torque
MT4-8T	BCAP • R, BCPC • K • R 0912, 1015, 1121, 1126, 1315, 1318, 1515, 1621, 1626, 1722, 1727, 1928, 2121	0.7N • m
MT5-8T	BCAP • R, BCPC • K • R 2030, 2535, 2828, 2838, 3030, 3040, 3535, 3545, 4050, 4060, 5060, 5070, 6080	1.4N • m

BCAS SERIES

IP65 PLASTIC PULL BOX



IP65

Technical Data

Protection class: IP65
 Operating temperature: -10°C ~ +60°C
 Recommended torque:
 1N · m ~ 1.5N · m
 (1N · m for BCAS050604G, BCAS050605G)

- Small-sized frontal screw fastening type waterproof box.
- Available in 39 different sizes.
- Applicable for various uses as wiring pull box, terminal junction box, switch box and so on.

Components

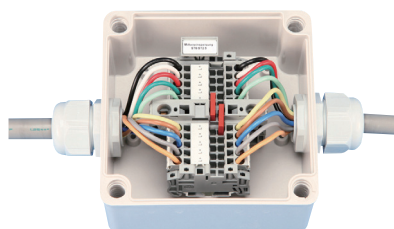
No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94HB	White gray
2	Body	1	ABS UL94HB	White gray
3	Gasket	1	Polyurethane	Black
4	Cover screw	4	Nylon · Stainless steel (BCAS050604G and BCAS050605G only)	White gray · Unfinished
5	Tapping screw (for mounting plate)	2 ~ 4	Steel	Trivalent chromate

APPLICATION EXAMPLE

SWITCH BOX



TERMINAL JUNCTION BOX



AIR PIPE CONTROLLER



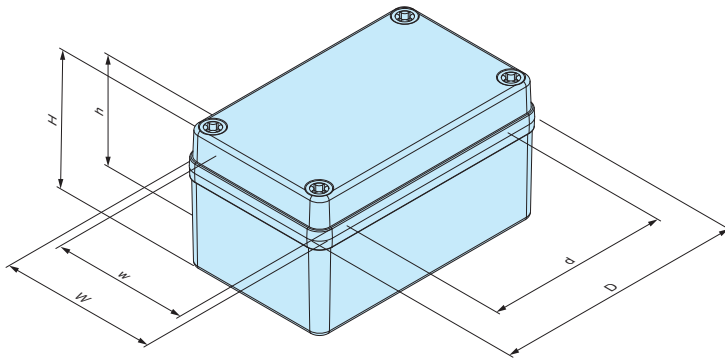
METEOROLOGICAL MONITOR TRANSMITTER



Product by Midori Engineering Laboratory (Japan)

BCAS dimensions

■ Drawings below are reference examples only.
DXF/DWG/PDF drawings available on our website.



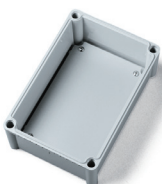
◎ : Guide markings for installation of optional latch/hinge parts.



Product no. / Dimensions

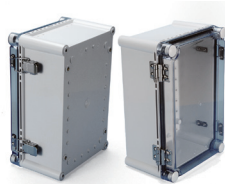
Product no.	Dimensions (External)			Dimensions (Internal)			Weight (g)
	W	D	H	w	d	h	
BCAS050604G	50	65	45	43.5	41	33	69
BCAS050605G	50	65	55	43.5	41	43	76
BCAS060905G	65	95	55	55.5	59	41.5	124
BCAS071005G	75	105	55	66	69	41.3	148
BCAS080806G	80	80	60	70.5	44	46.4	133
BCAS081104G	80	110	45	71	74	32.2	138
BCAS081107G	80	110	70	69.5	73.5	57	165
BCAS081108G	80	110	85	70	75	71.8	191
BCAS081110G	80	110	100	70	75	86.2	227
BCAS081307G	80.5	130	70	70.5	94	56.5	188
BCAS081308G	80	130	85	70.5	94	71.5	222
BCAS081807G	80	180	70	70.5	143.5	57	233
BCAS081808G	80	180	85	70.5	143.5	71.5	275
BCAS082507G	80	250	70	70	213.5	56.5	294
BCAS082508G	80	250	85	70	213.5	71.5	348
BCAS101007G	101.5	101.5	75	91	64	61.5	212
BCAS101010G	101.5	101.5	100	90	64	86.5	253
BCAS101807G	100	185	70	90	148.5	56.7	298
BCAS102007G	100	200	70	90.5	163.5	56.5	282
BCAS102307G	100	230	70	90.5	193.5	56.4	336
BCAS121207G	125	125	75	114	88.5	62	252
BCAS121210G	125	125	100	114	87.5	87	311
BCAS141709G	143	173	95	133	134	82	416
BCAS142309G	140	230	95	129	193	81.5	485
BCAS151507G	150	150	75	140	114	61.5	322
BCAS151510G	150	150	100	139	114	86.5	398
BCAS152004G	150	200	46	140	164	32.4	335
BCAS152007G	150	200	75.5	138	164	61.5	423
BCAS152010G	150	200	100.5	139	161.5	86.5	473
BCAS152013G	150	200	130.5	139.5	161	116.5	582
BCAS152016G	150	200	160	139	163	146.5	631
BCAS152510G	150	250	100	139.5	214	86.4	565
BCAS152513G	150	250	130	139.5	214	116.4	687
BCAS161607G	160	160	70	150	123.5	56.5	334
BCAS202010G	200	200	100	189	164.5	86	604
BCAS202013G	200	200	130	189	164.5	117	685
BCAS202016G	201	201	161	187.5	164.5	147	801
BCAS202019G	201	201	190	187.5	164.5	176.3	907.5
BCAS212310G	210	230	100.3	198.8	194.2	87.1	644.5

Accessories (Optional parts)



Mounting plate BMP series

See page BCAS-3 ~ BCAS-4



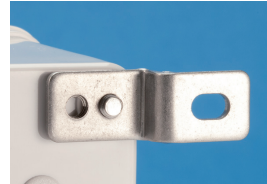
Latch • Hinge BCL55 • BCH55

See page BCAS • BCAL-ACC-1



Spare cover screw CB series

See page BCAS • BCAL-ACC-3



Mounting bracket CK series

See page BCAS • BCAL-ACC-2

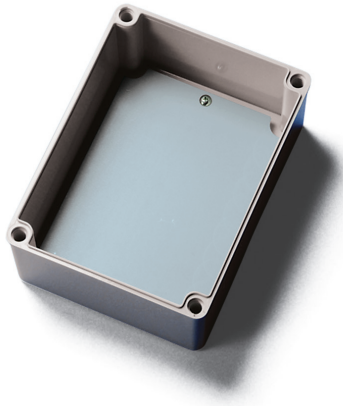


Cable gland

See cable gland pages

BMP-Z SERIES

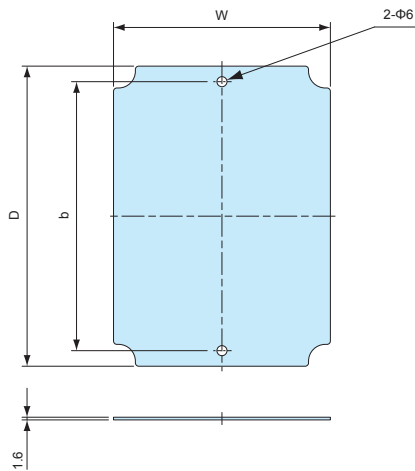
STEEL MOUNTING PLATE



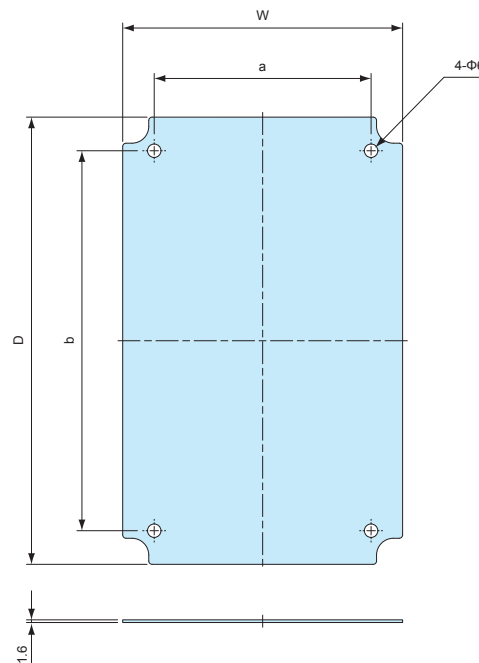
■ Strong but easily customizable.

■ Drawings below are reference examples only.
DXF/DWG/PDF drawings available on our website.

BMP0506Z ~ 1525Z



BMP2020Z, 2123Z

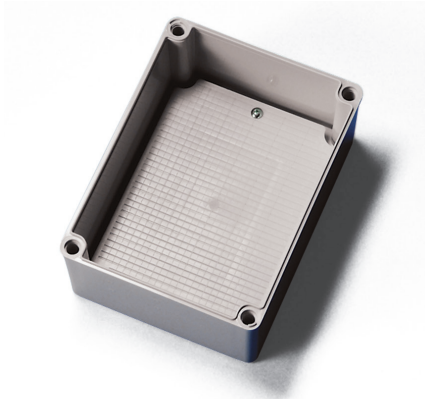


Components

Part name	Material	Color / Finish
Mounting plate	Steel t=1.6	Zinc coated

Product no. / Dimensions

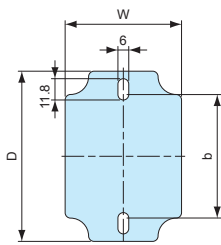
Product no.	W	D	a	b	Suitable box	Weight (g)
BMP0506Z	41	56	-	40	BCAS050604, 050605	23
BMP0609Z	52	82	-	65	BCAS060905	41
BMP0710Z	62	92	-	75	BCAS071005	63
BMP0808Z	67	67	-	50	BCAS080806	47
BMP0811Z	68	98	-	80	BCAS081104, 081107, 081108, 081110	72
BMP0813Z	68	118	-	99	BCAS081307, 081308	87
BMP0818Z	69	169	-	150	BCAS081807, 081808	134
BMP0825Z	69	239	-	220	BCAS082507, 082508	193
BMP1010Z	86	86	-	60	BCAS101007, 101010	80
BMP1018Z	89	173	-	139	BCAS101807	177
BMP1121Z	77	177	-	158	BCAS102007	159
BMP1023Z	88	218	-	184	BCAS102307	226
BMP1212Z	114	114	-	70	BCAS121207, 121210	151
BMP1417Z	132	162	-	130	BCAS141709	251
BMP1423Z	123	213	-	190	BCAS142309	305
BMP1515Z	121	121	-	110	BCAS151507, 151510	172
BMP1616Z	142	142	-	120	BCAS161607	237
BMP1520Z	126	176	-	160	BCAS152004, 152007, 152010, 152013, 152016	262
BMP1525Z	127	227	-	210	BCAS152510, 152513	346
BMP2020Z	176	176	120	150	BCAS202010, 202013, 202016, 202019	371
BMP2123Z	183	203	160	180	BCAS212310	447

BMP-P SERIES**PLASTIC MOUNTING PLATE**

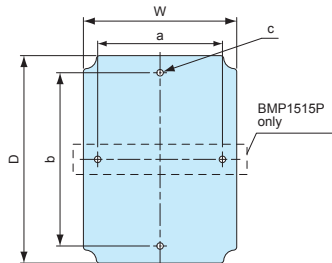
- Lightweight ABS plastic mounting plate.
- Not available for BCAS050604, 050605, 060905, 071005, 080806, 101807, 102307, and 212310 models.

■ Drawings below are reference examples only.
DXF/DWG/PDF drawings available on our website.

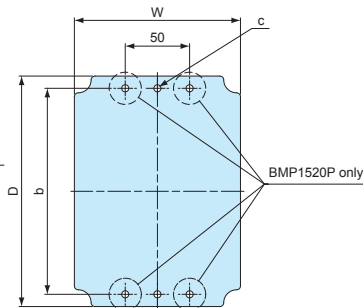
BMP0811P



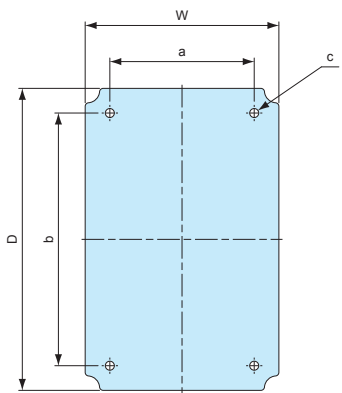
BMP0813P ~ 1616P



BMP0825P, 1423P, 1520P, 1525P



BMP2020P

**Components**

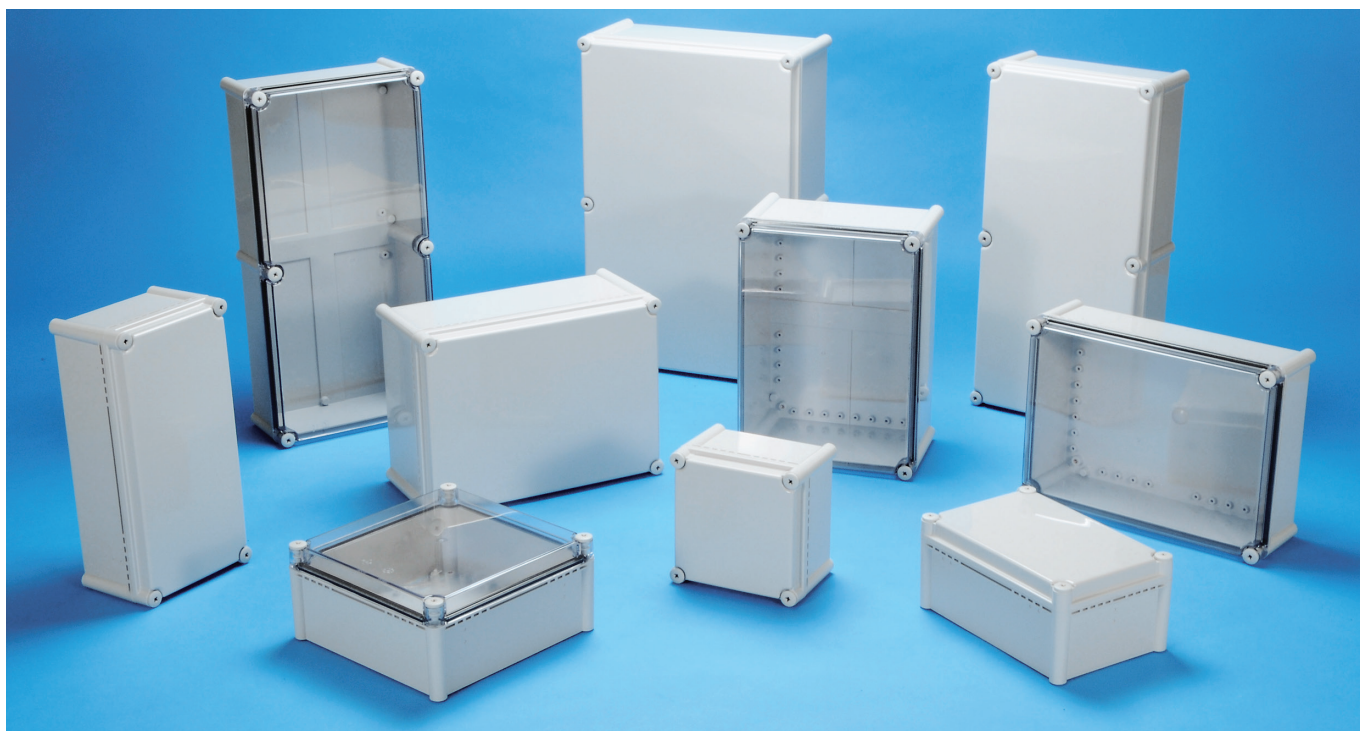
Part name	Material	Color / Finish
Mounting plate	ABS	White gray

Product no. / Dimensions

Product no.	W	D	a	b	c(Φ)	Thickness	Suitable box	Weight (g)
BMP0811P	64.5	94.3	—	68.4	—	3.5	BCAS081104, 081107, 081108, 081110	21
BMP0813P	64.5	114.5	—	99	Φ6	3.5	BCAS081307, 081308	24
BMP0818P	64.5	164	—	148.5	Φ6	3.5	BCAS081807, 081808	37
BMP0825P	64.2	234.5	—	219.5	Φ6	3.5	BCAS082507, 082508	59
BMP1010P	81.5	81.2	—	60	Φ6	3.5	BCAS101007, 101010	22
BMP1121P	76.5	175.8	—	157.8	Φ6	3	BCAS102007	40
BMP1212P	107	107	—	70	Φ5.5	3.5	BCAS121207, 121210	39
BMP1417P	125.5	155.5	—	130	Φ6	3.5	BCAS141709	69
BMP1423P	122.6	212.5	—	190	Φ5.5	3.7	BCAS142309	103.5
BMP1515P	123	123	110	110	Φ6	3.5	BCAS151507, 151510	52
BMP1616P	143.5	143.5	—	120	Φ6	3.2	BCAS161607	66
BMP1520P	129	179	—	160	Φ5.5	3.5	BCAS152004, 152007, 152010, 152013, 152016	92
BMP1525P	129	228.5	—	210	Φ6	3.5	BCAS152510, 152513	112
BMP2020P	178.5	178.5	120	150	Φ5.5	3.5	BCAS202010, 202013, 202016, 202019	125

BCAL SERIES

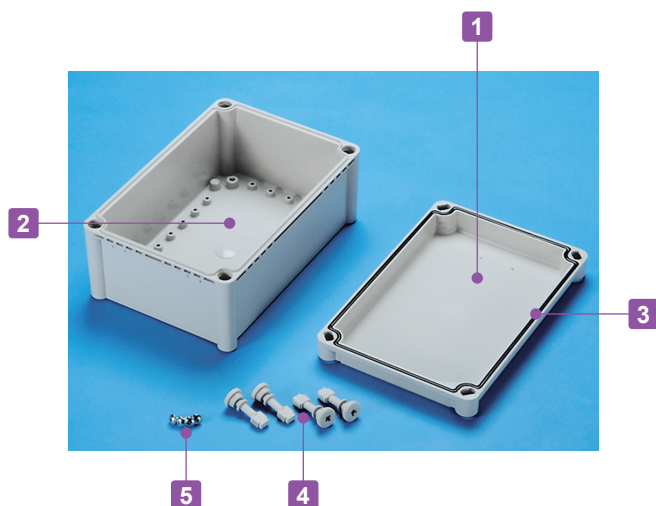
IP65 PLASTIC BOX



Technical Data

IP65

Protection class: IP65
 Operating temperature: -10°C ~ +60°C
 Recommended torque: 1N • m ~ 1.5N • m



- Large-sized frontal screw fastening type waterproof box.
- 11 different sizes available.
- Applicable for uses in various fields such as FA, control box, network communication, and so on.
- 2 different top cover models (ABS-White gray • Polycarbonate-Transparent) are available.
- Guide markings are available for installation of optional latch/hinge parts.

◎ : Guide markings

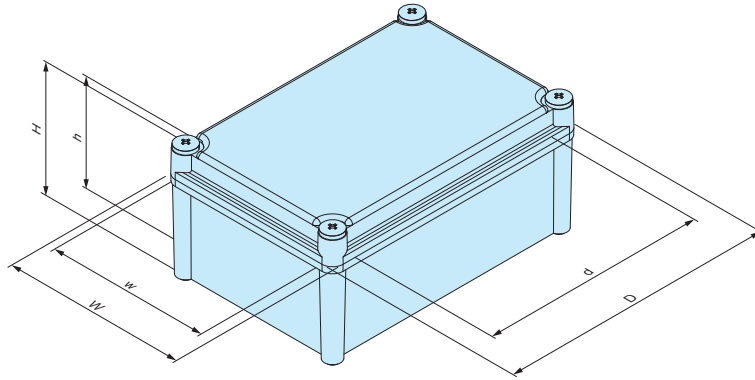


Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94HB • Polycarbonate (UL94V-0)	White gray • Transparent
2	Body	1	ABS UL94HB	White gray
3	Gasket	1	Polyurethane	Black
4	Cover screw	4 ~ 6	Nylon	White gray • Unfinished
5	Tapping screw (for mounting plate)	4	Steel	Trivalent chromate

BCAL dimensions

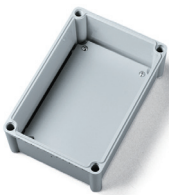
■ Drawings below are reference examples only.
DXF/DWG/PDF drawings available on our website.



Product no. / Dimensions

Product no.				Dimensions (External)			Dimensions (Internal)			Weight (g)
G type		T type		W	D	H	w	d	h	
Top cover	Body	Top cover	Body							
● White gray		○ Transparent	● White gray							
BCAL191913G		BCAL191913T		190	190	128	167	140	111.5	722
BCAL192813G		BCAL192813T		190	280	128	166	229	111.5	896
BCAL192818G		BCAL192818T		190	280	178	164	230	162	1,009
BCAL193813G		BCAL193813T		190	380	128	167	329	111	1,143
BCAL193818G		BCAL193818T		190	380	178	165	327.5	162	1,258
BCAL282813G		BCAL282813T		280	280	128	256	229	112	1,148
BCAL283413G		BCAL283413T		280	340	128	255.5	287	111.8	1,441
BCAL283813G		BCAL283813T		280	380	128	256	329	111.5	1,423
BCAL283818G		BCAL283818T		280	380	178	254	324	161.5	1,745
BCAL285613G		BCAL285613T		280	560	128	255	507	112	2,272
BCAL385618G		BCAL385618T		380	560	178	354	505	159.7	2,948

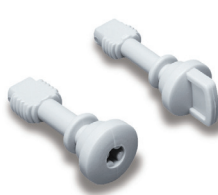
Accessories (Optional parts)



Mounting plate BMP series
See page BCAL-3



Latch • Hinge BCL65 • BCH65
See page BCAS • BCAL-ACC-1



Spare Cover screw CB28 series
See page BCAS • BCAL-ACC-3



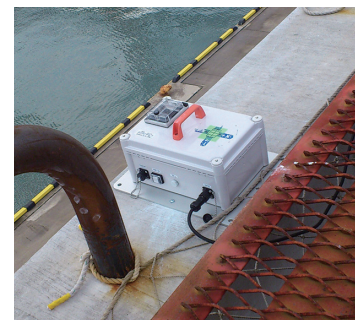
Mounting bracket CK-26P
See page BCAS • BCAL-ACC-2

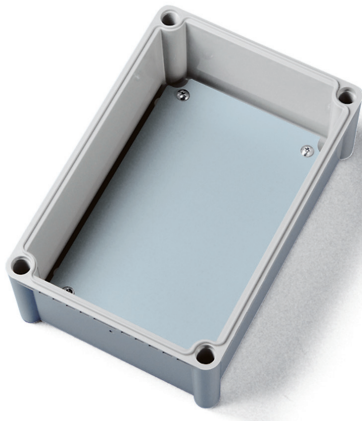


Cable gland
See cable gland pages

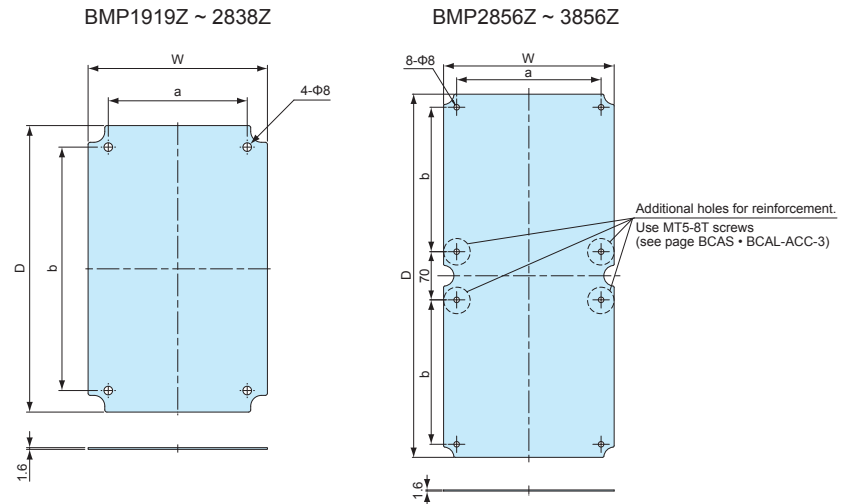
APPLICATION EXAMPLE

CONTROL BOX

INCLINOMETER for Bridge Construction
Product by Akasakatec Inc. (Japan)

BMP-Z SERIES**STEEL MOUNTING PLATE**

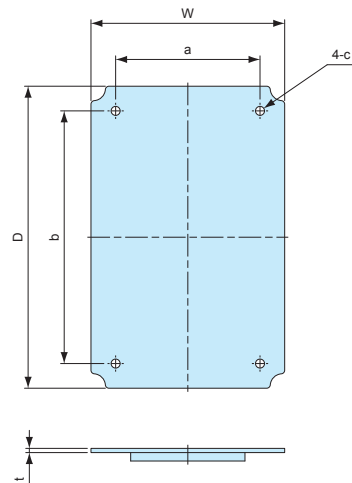
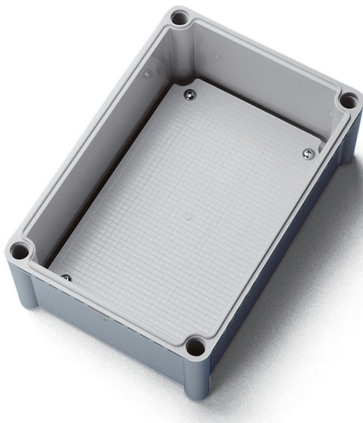
▪ DXF/DWG/PDF drawings available on our website.



- Strong but easily customizable.
- Material/Finish : Steel t=1.6mm / Zinc coated

Product no. / Dimensions

Product no.	W	D	a	b	Suitable box	Weight (g)
BMP1919Z	159	159	120	120	BCAL191913	303
BMP1928Z	157	247	120	210	BCAL192813, 192818	462.5
BMP1938Z	159	347	120	310	BCAL193813, 193818	676.5
BMP2828Z	246	246	210	210	BCAL282813	727.5
BMP2834Z	246	306	210	270	BCAL283413	920
BMP2838Z	246	346	210	310	BCAL283813, 283818	1,018
BMP2856Z	248	528	210	210	BCAL285613	1,571
BMP3856Z	348	528	310	210	BCAL385618	2,210

BMP-P SERIES**PLASTIC MOUNTING PLATE**

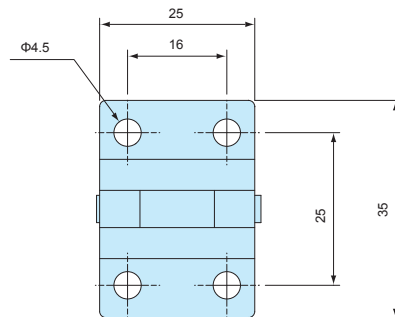
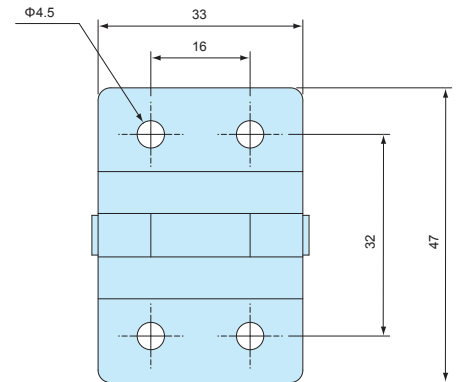
- Not available for BCAL283413, 285613, and 385618 models.
- Material/Color : ABS / White gray

Product no. / Dimensions

Product no.	W	D	a	b	c (Φ)	t	Suitable box	Weight (g)
BMP1919P	159	159	120	120	Φ8	4	BCAL191913	104
BMP1928P	158.5	248	120	210	Φ8	3.5	BCAL192813, 192818	162
BMP1938P	159	348	120	310	Φ8	4.5	BCAL193813, 193818	236
BMP2828P	248.5	248.5	210	210	Φ8	4	BCAL282813	237
BMP2838P	248	347.5	209	309.5	Φ8	4	BCAL283813, 283818	368

BCH SERIES**HINGE** for BCAS • BCAL

■ Refer to ☉ guide markings on BCAS • BCAL box when installing.

**BCH55****BCH65****Components**

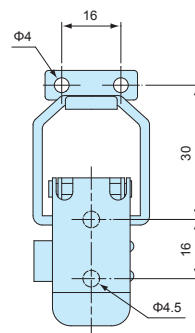
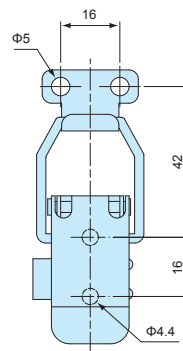
Part name	Pcs	Material	Color / Finish
Hinge	1	Stainless steel SUS304	Unfinished
Bracket	2	Stainless steel SUS304	Unfinished
Gasket	2	EPDM	Black

Product no. / Suitable box

Product no.	Suitable box	Included screw
BCH55	BCAS series Not available for BCAS050604, 050605, 060905, 071005, 080806, 081104, 101807, 102007, 102307, 152004, and 161607 models.	Truss head M4-10
BCH65	BCAL series	Truss head M4-10

BCL SERIES**LATCH** for BCAS • BCAL

■ Refer to ☉ guide markings on BCAS • BCAL box when installing.

**BCL55****BCL65****Components**

Part name	Pcs	Material	Color / Finish
Latch	1	Stainless steel SUS304	Unfinished
Hook	1	Stainless steel SUS304	Unfinished
Bracket	2	Stainless steel SUS304	Unfinished
Gasket	2	EPDM	Black

Product no. / Suitable box

Product no.	Suitable box	Included screw
BCL55	BCAS series Not available for BCAS050604, 050605, 060905, 071005, 080806, 081104, 101807, 102007, 102307, 152004, and 161607 models.	Truss head M4-10
BCL65	BCAL series	Truss head M4-10

BCM series

BLIND PLUG for BCAS • BCAL



- Blind plug for BCAS • BCAL when installing hinges and latches.
Not usable when using cover screws.

Components

Part name	Material	Color
Blind plug	ABS	White gray

Product no. / Suitable box

Product no.	Suitable box	Pack of
BCM-1	BCAS series (Not available for BCAS050604, 050605 models)	1
BCM-2	BCAL series	1

CK series

STAINLESS STEEL MOUNT BRACKET

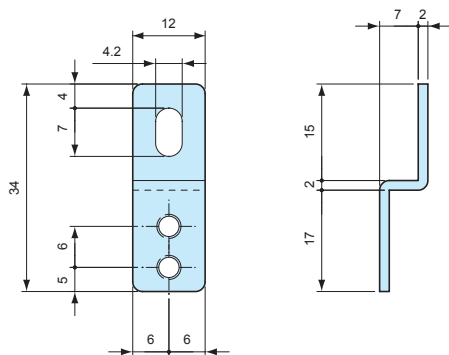


CK-34Z

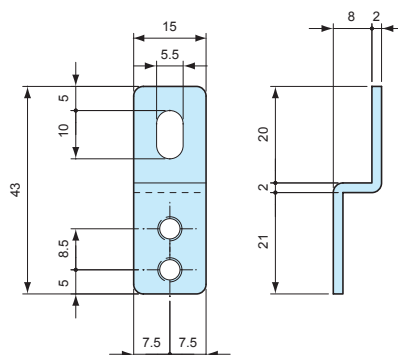


CK-26P

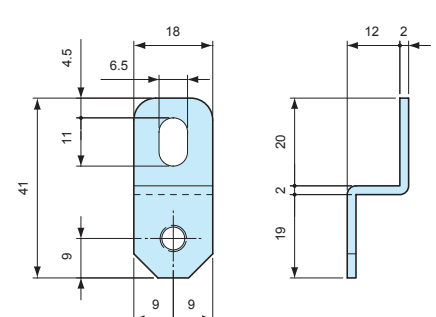
CK-34Z dimensions



CK-35P dimensions



CK-26P dimensions



- CK-34Z model requires the use of MT4-10 screw.

Product no. / Suitable box

Product no.	Material	Finish	Suitable box	Included screw	Pack of
CK-34Z	Stainless steel SUS304	Barrel finish	BCAS series (Not applicable for BCAS050604, 050605 models)	—	4
CK-35P	Stainless steel SUS304	Barrel finish	BCAS050604G, BCAS050605G	Pan head tapping M4-10	4
CK-26P	Stainless steel SUS304	Barrel finish	BCAL series	Pan head M5-10	4

MT4-10

MOUNTING SCREW

- Use together with CK-34Z.

Product no. / Details

Product no.	Material	Finish	Pack of
MT4-10 (Pan head M4-10)	Stainless steel	Unfinished	4

MT SERIES**PCB MOUNTING SCREW**

■ Mounting screw for the bosses without insert-nut.

Product no. / Feature

Product no.	Material	Finish	Pack of
MT4-8T (Binding head tapping M4-8)	Steel	Trivalent chromate	20
MT5-8T (Binding head tapping M5-8)	Steel	Trivalent chromate	20

Suitable box chart

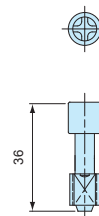
Product no.	Suitable box	Tightening torque
MT4-8T	BCAS071005, 081104, 081107, 081108, 081110, 081307, 081308, 081807, 081808, 082507, 082508, 101007, 101010, 101807, 102007, 102307, 121207, 121210, 141709, 142309, 151507, 151510, 152004, 152007, 152010, 152013, 152016, 152510, 152513, 161607, 202010, 202013, 202016, 202019, and 212310 models.	0.7N • m
MT5-8T	BCAL series	1.4N • m

CB SERIES**SPARE COVER SCREW for BCAS**

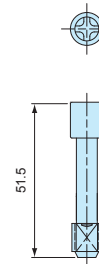
CB20

CB35

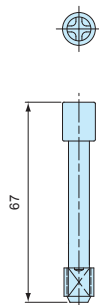
CB50



CB20



CB35

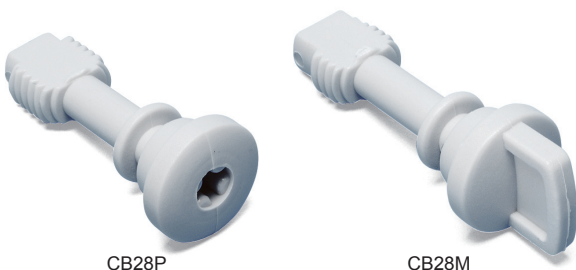


CB50

Product no. / Feature / Suitable box

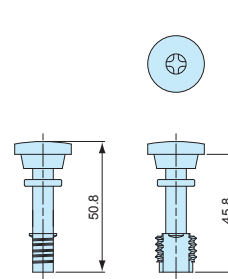
Product no.	Material	Color	Pack of
CB20	Fiberglass • Nylon	White gray	1
CB35	Fiberglass • Nylon	White gray	1
CB50	Fiberglass • Nylon	White gray	1

Product no.	Suitable box
CB20	BCAS060905, 071005, 080806, 081104, 081107, 081108, 081307, 081807, 082507, 101007, 101010, 101807, 102007, 102307, 121207, 121210, 141709, 142309, 151507, 151510, 152004, 152007, 152010, 152013, 152510, 161607, 202010, 202013, 202016, and 212310 models TMB-15PS, 20P, 20PL
CB35	BCAS081110, 081308, 081808, and 082508 models
CB50	BCAS152016, 152513, and 202019 models

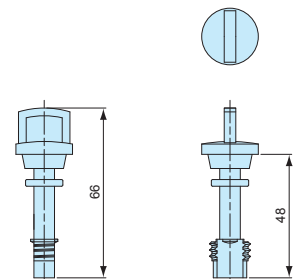
CB SERIES**SPARE COVER SCREW for BCAL**

CB28P

CB28M



CB28P



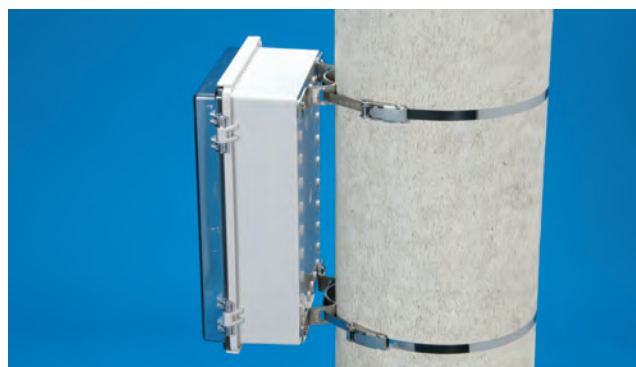
CB28M

Product no. / Feature / Suitable box

Product no.	Material	Color	Suitable box	Pack of
CB28P	Fiberglass • Nylon	White gray	BCAL series	1
CB28M	Fiberglass • Nylon	White gray	BCAL series	1

SSK series

POLE MOUNTING BRACKET for BCAP • BCAR • BCPC • BCPK • BCPR



- Stainless steel pole mounting bracket for BCAP • BCAR • BCPC • BCPK • BCPR series.
- No hole milling is required for maintaining the IP rating of the boxes.
- SSK-P models come with plastic brackets.

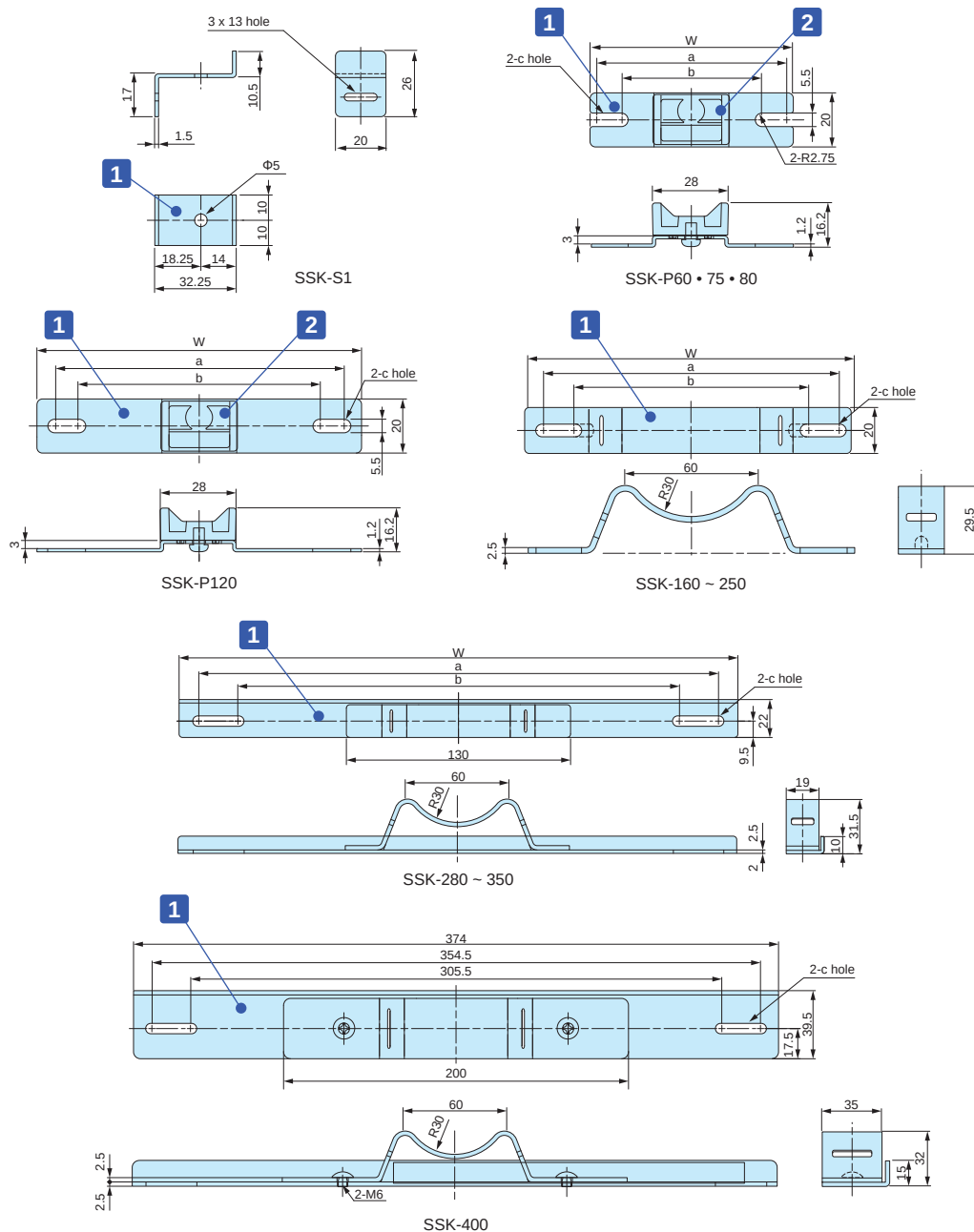
APPLICATION EXAMPLE

Weather Station Data Logger



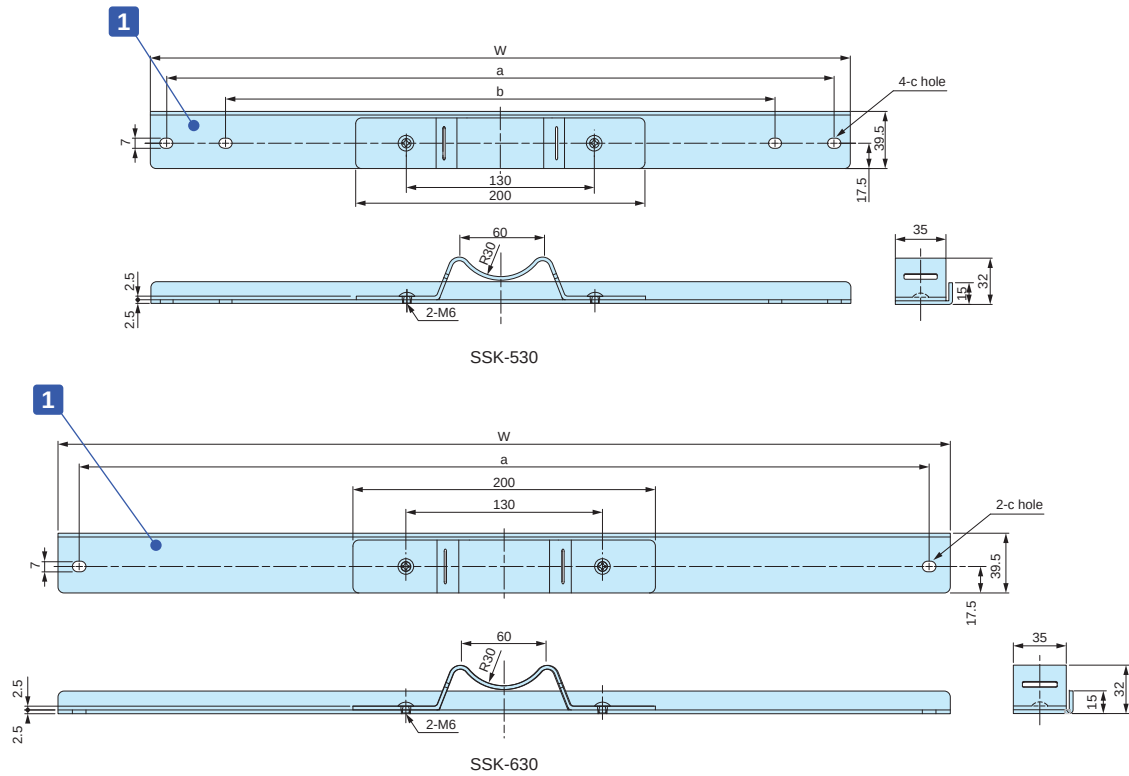
SSK dimensions

■ DXF/DWG/PDF drawings available on our website.



Water Level Detector





■ DXF/DWG/PDF drawings available on our website.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Mounting bracket	2 / 4	Stainless steel SUS304	Barrel finish
2	Plastic bracket (SSK-P only)	2	ASA UL94HB	White gray
—	Screw	4	Stainless steel	Unfinished

Product no. / Details

Product no.	W	a	b	c	Suitable models BCAP • BCAR • BCPC • BCPK • BCPR	Belt to use with	Pack of
SSK-S1	—	—	—	—	0912, 1015, 1121, 1126, 1315, 1318, 1621, 1626, 1722, 1727, 2121	PKB10PM, 10P, PKB10S, SNB series	4
SSK-P60	60	54.5	47.5	5.5 x 9	0912	PKB10PM, 10P, PKB10S	2
SSK-P75	75	69.5	55.5	5.5 x 12.5	1015	PKB10PM, 10P, PKB10S	2
SSK-P80	80	74.5	64.5	5.5 x 10.5	1121, 1126	PKB10PM, 10P, PKB10S	2
SSK-P120	120	106.5	88.5	5.5 x 14.5	1315, 1318	PKB10PM, 10P, PKB10S	2
SSK-160	142	129.5	106.5	—	1515, 1621, 1626	PKB10PM, 10P, PKB10S, SNB series	2
SSK-170	152	142.3	101	—	1722, 1727	PKB10PM, 10P, PKB10S, SNB series	2
SSK-200	174	161.5	112.5	5.5 x 30	1928, 2030	PKB10PM, 10P, PKB10S, SNB series	2
SSK-210	192	180.5	131.5	5.5 x 30	2121	PKB10PM, 10P, PKB10S, SNB series	2
SSK-250	230	215.5	166.5	5.5 x 30	2535	PKB10PM, 10P, PKB10S, SNB series	2
SSK-280	260	244.5	195.5	5.5 x 30	2828, 2838	PKB10PM, 10P, PKB10S, SNB series	2
SSK-300	280	264.5	215.5	5.5 x 30	3030, 3040	PKB10PM, 10P, PKB10S, SNB series	2
SSK-350	324	302.5	253.5	5.5 x 30	3535, 3545	PKB10PM, 10P, PKB10S, SNB series	2
SSK-400	374	354.5	305.5	5.5 x 30	4050, 4060	PKB20S, SNB series	2
SSK-530	484	462	380	7 x 9	5060, 5070	PKB20S, SNB series	2
SSK-630	590	562	—	7 x 9	6080	PKB20S, SNB series	2



SNB series



PKB-10PM, 10P



PKB-10S, 20S

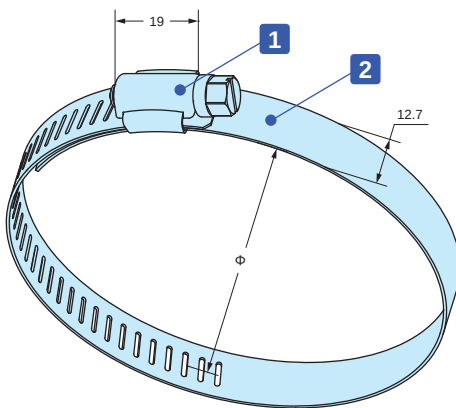
■ Pole mounting strap and belt, SNB and PKB series are sold separately. See page 207 ~ 208 for further details.

SNB series

STAINLESS STEEL POLE MOUNTING STRAP



SNB dimensions



- Corrosion resistant stainless steel (SUS304) belt clamp.
- It can be installed securely by tightening the screw.
- 8 mm nut driver (box driver) is recommended for tightening.
Flat-bladed screwdrivers can also be used.

Components

No.	Part name	Pcs	Material	Finish
1	Bracket	1	Stainless steel SUS304	Polished
2	Strap	1	Stainless steel SUS304	Polished

Product no. / Details

Product no.	Applicable diameter (Φ)	Strap width	Strap thickness	Recommended torque N · m	Weight (g)	Pack of
SNB 52- 76	52 ~ 76	12.7	0.6	0.7 ~ 1.0	27.5	1
SNB 72- 95	72 ~ 95	12.7	0.6	0.7 ~ 1.0	30	1
SNB 91-114	91 ~ 114	12.7	0.6	0.7 ~ 1.0	34.5	1
SNB105-127	105 ~ 127	12.7	0.6	0.7 ~ 1.0	37.5	1
SNB117-140	117 ~ 140	12.7	0.6	0.7 ~ 1.0	39.5	1
SNB130-153	130 ~ 153	12.7	0.6	0.7 ~ 1.0	41.5	1
SNB142-165	142 ~ 165	12.7	0.6	0.7 ~ 1.0	43.5	1
SNB155-178	155 ~ 178	12.7	0.6	0.7 ~ 1.0	46.5	1
SNB168-191	168 ~ 191	12.7	0.6	0.7 ~ 1.0	49	1
SNB181-204	181 ~ 204	12.7	0.6	0.7 ~ 1.0	51	1
SNB194-217	194 ~ 217	12.7	0.6	0.7 ~ 1.0	52.5	1
SNB207-230	207 ~ 230	12.7	0.6	0.7 ~ 1.0	57	1
SNB220-243	220 ~ 243	12.7	0.6	0.7 ~ 1.0	59.5	1
SNB233-256	233 ~ 256	12.7	0.6	0.7 ~ 1.0	62.5	1
SNB246-269	246 ~ 269	12.7	0.6	0.7 ~ 1.0	64	1
SNB259-282	259 ~ 282	12.7	0.6	0.7 ~ 1.0	67.5	1
SNB272-295	272 ~ 295	12.7	0.6	0.7 ~ 1.0	70	1
SNB285-308	285 ~ 308	12.7	0.6	0.7 ~ 1.0	71	1

■ Recommended torque listed is for reference only; actual may differ. Assemble after testing torque.

SNB Strap required

Suitable series	Suitable models						Required
SSK series	SSK-S1	SSK-160	SSK-170	SSK-200	SSK-210	SSK-250	2
	SSK-280	SSK-300	SSK-350	SSK-400	SSK-530		
WGMB series	WGMB-1W						1

PKB series

POLE MOUNTING BELT



PKB-10PM, 10P



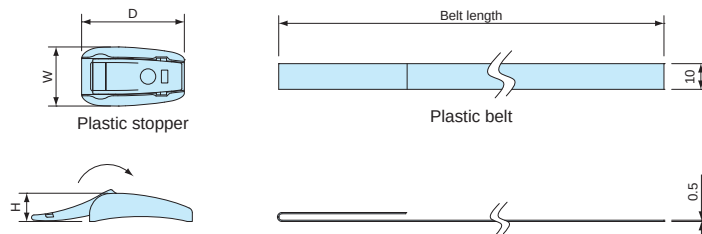
PKB-10S, 20S

- Pole mounting belt for attachment of enclosures with suitable pole mount brackets or construction onto poles.
- Designed for one time use only (not reusable).
- Strong stainless steel clamping type and easy installation plastic type are available.

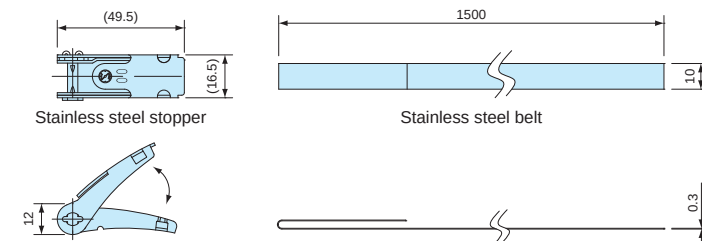
PKB dimensions

■ DXF/DWG/PDF drawings available on our website.

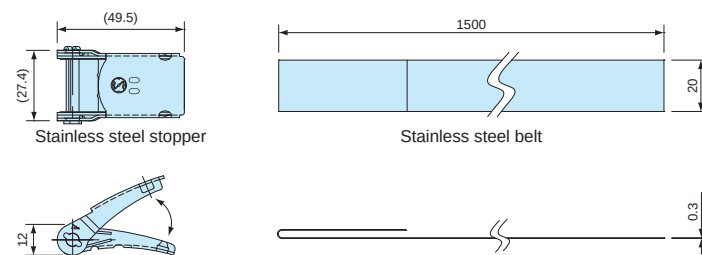
PKB-10PM, 10P



PKB-10S



PKB-20S



Components

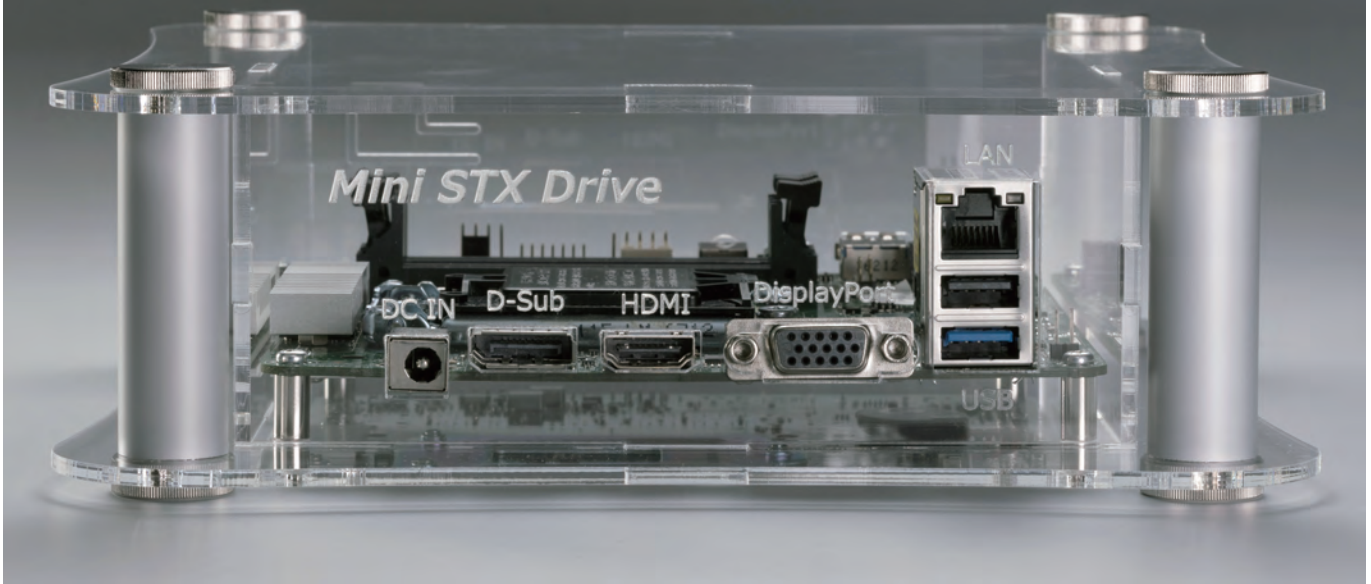
Part name	Material	Color / Finish
Stopper	Stainless steel SUS304 • POM	Barrel finish • Black
Belt	Stainless steel SUS430 • PET	Bright annealed finish • Gray

Product no. / Details

Product no.	W	D	H	Belt length	Belt material	Tensile strength (horizontal)	Weight (g)	Pack of
PKB-10PM	23	24	11	500 mm	PET	0.8kN	14	2
PKB-10P	23	40	11	1,500 mm	PET	1.3kN	31.8	2
PKB-10S	—	—	—	1,500 mm	Stainless steel SUS304	1.4kN	101.6	2
PKB-20S	—	—	—	1,500 mm	Stainless steel SUS430	2.9kN	182.2	2

SHOW IT THROUGH SKELETON CASE

An elegant and sophisticated curved design acrylic case with stylish aluminium pillars at the corners. Perfect for exhibitions or demonstration events to both showcase the internals and provide a unique product visual appeal.



Easy Assembly Curved Design Case



Custom Sized Cases Available

Custom sized cases are available 50 ~ 500 width / length(depth) and 30 ~ 500 height in 1mm intervals.

See SKLF series on our website for further details.



CUSTOMIZATION POSSIBILITIES

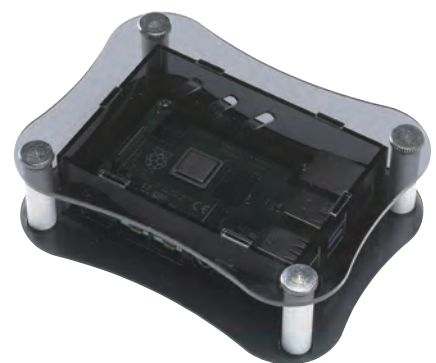
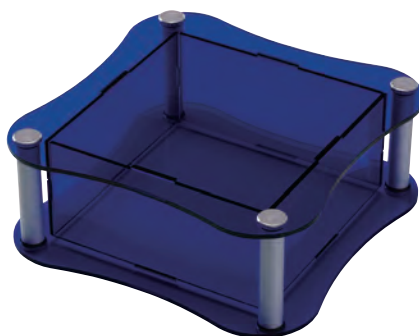
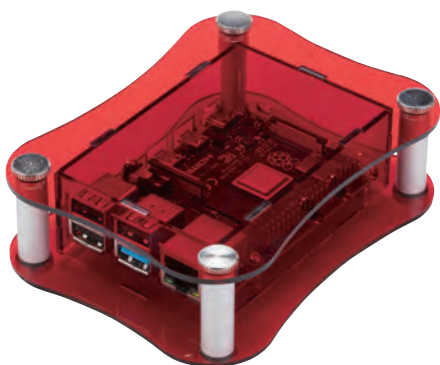
Printing

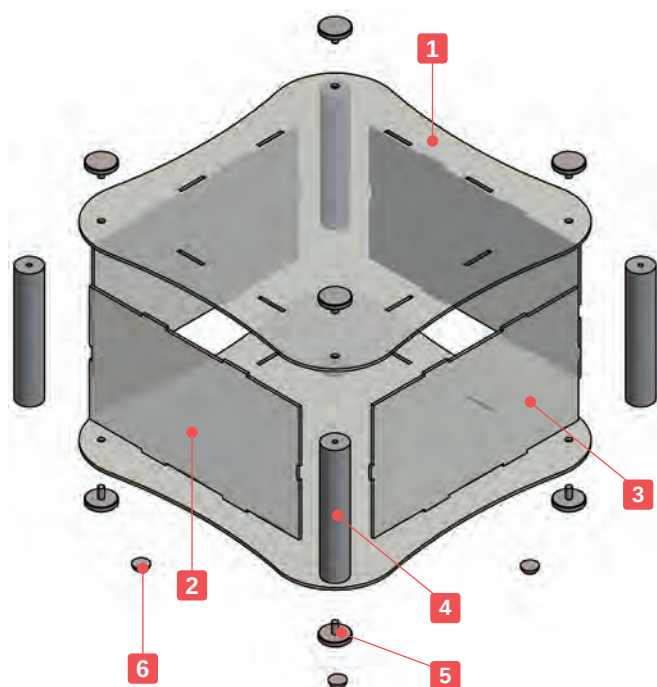
Print your logo, text and more using our customization services, such as inkjet printing.



Color Variation

Available in different color types, as well as smoked / tinted shades.





- Curved transparent acrylic case with corner support columns.
- 5 different sizes are available.
- Usable as a display enclosure for a unique and luxurious outlook.
- SKL11-5-17 and 11-8-17 models are compatible with the Euro Board.
SKL18-7-18 and 18-10-18 models are compatible with the Mini ITX board.
- Possible to be used in a flat layout, or a standing layout.
- Knurled thumb screws for easy hand assembly.
- Custom sized cases are available. See SKLF series on our website for further details.

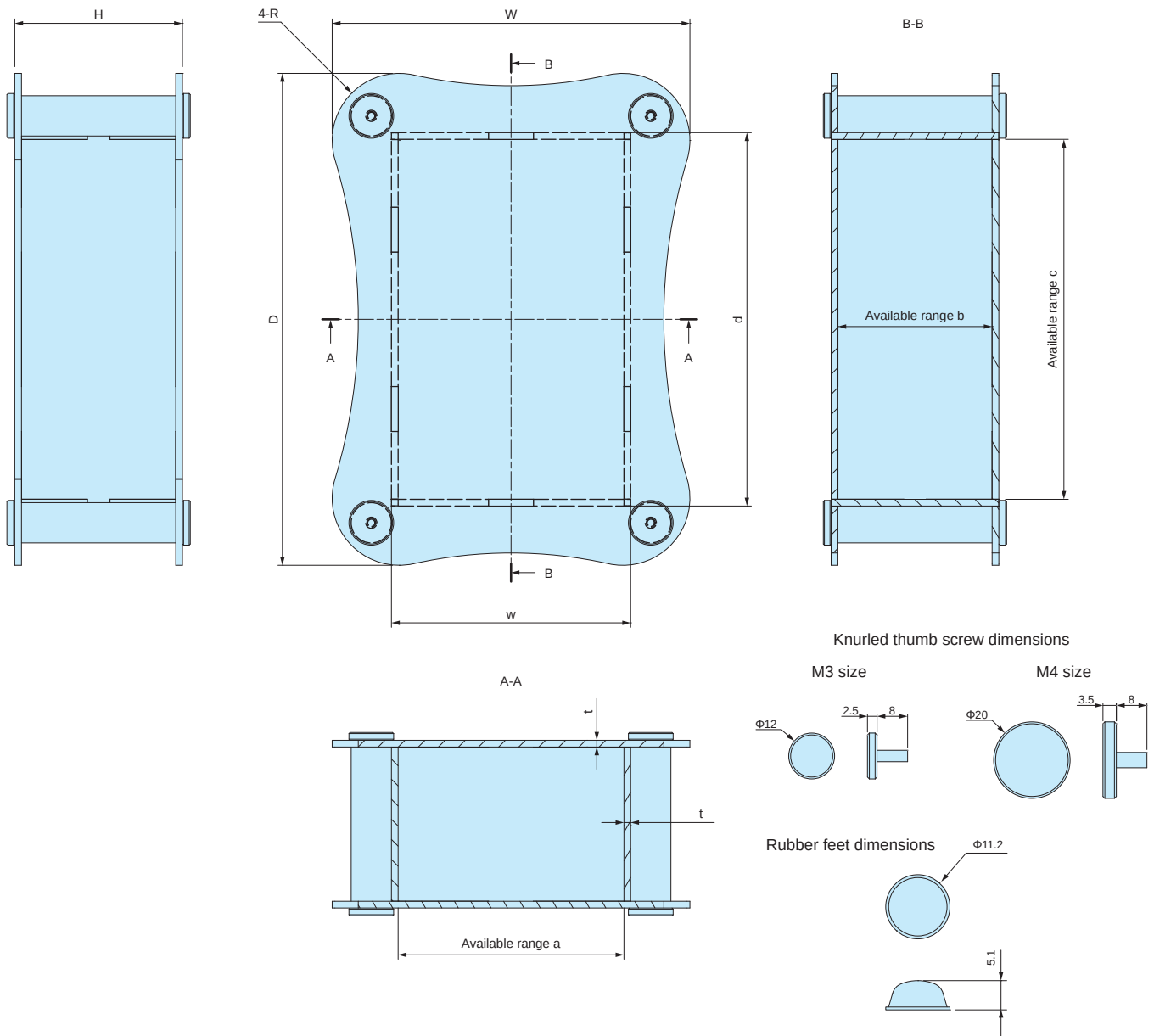
※Ethanol or other alcoholic solvents may cause the acrylic panel to crack. Use a neutral cleaner or specialized acrylic cleaning solvent for cleaning.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Top · Bottom cover	1 each	Acrylic	Transparent
2	W panel	2	Acrylic	Transparent
3	D panel	2	Acrylic	Transparent
4	Pillar	4	Extruded aluminium A6063S-T5	Silver / Anodized
5	Knurled thumb screw	8	Brass	Nickel plated
6	Rubber feet	4	Polyurethane	Transparent

SKL dimensions

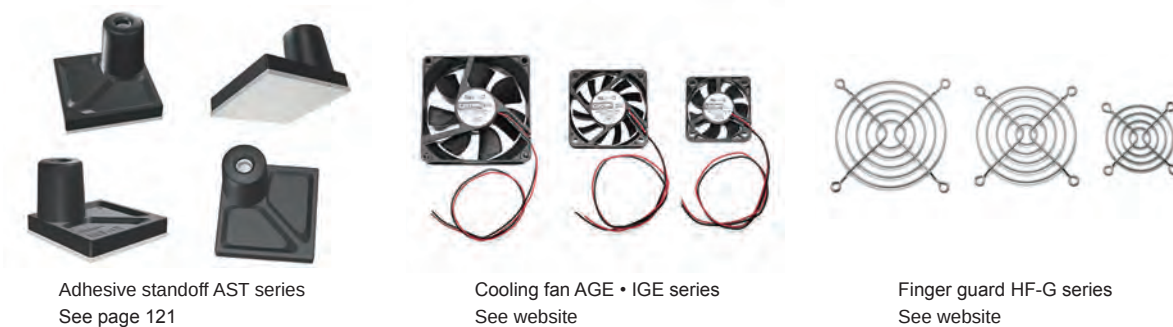
■ DXF/DWG/PDF/STP drawings available on our website.



Product no. / Dimensions

Product no.	External dimensions			Case dimensions		Available range			R	t	Screw size	Weight (g)
	W	H	D	w	d	a	b	c				
SKL10- 5-10	141	51	141	105	105	101	47	101	25	2	M3	191.5
SKL11- 5-17	165	47	225	107	167	101	41	161	25	3	M4	507
SKL11- 8-17	165	77	225	107	167	101	71	161	25	3	M4	643
SKL18- 7-18	239	67	239	177	177	171	61	171	40	3	M4	762
SKL18-10-18	239	102	239	177	177	171	96	171	40	3	M4	940.5

Accessories (Optional parts)



Adhesive standoff AST series
See page 121

Cooling fan AGE • IGE series
See website

Finger guard HF-G series
See website

WPMB-M4-3 series

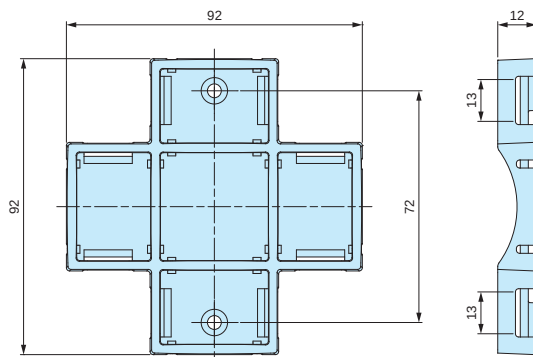
POLE MOUNTING BRACKET



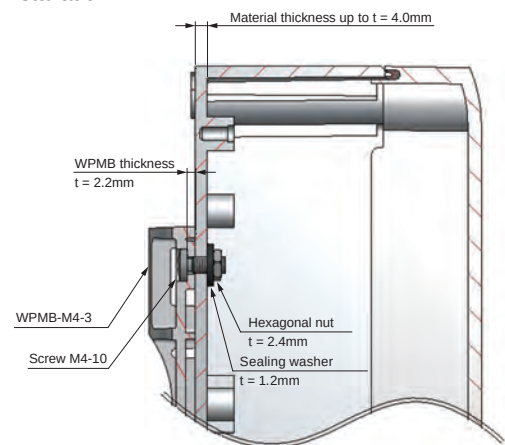
- Pole mount bracket made from weather resistant ASA material.
- Suitable for both vertical and horizontal mounting.
- IPX7 protection can be maintained through the use of sealing washers.
- Hole milling is required for bracket installation.
- Pole mount is possible with the use of PKB series mounting belt. (see page 324 for PKB series)

WPMB-M4-3 dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



Installation



Components

No.	Part name	Pcs	Material	Color / Finish
1	Bracket	1	ASA UL94HB	White gray • Dark gray
2	Sealing washer	2	NBR, SPCC	Black
3	Screw (M4-10 Pan head)	2	Stainless steel	Unfinished
4	Hexagonal nut (M4 - JIS Type 3)	2	Stainless steel	Unfinished

Product no. / Dimensions

Product no.		Material thickness to install	Recommended torque	Max load (kg)	Weight (g)
● White gray	● Dark gray				
WPMB-M4-3G	WPMB-M4-3D	Up to t = 4.0mm	0.45N • m	5	26.5

■ Recommended torque listed is for reference only; actual may differ. Assemble after testing torque.

GDH series

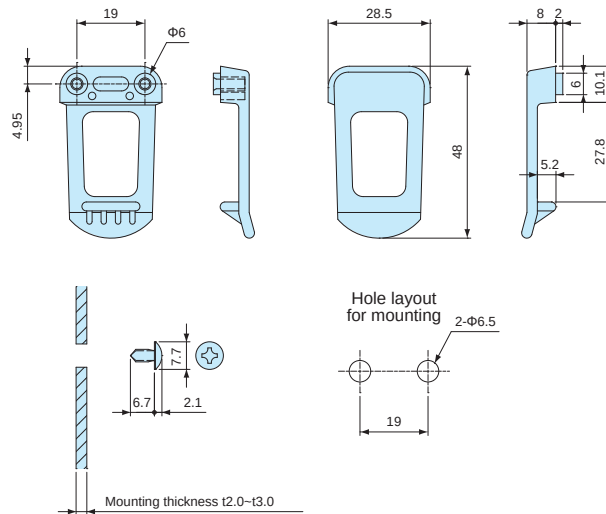
PLASTIC BELT CLIP



Installation example

GDH dimensions

■ DXF/DWG/PDF drawings available on our website.



Components

No.	Part name	Pcs	Material	Color / Finish
1	Clip	1	ABS UL94HB	White • Black
2	Screw	2	Steel M3.5-6	Zinc plated

Product no. / Details

Product no.		W	H	D
● White	● Black			
GDH-1W	GDH-1B	28.5	10	48

DK series

STEEL BELT CLIP

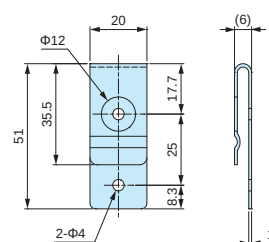
DK dimensions

■ DXF/DWG/PDF drawings available on our website.

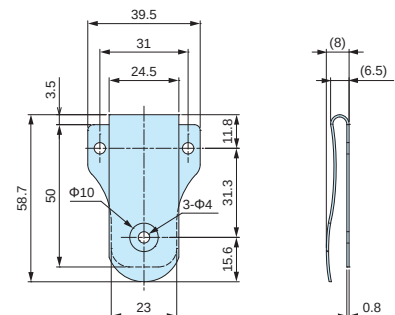
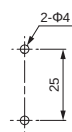


DK-1

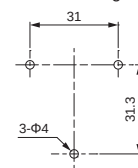
DK-2



Hole layout for mounting



Hole layout for mounting

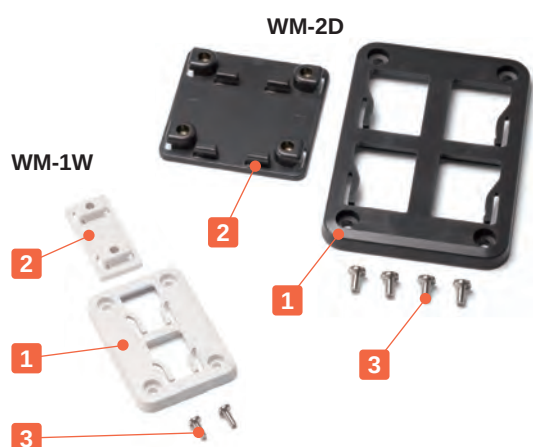


Product no. / Details

Product no.	Material	Finish
DK-1	Steel SPCC t=1.0	Chrome plated
DK-2	Steel SPCC t=0.8	Chrome plated

WM series

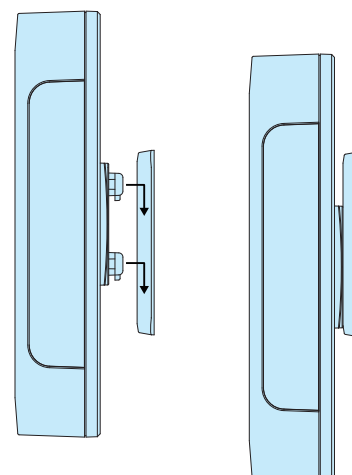
SUSPENSION BRACKET



Installation example



How to install



- Plastic wall mounting bracket. Easy attachment and removal.
- Large and small bracket types are available.
- Applicable to be used on plastic or metallic enclosures with a panel thickness of 0.8 ~ 3.5mm.
- To attach the suspension hook onto the enclosure, hole milling is required.
- Please be aware of the insertion direction of the suspension hook against the mounting base when attaching.
- DXF/DWG/PDF/STP drawings available on our website.

Technical Data

Max load : WM-1 - 2kg
WM-2 - 5kg

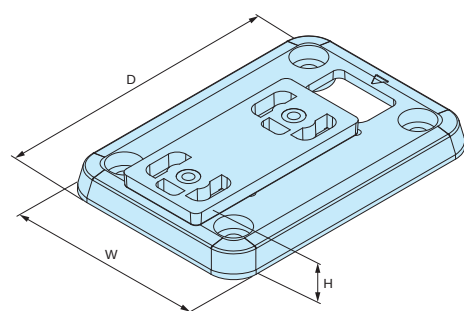
* The max load values listed are static load values only. Use caution when handling.

Components

No.	Name	Pcs	Material	Color / Finish
1	Mounting base	1	PC + ABS UL94HB	Off-white • Dark gray
2	Suspension hook	1	PC + ABS UL94HB	Off-white • Dark gray
3	Screw	2 (WM-1) 4 (WM-2)	Steel	Nickel plated

Included Screw

WM-1□ : Bind M3-8
WM-2□ : Bind M4-88



Product no. / Details

Product no.		W	H	D	Mountable thickness	Weight (g)
● Off-white	● Dark gray					
WM-1W	WM-1D	45	9	65	t0.8~t3.5	11.5
WM-2W	WM-2D	80	11	115	t0.8~t3.5	48

PMB-1

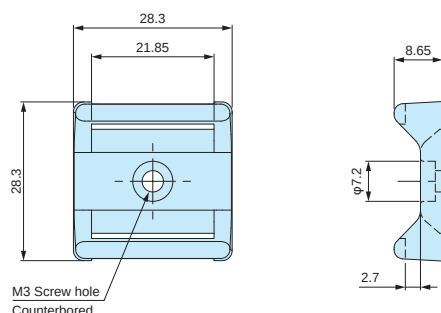
POLE MOUNTING BRACKET



Installation example



- DXF/DWG/PDF drawings available on our website.



- Small size pole mounting bracket suitable for indoor use.
- Installation screws (M3 size) are separately sold. See page HES • HOS • MT for compatible MT3-4 screws.
- Minimum applicable pole diameter is $\Phi 35$.
- Use SNB • PKB • SCT mounting belt to install onto a pole.

Product no. / Details

Material / Color : PA66+GF (UL94HB) / Black

Product no.	Maximum load (kg)	Weight (g)	Pack of
PMB-1	1	3 (1 piece)	2

NMG series

NEODYMIUM MAGNET

Round magnet

■ DXF/DWG/PDF drawings available on our website.

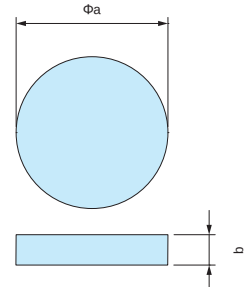


- Material / Finish: Neodymium / Nickel plated
- Please attach using a strong adhesive.

Product no. / Details

Product no.	a	b	Weight (g)	Flux Density	Absorption
NMG3-15N	15	3	4	214.4 mT	2.44 kgf
NMG3-20N	20	3	7.1	170.7 mT	3.26 kgf
NMG5-22N	22	5	11.4	247.2 mT	5.91 kgf
NMG5-25N	25	5	18.4	221.9 mT	6.89 kgf

NMG dimensions



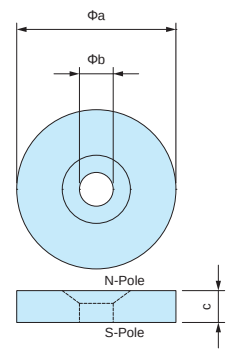
Round magnet with countersunk hole



- Please fasten with a screw.

Product no. / Details

Product no.	a	b	c	Countersunk size	Weight (g)	Flux Density	Absorption
NMG3-15M3	15	3.2	3	M3	3.8	214.3 mT	2.33 kgf
NMG3-20M3	20	3.2	3	M3	6.9	170.6 mT	3.17 kgf
NMG5-22M4	22	4.3	5	M4	13.7	247.2 mT	5.68 kgf
NMG5-25M5	25	5.3	5	M5	17.6	221.9 mT	6.58 kgf



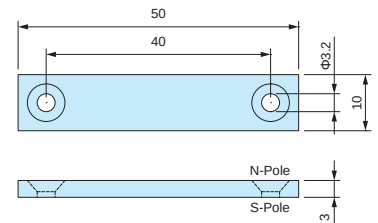
Rectangular magnet with countersunk holes



- Please fasten with a screw.

Product no. / Details

Product no.	a	b	c	Countersunk size	Weight (g)	Flux Density	Absorption
NMG3-50M3	50	10	3	M3	11.3	210.0 mT	9.1 kgf



Example 1 The magnetic force remains strong even through plastic.

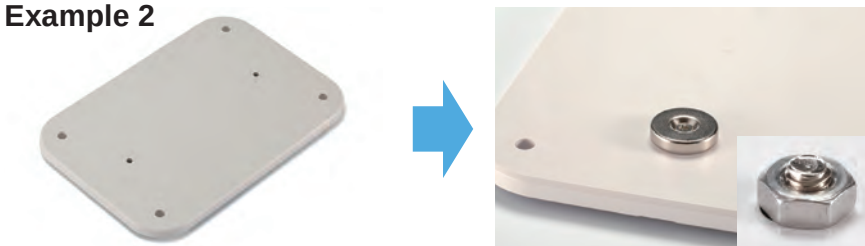


Make recessed pocket on the inside wall.

Glue on.

Attach onto a metallic surface.

Example 2



Make holes

Fasten with a screw and nut.

Attach onto a metallic surface.

CAUTION: Handle with care to avoid personal injury or damage to the magnet.

DST series

DOUBLE-SIDED MOUNTING TAPE



- Super strong double-sided mounting tape with excellent cold and heat resistance.
- Allow cases to be attached onto any place.
- Easily attached onto walls where holes cannot be drilled.
- Can be used with a range of products, such as small IoT type enclosures.

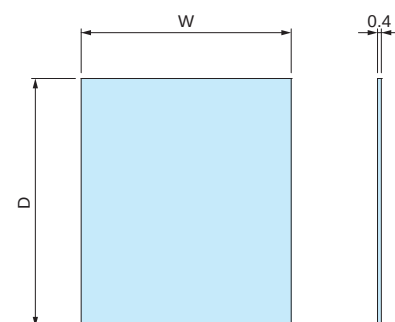
- Please ensure that surface is cleaned and grease-free before adhering.
- Once removed, it cannot be adhered on again.

Notes:

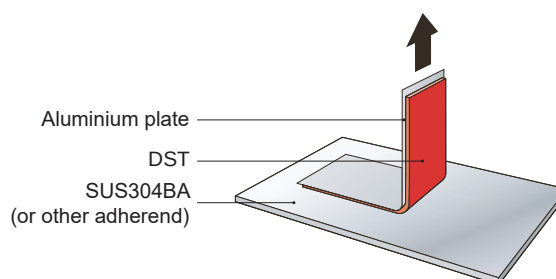
Due to the strong adhesive strength,
do ensure that the surface or product is suitable to be adhered onto.

Technical Data

Operating temperature:
-30°C ~ +200°C

**Adhesion Performance (90° peel adhesion)**

90° direction peel force N/cm	Stainless steel (SUS304BA)	24
	Aluminium (A1050P)	21
	Bonded steel plate (SECC)	30
	ABS	10
	Acrylic (PMMA)	16
	Polypropylene	6
	Polyethylene (HDPE)	3
	Glass	27

**[Test Method]**

Backed with specially treated Aluminium foil (130 μ m), crimped with a 10kg steel roller back and forth twice, cured at room temperature for 72 hours, tensile speed 300mm/min.

*Data values listed are test results based on the test conditions, and are to be used as reference only.

*Adhesive strength and other physical properties vary depending on the adherend, bonding and curing conditions, and other factors.

Product no. / Details

■ Material / Color: Acrylic foam base, acrylic adhesive / gray

Product no.	W	D	Suitable models	Weight (g)	Pack of
NEW DST14-22	14	22	SIC2-4-1 SW-30	0.3 / pc	5
NEW DST14-36	14	36	SIC2-5-1	0.4 / pc	5
DST18-40	18	40	SIC3-5-2 SW-(T)40 • 60	0.7 / pc	5
DST22-26	22	26	SIC3-4-2 SW-(T)40	0.5 / pc	5
DST24-48	24	48	SIC3-6-2 SW-50 • 53 • (N)(T)55 • (N)65 TW/TWN4-2-5 • 4-2-6 • 4-2-8	0.8 / pc	5

AST series

INSERT NUT ADHESIVE STANDOFF

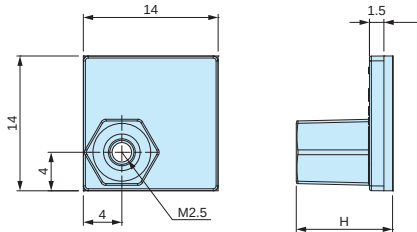


- Double-sided adhesive tape allows the standoff to be mounted quickly and easily; allows PCB mounting in non-boss enclosures.
- Convenient for installing PCBs into enclosures without the need for customization.
- Please ensure that surface is cleaned and grease-free before adhering.
- Once removed, it cannot be adhered on again.

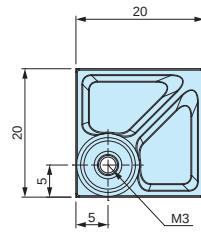
AST dimensions

■ DXF/DWG/PDF/STP drawings available on our website.

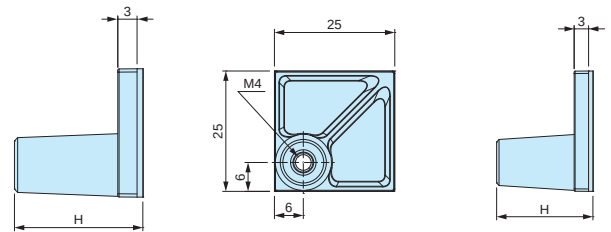
AST2.5-□



AST3-□



AST4-□



Product no. / Details

Bulk package

Product no	H dimension	Included screw	Recommended PCB thickness (mm)	Recommended torque (N · m)	Weight (g)	Pack of	Product no	Pack of
AST2.5-5B	5	M2.5-5 pan head	1.0 ~ 2.0	0.3	0.6 (1 piece)	4	AST2.5-5B-P	100
AST2.5-10B	10	M2.5-5 pan head	1.0 ~ 2.0	0.3	0.8 (1 piece)	4	AST2.5-10B-P	100
AST3-6B	6	M3-6 pan head	1.0 ~ 3.0	0.4	1.5 (1 piece)	4	AST3-6B-P	100
AST3-10B	10	M3-6 pan head	1.0 ~ 3.0	0.4	1.6 (1 piece)	4	AST3-10B-P	100
AST3-15B	15	M3-6 pan head	1.0 ~ 3.0	0.4	1.8 (1 piece)	4	AST3-15B-P	100
AST3-20B	20	M3-6 pan head	1.0 ~ 3.0	0.4	2.1 (1 piece)	4	AST3-20B-P	100
AST4-10.5B	10.5	M4-8 pan head	1.0 ~ 3.5	0.8	2.6 (1 piece)	4	AST4-10.5B-P	50
AST4-20B	20	M4-8 pan head	1.0 ~ 3.5	0.8	3.2 (1 piece)	4	AST4-20B-P	50

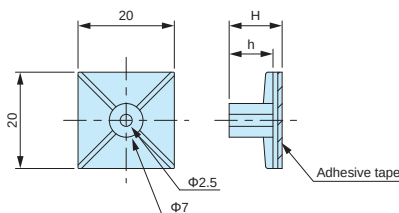
- Base material / color : Nylon 66 (UL94V-2) / Black
- Nut • screw material / finish : Steel / Trivalent chromate

- Bulk packaging is available. See "Bulk package" column above.
- Screws are not included for bulk packages.

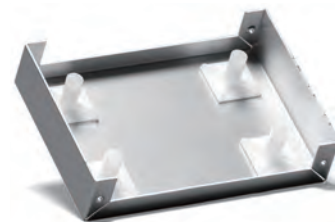
ASR series

ADHESIVE PCB STANDOFF

ASR dimensions



■ DXF/DWG/PDF drawings available on our website.



Product no. / Details

■ Material / Color: Nylon 66 (UL94V-2) / Natural

Product no	H	h	Weight (g)	Pack of
ASR- 5	5.1	3.1	0.9 (1 piece)	10
ASR- 6	6.4	4.4	1.0 (1 piece)	10
ASR- 7	7.2	5.1	0.9 (1 piece)	10
ASR- 8	8.1	6.3	0.9 (1 piece)	10
ASR- 9	9	7	1.0 (1 piece)	10
ASR-11	11	9	1.0 (1 piece)	10
ASR-13	12.7	10.7	1.2 (1 piece)	10
ASR-14.5	14.7	12.8	1.1 (1 piece)	10
ASR-16	15.9	13.9	1.3 (1 piece)	10
ASR-19	19.1	17.1	1.4 (1 piece)	10

- M3 tapping screw use adhesive standoff.
Recommended to be used with EM-3 or EM-3-6 self-tapping screws (See page 398).
- Please ensure that surface is cleaned and grease-free before adhering.
- Once removed, it cannot be adhered on again.

Technical Data
Recommended torque : 0.4N · m

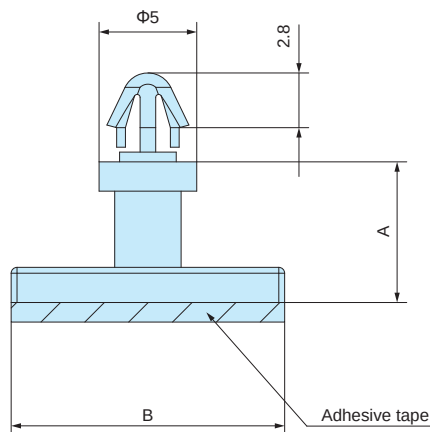
ASL series

LOCKING PCB ADHESIVE STANDOFF

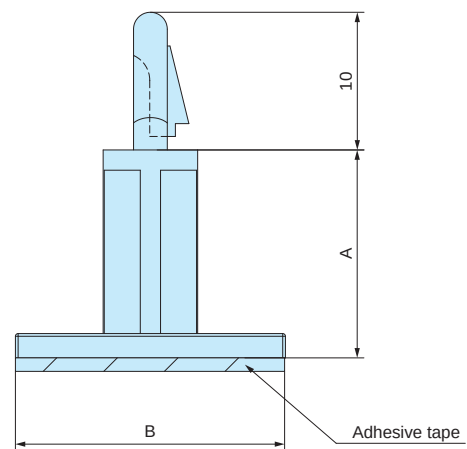


- Standoff for securing PCB by simply snapping it in.
- Adhesive standoff can be freely and easily affixed on.
- Once removed, it cannot be adhered on again.

ASL-3 ~ 12



ASL-15 & 19

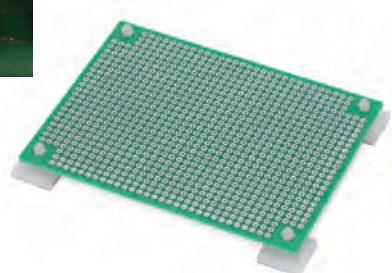
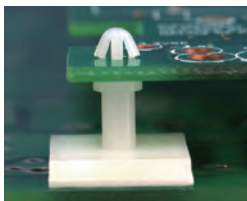


Product no. / Details

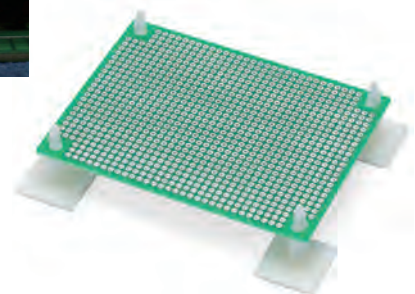
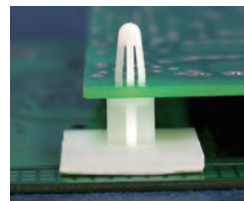
■ Material / Color : PA66 / Natural

Product no.	A	B	Mounting hole	Mounting thickness	Weight (g)	Pack of
ASL- 3	2.7	□14	Φ3	1.2 ~ 1.6	0.5 (1 piece)	10
ASL- 4	4	□14	Φ3	1.2 ~ 1.6	0.5 (1 piece)	10
ASL- 6	5.6	□14	Φ3	1.2 ~ 1.6	0.6 (1 piece)	10
ASL- 7	7.2	□14	Φ3	1.2 ~ 1.6	0.6 (1 piece)	10
ASL- 9	9.2	□14	Φ3	1.2 ~ 1.6	0.6 (1 piece)	10
ASL-10	9.7	□14	Φ3	1.2 ~ 1.6	0.6 (1 piece)	10
ASL-12	11.9	□14	Φ3	1.2 ~ 1.6	0.6 (1 piece)	10
ASL-15	15.4	□20	Φ4	1.2 ~ 1.7	1.3 (1 piece)	10
ASL-19	18.5	□18	Φ4	1.2 ~ 2.0	1.4 (1 piece)	10

APPLICATION EXAMPLE : ASL-3 ~ 12



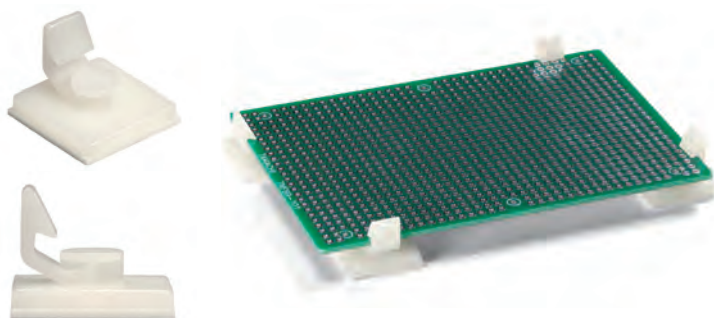
APPLICATION EXAMPLE : ASL-15 & 19



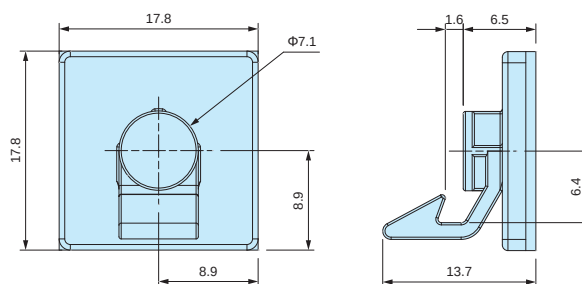
ULCK series

SCREWLESS PCB ADHESIVE STANDOFF

Application example



ULCK dimensions



■ DXF/DWG/PDF drawings available on our website.

- Securing of a 1.6mm thick PCB made easy by simply snapping it in.
- Adhesive standoff can be freely and easily affixed on.
- Once removed, it cannot be adhered on again.

Product no. / Details

■ Material / Color : PA66 UL94V-2 / Natural

Product no.	Weight (g)	Pack of
ULCK-6.4	1.3 (1 pc)	4

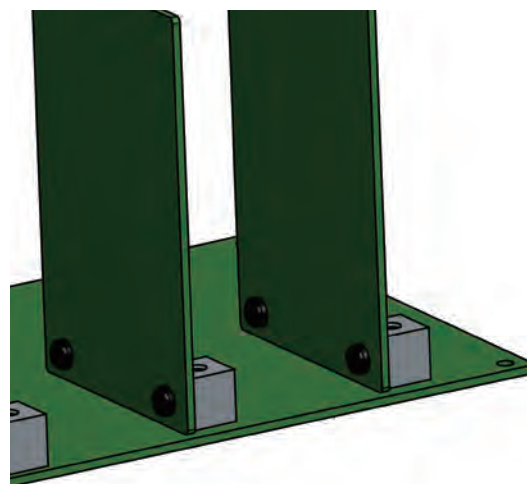
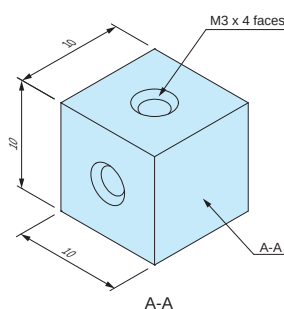
CUBE series

CUBE STANDOFF

■ DXF/DWG/PDF/STP drawings available on our website.

CUBE10-M3

CUBE10-M4



- 10mm threaded cube shape standoff with a thread on 4 faces.
- M3 and M4 thread models available.
- Conveniently usable when installing PCB or metal plate upright.
- CUBE can also be used to make a simple housing by vertically aligning the plates.

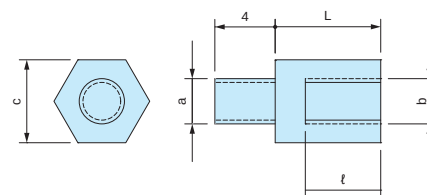
Product no. / Details

■ Zinc diecast : Glossy barrel finish

Product no.	Pack of
CUBE10-M3	2
CUBE10-M4	2
CUBE10-M3-P	20
CUBE10-M4-P	20

TPS series

TAPPING STANDOFF



■ Tapping screw head allows for easy installation onto existing enclosure boss mount.

■ DXF/DWG/PDF drawings available on our website.

■ 4 different sizes available : M2.3, M2.6, M3 and M4 size.

Product no. / Details

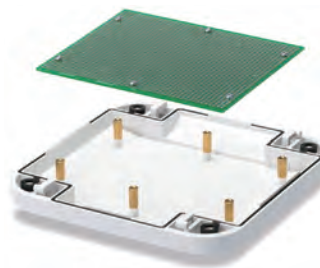
■ Material / Finish : Brass / Unfinished

Product no.	Screw size (a)	Screw size (b)	c	L	ℓ	Weight (g)	Pack of	Suitable models
TPS-M2.3-4	2.3	M2.3	5	4	3	0.7	4	WH series • PFE series LC • LCE • LCS • LCT series PF • PFF series (M2.3 boss models) TW • TWN • TWF series (M2.3 boss models) WP series (M2.3 boss models)
TPS-M2.3-5	2.3	M2.3	5	5	3	0.9	4	
TPS-M2.3-6	2.3	M2.3	5	6	4	1	4	
TPS-M2.3-7	2.3	M2.3	5	7	5	1.2	4	
TPS-M2.3-8	2.3	M2.3	5	8	6	1.3	4	
TPS-M2.3-10	2.3	M2.3	5	10	6	1.7	4	
TPS-M2.3-12	2.3	M2.3	5	12	6	2	4	PF • PFF series (M2.6 boss models) WP series (M2.6 boss models)
TPS-M2.6-4	2.6	M2.6	5	4	3	0.7	4	
TPS-M2.6-5	2.6	M2.6	5	5	3	0.8	4	
TPS-M2.6-7	2.6	M2.6	5	7	5	1.1	4	
TPS-M2.6-10	2.6	M2.6	5	10	6	1.6	4	SU • OP TWS • TW • TWN • TWF series (M3 boss models)
TPS-M2.6-12	2.6	M2.6	5	12	6	2	4	
TPS-M3-4	3	M3	5.5	4	3	0.8	4	
TPS-M3-5	3	M3	5.5	5	3	1.1	4	
TPS-M3-6	3	M3	5.5	6	4	1.2	4	
TPS-M3-7	3	M3	5.5	7	5	1.3	4	
TPS-M3-8	3	M3	5.5	8	5	1.6	4	BCAS • BCAP • BCPC • BCPK series (M4 boss models) BCAR • BCPR series (M4 boss models) SPCP • SPCM • WG • WGV • WGPC
TPS-M3-10	3	M3	5.5	10	6	1.9	4	
TPS-M3-12	3	M3	5.5	12	6	2.3	4	
TPS-M4-6	4	M4	7	6	4	2	4	
TPS-M4-10	4	M4	7	10	6	3.1	4	
TPS-M4-15	4	M4	7	15	8	4.7	4	
TPS-M4-20	4	M4	7	20	10	6.5	4	



■ Please use a suitable sized socket driver to both secure and loosen the tapping standoff.

Installation example



MT series

PCB MOUNTING SCREWS for TPS



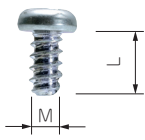
■ Pan head PCB mounting Screws for TPS tapping standoffs.

Product no. / Details

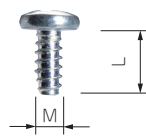
Product no.	M	L	Material	Finish	Pack of
MT2.3-4	2.3	4	Steel	Trivalent chromate	20
MT2.3-6	2.3	6	Steel	Trivalent chromate	20
MT2.6-4	2.6	4	Steel	Trivalent chromate	20
NEW MT2.6-6	2.6	6	Steel	Trivalent chromate	20
MT3-4	3	4	Steel	Trivalent chromate	20
NEW MT3-6	3	6	Steel	Trivalent chromate	20
NEW MT4-4	4	4	Steel	Trivalent chromate	20
NEW MT4-6	4	6	Steel	Trivalent chromate	20

EM series**PCB MOUNTING SCREW**

Pan head



Bind head



- Self-tapping screws for mounting PCB on bosses or standoffs.
- EM-3-6 self-tapping screws are suitable for mounting 1.6mm or thicker PCB.

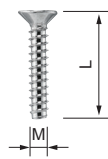
Product no. / Details

■ Material / Finish : Steel / Trivalent chromate

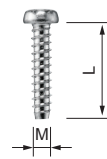
Product no.	M	L	Head type	Suitable models	Pack of
EM-1.6	1.6	4	Pan	SMW • CSS • CS SIC • SIM • WC • PS (M1.6 boss models)	50
EM-2	2	5	Pan	PS • TW • TWN • TWF SIC • SIM • PF • WC • WP (M2 boss models)	50
NEW EM-B2	2	5	Bind	SIC • SIM (M2 boss models) SIC • SIM6-12-□ (when installing PCB46-101)	50
EM-2.3	2.3	6	Pan	DRC • WH • LC • LCT • LCS • LCE • PFE WSC (Top cover bosses) PF • PFF (M2.3 boss models) TW • TWN • TWF (M2.3 boss models) WP (M2.3 boss models)	50
EM-2.3-8	2.3	8	Pan	WSC (Bottom base bosses)	50
EM-2.6	2.6	6	Pan	PF • PFF • WP (M2.6 boss models)	50
EM-3	3	5	Pan	SU • OP	50
EM-3-6	3	6	Pan	TWS • TW • TWN • TWF (M3 boss models)	50

MR series**TORX SCREW**

Flat head



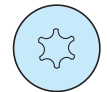
Pan head



With pin



★ Without pin



- Self-tapping torx screws for securing of the enclosure.

★ : MR1.6-6S, MR2.6-10□, MR3-5Z□ and MR3-14□ are without pin.

Product no. / Details

★ Mark = Without pin

Product no.	M	L	Head no.	Head style	Material	Finish	Suitable models	Pack of
MR1.6-6S★	1.6	6	T3	Pan	Steel	Nickel plated	CSS • CS	20
MR2.5-8PS	2.5	8	T8	Pan	Steel	Nickel plated	PF • PFE • PFF (M2.5 size)	20
MR2.6-10S★	2.6	10	T8	Flat	Steel	Nickel plated	TW • TWN (M2.6 size)	20
MR2.6-10B★	2.6	10	T8	Flat	Steel	Black trivalent chromate	TWF (M2.6 size)	20
MR2.6-12PS	2.6	12	T8	Pan	Steel	Nickel plated	MX • MXA • MXB • MXF (M2.6 size)	20
MR2.6-14PS	2.6	14	T8	Pan	Steel	Nickel plated	LCT • LCS • LC115-F2 / F3 LCT • LCS • LC145S-F6	20
MR2.6-14S	2.6	14	T8	Flat	Steel	Nickel plated	LCT • LCS • LC115H-F2 / F3 / M2 / 9V LCT • LCS • LC135-F4 / M2 / M3 / 9V LCT • LCS • LC135H-F4 / M2 / M3 / 9V LCT • LCS • LC145-F6 / M2 / M4 LCT • LCS • LC145H-F6 / M2 / M4 LCT • LCS • LC165-M4 LCT • LCS • LC165H-M4	20
MR2.6-18S	2.6	18	T8	Flat	Steel	Nickel plated	LCT • LCS • LC115-N / F2 / F3 LCT • LCS • LC145S-F6 / 145S-N LCE115-N TW • TWN7-2-11 / 7-4-11 / 7-5-11 TWF7-2-11 / 7-4-11 / 7-5-11 / 8-2-8 / 8-4-8	20
MR-1S	3	5	T10	Flat	Steel	Nickel plated	LCT • LCS • LC115H-N / F2 / F3 / M2 / 9V LCT • LCS • LC135-N / F4 / M2 / M3 / 9V LCT • LCS • LC135H-N / F4 / M2 / M3 / 9V LCT • LCS • LC145-N / F6 / M2 / M4 LCT • LCS • LC145H-N / F6 / M2 / M4 LCT • LCS • LC165-N / M4 LCT • LCS • LC165H-N / M4 LCE115H-N • LCE135-N • LCE145H-N • LCE165H-N	20
MR-1B	3	5	T10	Flat	Steel	Black trivalent chromate	UC	20
MR3-5ZS★	3	5	T10	Slotted raised countersunk	Steel	Nickel plated	FC • HY • HYR • HYRH (M3 size)	20
MR3-5ZB★	3	5	T10	Flat	Steel	Black trivalent chromate	CF	20
MR3-8PS	3	8	T10	Pan	Steel	Nickel plated	PF • PFE • PFF (M3 size)	20
MR3-14S★	3	14	T10	Flat	Steel	Nickel plated	TW • TWN (M3 size)	20
MR3-14B★	3	14	T10	Flat	Steel	Black trivalent chromate	TWF (M3 size) MX • MXA • MXB • MXF (M3 size)	20



Technical Data

Operating temperature: -10°C ~ +60°C

Mount Example



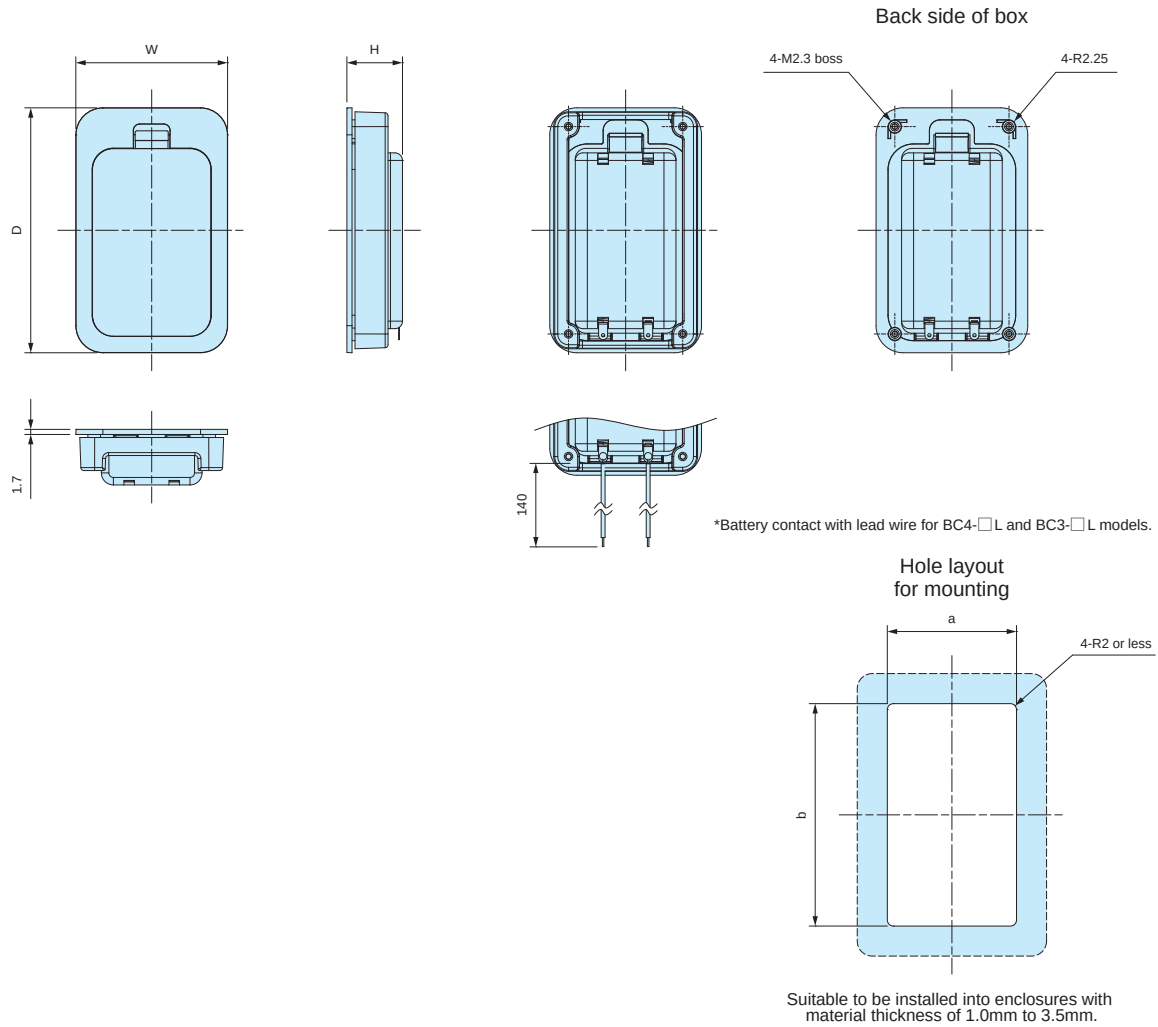
- Suitable to be installed into enclosures with material thickness of 1.0mm to 3.5mm.
- Cover can be opened/closed without any tool for easy battery replacement.
- 5 different battery layouts are available as AA x 2, AA x 3, AA x 4, AAA x 2 and AAA x 4. Each layout comes in 2 models: with lead-wire, and without lead-wire.
- ⊕⊖ markings prevents incorrect placement of battery.
- The dimensions of alkaline or manganese batteries may vary depending on country and brand. Use optional battery cushion sponge to prevent rattling.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Box	1	ABS UL94V-0	Black • Off-white
2	Cover	1	ABS UL94V-0	Black • Off-white
3	Frame	1	ABS UL94V-0	Black • Off-white
4	Battery contact Lead wire (BC-L models)	1 set	Battery contact : Brass & steel wire Lead wire : PVC + Copper wire (UL1007 AWG26)	Nickel plated Black • Red
5	Self-tapping screw	4	Steel	Nickel plated

BC dimensions

- DXF/DWG/PDF/STP drawings available on our website.
- The shape and position of battery contacts vary by model.



Type: Without Lead Wire

Product no. / Details

Product no.		Dimensions					Battery layout	Weight (g)
● Black	● Off-white	W	H	D	a	b		
BC4-2-B	BC4-2-W	40	14.8	78.5	32.5	71	*AAA x 2	24.5
BC4-4-B	BC4-4-W	62	14.8	78.5	54.5	71	*AAA x 4	34.5
BC3-2-B	BC3-2-W	50.5	18.5	81.5	43	74	*AA x 2	31.5
BC3-3-B	BC3-3-W	65.5	18.5	81.5	58	74	*AA x 3	39
BC3-4-B	BC3-4-W	80.5	18.5	81.5	73	74	*AA x 4	46

*Alkaline or manganese batteries

Type: With Lead Wire

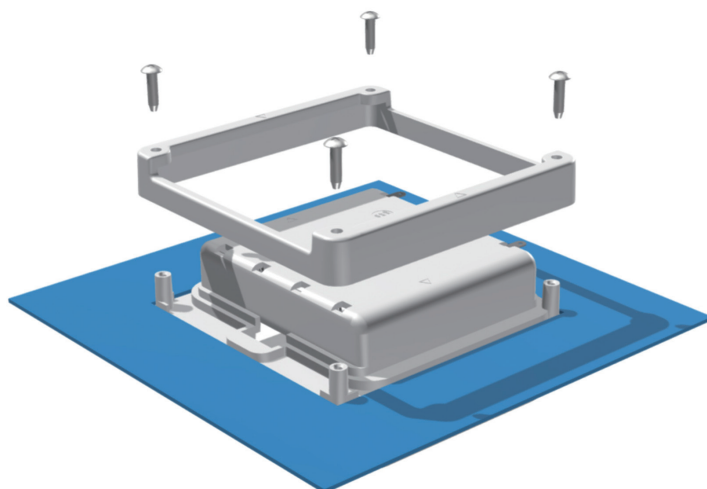
Product no. / Details

Product no.		Dimensions					Battery layout	Weight (g)
● Black	● Off-white	W	H	D	a	b		
BC4-2L-B	BC4-2L-W	40	14.8	78.5	32.5	71	*AAA x 2	25.5
BC4-4L-B	BC4-4L-W	62	14.8	78.5	54.5	71	*AAA x 4	35.5
BC3-2L-B	BC3-2L-W	50.5	18.5	81.5	43	74	*AA x 2	32.5
BC3-3L-B	BC3-3L-W	65.5	18.5	81.5	58	74	*AA x 3	40
BC3-4L-B	BC3-4L-W	80.5	18.5	81.5	73	74	*AA x 4	47

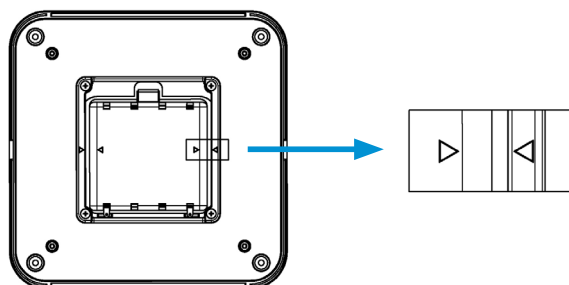
*Alkaline or manganese batteries

How to mount on the enclosures

- Insert battery box into the milled hole first, and fit the frame on the back side. Once mounted, secure the frame with screws.



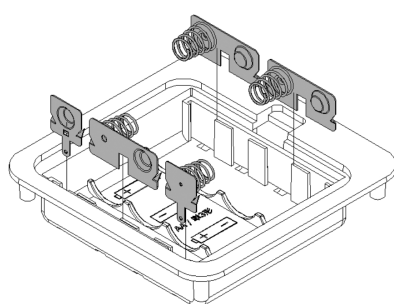
- For BC3-4□ models, ▷ markings are shown on the frame. Install by matching the markings.



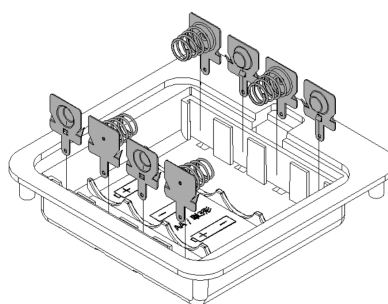
Parallel circuit conversion on BC series battery box

- BC-3□ models can be converted from a series to a parallel circuit. See below illustration for further details.
- IT series (IT-3 models) optional battery contacts can be used for parallel circuit conversion. (See website for more information)
- Use caution when installing or replacing the terminals to avoid the damage to the material.
- Parallel series conversion is available via our customization services.

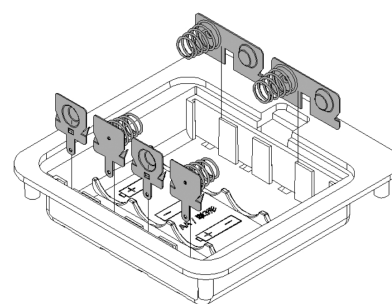
Conversion Example



Series Circuit (Standard)

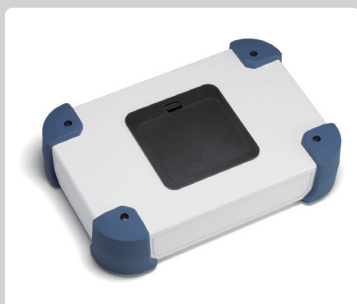


Parallel Circuit (4 batteries)



Parallel Circuit (2 batteries x 2)

Customization Available



For more information, contact us here:

Online form: https://www.takachi-enclosure.com/contact/form_contact
E-mail : sales@takachi-el.co.jp

CR2•CR123A-PC series

LITHIUM BATTERY HOLDER

■ DXF/DWG/PDF drawings available on our website.



Technical Data

Operating temperature: -10°C ~ +60°C

Components

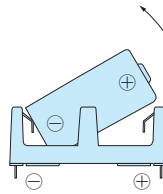
Holder material	Holder color	Contact material	Contact finish
ABS UL94V-0	Black	Phosphor bronze	Nickel plated

Product no. / Details

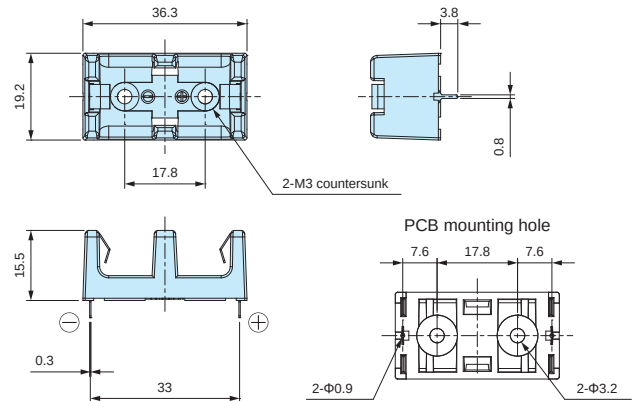
Product no.	Battery	Mounting	Weight (g)
CR2-PC	CR2×1	Through-hole mount pin x 2	4.3
CR123A-PC	CR123A×1	Through-hole mount pin x 2	5.0

Caution

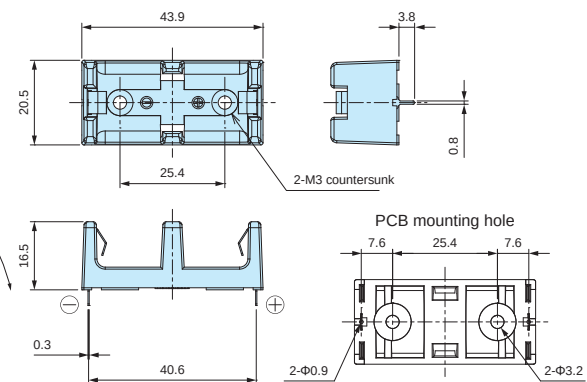
- Please remove the battery from the positive (+) side. Removing it from the negative (-) side may damage the battery or the battery contacts.



CR2-PC dimensions



CR123A-PC dimensions



CR2•CR123A-R series

LITHIUM BATTERY HOLDER with LEAD WIRE

■ DXF/DWG/PDF drawings available on our website.



Technical Data

Operating temperature: -10°C ~ +60°C

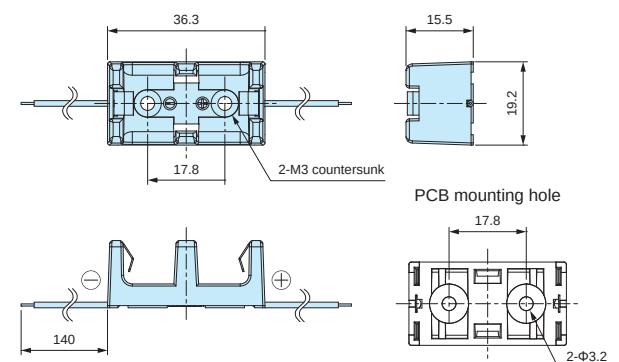
Components

Holder material	Holder color	Contact material	Contact finish
ABS UL94V-0	Black	Phosphor bronze	Nickel plated

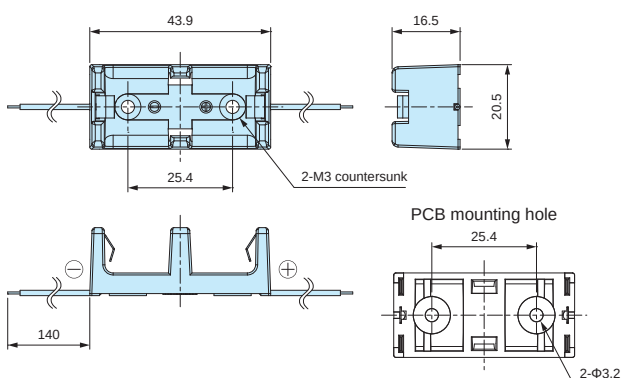
Product no. / Details

Product no.	Battery	Lead wire	Weight (g)
CR2-R	CR2×1	UL1007 AWG26 L=140	5.3
CR123A-R	CR123A×1	UL1007 AWG26 L=140	6.0

CR2-R dimensions



CR123A-R dimensions



Mount Example



■ BC series battery boxes can also be mounted on aluminium enclosures.

TLW series

TILT LEG



APPLICATION EXAMPLE

- Double shot injection molded feet with soft and well-designed rounded shape.
- Non-slip design with Elastomer (TPE) pad.
- Available in 3 different color patterns (2 color patterns for TLW-70 models).
- TLW-70E models are exclusively for use with width 185mm or larger bottom covers of EXP • EXPE • EXW • EX • EXH • EXHE aluminium enclosures.

Technical Data

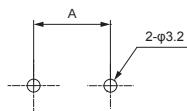
Max load : 7kg

Components

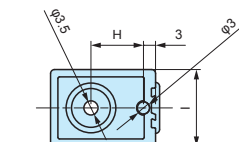
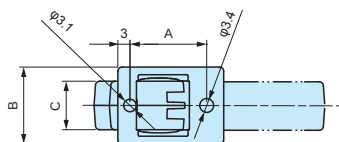
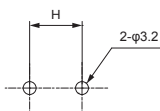
No.	Part name	Pcs	Material	Color / Finish
1	Front foot	2	PC + ABS UL94V-0 • TPE	Black & Black • Navy & Gray • Light gray & Gray
2	Rear foot	2	PC + ABS UL94V-0 • TPE	Black & Black • Navy & Gray • Light gray & Gray
-	Screw	4	Steel M3-8 pan head	Black trivalent chromate
-	Nut	4	Steel M3	Black trivalent chromate

TLW dimensions

Mounting hole (Front)



Mounting hole (Rear)



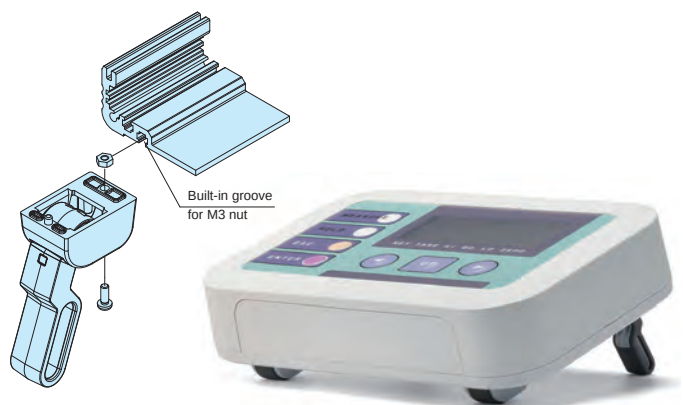
1

2

- DXF/DWG/PDF/STP drawings available on our website.

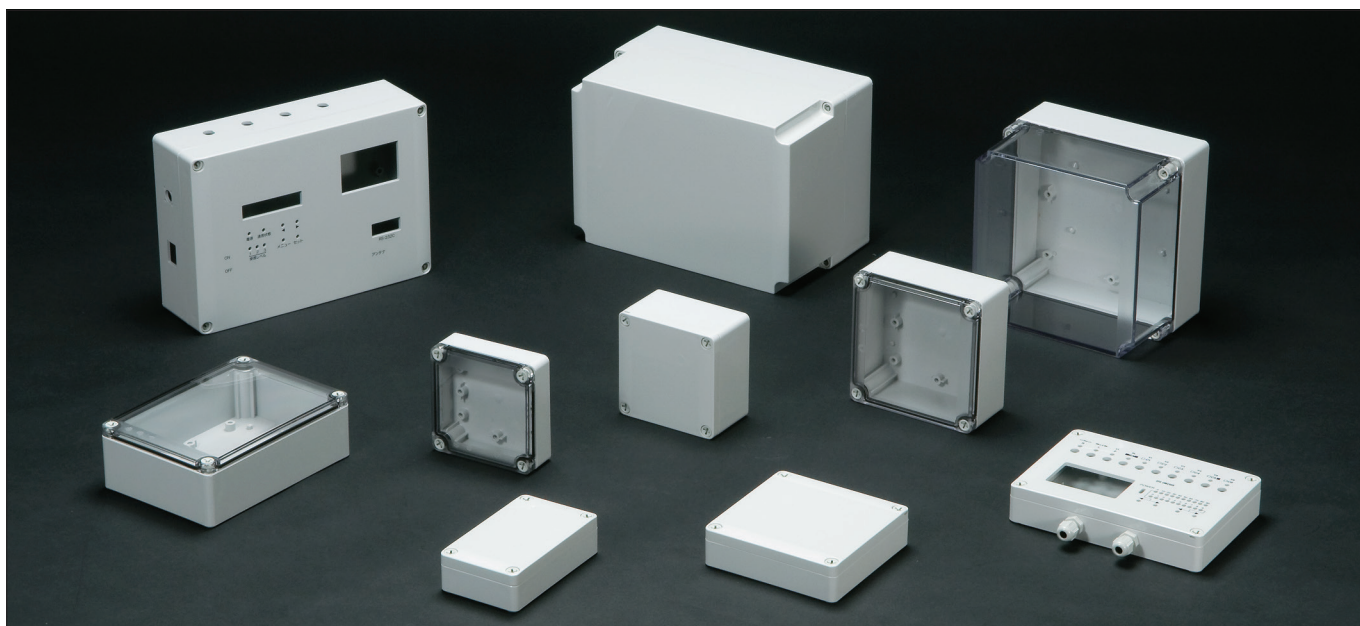
- TLW-70E□□ models are for installation (with M3 nut) into the built-in grooves on bottom-covers of EXP • EXPE 20-6, EXH • EXHE • EX 19-4 or larger models.

- Hole milling is required to install TLW-46□□ and TLW-70□□ models.
- Max installation panel thickness : t = 3.5mm



Product no. / Details

Product no.	A	B	C	D	E	F	G	H	I	J	K	L	Color (plastic)	Color (TPE)	Weight (g)
TLW-46BB	19	19	12	51.2	45.9	2	14	13	19	27	14	2	Black	Black	23
TLW-46NG	19	19	12	51.2	45.9	2	14	13	19	27	14	2	Navy	Gray	23
TLW-46LG	19	19	12	51.2	45.9	2	14	13	19	27	14	2	Light gray	Gray	23
TLW-70EBB	-	25	16	75.4	69	3	21.5	-	25	39	21.5	3	Black	Black	59
TLW-70ENG	-	25	16	75.4	69	3	21.5	-	25	39	21.5	3	Navy	Gray	59
TLW-70ELG	-	25	16	75.4	69	3	21.5	-	25	39	21.5	3	Light gray	Gray	59
TLW-70BB	30	25	16	75.4	69	2	21.5	20	25	39	21.5	2	Black	Black	59
TLW-70LG	30	25	16	75.4	69	2	21.5	20	25	39	21.5	2	Light gray	Gray	59



Technical Data

Protection class : IP66 • IP67
 Operating temperature : -20°C ~ +75°C
 Recommended Torque : 1N • m ~ 1.5N • m



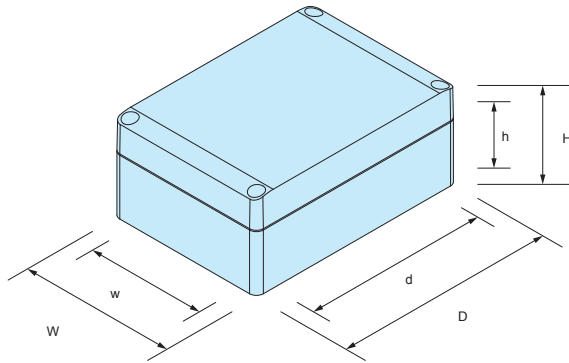
- UL certified products are SPCP.U series. See our website for more details.
- Please see our "PROTECTION CLASS (IP RATING)" document for details on the protection class when selecting your enclosure.
- Tough polycarbonate material for superior impact resistance.
- Available in 28 different sizes, with 2 different cover types (white gray and transparent).
- Suitable to be used as terminal junction box, control box, communication unit and more.
- Mountable on walls by using the cover holes for fastening.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	Polycarbonate UL94V-2	White gray • Transparent
2	Body	1	Glass fiber filled polycarbonate UL94V-0	White gray
3	Gasket	1	Polyurethane	Black
4	Cover screw	4	Polyamide	White gray
5	Tapping screw (for mounting plate)	4	Steel	Unichrome plated

SPCP dimensions

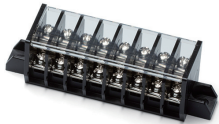
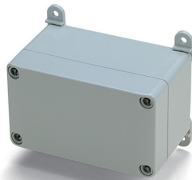
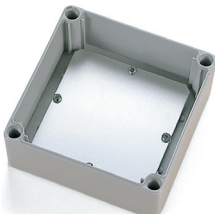
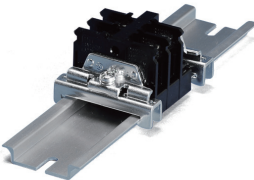
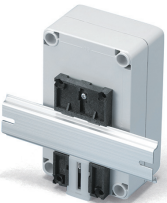
■ DXF/DWG/PDF/STP drawings available on our website.

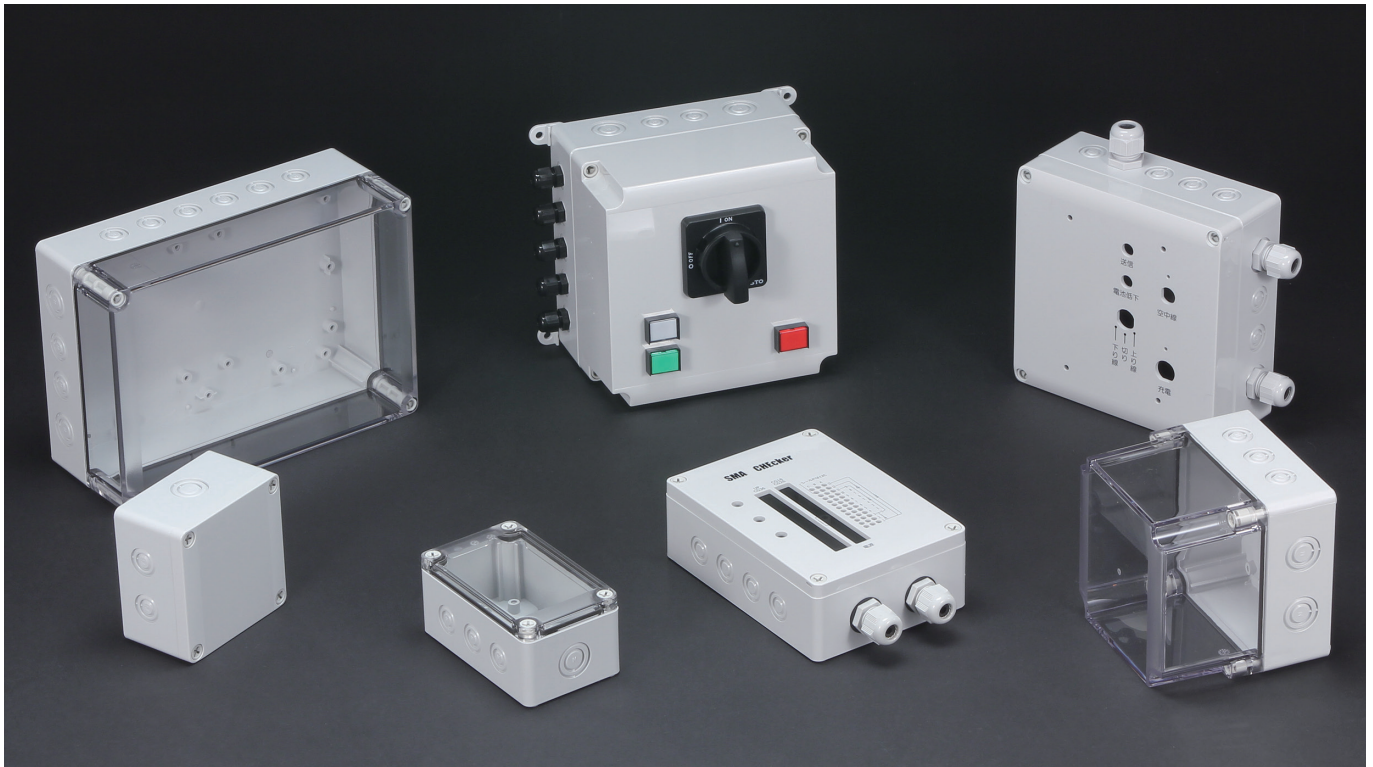


Product no. / Details

Product no.				Dimensions (External)			Dimensions (Internal)			Weight (g)
G type		T type		W	D	H	w	d	h	
Cover	Body	Cover	Body							
● White gray		○ Transparent	● White gray							
SPCP081304G		SPCP081304T		75	125	35	65.5	91	20.5	120
SPCP081305G		SPCP081305T		75	125	50	65.5	91	35.5	150
SPCP081306G		SPCP081306T		75	125	60	65.5	91	45.5	161
SPCP081308G		SPCP081308T		75	125	75	65.5	91	60.5	213
SPCP081310G		SPCP081310T		75	125	100	65	90.5	85.5	278
SPCP081313G		SPCP081313T		75	125	125	64.5	90	110.5	306
SPCP101004G		SPCP101004T		100	100	35	90.5	66	20.5	124
SPCP101006G		SPCP101006T		100	100	60	90.5	66	45.5	165
SPCP131304G		SPCP131304T		125	125	35	115.5	91	20.5	178
SPCP131305G		SPCP131305T		125	125	50	115.5	91	35.5	215
SPCP131306G		SPCP131306T		125	125	60	115.5	91	45.5	243
SPCP131308G		SPCP131308T		125	125	75	115.5	91	60.5	294
SPCP131310G		SPCP131310T		125	125	100	115	90.5	85.5	366
SPCP131313G		SPCP131313T		125	125	125	114.5	90	110.5	405
SPCP131804G		SPCP131804T		125	175	35	115.5	141	20.5	237
SPCP131805G		SPCP131805T		125	175	50	115.5	141	35.5	282
SPCP131806G		SPCP131806T		125	175	60	115.5	141	45.5	297
SPCP131808G		SPCP131808T		125	175	75	115.5	141	60.5	378
SPCP131810G		SPCP131810T		125	175	100	115	140.5	85.5	463
SPCP131813G		SPCP131813T		125	175	125	115	140.5	110.5	531
SPCP131815G		SPCP131815T		125	175	150	114	139.5	135.5	600
SPCP181808G		SPCP181808T		175	175	75	165.5	141	60.5	475
SPCP181810G		SPCP181810T		175	175	100	165	140.5	85.5	584
SPCP181813G		SPCP181813T		175	175	125	164.5	140	110.5	652
SPCP181815G		SPCP181815T		175	175	150	164	139.5	135.5	738
SPCP182508G		SPCP182508T		175	250	75	165.5	216	60.5	637
SPCP182510G		SPCP182510T		175	250	100	165	215.5	85.5	754
SPCP182515G		SPCP182515T		175	250	150	164	214.5	135.5	959

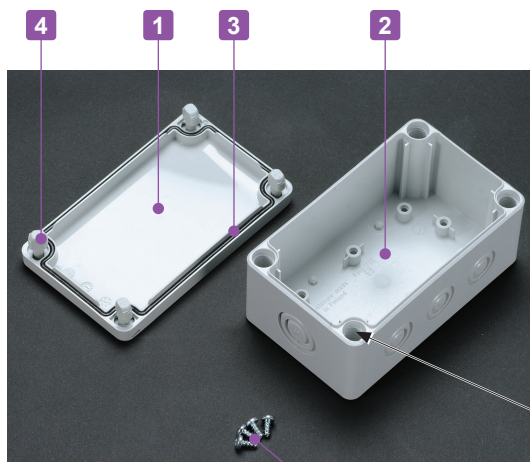
Accessories (Optional parts)

 Terminal block • Terminal cover STB • STC series See page STB • STC-1 ~ STB • STC-4	 Mounting bracket SFL-1 See page SPCM • SPCP-ACC-1	 Mounting plate SMP series See page SPCM • SPCP-ACC-1	 Cable gland See cable gland pages	 Protective vent PMF series See PMF pages
 DIN-Rail FDR series See page FDR-1 ~ FDR-2	 Terminal block stopper TKR series See page DIN-ACC-2	 DIN-Rail mounting base DRA, DRT, CKD series See page DIN-ACC-1 ~ DIN-ACC-2	 Pole mounting bracket & belt SSK, PKB series See page SSK-1 ~ SSK-4	 Outdoor roof SR series See page SPCM • SPCP-ACC-2

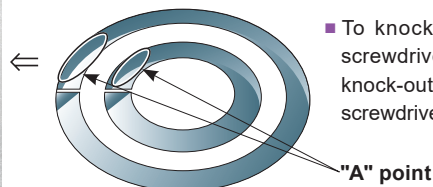


Technical Data

Protection class : IP66 • IP67
 Operating temperature : -20°C ~ +75°C
 Recommended Torque : 1N • m ~ 1.5N • m



- UL certified products are SPCM.U series. See our website for more details.
- Please see our "PROTECTION CLASS (IP RATING)" document for details on the protection class when selecting your enclosure.
- Tough polycarbonate material for superior impact resistance.
- Available in 28 different sizes, with 2 different cover types (white gray and transparent).
- Molded with metric knock-outs to allow for easy cable entry.
- Suitable to be used as terminal junction box, control box, communication unit and more.
- Mountable on walls by using the cover holes for fastening.



- To knock out the hole covers, rest a flathead screwdriver at the "A" points, and punch out the knock-outs by hammering on the rear end of the screwdriver handle with a hammer.

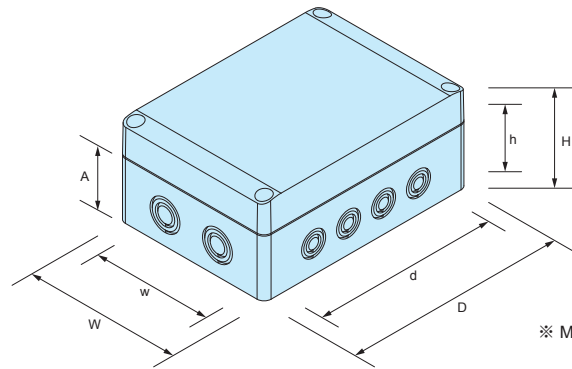
"A" point

Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	Polycarbonate UL94V-2	White gray • Transparent
2	Body	1	Glass fiber filled polycarbonate UL94V-0	White gray
3	Gasket	1	Polyurethane	Black
4	Cover screw	4	Polyamide	White gray
5	Self-tapping screw (for mounting plate)	4	Steel	Unichrome plated

SPCM dimensions

■ DXF/DWG/PDF drawings available on our website.

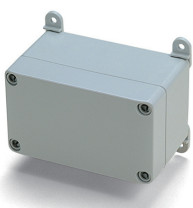


※ Metric knock-outs are on all 4 sides.

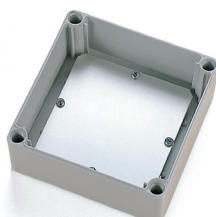
Product no. / Details

Product no.				External dimensions				Internal dimensions			Weight (g)
G type		T type		W	D	H	A	w	d	h	
Cover	Body	Cover	Body								
● White gray		○ Transparent	● White gray								
SPCM081306G		SPCM081306T		75	125	60	50	65.5	91	45.5	159
SPCM081308G		SPCM081308T		75	125	75	50	65.5	91	60.5	208
SPCM081310G		SPCM081310T		75	125	100	50	65	90.5	85.5	275
SPCM081313G		SPCM081313T		75	125	125	50	64.5	90	110.5	299
SPCM101006G		SPCM101006T		100	100	60	50	90.5	66	45.5	164
SPCM131306G		SPCM131306T		125	125	60	50	115.5	91	45.5	243
SPCM131308G		SPCM131308T		125	125	75	50	115.5	91	60.5	292
SPCM131310G		SPCM131310T		125	125	100	50	115	90.5	85.5	366
SPCM131313G		SPCM131313T		125	125	125	50	114.5	90	110.5	401
SPCM131806G		SPCM131806T		125	175	60	50	115.5	141	45.5	294
SPCM131808G		SPCM131808T		125	175	75	50	115.5	141	60.5	373
SPCM131810G		SPCM131810T		125	175	100	50	115	140.5	85.5	450
SPCM131813G		SPCM131813T		125	175	125	50	115	140.5	110.5	519
SPCM131815G		SPCM131815T		125	175	150	50	114	139.5	135.5	588
SPCM181808G		SPCM181808T		175	175	75	50	165.5	141	60.5	468
SPCM181810G		SPCM181810T		175	175	100	50	165	140.5	85.5	569
SPCM181810HG		SPCM181810HT		175	175	100	75	164.8	140.4	85.5	538
SPCM181813G		SPCM181813T		175	175	125	50	164.5	140	110.5	639
SPCM181813HG		SPCM181813HT		175	175	125	75	164.3	139.9	110.5	652
SPCM181815G		SPCM181815T		175	175	150	50	164	139.5	135.5	723
SPCM181815HG		SPCM181815HT		175	175	150	75	163.9	139.5	135.5	716
SPCM181818HG		SPCM181818HT		175	175	175	75	163.5	139.1	160.5	794
SPCM182508G		SPCM182508T		175	250	75	50	165.5	216	60.5	633
SPCM182510G		SPCM182510T		175	250	100	50	165	215.5	85.5	745
SPCM182510HG		SPCM182510HT		175	250	100	75	164.8	215.4	85.5	718
SPCM182513HG		SPCM182513HT		175	250	125	75	164.3	214.9	110.5	855
SPCM182515G		SPCM182515T		175	250	150	50	164	214.5	135.5	946
SPCM182518HG		SPCM182518HT		175	250	175	75	163.5	214.1	160.5	983

Accessories (Optional parts)



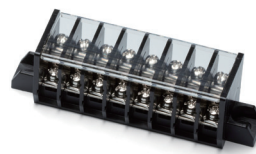
Mounting bracket SFL-1
See page SPCM • SPCP-ACC-1



Mounting plate SMP series
See page SPCM • SPCP-ACC-1



Cable gland
See cable gland pages



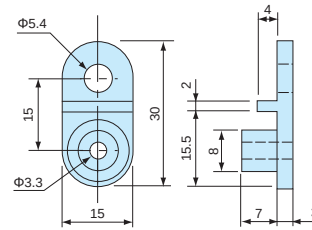
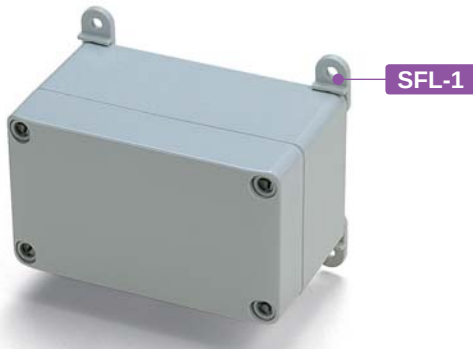
Terminal block • Terminal cover STB • STC series
See page STB • STC-1 ~ STB • STC-4



Pole mounting bracket & bolt SSK, PKB series
See page SSK-1 ~ SSK-4

SFL-1

PLASTIC MOUNTING BRACKET



Product no. / Feature

Product no.	Material	Screw	Pcs
SFL-1	Polycarbonate	M4 Tapping	4

SMS4-8

MOUNTING SCREW



- Mounting screws for PCB mounting on SPCP • SPCM series.
※1 set included with each SPCP • SPCM enclosure.

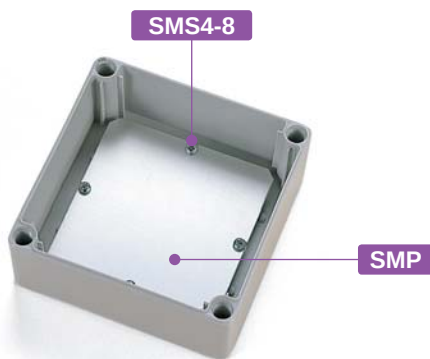
Product no. / Feature

Product no.	Material	Screw	Pcs
SMS4-8 (M4-8 Pan head tapping)	Steel	Trivalent chromate	4

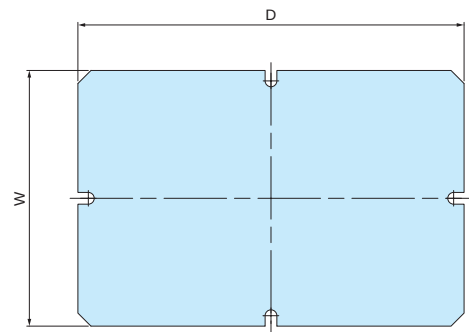
SMP SERIES

ALUMINIUM MOUNTING PLATE

SMP dimensions



- Drawings below are reference examples only.
DXF/DWG/PDF drawings available on our website.



Product no. / Dimensions

Product no.	Suitable box	W	D	Weight (g)
SMP0813	SPCM • SPCP0813	48	98	18
SMP1010	SPCM • SPCP1010	78	78	24
SMP1313	SPCM • SPCP1313	98	98	40.5
SMP1318	SPCM • SPCP1318	98	148	61
SMP1818	SPCM • SPCP1818	148	148	93
SMP1825	SPCM • SPCP1825	148	223	140.5

- Customization services (clinching standoffs, hole milling, and others) available.
See website for more details.



SR SERIES

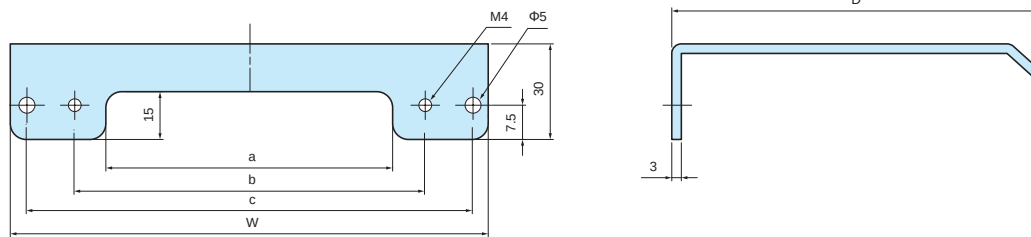
OUTDOOR ROOF for SPCM • SPCP



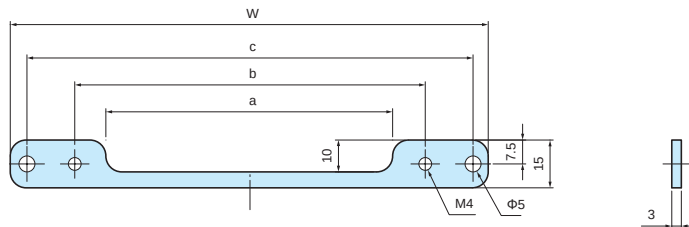
■ Roof and spacer attachments are easily attached onto the enclosure using existing cover fastening holes.

■ Recommended for outdoor environments for protection against rain, etc.

Roof



Spacer



Components

No.	Part name	Pcs	Material	Color / Finish
1	Roof	1	Aluminium A1050P t = 3.0mm	Light gray / Painted
2	Spacer	1	Aluminium A1050P t = 3.0mm	Light gray / Painted
-	Screw	4	Stainless steel	Unfinished
-	O-ring	4	NBR	Black

Product no. / Dimensions

Product no.	W	D	a	b	c	Suitable box
SR0808	100	90	50	60	90	SPCM • SPCP 081308
SR0810	100	115	50	60	90	SPCM • SPCP 081310
SR0813	100	140	50	60	90	SPCM • SPCP 081313
SR1308	150	90	90	110	140	SPCM • SPCP 131308 131808
SR1310	150	115	90	110	140	SPCM • SPCP 131310 131810
SR1313	150	140	90	110	140	SPCM • SPCP 131313 131813
SR1315	150	165	90	110	140	SPCM • SPCP 131815
SR1808	200	90	140	160	190	SPCM • SPCP 181808 182508
SR1810	200	115	140	160	190	SPCM • SPCP 181810 182510
SR1813	200	140	140	160	190	SPCM • SPCP 181813
SR1815	200	165	140	160	190	SPCM • SPCP 181815 182515

STB SERIES

TERMINAL BLOCK

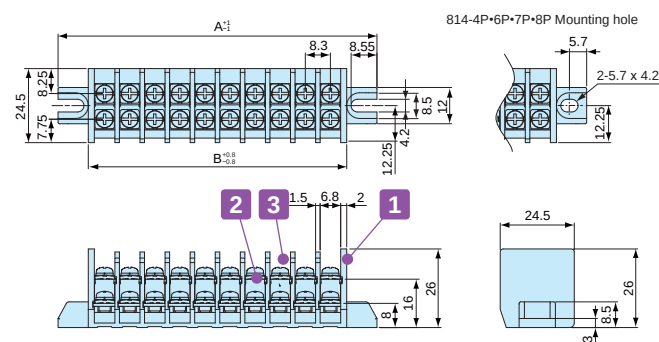
 (FW2)


■ Terminal block for SPCM • SPCP series.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Base	1	PBT (UL94V-0)	Black
2	Terminal	1	Brass	Nickel plated
3	Terminal screw	2 x P	Steel	Nickel plated
—	Mounting screw	4	Steel	Trivalent chromate

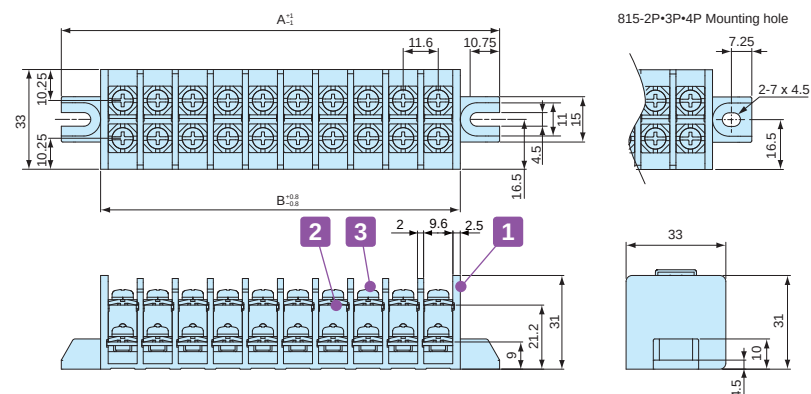
STB-814



Specification

1. Electrical Rating 300V 30A
2. Insulation Resistance DC500V 1000MΩ ~
3. Withstand Voltage AC2500V (Tested for 1 min.)
4. Operating Temp. Range -25°C ~ +80°C
5. Storage Temp. Range -25°C ~ +80°C

STB-815



Specification

1. Electrical Rating 300V 30A
(600V 30A JIS IEC compliant)
2. Insulation Resistance DC500V 1000MΩ ~
3. Withstand Voltage AC2500V (Tested for 1 min.)
4. Operating Temp. Range -25°C ~ +80°C
5. Storage Temp. Range -25°C ~ +80°C

Product no. / Dimensions

Product no.	P (Number of poles)	A	B	Suitable SPCM • SPCP box W x D dimensions
STB814- 3P	3	47.4	27.4	75×125
STB814- 4P	4	55.7	35.7	100×100
STB814- 6P	6	72.3	52.3	175×175
STB814- 7P	7	80.6	60.6	100×100
STB814- 8P	8	88.9	68.9	75×125, 125×125
STB814- 9P	9	97.2	77.2	125×125, 125×175, 175×250
STB814-10P	10	105.5	85.5	125×175, 175×250
STB815- 2P	2	52.2	26.2	75×125
STB815- 3P	3	63.8	37.8	100×100
STB815- 4P	4	75.4	49.4	125×125
STB815- 6P	6	98.6	72.6	125×125, 125×175, 175×250
STB815-10P	10	145	119	175×175, 175×250

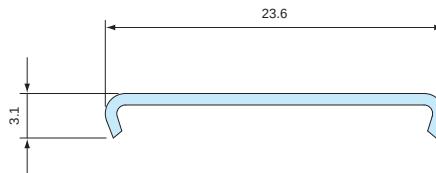
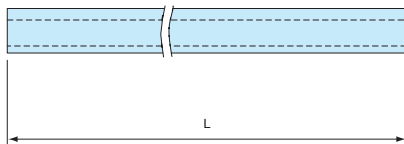
STC SERIES

TERMINAL COVER

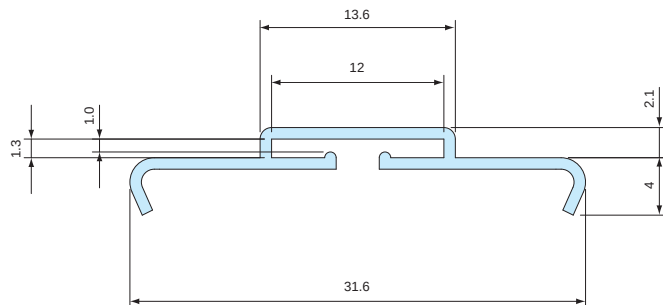
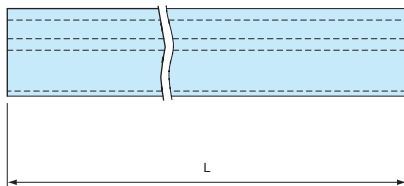


- Terminal cover for STB terminal block.
- Use for protecting terminals.

STC814



STC815



- Material / Color : Polycarbonate t=0.8mm / Transparent

Product no. / Dimensions

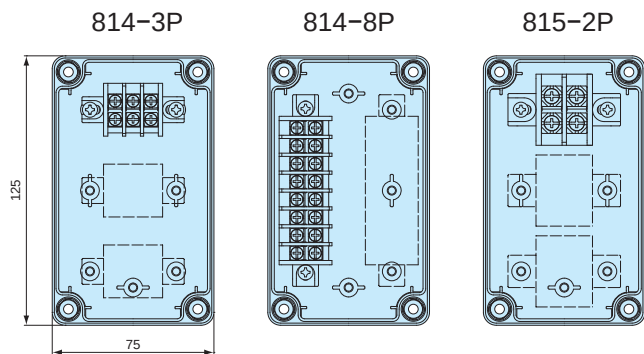
Product no.	P (Number of poles)	L	Compatible terminal
STC814- 3P	3	22.4	STB814- 3P
STC814- 4P	4	30.7	STB814- 4P
STC814- 6P	6	47.3	STB814- 6P
STC814- 7P	7	55.6	STB814- 7P
STC814- 8P	8	63.9	STB814- 8P
STC814- 9P	9	72.2	STB814- 9P
STC814-10P	10	80.5	STB814-10P
STC815- 2P	2	20.2	STB815- 2P
STC815- 3P	3	31.8	STB815- 3P
STC815- 4P	4	43.4	STB815- 4P
STC815- 6P	6	66.6	STB815- 6P
STC815-10P	10	113.0	STB815-10P

STB TERMINAL BLOCK MOUNTING POSITION

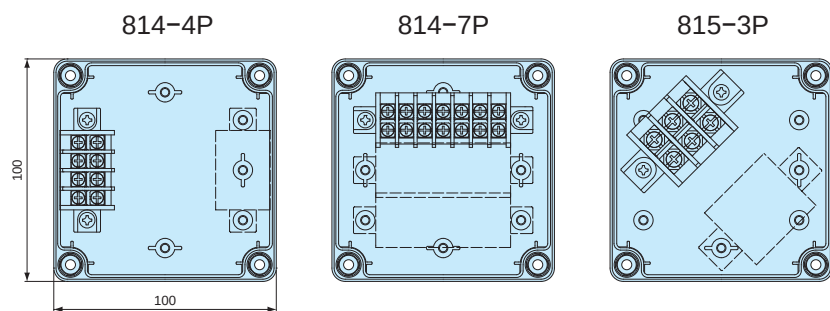
■ Drawings below are reference examples only.
DXF/DWG/PDF drawings available on our website.

■ Terminals can be installed in the area with dotted lines.

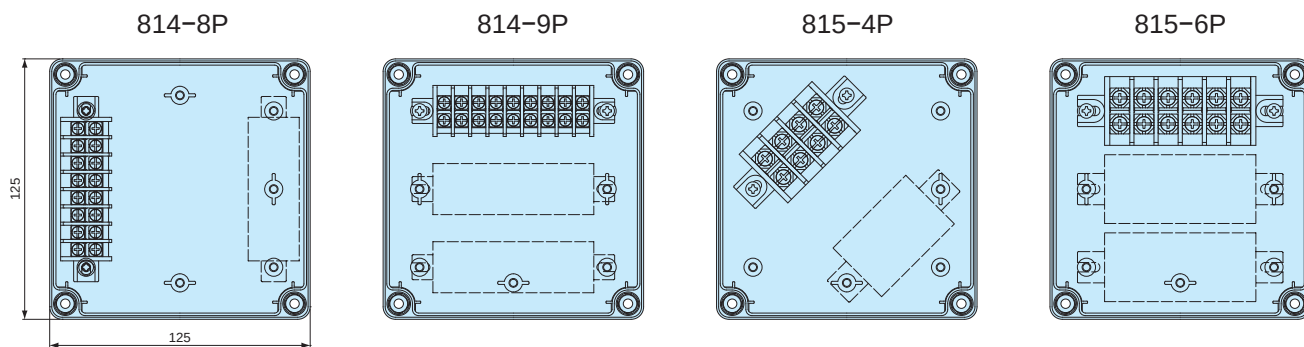
Suitable box SPCM/SPCP 081305 • 081306 • 081308 • 081310 • 081313



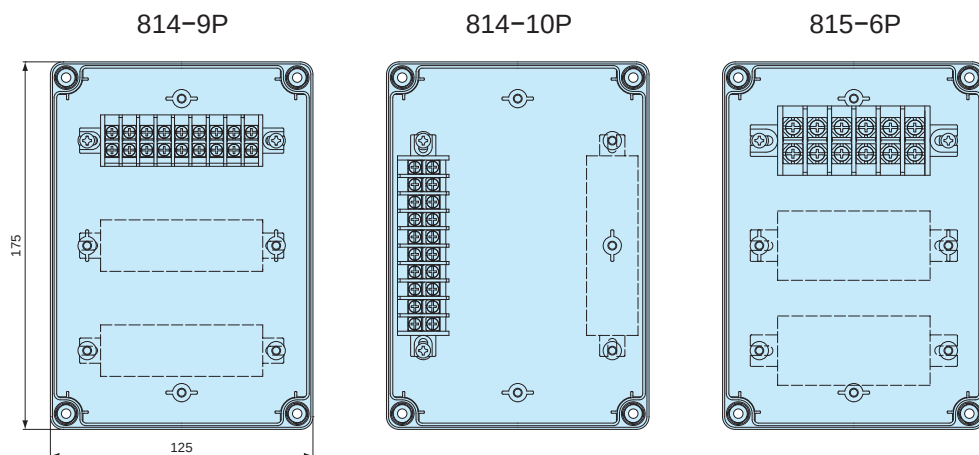
Suitable box SPCM/SPCP 101006



Suitable box SPCM/SPCP 131305 • 131306 • 131308 • 131310 • 131313



Suitable box SPCM/SPCP 131805 • 131806 • 131808 • 131810 • 131813 • 131815



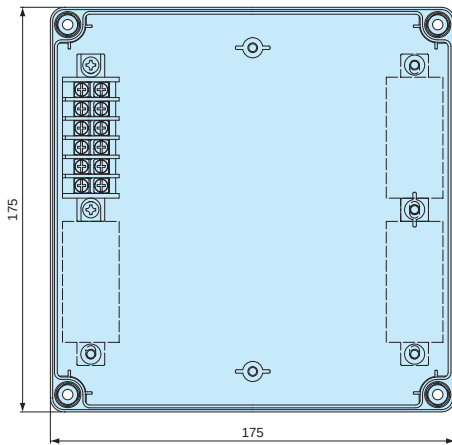
STB TERMINAL BLOCK MOUNTING POSITION

■ Drawings below are reference examples only.
DXF/DWG/PDF drawings available on our website.

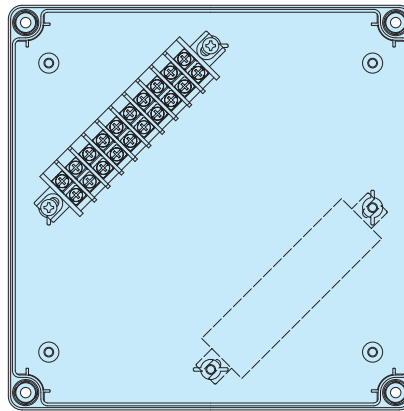
■ Terminals can be installed in the area with dotted lines.

Suitable box SPCM/SPCP 181808 • 181810 • 181813 • 181815

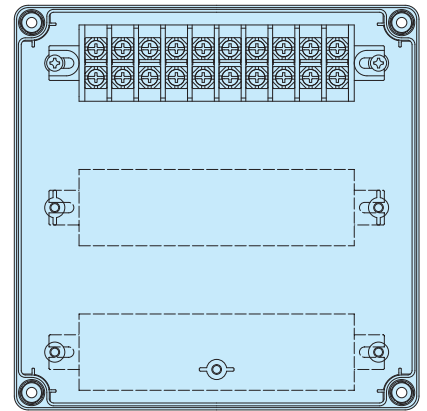
814-6P



814-10P

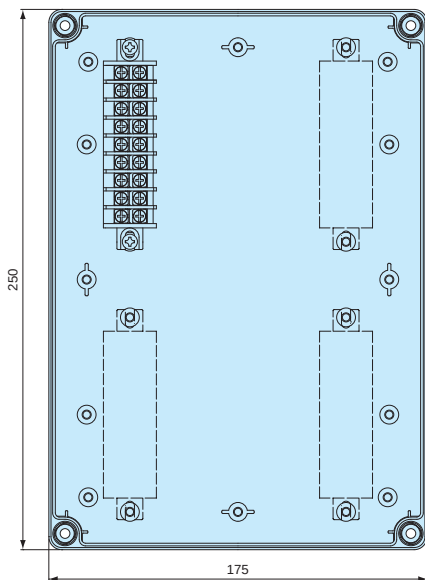


815-10P

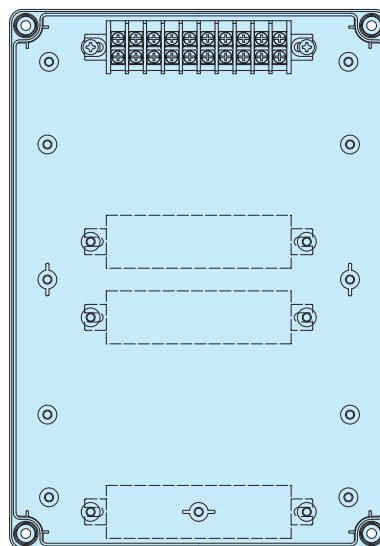


Suitable box SPCM/SPCP 182508 • 182510 • 182515

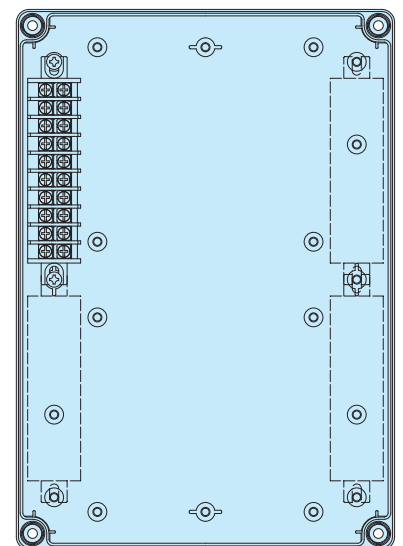
814-9P



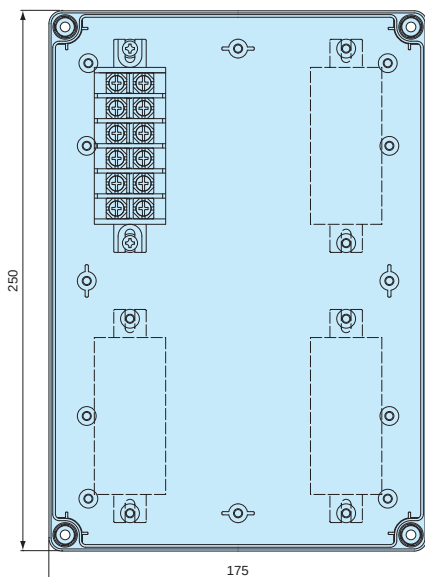
814-10P



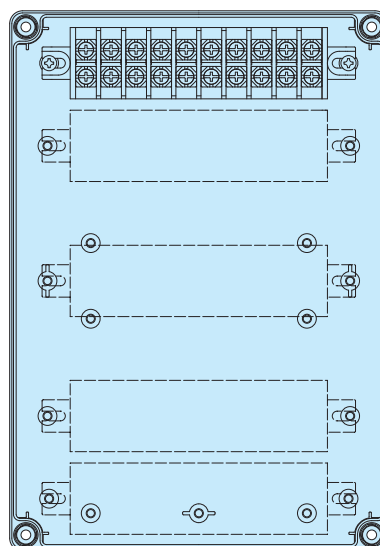
814-10P



815-6P



815-10P

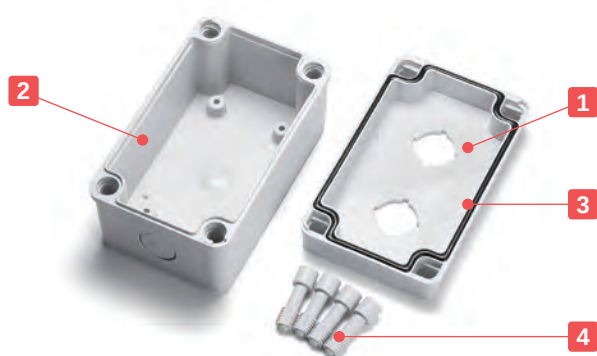




Technical Data

Protection class : IP65 {Waterproof switch
Exclusive cable gland} required
Operating Temperature : -20°C ~ +75°C
Recommended torque : 1N · m ~ 1.5N · m

IP65



- IP65 switch box with 1 ~ 4 $\Phi 22$ hole(s) on the top cover.
- Made from flame retardant UL94V-0 high heat resistant polycarbonate material.
- $\Phi 22$ knock-outs on 2 opposite ends for easy wiring access if required.
- Exclusive cable gland, B131210G for $\Phi 22$ knock-outs is available as optional parts.
- IP65 protection class is maintained with waterproof switches and the exclusive cable glands installed.
- Yellow/Black color types available as BTO (built-to-order) at a MOQ of 500 pcs. For custom color order, the material would be changed to ABS UL94HB, with an operating temperature of -10°C ~ +60°C.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	Polycarbonate UL94V-0	Light gray
2	Base	1	Glass fiber filled polycarbonate UL94V-0	Light gray
3	Gasket	1	Polyurethane	Black
4	Cover screw	4	Glass fiber filled nylon	White gray

Accessories (Optional parts)



Exclusive cable gland B131210G
See page 330



Stainless steel mounting bracket CK-34Z
See website



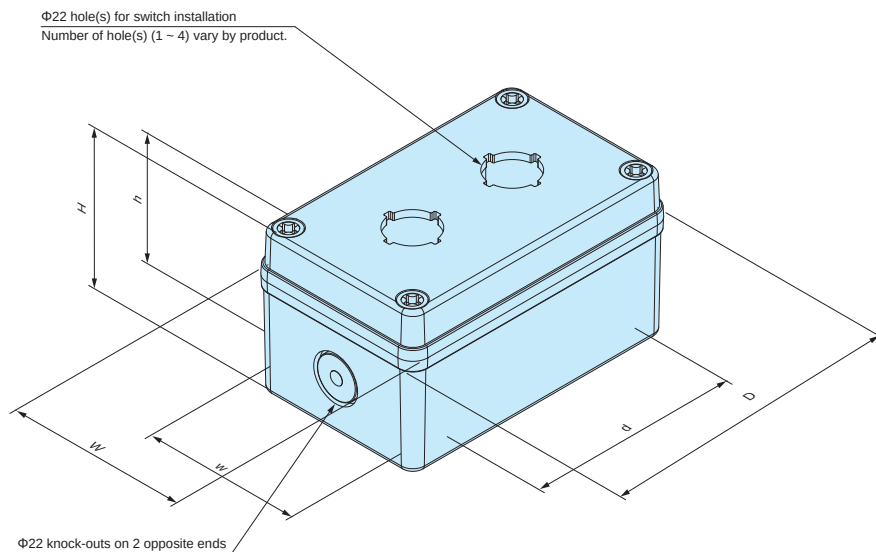
Spare cover screw CB20
See website



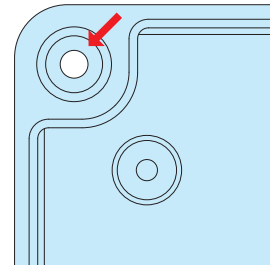
PCB mounting screw MT4-8T
See page 320

BCSB dimensions

■ DXF/DWG/PDF drawings available on our website.



■ Wall mounting without an optional wall mounting bracket is possible through inserting the wall mount screw directly into the cover screw hole on the base part.



Product no. / Dimensions

Product no.	External dimensions			Internal dimensions			Switch hole(s)	Knock-outs	Weight (g)
	W	D	H	w	d	h			
BCSB081107-2201G	80	110.5	70.3	67	67	55.8	Φ22 x 1	Φ22 x 2	204
BCSB081307-2202G	80.5	130.5	70	67	87	55.6	Φ22 x 2	Φ22 x 2	222
BCSB081807-2203G	80	180	70.5	67	137	56.3	Φ22 x 3	Φ22 x 2	278
BCSB082507-2204G	80	250	71	67	207	56.3	Φ22 x 4	Φ22 x 2	364

Accessories (Optional parts)

B131210G

EXCLUSIVE CABLE GLAND for BCSB



■ Exclusive cable gland for Φ22 knock-outs on BCSB series switch box.

■ The PG13.5 thread (Φ20.5) is a little smaller than Φ22 hole but is compatible for the Φ22 knock-out hole.

■ Install B131210G into the very center of the Φ22 knock-out hole.

■ Cap and connector are made from PA66 material, light gray color type. Sealing insert and O-ring are made from NBR material, black color type.

Technical Data

Protection class : IP65
Operating temperature : -20°C ~ +75°C

Product no. / Dimensions

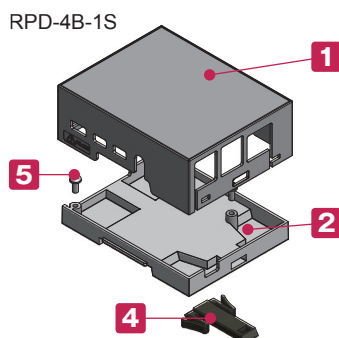
Product no.	Cable range		Suitable models	Weight (g)
	Min	Max		
B131210G	7	11	BCSB series	12.7

■ DXF/DWG/PDF drawings available on our website.

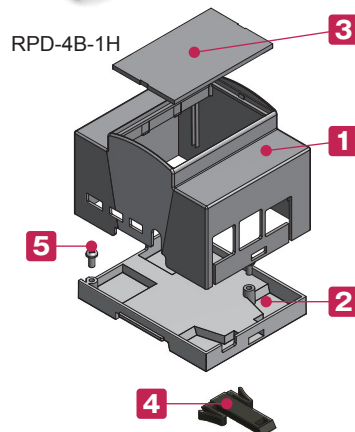




RPD-4B-1S



RPD-4B-1H



■ Exclusively for use with Raspberry Pi 4B.

■ Exclusively for use with 35mm DIN rail.

Able to assemble easily with a flathead screwdriver;
no screws required.

*Caution : Material may easily break when assembling.

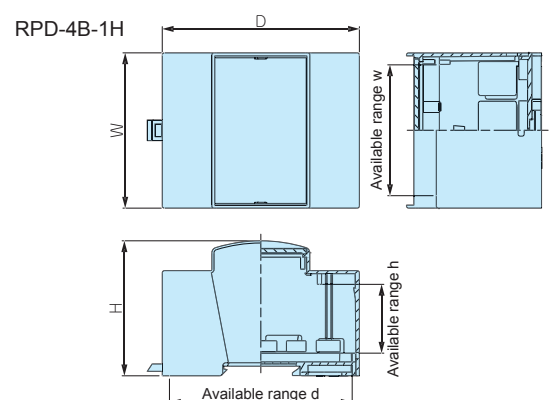
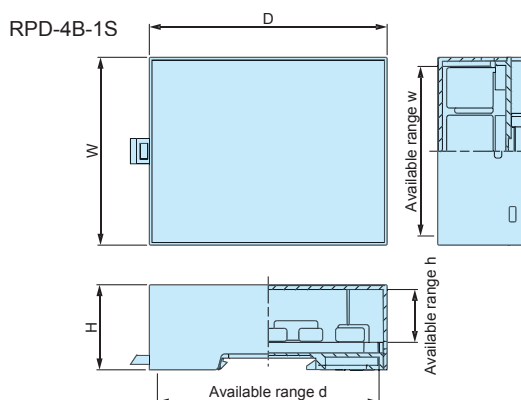
■ Raspberry Pi Board is excluded.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Body	1	PC + ABS	Gray
2	Base	1	PC + ABS	Gray
3	Front panel (RPD-4B-1H only)	1	Polycarbonate t = 2.0	Transparent
4	Hook	1	PPO	Black
5	Screw for Board (M3-6)	2	Stainless steel	Unfinished

RPD dimensions

■ Drawings below are reference examples only.
DXF/DWG/PDF drawings available on our website.



Product no. / Dimensions

Product no.	Dimensions						Weight (g)
	W	H	D	w	h	d	
RPD-4B-1S	71.1	32.2	90	64.1	20.1	83.9	46.8
RPD-4B-1H	71.3	62	90.5	60.3	31.7	83.9	68.1

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sales@takachi-el.co.jp

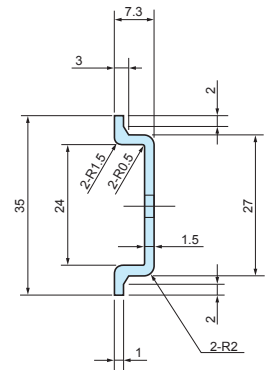
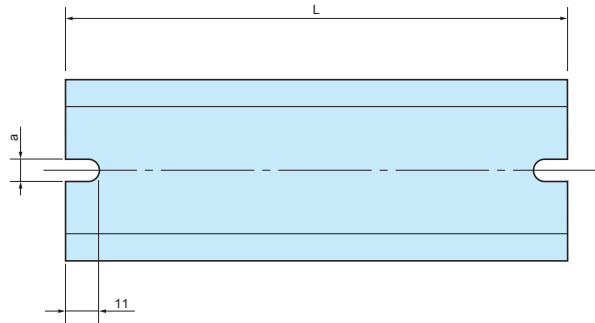
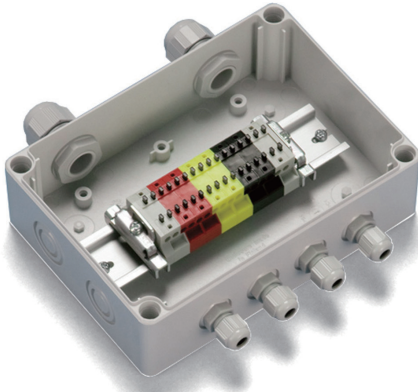
● All items listed in this catalogue are compliant with EU RoHS 10 standard.

FDR SERIES

DIN-RAIL



- DIN rail for installation of terminals, relays or switches inside enclosures.
- Available in different models and lengths to fit a wide variety of mounting boss pitch.
- FDR-1000 is available if customized length is required.



Feature

Material	Finish
Extruded Aluminium A6063S-T5	Silver anodized

Product no. / Dimensions

Product no.	L	a	Matching boss pitch
FDR- 50	50	4.2	32 ~ 42
57	57	4.2	39 ~ 49
66	66	4.2	48 ~ 58
77	77	4.2	59 ~ 69
80	80	4.2	62 ~ 72
87	87	4.2	69 ~ 79
92	92	4.2	74 ~ 84
100	100	4.2	82 ~ 92
106	106	4.2	88 ~ 98
110	110	4.2	92 ~ 102
120	120	4.2	102 ~ 112
128	128	4.2	110 ~ 120
137	137	4.2	119 ~ 129
142	142	4.2	124 ~ 134
146	146	4.2	128 ~ 138
150	150	4.2	132 ~ 142
168	168	4.2	150 ~ 160
170	170	4.2	152 ~ 162
186	186	4.2	168 ~ 178
202	202	4.2	184 ~ 194
205	205	4.2	187 ~ 197
223	223	4.2	205 ~ 215
226	226	4.2	208 ~ 218
235	235	4.2	217 ~ 227
242	242	4.2	224 ~ 234
249	249	4.2	231 ~ 241
283	283	4.2	265 ~ 275
300	300	4.2	282 ~ 292
350	350	4.2	332 ~ 342
450	450	4.2	432 ~ 442
550	550	4.2	532 ~ 542

Product no.	L	a	Matching boss pitch
FDR-B102	102	6.5	86 ~ 92
NEW B124	124	6.5	108 ~ 114
B142	142	6.5	126 ~ 132
B160	160	6.5	144 ~ 150
B165	165	6.5	149 ~ 155
B176	176	6.5	160 ~ 166
B183	183	6.5	167 ~ 173
B223	223	6.5	207 ~ 213
B260	260	6.5	244 ~ 250
B283	283	6.5	267 ~ 273
B303	303	6.5	287 ~ 293
B338	338	6.5	322 ~ 328
B360	360	6.5	344 ~ 350
B376	376	6.5	360 ~ 366
B383	383	6.5	367 ~ 373
B463	463	6.5	447 ~ 453
B560	560	6.5	544 ~ 550
B623	623	6.5	607 ~ 613
FDR-1000	1000	—	—

■ FDR-1000 does not have mounting holes.

Matching DIN-Rail Chart

BC□□ series

Product no.	Matching DIN-Rail
091207	FDR - 80
091208	80
101507	110
101508	110
112107	170
112110	170
112607	223
112610	223
131508	120
131808	150
131810	150
151509	120
151512	120
162110	170
162113	170
162610	223
162613	223
172211	170
172711	223

BDN series

Product no.	Matching DIN-Rail
6- 8- 5	FDR - 50
7-10- 4	—
9- 9- 6	FDR - 80
9-13- 5	120
10-14- 7	128
11-16- 6	150
12-22- 8	205
16-26- 9	242

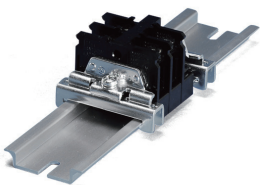
BCAS series

Product no.	Matching DIN-Rail
071005	FDR - 92
080806	66
081104	92
081107	92
081108	92
081110	92
081307	110
081308	110
081807	168
081808	168
082507	235
082508	235
101007	77
101010	77
101807	150
102007	170
102307	202
121207	80
121210	80
141709	146
142309	205
151507	120
151510	120
152004	170
152007	170
152010	170
152013	170
152016	170
152510	226
152513	226
161607	137

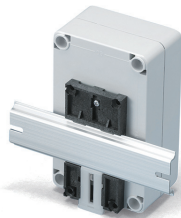
SPCM • SPCP series

Product no.	Matching DIN-Rail
081304	FDR - 50/100
081305	50/100
081306	50/100
081308	50/100
081310	50/100
081313	50/100
101004	80
101006	80
131304	100
131305	100
131306	100
131308	100
131310	100
131313	100
131804	100/150
131805	100/150
131806	100/150
131808	100/150
131810	100/150
131813	100/150
131815	100/150
181808	150
181810	150
181813	150
181815	150
182508	150/223
182510	150/223
182515	150/223

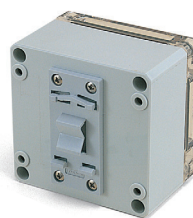
Accessories (Optional parts)



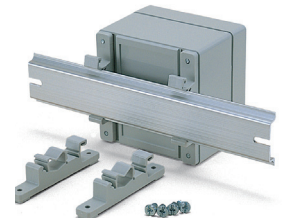
DIN-Rail stopper bracket TKR series
See page DIN-ACC-2



DIN-Rail mounting base DRA series
See page DIN-ACC-1



DIN-Rail mounting base DRT series
See page DIN-ACC-1

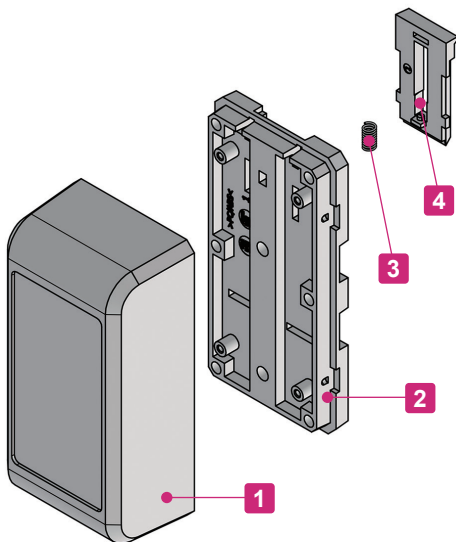


DIN-Rail mounting feet CKD series
See page DIN-ACC-2



Technical Data

Operating temperature : -20°C ~ +60°C



- Plastic enclosure with mount bracket for 35mm DIN Rail.
- 3 new sizes added for a total of 4 different sizes available for selection.
- Toolless snap-in structure allows for quick and easy assembly.
- Simple installation and removal on a DIN Rail with the pull lever.
- Suitable for network module, controller, data logger and others.

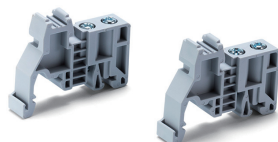
Components

No.	Part name	Pcs	Materials	Color / Finish
1	Cover	1	PC/ABS (UL94V-0)	Off-white
2	Base	1	PC/ABS (UL94V-0)	Off-white
3	Compression spring	1	SUS304	Unfinished
4	Lever	1	PC/ABS (UL94V-0)	Off-white

Accessories (Optional parts)



DIN Rail FDR series
See page 100



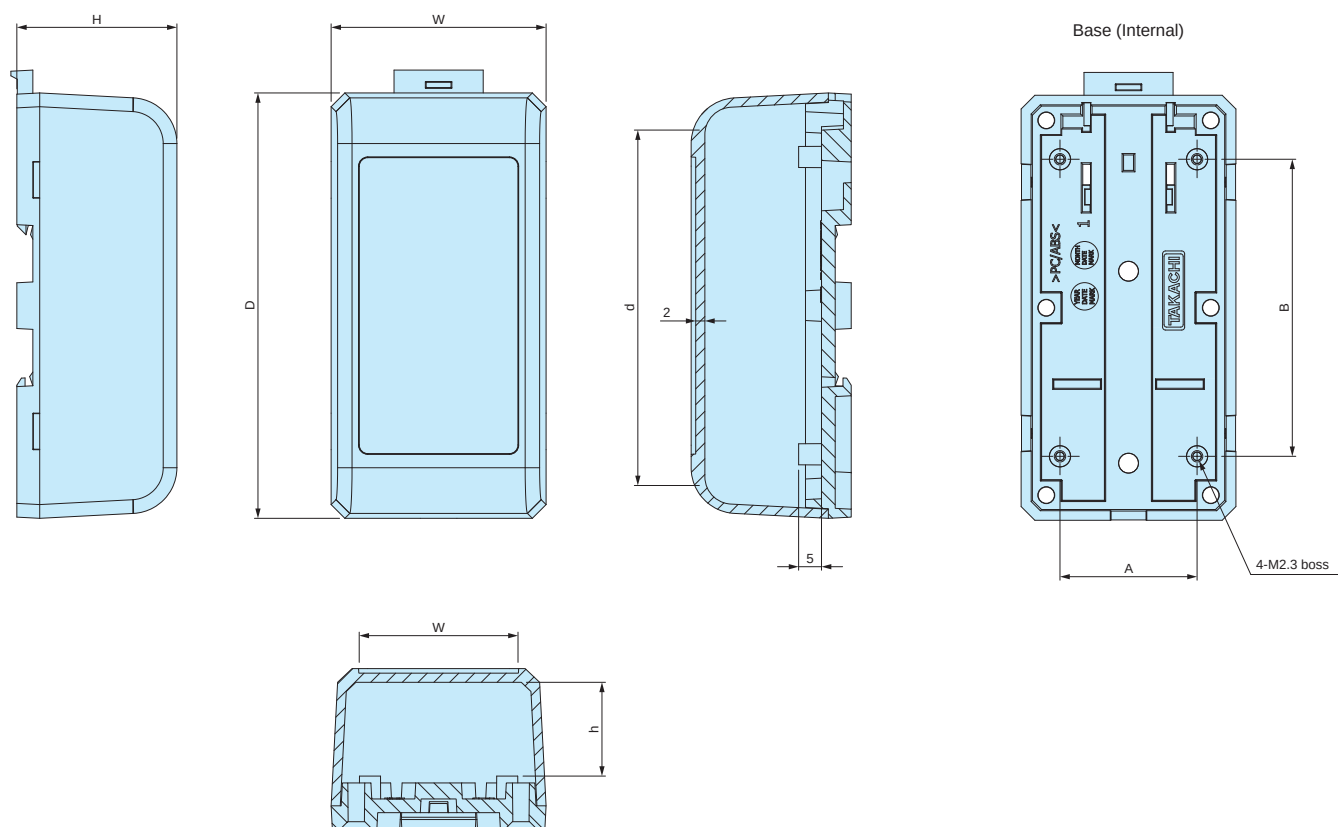
Economical DIN Rail end stopper
DRS series
See page 99



DIN Rail terminal block end stopper
TKR series
See page 99

DRC dimensions

■ DXF/DWG/PDF/STP drawings available on our website.



Product no. / Details

Product no.	External dimensions			Internal dimensions			Boss pitch		Weight (g)
	W	H	D	w	h	d	A	B	
NEW DRC4-4-9W	38	35	93	27	20.5	74.7	20	70	44.1
DRC5-4-9W	47	35	93	36	20.5	74.7	30	65	51.6
NEW DRC7-4-9W	65	35	93	54	20.5	74.7	45	65	65.4
NEW DRC9-4-9W	90	35	93	79	20.5	74.7	70	65	83.9

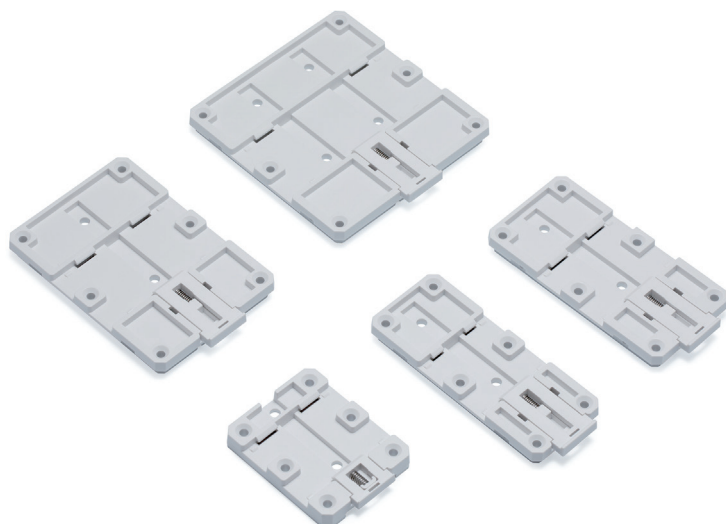
APPLICATION EXAMPLE



Controller



Network Module

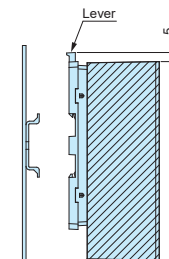


Installation Example



NOTE

Before installation, please ensure that the lever is not fully hidden behind the enclosure.



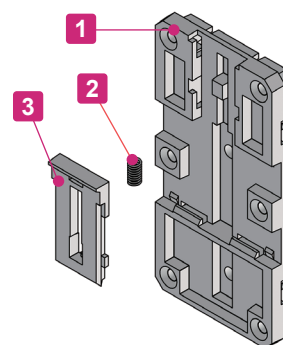
Technical Data

Max load : 5kg

- Mounting base for installation of enclosures, PCB and other parts onto 35mm DIN Rail.
- 4 new sizes added for a total of 5 different sizes available for selection.
- Easy mounting and dismounting from a DIN Rail using the pull lever.
- Replacement product for the discontinued DRA series.

Components

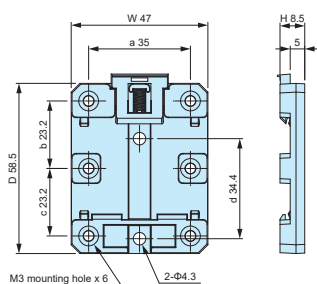
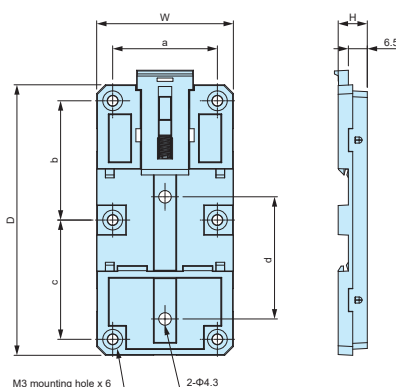
No.	Part name	Pcs	Materials	Color / Finish
1	Base	1	PC/ABS (UL94V-0)	Off-white
2	Compression spring	1	SUS304	Unfinished
3	Lever	1	PC/ABS (UL94V-0)	Off-white



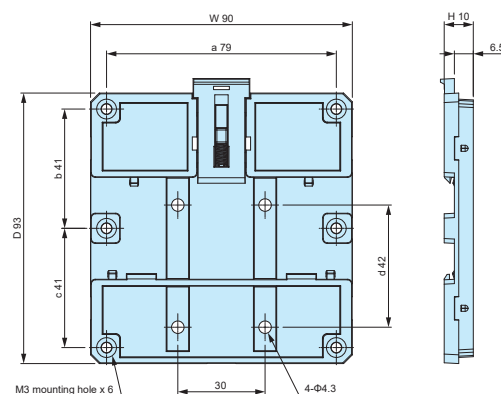
DRP dimensions

- DXF/DWG/PDF/STP drawings available on our website.

DRP5-6W

DRP4-9W, DRP5-9W
DRP7-9W

DRP9-9W

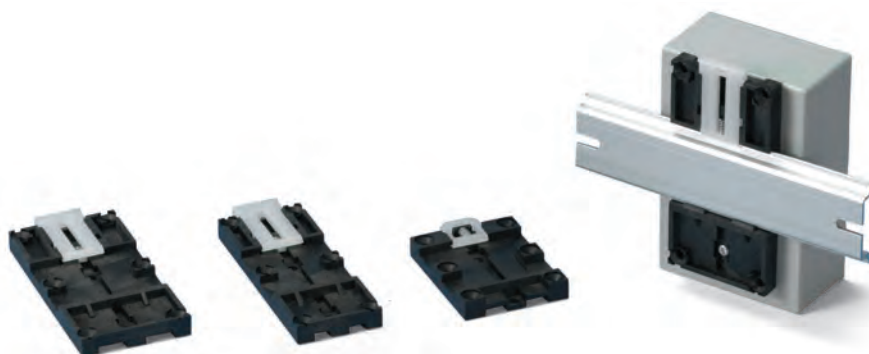


Product no. / Details

Product no.	Dimensions							Weight (g)	Old product model
	W	H	D	a	b	c	d		
NEW DRP4-9W	38	10	93	27	41	41	41	20.6	DRA-2
NEW DRP5-6W	47	8.5	58.5	35	23.2	23.2	34.4	13.4	DRA-3
DRP5-9W	47	10	93	36	41	41	42	24.6	DRA-1
NEW DRP7-9W	65	10	93	54	41	41	42	31.3	—
NEW DRP9-9W	90	10	93	79	41	41	42	41.6	—

DRA series

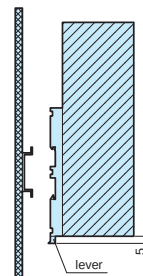
DIN-RAIL MOUNTING BASE



- For installation of enclosures, PCB and other parts onto a DIN rail.
- Simple installation and removal via the pull lever.

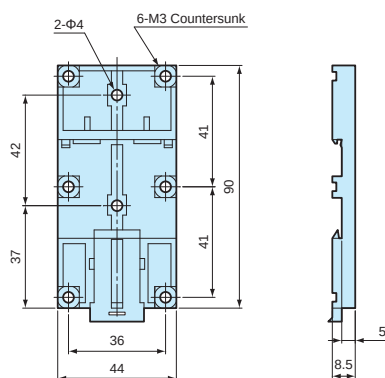
■ NOTE

Before installation, please ensure that the lever is not fully hidden behind the enclosure

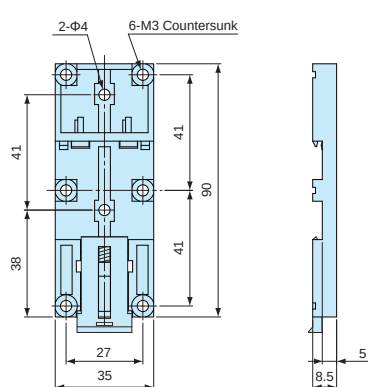


DRA dimensions

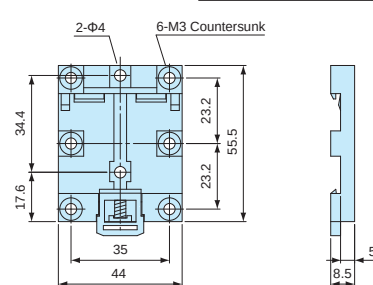
DRA-1



DRA-2



DRA-3



Technical Data

Max load : 5kg

Product no. / Dimensions

Product no.	Material (body)	Material (lever)	Color	Weight (g)
DRA-1	PPE : SB UL94V-1	Nylon 66 UL94V-2	Black : White	16.4
DRA-2	PPE : SB UL94V-1	Nylon 66 UL94V-2	Black : White	14.5
DRA-3	PPE : SB UL94V-1	Nylon 66 UL94V-2	Black : White	10.4

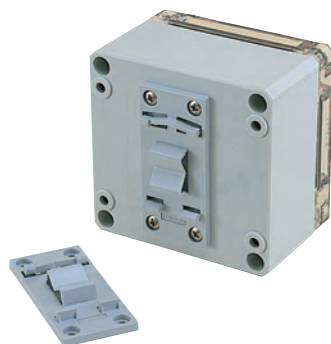
■ DXF/DWG/PDF drawings available on our website.

DRT series

DIN-RAIL MOUNTING BASE

DRT dimensions

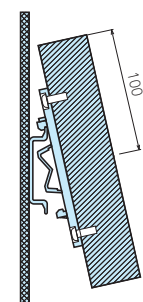
■ DXF/DWG/PDF drawings available on our website.



- For installation of enclosures, PCB and other parts onto a DIN rail.
- Simple installation and removal by tilting the case at an angle and sliding it in/out.

■ NOTE

Before installation, please ensure that the length (from top) of the enclosure is equal to, or less than 100mm from the center of the mounting base.



Technical Data

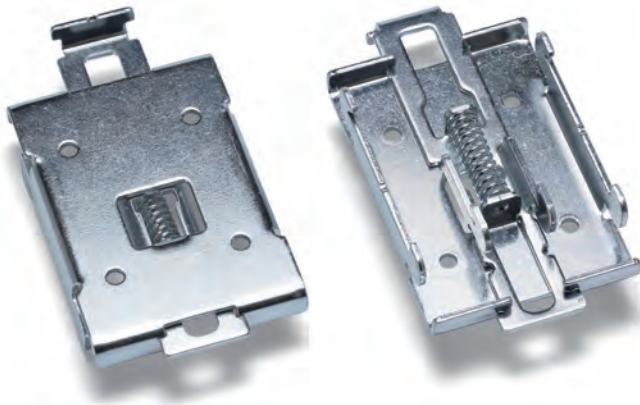
Max load : 1kg
Operating temperature: -20°C ~ +70°C

Product no. / Dimensions

Product no.	Material	Color	Weight (g)
DRT-1	PC/ABS UL94V-0	Light gray	7.3

DRM-1

DIN RAIL MOUNT BRACKET

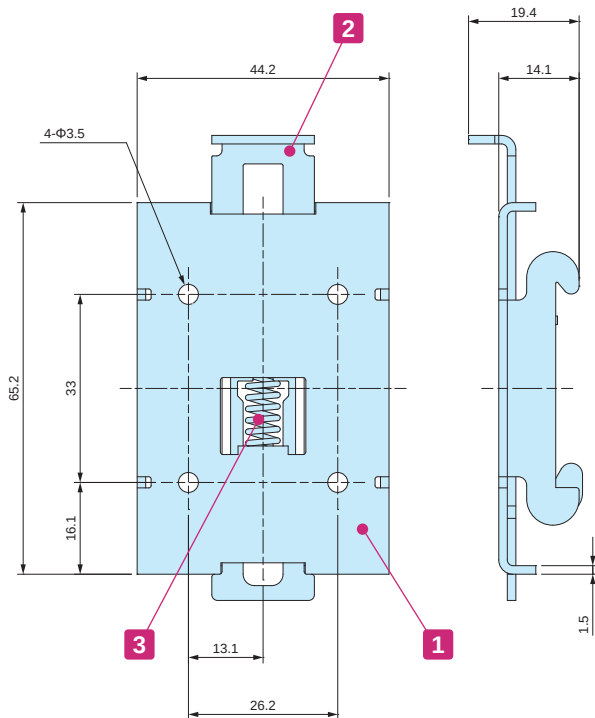


Installation example

- For installation of enclosures, PCB and other parts onto a DIN Rail.
- Robust metallic material allows rigid mounting on DIN Rails.
- Simple installation and removal via the pull lever.

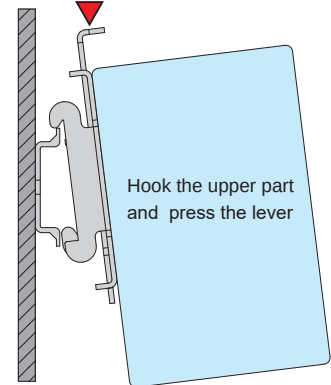
DRM-1 dimensions

- DXF/DWG/PDF drawings available on our website.



NOTE

Before installation, please ensure that the lever is not fully hidden behind the enclosure.



Technical Data

Max load : 10kg

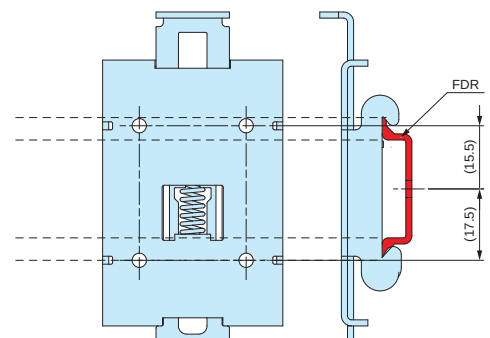
Components

No.	Part name	Material	Color / Finish
1	Base	Plated steel	Zinc plated
2	Lever	Plated steel	Zinc plated
3	Spring	Steel	Zinc plated

Product no. / Details

Product no.	Weight (g)
DRM-1	57.5

- Installation example on FDR series DIN Rail.

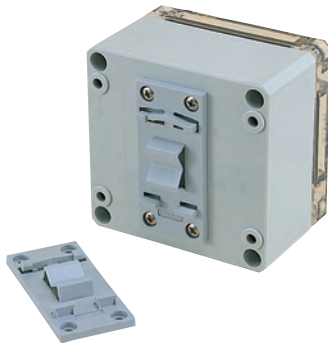


DRT series

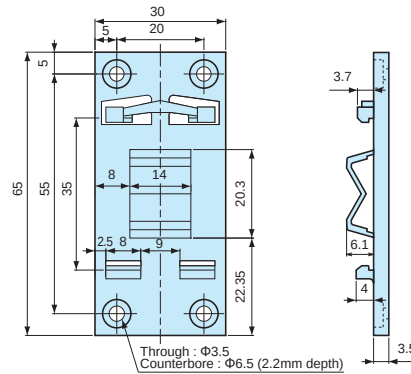
DIN RAIL MOUNTING BASE



Installation example

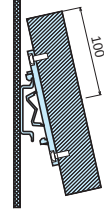


■ DXF/DWG/PDF/STP drawings available on our website.



■ NOTE

Before installation, please ensure that the length (from top) of the enclosure is equal to, or less than 100mm from the center of the mounting base.



- For installation of enclosures, PCB and other parts onto a DIN Rail.
- Simple installation and removal by tilting the case at an angle and sliding it in/out.

Technical Data

Max load : 1kg

Product no. / Details

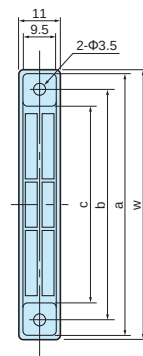
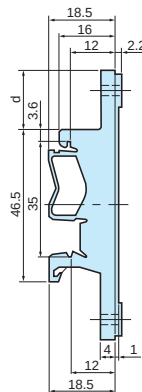
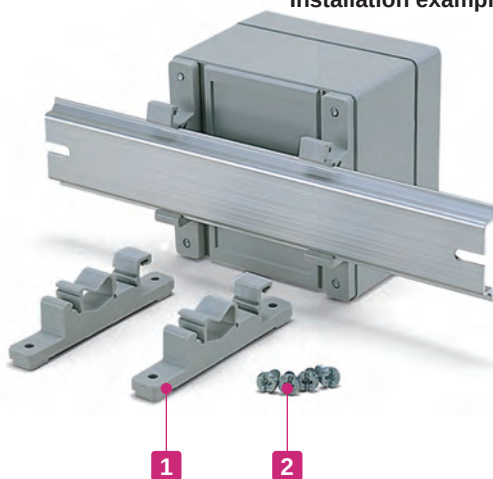
Product no.	Material	Color	Weight (g)	Pack of
DRT-1	PC/ABS UL94V-0	Light gray	7.3	1
DRT-1-P	PC/ABS UL94V-0	Light gray	7.3 (1pc)	50

CKD series

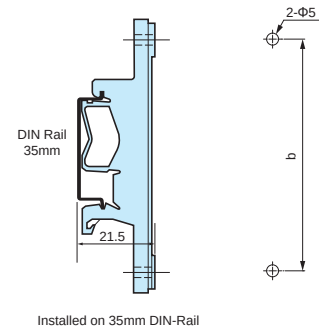
DIN RAIL MOUNTING FEET

Installation example

■ DXF/DWG/PDF drawings available on our website.



Hole layout for mounting



- Mounting feet for installation of enclosures, PCB and other parts onto a DIN Rail. Can be easily detached.

Technical Data

Max load : 3kg / 2pcs

Components

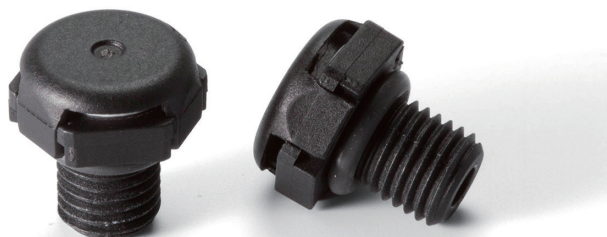
No.	Part name	Pcs	Material	Color / Finish
1	Mounting feet	2	Polyamide	White gray
2	Screw (special type 4.2 x 9.5)	4	Steel	Unichrome plated

Product no. / Details

Product no.	W	a	b	c	d	Weight (g)	Pack of
CKD-120	117	115	106	96	37	21 (2pcs)	2
CKD-160	157	155	147	136	57	24 (2pcs)	2

PMF-6B

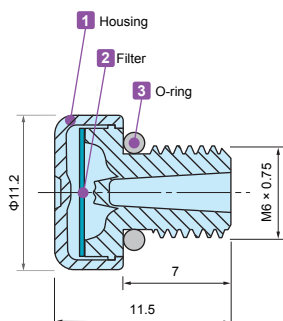
SMALL PROTECTIVE VENT



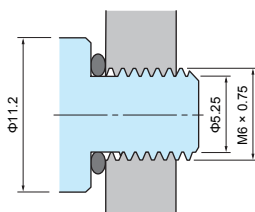
Application example

- Small and screw-in protective vent suitable for compact, and hand-held type devices.
- IP68 protection class (water depth 2 meters / 60 mins) and $-40^{\circ}\text{C} \sim +150^{\circ}\text{C}$ operating temperature range allows it to be used in various environments.
- Suitable for enclosures with capacities of 2.0 litres or under.
- For outdoor use, installation on the side of the enclosure unit is recommended.

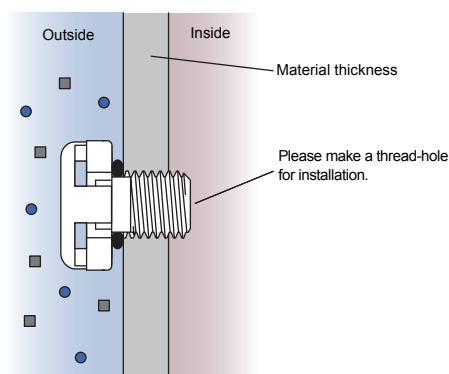
PMF-6B dimensions



Hole milling drawings



Installation drawings



Technical Data

Airflow	300ml / min ($\text{dp} = 7 \text{ kPa}$)
Recommended Torque	0.2 ~ 0.4 N • m
Certifications	IEC60529 (Protection class test) : IP66 • IP67 • IP68 IEC60068-2-1, 2, 14 (Heat resistance test) : $-40^{\circ}\text{C} \sim +150^{\circ}\text{C}$ IEC60068-2-78 (Humidity test) : $85^{\circ}\text{C} \cdot 85\% \text{ humidity} \cdot 1000 \text{ hours}$ IEC60068-2-64 (Vibration test) UL94V-0 (Flame-resistant) • UL746C f1

Product no. / Dimensions

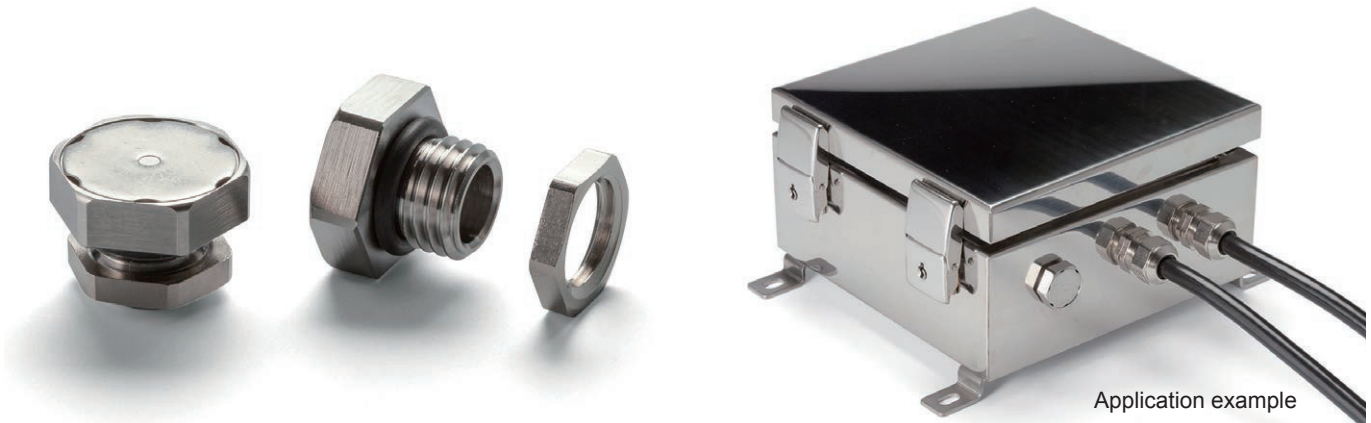
Product no.	Material			G	
● Black	1 Housing	2 Filter	3 O-ring	Thread size	Mount hole
PMF-6B	PA6 (Body) • PA66 (Cap)	PTFE	Silicone	M6 x 0.75	—

PMF-12M

STAINLESS STEEL PROTECTIVE VENT

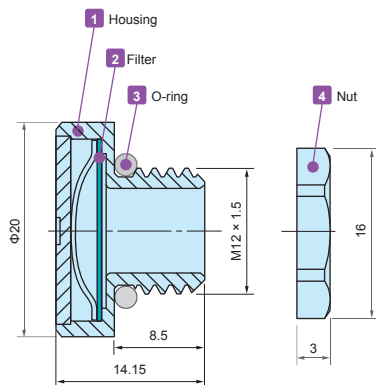
★ ★ NEW

IP68 IP69K

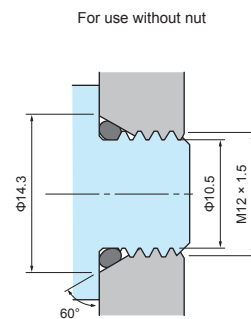


- Stainless steel protective vent for superior durability and chemical resistance.
- IP68 protection class (water depth 2 meters / 60 mins) and $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ operating temperature range allows it to be used in various environments.
- Suitable for enclosures with capacities of 20 liters or under.
- For outdoor use, installation on the side of the enclosure unit is recommended.

PMF-12M dimensions

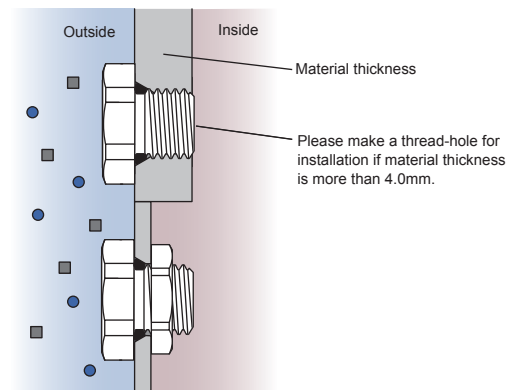


Hole milling drawings



- While $\phi 12.2\text{mm}$ through-hole is sufficient for installation, 60° angle tapered hole is recommended to prevent deformation of the O-ring.

Installation drawings



- If used with a lock nut, material thickness should not exceed 4.0mm.

Technical Data

Airflow	1600ml / min (dp = 7 kPa)
Recommended Torque	0.6 ~ 1.2 N · m
Certifications	IEC60529 (Protection class test) : IP66 • IP67 • IP68 • IP69K IEC60068-2-1, 2, 14 (Heat resistance test) : $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ IEC60068-2-78 (Humidity test) : $85^{\circ}\text{C} \cdot 85\%$ humidity • 1000 hours IEC60068-2-64 (Vibration test)

Product no. / Dimensions

Product no.	Material				G		Nut SW
● Metallic	1 Housing	2 Filter	3 O-ring	4 Nut	Thread size	Mount hole	
PMF-12M	Stainless steel	PTFE	Silicone	Brass • Nickel plated	M12 x 1.5	$\phi 12.2$	15

PMF series

PROTECTIVE VENT

Pressure Equalization / Ventilation



Application Example

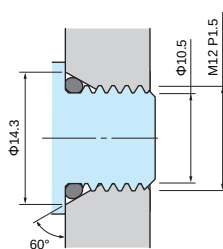
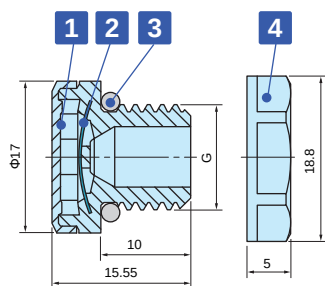
- Protective vent protects the enclosure from deformation by equalizing internal and external pressure differences, as well as venting the gas generated within the enclosure.
- IP68 protection class (water depth 2 meters / 60 mins) with an operating temperature range -40°C ~ +125°C allows them to be used in harsh environments.
- PMF-12 and PMF-12HS models are suitable for up to 5 and 50 liters respectively.
- Recommended to be installed at the sides of the enclosure.
- Use in industrial and electrical / electronic products only; not suitable to be used in medical, food and beverage, and cosmetic industries and related industrial equipment.

PMF dimensions

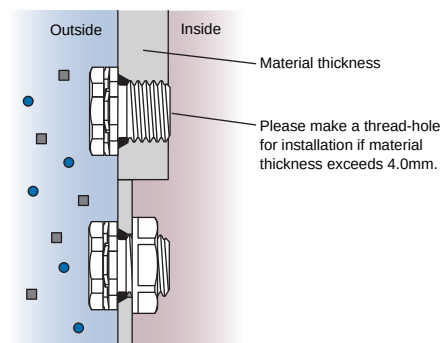
Hole milling drawings

Installation drawings

- DXF/DWG/PDF drawings available on our website.



- Recommended for prevention of O-ring deformation during tightening.
If tightened with a lock nut, a standard through-hole is sufficient for installation.



- If used with a lock nut, material thickness should not exceed 4.0mm.

Technical Data

Product no.	PMF-12	PMF-12HA
Airflow	450ml / min (dp = 7kPa)	4,000ml / min (dp = 7kPa)
Recommended torque	0.6 ~ 0.8N • m	0.6 ~ 0.8N • m
Certifications	IEC60529 (Protection class test) : IP65 • IP66 • IP67 • IP68 • IP69K IEC60068-2-1, 2, 14 (Heat resistance test) : - 40°C ~ +125°C IEC60068-2-78 (Humidity test) : 85°C • 85% humidity • 1,000 hours IEC60068-2-11, 52 (Salt spray test) IEC60068-2-64 (Vibration test) GR-3108-CORE (Corrosive gas test) UL94V-0 (Flame-resistant) • UL746C f1	

Product no. / Details

Product no.		Material				G		Lock nut
● Light gray	● Black	1 Housing	2 Filter	3 O-ring	4 Lock nut	Thread size	Mount hole	SW
PMF-12S	PMF-12B	PA66 / 6	PTFE	Silicone	PA66 (UL94V-2)	M12 x P1.5	Φ12.2	17
PMF-12HAS	PMF-12HAB	PA66 / 6	PTFE	Silicone	PA66 (UL94V-2)	M12 x P1.5	Φ12.2	17

PMF-32S

LARGE PROTECTIVE VENT

Pressure Equalization / Ventilation



Application Example

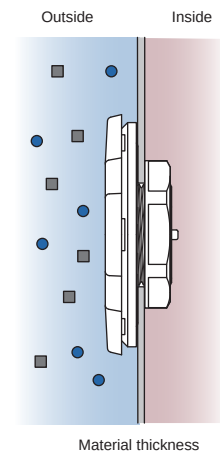
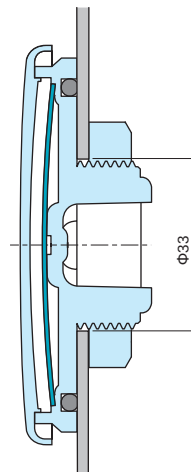
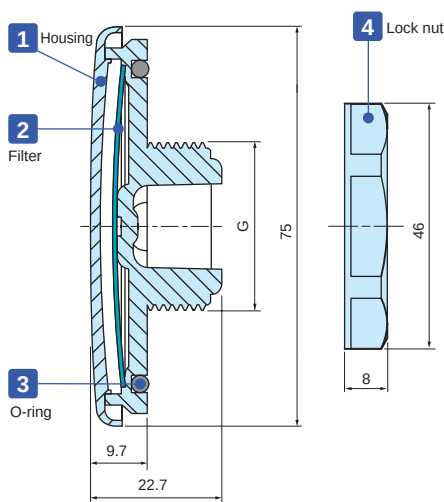
- Maintains exceptionally high airflow in extra-large enclosures with volumes of up to 200 liters in an outdoor environment.
- Protective vent protects the enclosure from deformation by equalizing internal and external pressure differences, as well as venting the gas generated within the enclosure.
- Simple and flat design allows it to be used on a wide variety of enclosure types.
- IP68 protection class rated (water depth 2 meters / 60 mins) with an operating temperature range of -40°C ~ +125°C allows it to be used in harsh environments.
- Compliant with Solar industry testing IEC62108 standards.
- Recommended to be installed at the sides of the enclosure.
- Use in industrial and electrical / electronic products only; not suitable to be used in medical, food and beverage, and cosmetic industries and related industrial equipment.

■ DXF/DWG/PDF drawings available on our website.

PMF-32 dimensions

Hole milling drawings

Installation drawings



■ If used with a lock nut, material thickness should not exceed 5.0mm.

Technical Data

Airflow	16ℓ / min (dp = 1.2kPa)
Recommended torque	5 N • m
Certifications	IEC529, 2nd (Protection class test) : IP66 • IP67 • IP68 • IP69K IEC60068-2-1, 2, 14 (Heat resistance test) : - 40°C ~ +125°C IEC60068-2-78 (Humidity test) : 85°C • 85% humidity • 1,000 hours IEC60068-2-11, 52 (Salt spray test) IEC60068-2-64 (Vibration test) IEC62108, 10.8 • 9 (Solar industry test) : Freezing • High temperature tes • Hail impact test GR-3108-CORE (Corrosive gas test) UL94V-0 (Flame-resistant) • UL746C f1

Product no. / Details

Product no.	Material				G			Lock nut SW
	1 Housing	2 Filter	3 O-ring	4 Lock nut	Thread size	Thread diameter	Mount hole	
PMF-32S	Polycarbonate	PTFE	Silicone	PA66	M32 x P1.5	Φ32	Φ33	41.5

VE8 series

ADHESIVE PROTECTIVE VENT FILTER



Technical Data

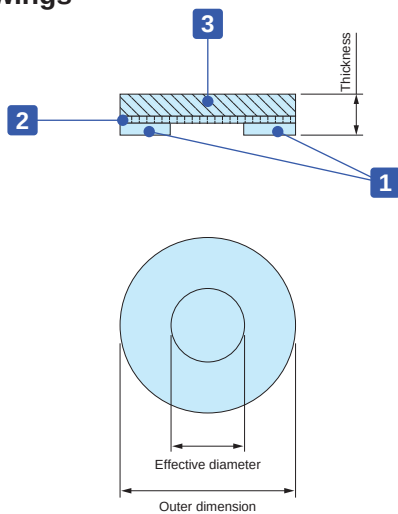
Protection class : Dustproof IP6X
 Waterproof IPX4, IPX7
 Airflow : 3,300ml/min/cm² (at 7Kpa)
 Operating temperature : -40°C ~ +100°C

- Vent filter protects the enclosure from deformation by equalizing internal and external pressure differences, as well as venting the gas generated within the enclosure.
- Allows water vapor molecules to diffuse through the microporous membrane.
- Highly water and oil repellent membrane protects electronic components from water, corrosive liquids, salts and dust.
- Easy installation adhesive filter.
- Recommended to be adhered onto flat plastic or metallic surfaces.

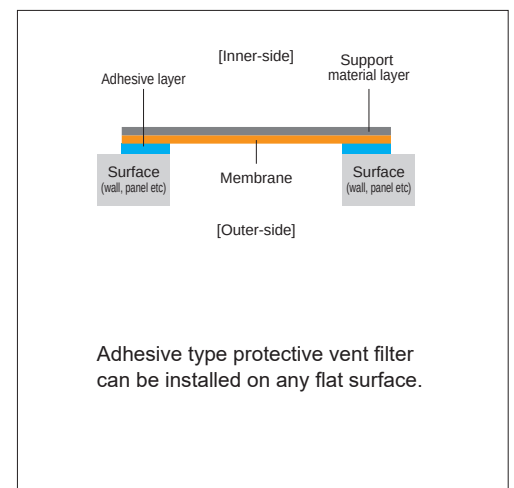
CAUTION

- Install only on the inner surface of the case / box with the membrane and adhesive side facing outwards.
- An initial period of 24 hours is required for the adhesive to properly bond to the surface. Avoid using the vent filter with a heavy load.
- Please do not adhere onto the top-side of enclosures. Rain water etc. will collect on the filter, which will weaken the adhesive seal and prevent proper ventilation.
- After degreasing and cleaning, adhere the filter without touching the center part of the vent filter.
- Use in industrial and electrical / electronic products only; not suitable to be used in medical, food and beverage, and cosmetic industries and related industrial equipment.

VE8 drawings



Installation drawings



Components

No.	Part name	Material	Color
1	Adhesive	Acrylic adhesive	Transparent
		Silicon adhesive (VE82029S, VE82029S-S)	
2	Filter	ePTFE (Oil-repellent type)	White
3	Support material	Polyester fabric	White

Product no. / Details

Product no.	Outer dimension (Φ-mm)	Effective diameter (Φ-mm)	Thickness (mm)	Sales unit
VE80308	7.6	3.3	0.26	8 pcs (per pack)
VE80814	14.0	8.0	0.26	4 pcs (per pack)
VE81221	21.5	12.5	0.26	4 pcs (per pack)
VE82029S	29.0	20.0	0.35	2 pcs (per pack)
VE80308-S	7.6	3.3	0.26	96 pcs (per sheet)
VE80814-S	14.0	8.0	0.26	56 pcs (per sheet)
VE81221-S	21.5	12.5	0.26	20 pcs (per sheet)
VE82029S-S	29.0	20.0	0.35	10 pcs (per sheet)

V series

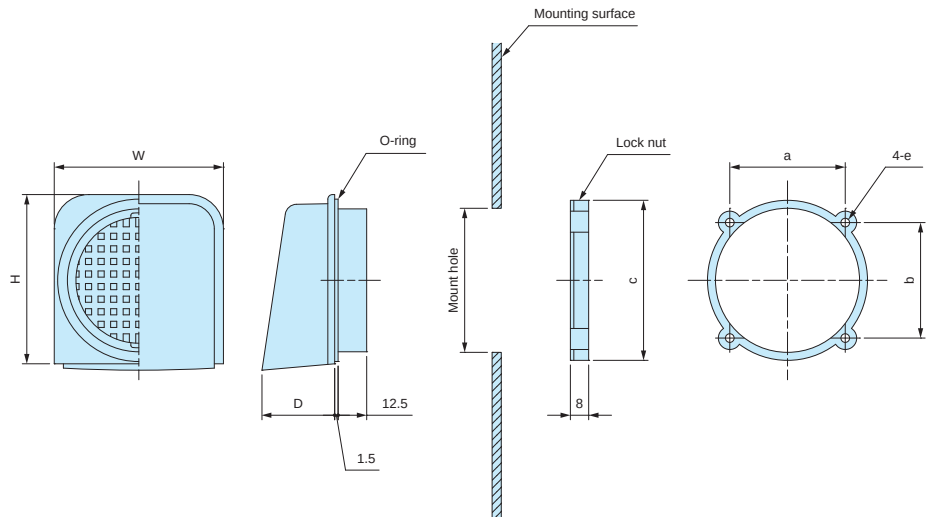
VENTILATION LOUVER



- Recommended for condensation prevention and heat dissipation.
- 2 models available : ABS V60, V80 match the color for BCAP and BCAR series, and polycarbonate V60S and V80S match the color for BCPC, BCPK, and BCAR series.
- Suitable to be used on a variety of enclosure types, series and models.

V dimensions

■ DXF/DWG/PDF drawings available on our website.



Product no. / Details

Product no.	Material	Color	Mount hole	W	H	D	a	b	c	e
V60	ABS	White gray	Φ63	74	74	31.8	50.5	50.5	70	Φ3.8
V80	ABS	White gray	Φ88	100	100	37	71.5	71.5	94.8	Φ3.3
V60S	Polycarbonate	Light gray	Φ63	74	74	31.8	50.5	50.5	70	Φ3.8
V80S	Polycarbonate	Light gray	Φ88	100	100	37	71.5	71.5	94.8	Φ3.3

■ O-ring material : EPDM / Black

VF series

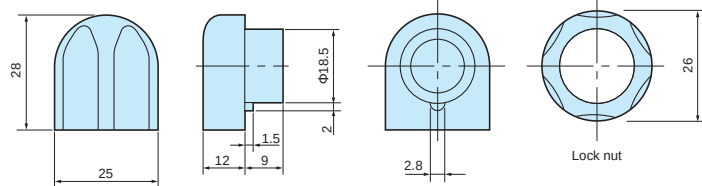
VENTILATION PARTS

VF dimensions

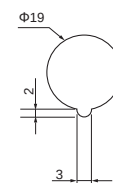
■ DXF/DWG/PDF drawings available on our website.



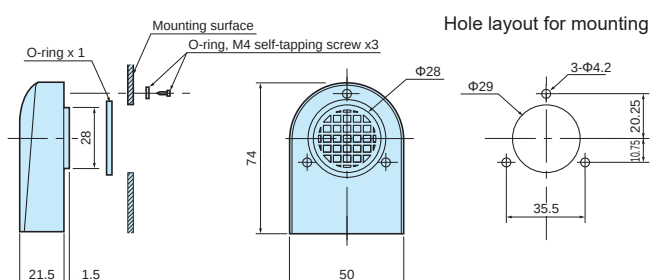
VF-1



Hole layout for mounting



VF-2



Hole layout for mounting

Technical Data

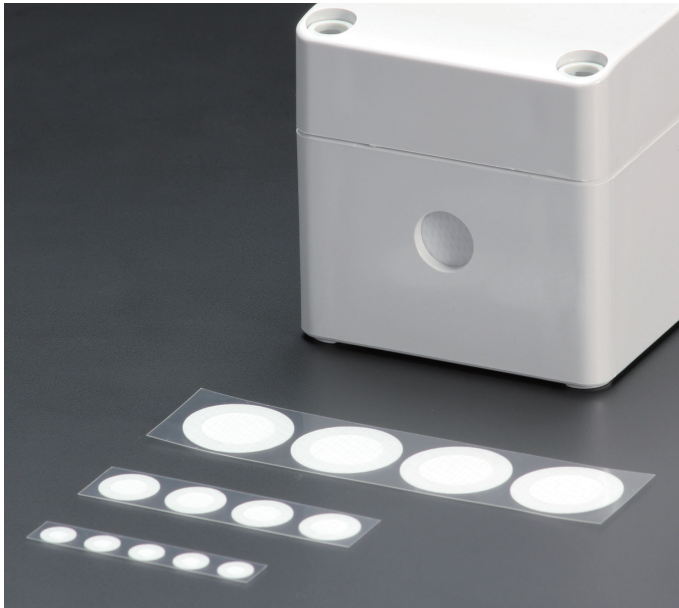
Protection class : VF-1 IP33
VF-2 IP24

Product no. / Details

Product no.	Material / Color
VF-1	Polyamide / White gray
VF-2	Polyamide / White gray

VSC SERIES

ADHESIVE PROTECTIVE VENT FILTER



Technical Data

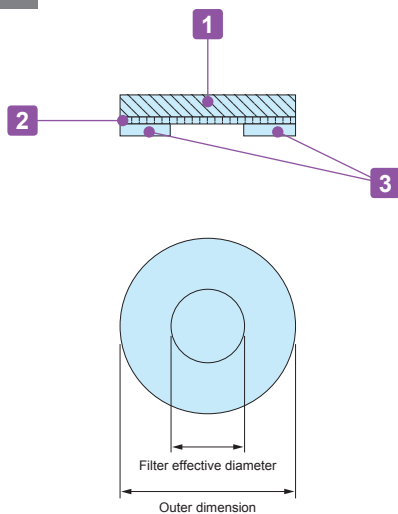
Water Entry Pressure (WEP): $\geq 20.0\text{kPa}$
 Airflow: $450\text{cc}/\text{cm}^2 \cdot \text{min}$ at 1.29Kpa

- Prevents ingress of a variety of contaminants, such as water, dust and other particles.
- Allows water vapor molecules to diffuse through the microporous membrane.
- Recommended to be adhered onto flat plastic or metallic surfaces.

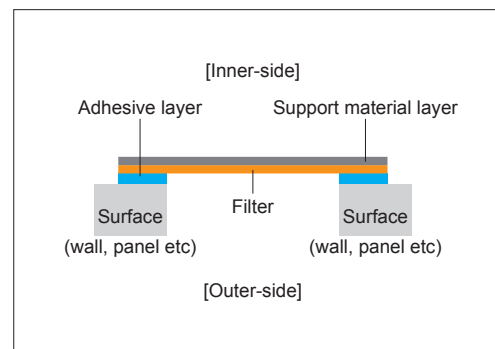
NOTE

- Surface must be wiped dry before adhering.
- An initial period of a few hours is required for the adhesive to properly bond to the surface.
- Please do not adhere onto the top-side of enclosures. Rain water etc will collect on the filter, which will weaken the adhesive seal and prevent ventilation.

Drawing



Installation drawing

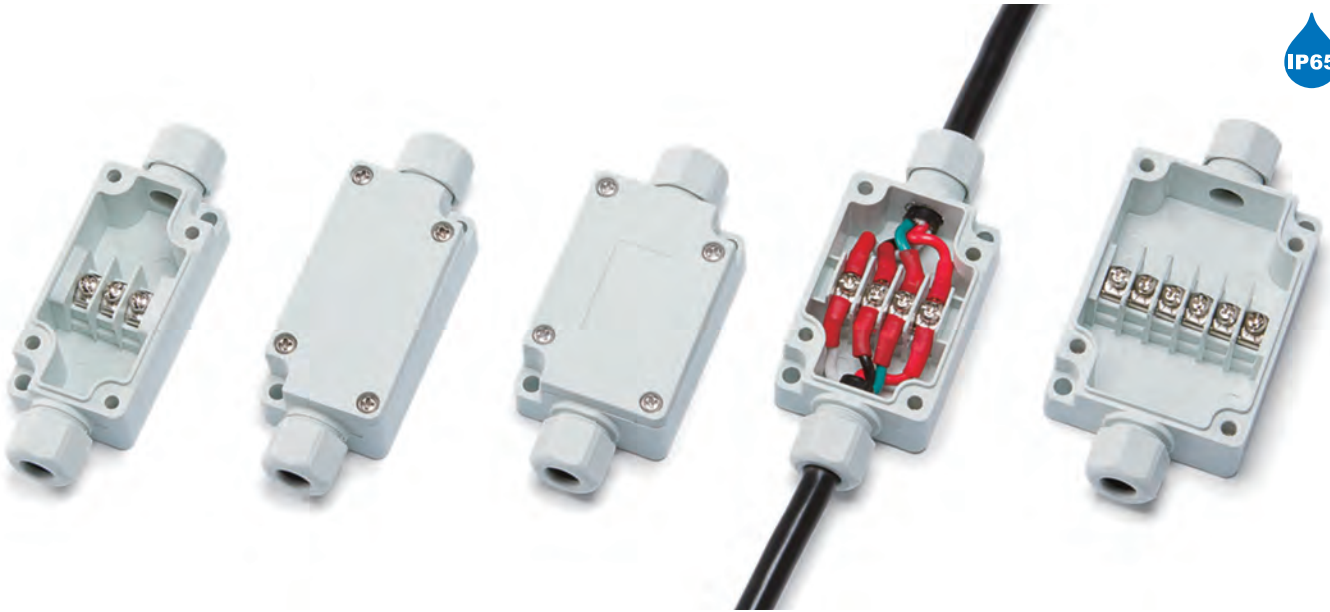


Components

No.	Part name	Material	Color
1	Adhesive	Acrylic adhesive	Transparent
2	Filter	PTFE	White
3	Support material	Polyester fabric	White

Product no. / Dimensions

Product no.	Outer dimension (Φ)	Filter effective diameter (Φ)	Thickness	Sales unit
VSC075	7.5	4.0	0.35	5 pcs (per pack)
VSC130	13.0	8.0	0.35	4 pcs (per pack)
VSC240	24.0	16.0	0.35	4 pcs (per pack)
VSC075-S	7.5	4.0	0.35	100 pcs (per sheet)
VSC130-S	13.0	8.0	0.35	56 pcs (per sheet)
VSC240-S	24.0	16.0	0.35	20 pcs (per sheet)

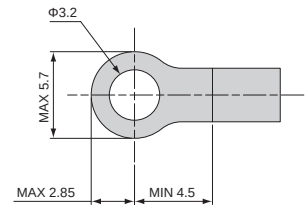


- Integrated junction box consisting of cable glands and a terminal block.
- Suitable for industrial facilities, power cable joints, relay between motors and/or sensors.
- IP65 protection class with high oil resistant PBT material.
- 3, 4, and 6 pole types are available.
- $\Phi 5.0$ and $\Phi 7.4$ rubber cable bushes (2 pcs each) are included.

Technical Data

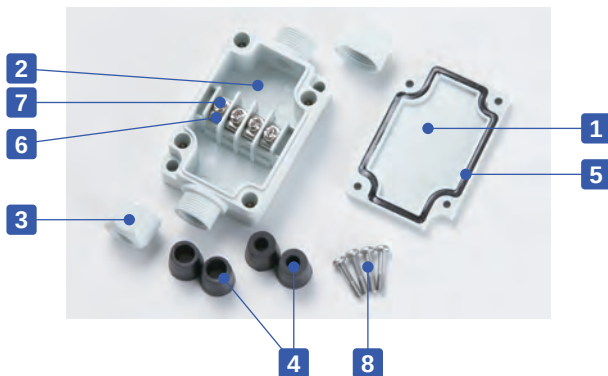
Protection class : IP65
Operating temperature : $-20^{\circ}\text{C} \sim +75^{\circ}\text{C}$
Recommended torque : $0.5\text{N} \cdot \text{m}$

Applicable crimp terminal
R1.25-3



Terminal Block Specification

Rated voltage	250V
Rated current	15A
Applicable wire	1.25mm^2
Standard tightening torque	$0.5\text{N} \cdot \text{m}$



Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	PBT UL94V-0	Light gray
2	Base	1	PBT UL94V-0	Light gray
3	Cable cap	2	PBT UL94V-0	Light gray
4	Rubber bush	2 pairs	EPDM	Black
5	Gasket	1	Polyurethane	Black
6	Conductive plate	3~6	Brass	Nickel plated
7	Terminal screw	3~6	Steel M3	Nickel plated
8	Cover screw	4	Stainless steel M3	Unfinished

Accessories (Optional parts)



Shorting Bar SBR series
See website

Rubber Bush RB-9
See page 176

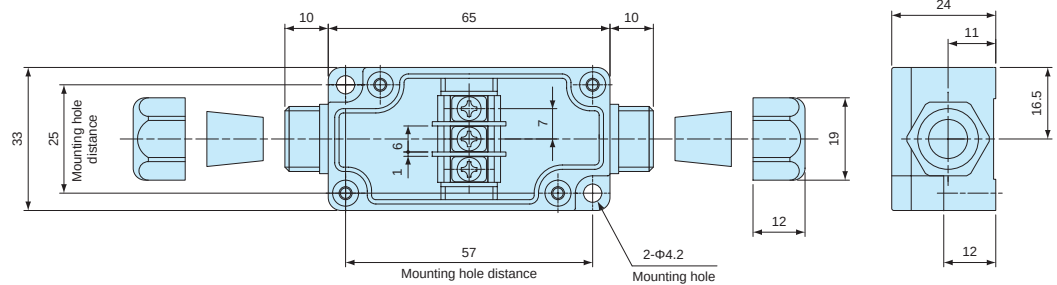
Product no. / Details

Product no.	L	W	H	Number of poles	Weight (g)
● Light gray					
TMC-3PG	65	33	24	3P	52
TMC-4PG	60	40	24	4P	58
TMC-6PG	70	50	24	6P	73

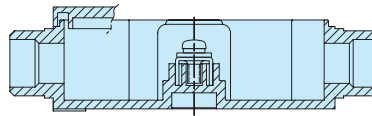
TMC dimensions

■ DXF/DWG/PDF drawings available on our website.

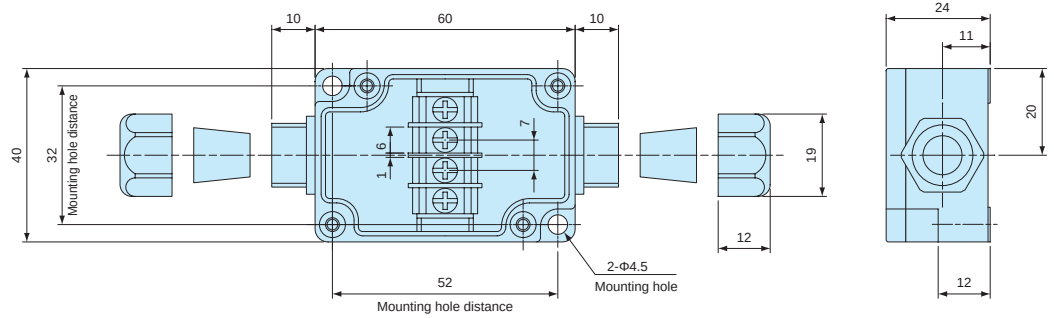
TMC-3PG



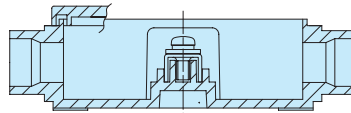
Inner diameter of rubber bush	Cable range
Φ5.0	Φ4 ~ Φ5
Φ7.4	Φ6 ~ Φ7



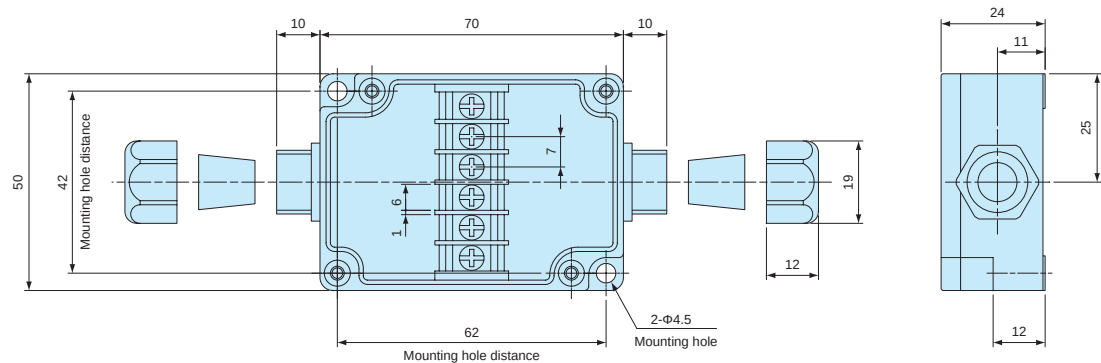
TMC-4PG



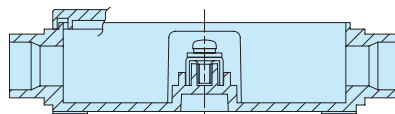
Inner diameter of rubber bush	Cable range
Φ5.0	Φ4 ~ Φ5
Φ7.4	Φ6 ~ Φ7

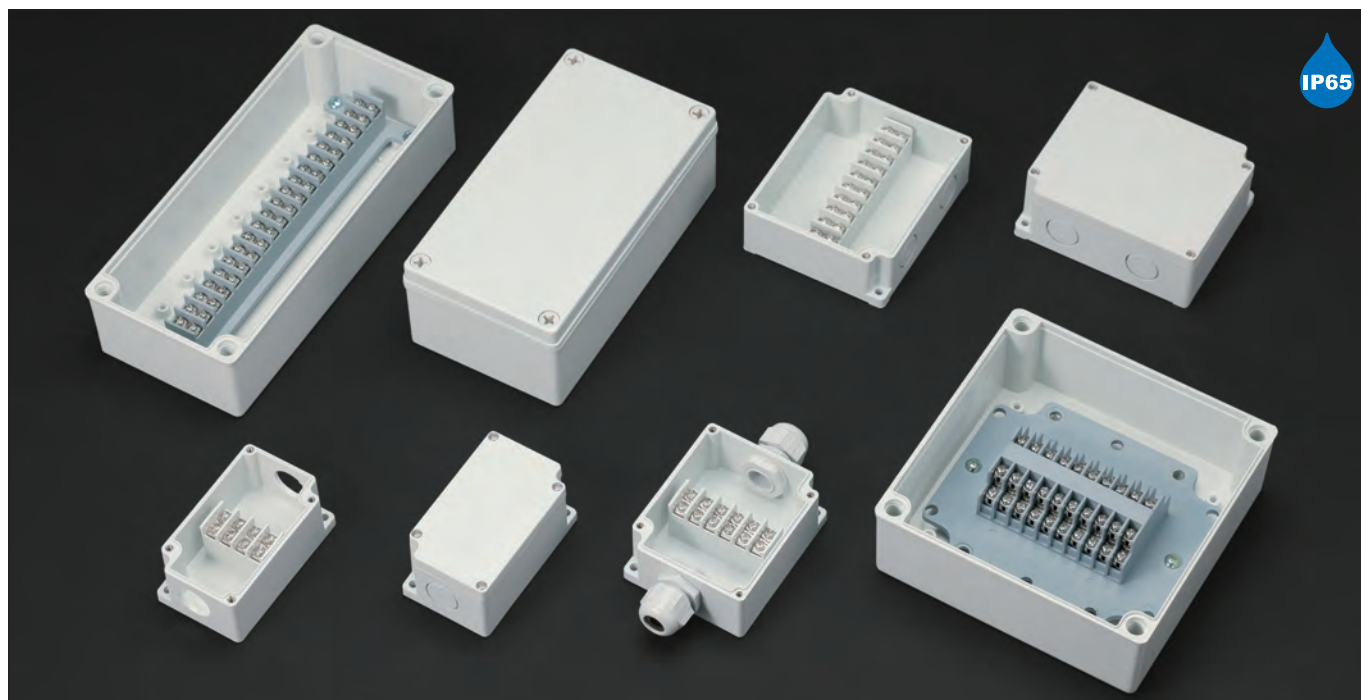


TMC-6PG

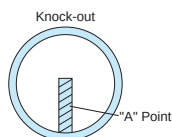


Inner diameter of rubber bush	Cable range
Φ5.0	Φ4 ~ Φ5
Φ7.4	Φ6 ~ Φ7





- Terminal junction box with built-in terminal block.
- IP65 protection class.
- ABS and Glass fiber filled polycarbonate types are available.
- TMB-4P • 6P • 10P is molded with $\Phi 21.0\text{mm}$ metric knock-outs for M20 cable glands.
- To knock out the hole covers, rest a flathead screwdriver at the "A" points, and punch out the knock-outs by hammering on the rear end of the screwdriver handle with a hammer.



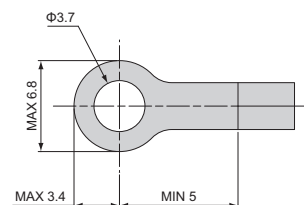
Terminal Block Specification

Rated voltage	400V
Rated current	17.5A
Applicable wire	1.5mm ²
Standard tightening torque	0.8N • m

Technical Data

Protection class : IP65
 Operating temperature : -10°C ~ +60°C
 Recommended torque :
 TMB-4P • 6P • 10P : 0.6N • m
 TMB-15PCS • 20PC • 20PCL : 1N • m

Applicable crimp terminal R1.25-3.5



Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	TMB-4P • 6P • 10P : ABS UL94V-0 TMB-15PCS • 20PC • 20PCL : Polycarbonate UL94V-0	White gray Light gray
2	Body	1	TMB-4P • 6P • 10P : ABS UL94V-0 TMB-15PCS • 20PC • 20PCL : Glass fiber filled polycarbonate UL94V-0	White gray Light gray
3	Gasket	1	Polyurethane	Black
4	Conductive plate	4 ~ 20	Brass	Nickel plated
5	Terminal screw	8 ~ 40	Steel (M3.5)	Nickel plated
—	Terminal mount screw (15PCS, 20PC, 20PCL models only)	2 ~ 4	Steel	Trivalent chromate
6	Cover screw	4	Stainless steel • Nylon	Unfinished

※ Cover screw material : Stainless steel - 4P, 6P, and 10P models • Nylon - 15PCS, 20PC, and 20PCL models.

Accessories (Optional parts)



Shorting bar SBR series
See website



Cable gland
See page 181 ~ 193



Mounting bracket CK-34Z
See website

ABS UL94V-0 Models

Product no. / Details

Product no.	L	W	H	Number of poles	Weight (g)
TMB- 4P	91	55	43	4P	102
TMB- 6P	91	75	43	6P	134
TMB-10P	91	110	43	10P	190

Polycarbonate UL94V-0 Models

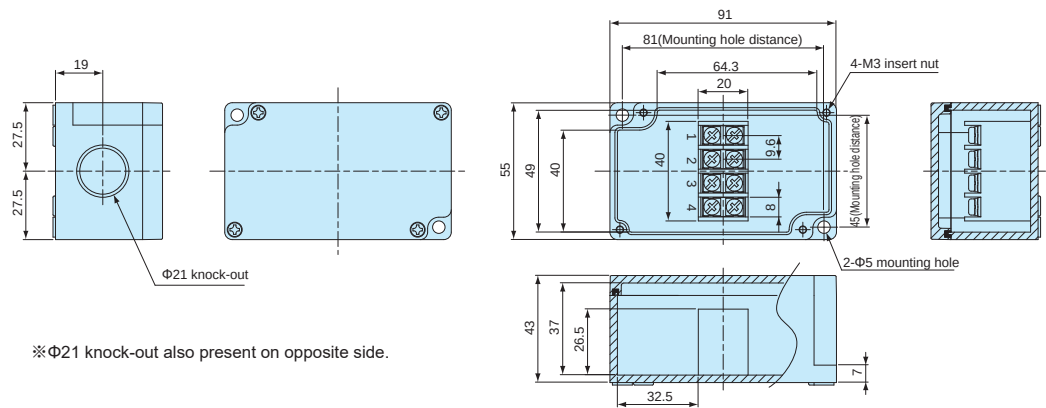
Product no. / Details

Product no.	L	W	H	Number of poles	Weight (g)
TMB-15PCS	185	100	70	15P	412
TMB-20PC	160	160	70	10P×2	560
TMB-20PCL	230	100	70	20P	484

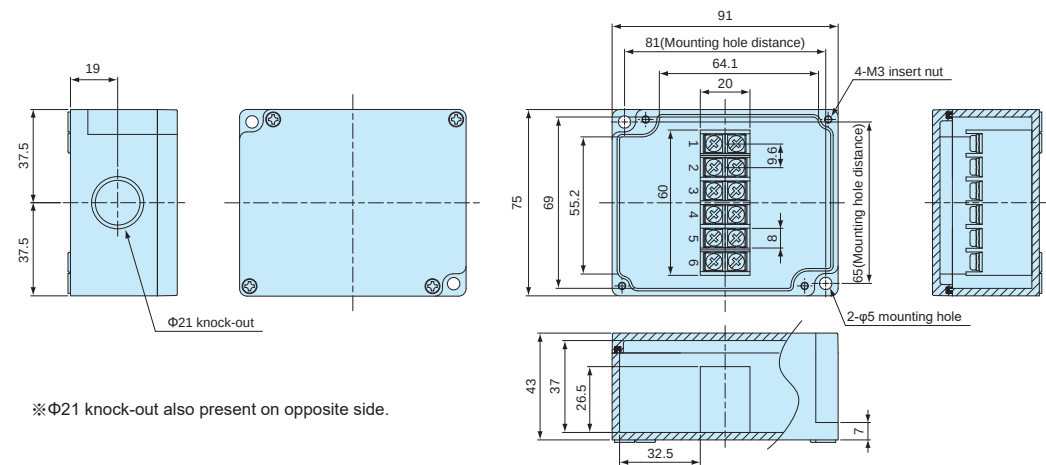
TMB dimensions

■ Drawings below are reference examples only. DXF/DWG/PDF drawings available on our website.

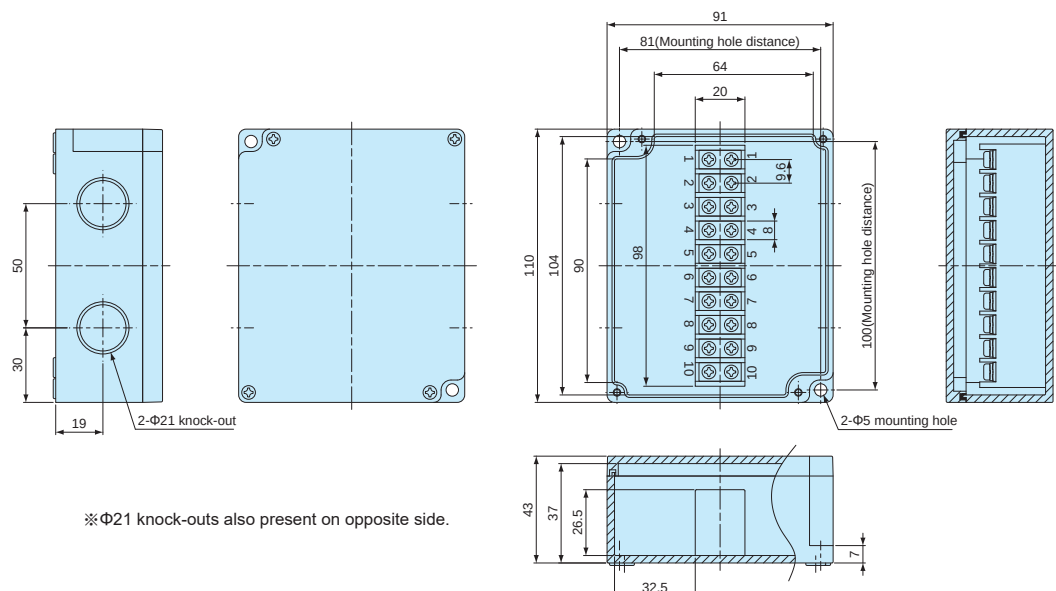
TMB-4P



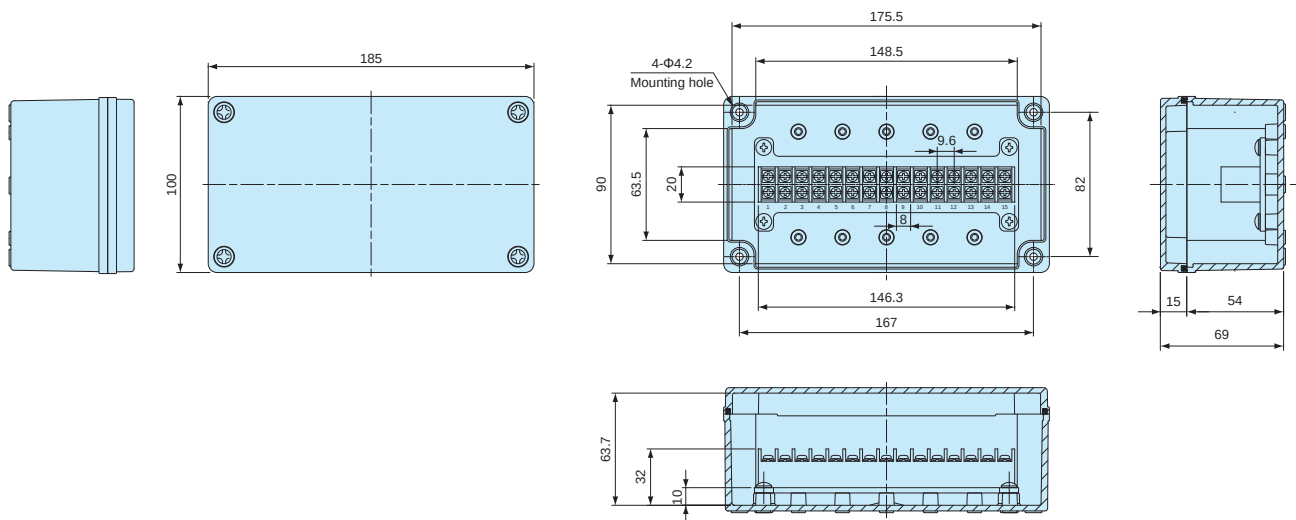
TMB-6P



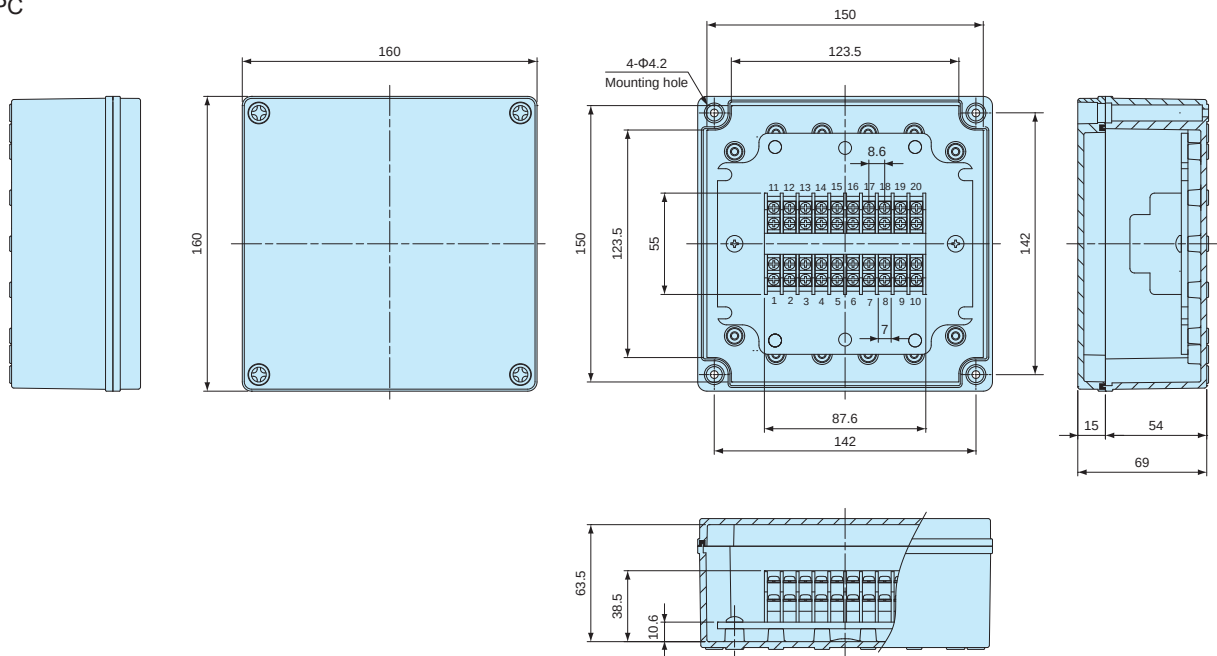
TMB-10P



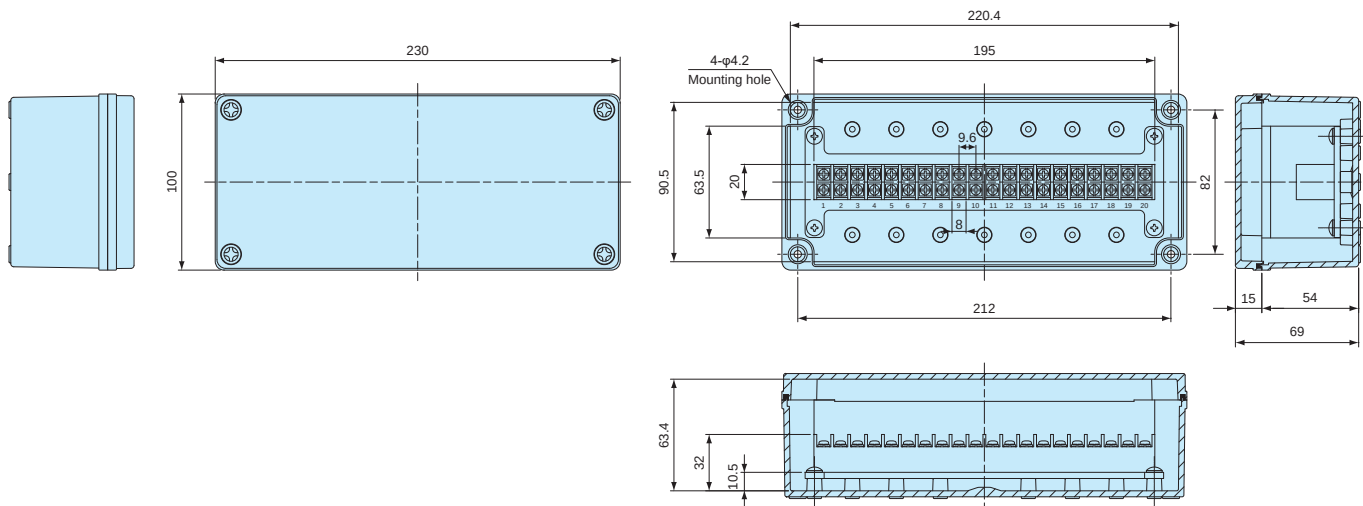
TMB-15PCS



TMB-20PC

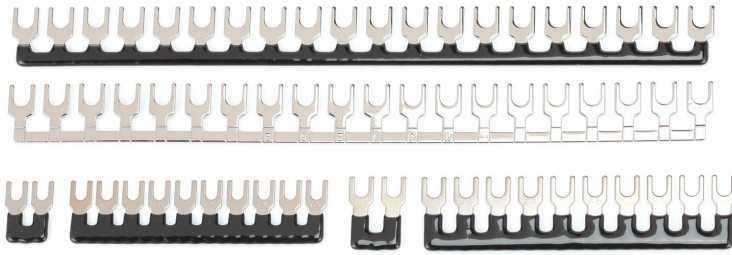


TMB-20PCL



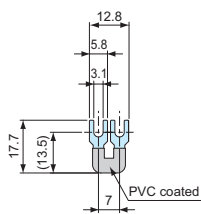
SBR SERIES

SHORTING BAR

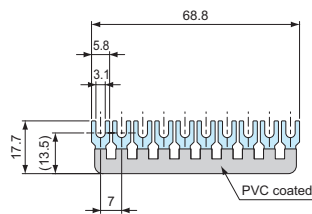


- Shorting bar for common-wiring.
- SBR70-10P, SBR85-10P, SBR95-20P, and SBR95-20N can be cut accordingly into required poles.
- PVC coated. SBR95-20 available in both PVC coated (SBR95-20P) and non PVC coated (SBR95-20N) models.
- See chart below for suitable box.

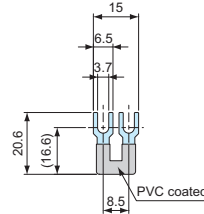
SBR70-2P



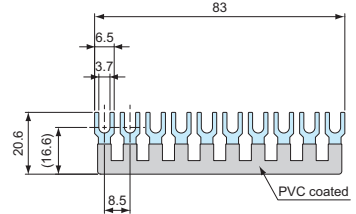
SBR70-10P



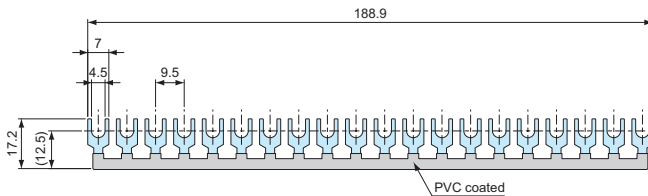
SBR85-2P



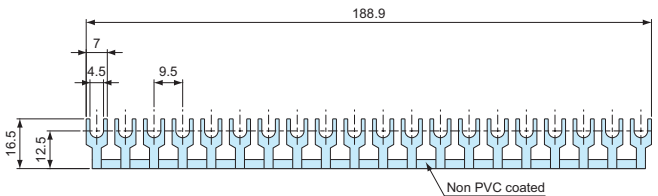
SBR85-10P



SBR95-20P



SBR95-20N



Suitable Box Chart

Product no.	Number of poles	Pole distance	Suitable box
SBR70 - 2P	2P	7.0mm	TMC series
SBR70 -10P	10P	7.0mm	TMC series
SBR85 - 2P	2P	8.6mm	TMB-20P, TMA-20P-AS, TMA30P-AS
SBR85 -10P	10P	8.6mm	TMB-20P, TMA-20P-AS, TMA30P-AS
SBR95 -20P	20P	9.6mm	TMA • TMB series (Not applicable for TMB-20P, TMA20P-AS, and TMA30P-AS models)
SBR95 -20N	20P	9.6mm	TMA • TMB series (Not applicable for TMB-20P, TMA20P-AS, and TMA30P-AS models)

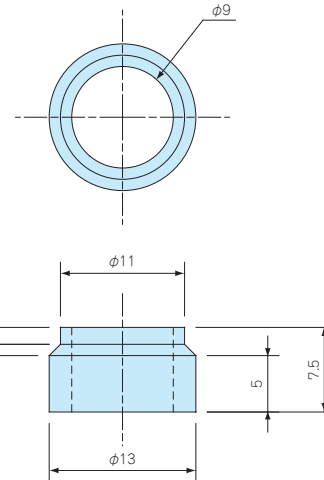
Product no. / Feature

■ Pack quantity differs by models.

Product no.	Number of poles	Material	Finish	PVC coating	Pack of
SBR70 - 2P	2P	Brass	Nickel plated	Yes	10
SBR70 -10P	10P	Brass	Nickel plated	Yes	1
SBR85 - 2P	2P	Brass	Nickel plated	Yes	10
SBR85 -10P	10P	Brass	Nickel plated	Yes	1
SBR95 -20P	20P	Brass	Nickel plated	Yes	1
SBR95 -20N	20P	Brass	Nickel plated	No	1

RB-9

RUBBER BUSH



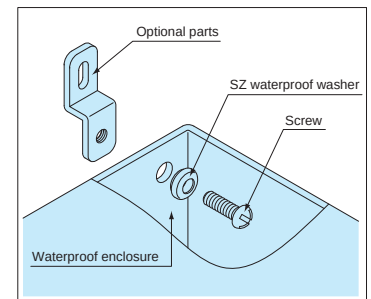
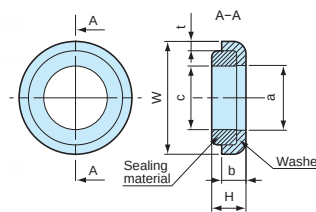
- Rubber bush for TMC series terminal junction box.
- Applicable for $\phi 8 \sim \phi 9$ mm diameter cable.

Product no. / Details

Product no.	Material	Color	Cable range	Pack of
RB-9	NBR	Black	$\phi 8 \sim \phi 9$ mm	2

SZ series

WATERPROOF WASHER



- Waterproof washer for screwing onto waterproof boxes.
- NBR sealing material has superior oil resistance (N models only).
- Silicone sealing material has wider operating temperature with superior temperature and water resistance (S models only).

Technical Data

Water pressure resistance :
M3 ~ M16
0.98MPa (10kgf/cm²) / 1 hour

- Shape of the sealing material vary by product.

Product no. / Details

Product no.	W	H	a	b	c	t	Washer material	Sealing material	Color	Screw size	Pack of
SZ- 3N	7	2.7	3.2	2.2	3.1	0.5	SUS304	NBR	Black	M 3	1
SZ- 3S	7	2.7	3.2	2.2	3.1	0.5	SUS304	Silicone	Brown	M 3	1
SZ- 4N	8	2.8	4.2	2.1	4.1	0.5	SUS304	NBR	Black	M 4	1
SZ- 4S	8	2.8	4.2	2.1	4.1	0.5	SUS304	Silicone	Brown	M 4	1
SZ- 5N	9.5	3.6	5.2	2.7	5.1	0.8	SUS304	NBR	Black	M 5	1
SZ- 5S	9.5	3.6	5.2	2.7	5.1	0.8	SUS304	Silicone	Brown	M 5	1
SZ- 6N	11.5	4	6.2	3	6.2	1	SUS304	NBR	Black	M 6	1
SZ- 6S	11.5	4	6.2	3	6.2	1	SUS304	Silicone	Brown	M 6	1
SZ- 8N	15.2	3.8	8.2	3.2	8.2	1	SUS304	NBR	Black	M 8	1
SZ- 8S	15.2	3.8	8.2	3.2	8.2	1	SUS304	Silicone	Brown	M 8	1
SZ-10N	18	5.3	10.2	4	10.2	1.5	SUS304	NBR	Black	M10	1
SZ-10S	18	5.3	10.2	4	10.2	1.5	SUS304	Silicone	Brown	M10	1
SZ-12N	24	6.1	14.2	4.8	12.2	1.5	SUS304	NBR	Black	M12	1
SZ-12S	24	6.1	14.2	4.8	12.2	1.5	SUS304	Silicone	Brown	M12	1
SZ-16N	30	6.8	18.4	5.3	16	1.9	SUS304	NBR	Black	M16	1
SZ-16S	30	6.8	18.4	5.3	16	1.9	SUS304	Silicone	Brown	M16	1
NEW SZ-3N-P	7	2.7	3.2	2.2	3.1	0.5	SUS304	NBR	Black	M 3	50
NEW SZ-3S-P	7	2.7	3.2	2.2	3.1	0.5	SUS304	Silicone	Brown	M 3	50
NEW SZ-4N-P	8	2.8	4.2	2.1	4.1	0.5	SUS304	NBR	Black	M 4	50
NEW SZ-4S-P	8	2.8	4.2	2.1	4.1	0.5	SUS304	Silicone	Brown	M 4	50
NEW SZ-5N-P	9.5	3.6	5.2	2.7	5.1	0.8	SUS304	NBR	Black	M 5	50
NEW SZ-5S-P	9.5	3.6	5.2	2.7	5.1	0.8	SUS304	Silicone	Brown	M 5	50

NANUK™

PROFESSIONAL PROTECTIVE CASES

THE FUTURE OF PROTECTION CASES

Tough yet stylish.

Durable and elegant.

Easily customizable.

Endless possibilities abound.



OUTDOOR



NANUK-1

MEASUREMENT



DRONE



MEDICAL



TRANSPORT



DEFENCE



NANUK™ THE NANUK ADVANTAGE

IP65 PROTECTION CLASS

IP65 protection class for use in various environments.

Equipped with durable and weather resistant EPDM gasket.

Waterproof pressure relief valve enables pressure within the case to be equalized with the surrounding, allowing it to be opened with ease, while keeping it waterproof.



IMPACT RESISTANT-NK-7 RESIN

Impact resistant, lightweight, and armed with reinforced PP, NK-7 resin body.

Keep your items safe from impact damage.



24 DIFFERENT SIZES

A large selection of 24 different sizes, ranging from small (232 x 173 x 97mm) to large (1,196 x 439 x 168mm) types.



PROTECTIVE SPONGE FOAM

Nanuk cases are also available with a protective sponge foam.

Sponge foam are fitted to the case, and can also be purchased as separate option (NKSP series).

NKSP sponge foam comes with pre-cubed foam to allow for easy modification by removing the required squares.

(※No pre-cubed foam available for NKSP990).

Sponge customization is also available.

(See page SP-Custom-1～SP-Custom-2)



POWERCLAW LATCHING SYSTEM and SOFT GRIP HANDLE

NANUK's patented PowerClaw latching system uses compressive force to keep your case tightly clamped.

Integrated slide lock offers added security, preventing it from accidental opening during transport or when dropped.

NANUK's TPE soft grip handle makes carrying not only comfortable, but also convenient.

Handle can be folded down to be flushed with the case when not in use.



※Latch with TSA lock on NKK series



100% STAINLESS STEEL PARTS

Metallic parts are made from SUS304 stainless steel.

Suitable to be used in environments with water splashes and so on.



OPTIONAL ALUMINIUM PANEL for YOUR DEVICE

Optional aluminium panel can make NANUK into your original controller, measuring device or transmitter.

See page NKAP-1 for the details of optional aluminium panel.

NKAP panel customization is available. (See NKAP-2 for more details).

●CUSTOMIZATAION on ALUMINIUM PANEL



CUSTOMIZE



NANUK-4



- Durable and stylishly designed waterproof carrying case.
- A total of 23 different sizes available without foam, and 20 sizes with foam.
- Suitable for storing electronics and delicate devices such as measuring device, camera broadcasting device, electric tool, medical equipment, and so on.
- Optional aluminium panel can turn the NK series into your own original controller, measuring device or transmitter.



Technical Data

Protection class : IP65
Operating temperature : -20°C~+60°C



Hinge pin shape varies based on model type

Components

No.	Part name	Material
1	Cover · Base	Reinforced PP (NK-7)
2	Latch	Nylon 66
3	Handle grip	Elastomer
4	Pressure release valve (※1)	Nylon 66 · PTFE

No.	Part name	Material
5	Hinge pin	Stainless steel
6	Gasket	EPDM
7	Foam	Polyurethane / 12.7mm Pitch Pre-cut cubed foam (※2)

※1 Pressure release valve automatically enables pressure within the case to be equalized with the surrounding, allowing it to be opened with ease, while keeping it waterproof.

※2 Pitch of Pre-cut cubed foam for NK940, 945, and 950 models is 15mm.

Accessories (Optional parts)



Divider DVI series
See page NANUK-ACC-1



Aluminium panel NKAP series
See page NKAP-1 ~ NKAP-2



Shoulder strap NSTP series
See page NANUK-ACC-3



Padlock AB145S series
See page NANUK-ACC-3



Nameplate sticker NKST
See page NANUK-ACC-3

- With and Without-foam types are available.

NK dimensions

- DXF/DWG/PDF drawings available on our website.



Product no. / Details

※See page NANUK-ACC-2 pages
for optional NKSP foam.

■ Without-foam type

Product no.		External dimensions			Internal dimensions			Hinge removal	Weight (kg)
● Black	● Yellow	W	D	H	w	d	h		
NK903B	NK903Y	232	173	97	176	113	79	—	0.6
NK904B	NK904Y	259	200	114	198	134	96	—	0.7
NK905B	NK905Y	316	257	152	209	146	129	—	1.6
NK908B	NK908Y	318	249	203	203	134	180	—	1.5
NK909B	NK909Y	321	230	110	265	138	83	—	1.0
NK910B	NK910Y	363	284	121	307	193	98	—	1.4
NK915B	NK915Y	391	309	172	305	179	146	○	2.1
NK918B	NK918Y	425	326	232	332	178	207	○	2.9
NK920B	NK920Y	424	342	172	338	211	146	○	2.4
NK923B	NK923Y	471	364	161	383	222	123	○	2.7
NK925B	NK925Y	474	373	178	387	242	151	○	2.9
NK930B	NK930Y	500	405	191	412	274	164	○	3.4
NK933B	NK933Y	503	408	255	408	258	226	○	3.9
NK935B	NK935Y	560	355	229	416	231	179	○	5.3
NK938B	NK938Y	605	395	336	440	239	283	○	6.4
NK940B	NK940Y	551	430	216	460	296	189	○	3.9
NK945B	NK945Y	648	508	222	511	359	195	○	5.0
NK950B	NK950Y	581	464	298	416	316	247	○	7.0
NK960B	—	646	509	368	466	356	316	○	9.0
NK963B	—	825	536	317	627	373	257	○	10.2
NK970B	—	700	697	410	523	493	334	○	11.9
NK975B	—	844	612	501	685	439	435	○	14.6
NEW NK980B	—	760	409	186	635	276	142	○	4.9

■ With-foam type

Product no.		External dimensions			Internal dimensions			Weight (kg)
● Black	● Yellow	W	D	H	w	d	h	
NK903BS	NK903YS	232	173	97	176	113	79	0.63
NK904BS	NK904YS	259	200	114	198	134	96	0.81
NK905BS	NK905YS	316	257	152	209	146	129	1.7
NK908BS	NK908YS	318	249	203	203	134	180	1.7
NK909BS	NK909YS	321	230	110	265	138	83	1.2
NK910BS	NK910YS	363	284	121	307	193	98	1.5
NK915BS	NK915YS	391	309	172	305	179	146	2.4
NK918BS	NK918YS	425	326	232	332	178	207	2.9
NK920BS	NK920YS	424	342	172	338	211	146	2.7
NK923BS	NK923YS	471	364	161	383	222	123	3.1
NK925BS	NK925YS	474	373	178	387	242	151	3.3
NK930BS	NK930YS	500	405	191	412	274	164	3.9
NK933BS	NK933YS	503	408	255	408	258	226	4.6
NK935BS	NK935YS	560	355	229	416	231	179	6.0
NK938BS	NK938YS	605	395	336	440	239	283	7.1
NK940BS	NK940YS	551	430	216	460	296	189	4.6
NK945BS	NK945YS	648	508	222	511	359	195	6.0
NK950BS	NK950YS	581	464	298	416	316	247	8.0
NK960BS	—	646	509	368	466	356	316	10.5
NEW NK980BS	—	760	409	186	635	276	142	5.5



- Equipped with a TSA lock latch for security, or transportation as check-in baggage.
- A total of 18 different sizes available without foam, and 17 sizes available with foam.
- Optional aluminium panel can turn the NK series into your own original controller, measuring device or transmitter.



Technical Data

Protection class : IP65
Operating temperature : -20°C~+60°C



Latch with TSA lock



2 Keys included.

What is TSA LOCK?

TSA LOCK is a global security system which allows passengers to lock their luggage, while at the same time, permitting security authorities to inspect them without damage to the lock or luggage.



Accessories (Optional parts)



Divider DVI series
See page NANUK-ACC-1



Aluminium panel NKAP series
See page NKAP-1 ~ NKAP-2



Shoulder strap NSTP series
See page NANUK-ACC-3



Nameplate sticker NKST
See page NANUK-ACC-3



Hinge pin shape varies based on model type

Components

No.	Part name	Material
1	Cover · Base	Reinforced PP (NK-7)
2	Latch	Nylon 66 · Zinc alloy
3	Handle grip	Elastomer
4	Pressure release valve (※1)	Nylon 66 · PTFE
5	Hinge pin	Stainless steel

※1 Pressure release valve automatically enables pressure within the case to be equalized with the surrounding, allowing it to be opened with ease, while keeping it waterproof.

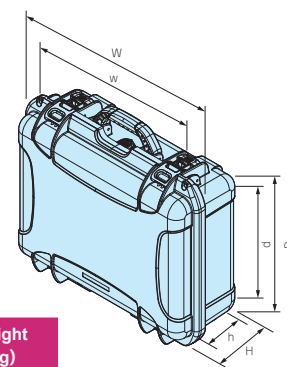
※2 Pitch of Pre-cut cubed foam for NK940, 945, and 950 models is 15mm.

■ Only 2 latches are equipped with TSA lock for models with 4 or more latches. Refer to the drawings for more details.

No.	Part name	Material
6	Gasket	EPDM
7	Foam	Polyurethane / 12.7mm Pitch Pre-cut cubed foam (※2)
8	Key	Brass · PP

NKK dimensions

■ DXF/DWG/PDF drawings available on our website.



Product no. / Details

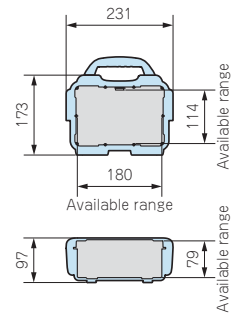
Without-foam type

Product no.	External dimensions			Internal dimensions			Hinge removal	Weight (kg)
● Black	W	D	H	w	d	h		
NKK905B	316	257	152	209	146	129	—	1.6
NKK908B	318	249	203	203	134	180	—	1.5
NKK915B	391	309	172	305	179	146	○	2.1
NKK918B	425	326	232	332	178	207	○	2.9
NKK920B	424	342	172	338	211	146	○	2.4
NKK923B	471	364	161	383	222	123	○	2.7
NKK925B	474	373	178	387	242	151	○	2.9
NKK930B	500	405	191	412	274	164	○	3.4
NKK933B	503	408	255	408	258	226	○	3.9
NKK935B	560	355	229	416	231	179	○	5.3
NKK938B	605	395	336	440	239	283	○	6.4
NKK940B	551	430	216	460	296	189	○	3.9
NKK945B	648	508	222	511	359	195	○	5.0
NKK950B	581	464	298	416	316	247	○	7.0
NKK960B	646	509	368	466	356	316	○	9.0
NKK963B	825	536	317	627	373	257	○	10.2
NEW NKK980B	760	409	186	635	276	142	○	4.9
NKK990B	1,196	439	168	1,061	303	143	○	8.3

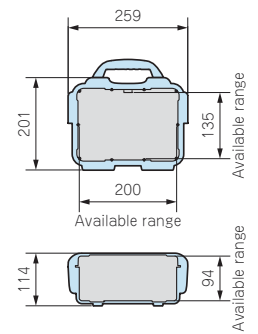
With-foam type

Product no.	External dimensions			Internal dimensions			Weight (kg)
● Black	W	D	H	w	d	h	
NKK905BS	316	257	152	209	146	129	1.7
NKK908BS	318	249	203	203	134	180	1.7
NKK915BS	391	309	172	305	179	146	2.4
NKK918BS	425	326	232	332	178	207	2.9
NKK920BS	424	342	172	338	211	146	2.7
NKK923BS	471	364	161	383	222	123	3.1
NKK925BS	474	373	178	387	242	151	3.3
NKK930BS	500	405	191	412	274	164	3.9
NKK933BS	503	408	255	408	258	226	4.6
NKK935BS	560	355	229	416	231	179	6.0
NKK938BS	605	395	336	440	239	283	7.1
NKK940BS	551	430	216	460	296	189	4.6
NKK945BS	648	508	222	511	359	195	6.0
NKK950BS	581	464	298	416	316	247	8.0
NKK960BS	646	509	368	466	356	316	10.5
NEW NKK980BS	760	409	186	635	276	142	5.5
NKK990BS	1,196	439	168	1,061	303	143	9.8

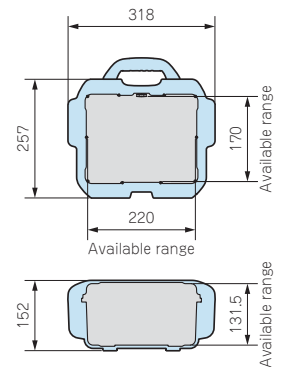
NK 903



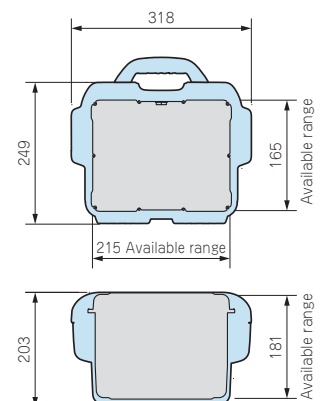
NK 904



NK/NKK 905

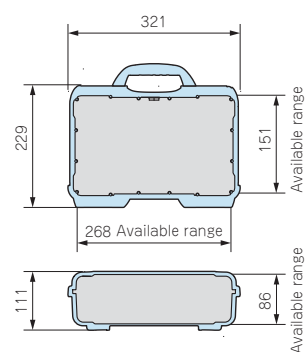


NK/NKK 908 **NEW**

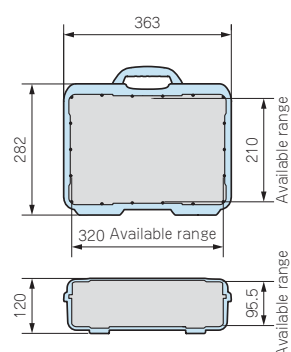
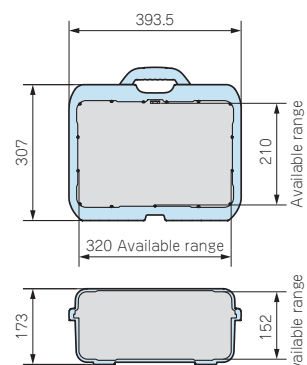
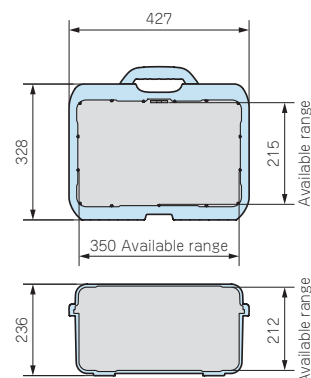


NK • NKK dimensions

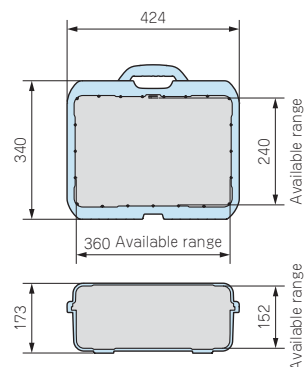
■ DXF/DWG/PDF drawings available on our website.

NK 909 **NEW****NK 910**

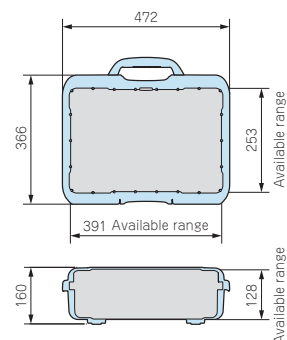
NK910 is able to install optional aluminium panels on both the cover and base. (See page NKAP-1~NKAP-2)

**NK/NKK 915****APPLICATION EXAMPLE**EDUCATIONAL TABLET AID PACK
Product by FUJISOFT (Japan)**NK/NKK 918**

NK/NKK 920



NK/NKK 923 **NEW**

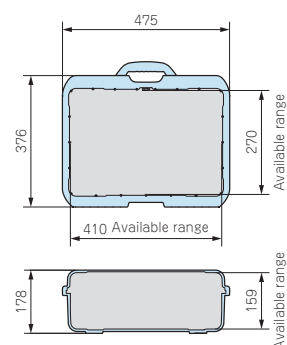


NK/NKK 925



APPLICATION EXAMPLE

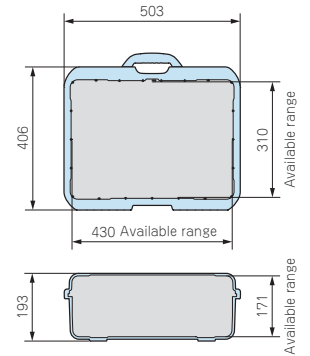
ELECTRIC PROSPECTING / LOGGING DEVICE
Product by OYO CORPORATION (Japan)



NK • NKK dimensions

■ DXF/DWG/PDF drawings available on our website.

NK/NKK 930

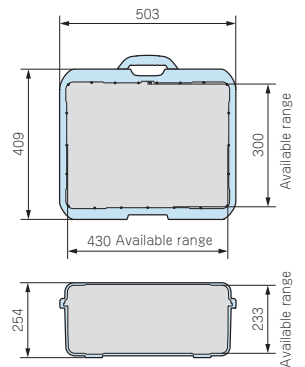


APPLICATION EXAMPLE

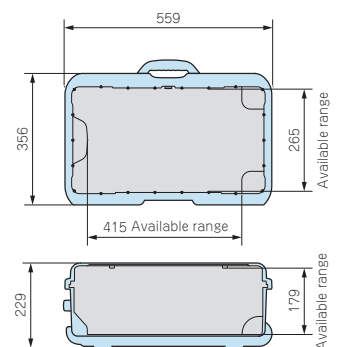
PRESS BREAK CHECKER

Product by Shinohara Press Service (Japan)

NK/NKK 933



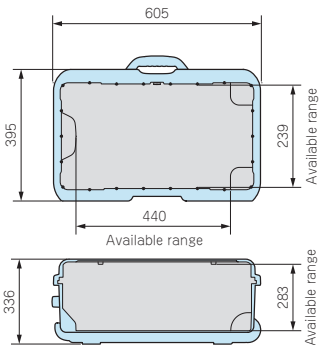
NK/NKK 935



Equipped with a 2 stage retractable handle and polyurethane wheels.

Cover can be detached by pulling out the hinge pin.
※Hinge pin shape varies based by model type.

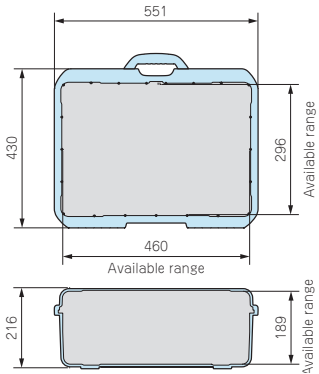
NK•NKK 938



Equipped with a 2 stage retractable handle and polyurethane wheels.



NK•NKK 940



NK • NKK dimensions

■ DXF/DWG/PDF drawings available on our website.

NK•NKK 945



NK•NKK 950

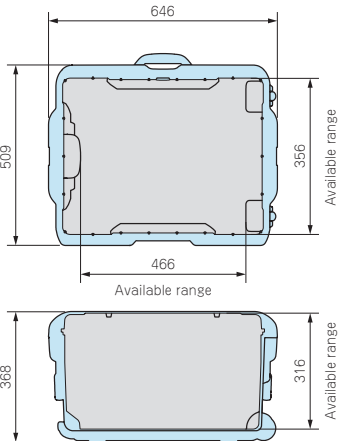
Equipped with a 2 stage retractable handle and polyurethane wheels.



NK•NKK 960



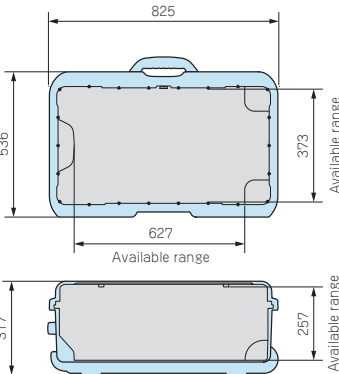
Equipped with a 2 stage retractable handle and polyurethane wheels.



NK•NKK 963



Equipped with a 2 stage retractable handle and polyurethane wheels.



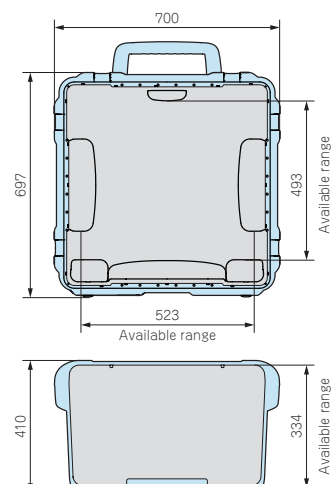
NK • NKK dimensions

■ DXF/DWG/PDF drawings available on our website.

NK 970



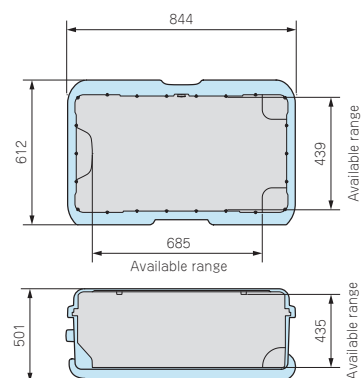
Equipped with a 2 stage retractable handle and polyurethane wheels.



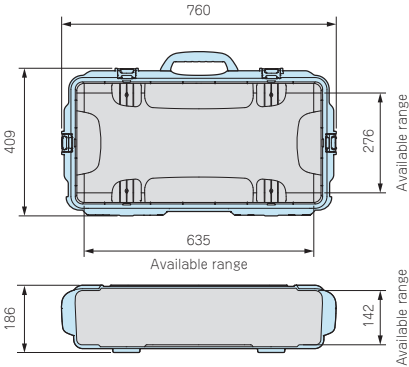
NK 975



Equipped with a 2 stage retractable handle and polyurethane wheels.



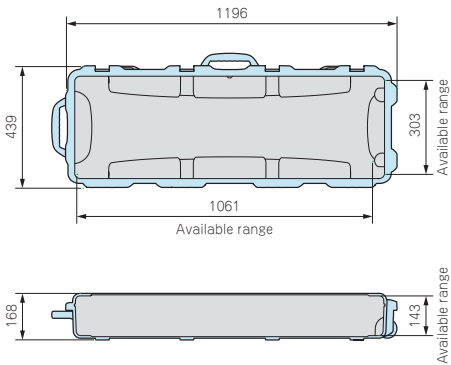
NK•NKK 980 NEW



NKK 990



Equipped with polyurethane wheels.





- Robust and stylish waterproof carrying case in a top loader type design.
- Large carrying handle for easy transportation and for outdoor use.
- Top loading design allows vertical storage of tall items such as measuring instruments or camera lenses.
- Available in two sizes, with or without internal foam.
- Refer to optional parts page for various optional parts.



Technical Data

Protection class : IP65
Operating temperature : -20 ~ +60°C



Components

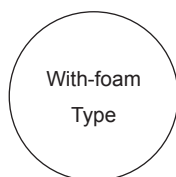
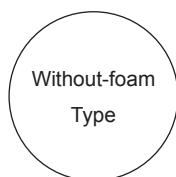
No.	Part name	Material
1	Cover / Base	Reinforced PP (NK-7)
2	Latch	Nylon 66
3	Handle grip	Elastomer
4	Pressure release valve (※1)	Nylon 66 • PTFE

No.	Part name	Material
5	Strap holder	Nylon66 • Stainless steel
6	Hinge pin (※2)	Stainless steel
7	Gasket	EPDM
8	Foam	Polyurethane / Pre-cut cubed

※1 Pressure release valve automatically enables pressure within the case to be equalized with the surrounding, allowing it to be opened with ease, while keeping it waterproof.

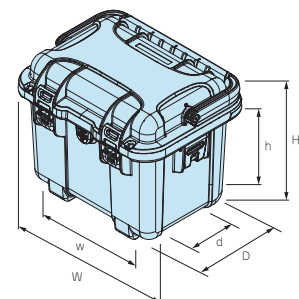
※2 Hinge pin can be removed.

- With and Without-foam types are available.



NK-T dimensions

- DXF/DWG/PDF drawings available on our website.



Product no. / Details

※See page NANUK-ACC-2 for optional NKSP foam.

Product no.	External dimensions			Internal dimensions			Foam type	Weight (kg)
	W	D	H	w	d	h		
● Black								
NK-T20B	325.4	247.5	260.4	235	134	232	Without	1.7
NK-T30B	420.2	238.8	316.7	325	109	287	Without	2.7
NK-T20BS	325.4	247.5	260.4	235	134	232	With	1.72
NK-T30BS	420.2	238.8	316.7	325	109	287	With	2.73

Accessories (Optional parts)



Divider DVI series
See page NANUK-ACC-1



Aluminium panel NKAP series
See page NKAP



Shoulder strap SB1250
See page SB1250 • NSTP810



Padlock AB145S series
See page NANUK-ACC-3



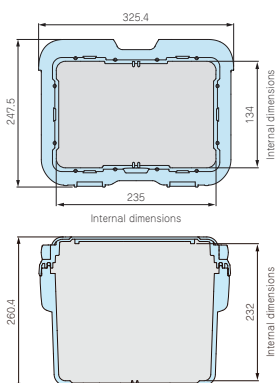
Nameplate sticker NKST
See page NANUK-ACC-3

NK-T dimensions

■ DXF/DWG/PDF drawings available on our website.

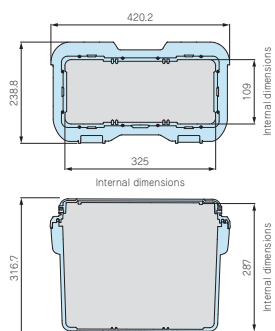
NK-T20

Handle rotates up to 90°



NK-T30

Handle rotates up to 90°



Accessories (Optional parts)

NKTD series

TRAY • DIVIDER SET for NK-T



Components

No.	Part name	Material
1	Tray	Reinforced PP (NK-7)
2	Divider	Reinforced PP (NK-7)
3	Handle	Reinforced PP (NK-7)
4	Cover	Reinforced PP (NK-7)

Product no. / Details

Product no.	Suitable model	Weight (g)
NKTD-T20	NK-T20	437
NKTD-T30	NK-T30	663

- A set of tray and divider for convenient storage.
- The handle can be fitted on the tray.
The handle can be removed when not in use.
- Easy organization with tray and divider.

• Handle use example



• Handle cover use example



• Divider use example



NKTD-T20

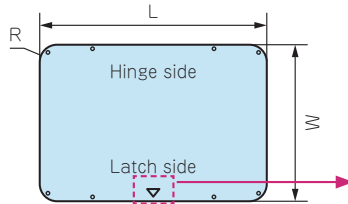
NKTD-T30

NKAP series**ALUMINIUM PANEL for NK • NKK • NK-T**

- Optional aluminium panel can be used as a control / display board of controller, measuring device, transmitter, and others.

NKAP dimensions

Required screws vary based on size.



※Install panel with ▽ marking towards the latch.

- DXF/DWG/PDF drawings available on our website.

Components

No.	Part name	Material
1	Panel	Aluminium A1100P (Silver anodized)
2	Screw	Stainless steel

- Screws are not included on NKAP963 ~ NKAP975 models.

Product no. / Details**Base side**

※NKAP-T20 and T30 comes with U-shaped holes.

Product no.	Suitable model	Thickness	L	W	R	▽ marking	Screw pcs	Inventory type	Weight (g)
NEW NKAP-T20	NK-T20 Base side	2	283.8	193	18	—	4	In stock	289
NEW NKAP-T30	NK-T30 Base side	2	377.5	173.5	18	—	4	In stock	345
NKAP903	NK903 Base side	1.5	198.5	136.5	15	—	4	In stock	109
NKAP904	NK904 Base side	1.5	226	163.5	18	—	4	In stock	149
NKAP905	NK/NKK905 Base side	1.5	257	207	21.5	—	4	In stock	214
NKAP908	NK/NKK908 Base side	1.5	250.9	200.1	18	—	4	In stock	203
NKAP909	NK909 Base side	1.5	304.7	190.4	18	—	4	In stock	234
NKAP910	NK910 Base side	2	346	244.5	17	—	4	In stock	452
NKAP915	NK/NKK915 Base side	2	364.5	252	28	○	8	In stock	496
NKAP918	NK/NKK918 Base side	2	397.5	268.5	27	—	8	In stock	574
NKAP920	NK/NKK920 Base side	2	399.5	285	28	○	8	In stock	606
NKAP923	NK/NKK923 Base side	2	446.3	309.1	28	—	8	In stock	737
NKAP925	NK/NKK925 Base side	2	451.5	318	28	○	8	In stock	760
NKAP930	NK/NKK930 Base side	2	476	350.5	27	○	8	In stock	880
NKAP933	NK/NKK933 Base side	2	477.5	352	27	—	8	In stock	908
NKAP935	NK/NKK935 Base side	2	535	301.5	26.5	○	8	In stock	855
NKAP938	NK/NKK938 Base side	2	566.2	337.6	27	—	10	In stock	1,017
NKAP940	NK/NKK940 Base side	2	526.5	374	27	○	10	In stock	1,050
NKAP945	NK/NKK945 Base side	2	576.5	450	26.5	○	10	In stock	1,395
NKAP950	NK/NKK950 Base side	2	540.8	409.1	27	—	10	In stock	1,179
NKAP960	NK/NKK960 Base side	2	579.7	454.2	27	—	10	In stock	1,402
NKAP963	NK/NKK963 Base side	2	742.4	463	23.2	—	—	BTO (built to order)	1,786
NKAP970	NK970 Base side	2	620.2	620.2	23	○	—	BTO (built to order)	1,991
NKAP975	NK975 Base side	2	760.5	538.2	23.5	—	—	BTO (built to order)	2,156

- For BTO (built-to-order) models, production lead time required will be 5 business days after payment confirmation.

Lid side

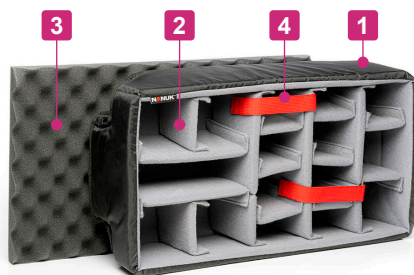
※NKAP-T20C and T30C comes with U-shaped holes.

Product no.	Suitable model	Thickness	L	W	R	▽ marking	Screw pcs	Inventory type	Weight (g)
NEW NKAP-T20C	NK-T20 Lid side	1.5	276	187	15	—	4	BTO (built to order)	202
NEW NKAP-T30C	NK-T30 Lid side	2	368	165	15	—	4	BTO (built to order)	320
NKAP905C	NK/NKK905 Lid side	1.5	247.8	197	17	—	4	BTO (built to order)	195
NKAP908C	NK/NKK908 Lid side	1.5	244.1	193.3	14	—	4	BTO (built to order)	189
NKAP909C	NK909 Lid side	1.5	298.1	183.8	14	—	4	BTO (built to order)	219
NKAP910C	NK910 Lid side	1.5	339.5	238	14	—	4	BTO (built to order)	329
NKAP915C	NK/NKK915 Lid side	2	357.5	243.8	23.5	—	8	BTO (built to order)	465
NKAP918C	NK/NKK918 Lid side	2	389.8	260.8	23.5	—	8	BTO (built to order)	541
NKAP920C	NK/NKK920 Lid side	2	389.9	275.5	23.5	—	8	BTO (built to order)	572
NKAP923C	NK/NKK923 Lid side	2	438.3	301.1	23.5	—	8	BTO (built to order)	704
NKAP925C	NK/NKK925 Lid side	2	440.3	307	23.5	—	8	BTO (built to order)	720
NKAP930C	NK/NKK930 Lid side	2	465.7	340	23.5	—	8	BTO (built to order)	841
NKAP933C	NK/NKK933 Lid side	2	467.8	342	23.5	—	8	BTO (built to order)	851
NKAP935C	NK/NKK935 Lid side	2	524.2	290.4	23.5	—	8	BTO (built to order)	810
NKAP938C	NK/NKK938 Lid side	2	558.3	329.7	23.5	—	10	BTO (built to order)	981
NKAP940C	NK/NKK940 Lid side	2	516.3	363.9	23.5	—	10	BTO (built to order)	1,000
NKAP945C	NK/NKK945 Lid side	2	570	443	23.5	—	10	BTO (built to order)	1,342
NKAP950C	NK/NKK950 Lid side	2	530	398.6	23.5	—	10	BTO (built to order)	1,120
NKAP960C	NK/NKK960 Lid side	2	568.7	443.3	23.5	—	10	BTO (built to order)	1,336
NKAP970C	NK970 Lid side	2	622.6	622.6	23.8	○	—	BTO (built to order)	1,966
NKAP975C	NK975 Lid side	2	760.4	538.2	23.5	—	—	BTO (built to order)	2,155

- For BTO (built-to-order) models, production lead time required will be 5 business days after payment confirmation.

DVI series

DIVIDER for NK • NKK • NK-T



Components

No.	Part name	Material
1	Base	Nylon
2	Divider	Polyester
3	Waved foam	Polyester
4	Strap	Nylon

■ Straps are available according to the model.

- Divider for organizing your components or equipment.
- Adjustable hook and loop fasteners allows for easily size adjustments.
- Padded dividers are designed to easily organize and protect your equipment.

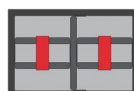
APPLICATION EXAMPLE



Product no. / Details

Product no.	Suitable model	Weight (g)
NEW DVI-T20	NK-T20	485
NEW DVI-T30	NK-T30	762
DVI905	NK/NKK905	288
DVI908	NK/NKK908	453
DVI915	NK/NKK915	542
DVI918	NK/NKK918	800
DVI920	NK/NKK920	753
DVI923	NK/NKK923	1,025
DVI925	NK/NKK925	968
DVI930	NK/NKK930	1,220
DVI933	NK/NKK933	1,500
DVI935	NK/NKK935	1,190
DVI938	NK/NKK938	1,360
DVI940	NK/NKK940	1,695
DVI945	NK/NKK945	1,940
DVI950	NK/NKK950	1,810
DVI960	NK/NKK960	3,230

DVI-T20



DVI905 / 908



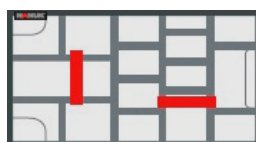
DVI918



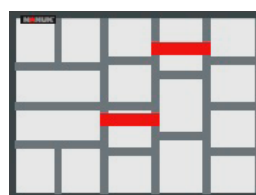
DVI923



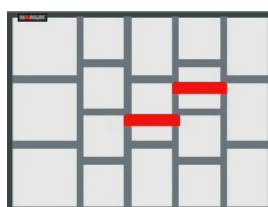
DVI935



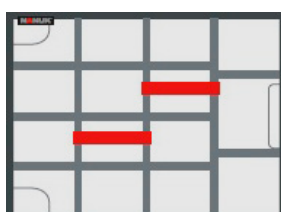
DVI940



DVI945



DVI950



DVI-T30 ※2 divider layers available.

▼1st layer



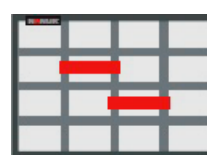
▼2nd layer



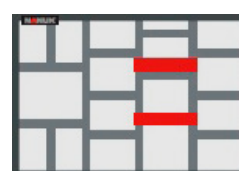
DVI915



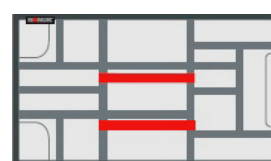
DVI920



DVI925 / 930 / 933

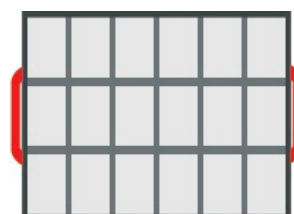


DVI938

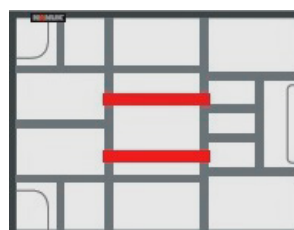


DVI960 ※2 divider layers available.

▼1st layer



▼2nd layer

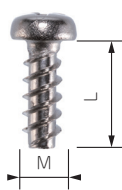


MT series**MOUNTING SCREW for NK • NKK**

MT3-10T



MT3.5-10T



- Mounting screws for installation of NKAP panel onto NK • NKK series.
- See NKAP drawings on our website for suitable screw size.

Product no. / Dimensions

Product no.	M	L	Details	Pack of
MT3-10T	3	10	Washer head self-tapping screw	10
MT3.5-10T	3.5	10	Panhead self-tapping screw + Washer	10 each

Material : Stainless steel

CUSTOMIZATION on ALUMINIUM PANEL

- Customization services such as punching press, laser cutting, digital inkjet printing, silkscreen printing, and engraving on NKAP panel are available.
- Custom colors can also be performed either through anodization, or painting.



- Self-clinching Standoff/Stud/Nut or Welded Fastener customization is available.

- An original control panel with machined aluminum panel and overlay sheet can be manufactured.



NKAP-KIT

PANEL INSTALLATION KIT for NK•NKK



Kit installation example

- Panel installation kit for NK • NKK963, NK970, and NK975 models.
For installation of NKAP panels onto NK • NKK963, NK970, and NK975 models that do not have mounting bosses.
- Use included drill bit to drill mounting holes ※ Use electric screw driver for drilling the holes.
Waterproofing ability will be lost once holes are drilled.
※Drilling is to be performed by customer.
※Kit cannot be mounted on cover side of NK • NKK963 model.

Components

No.	Part name	Pcs
1	Panel installation parts	20
2	Screw	40
3	Drill bit	1
4	Hole guide	1

Product no. / Dimensions

Product no.	Included parts
NKAP-KIT	1 set (Installation parts x 20 pcs, Screw x 40 pcs, Bit x 1 pc, and Guide x 1)

- Guide markings for drilling holes are located on the case.



Guide marking

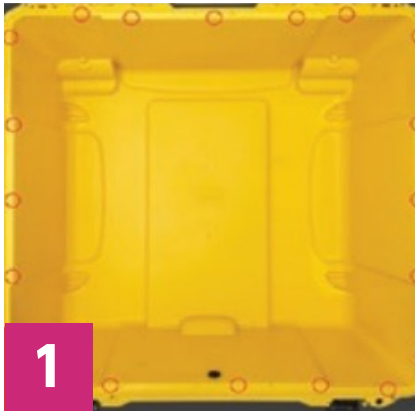


Panel installation example

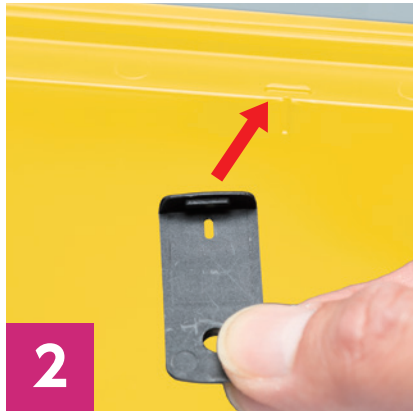
How to install panel with panel mount kit

■ Prepare electric screw driver and a manual Phillips (plus) screw driver.

■ Check the installation video from QR code.



Confirm the mounting positions. ○



Fit the hole guide to the guide marking.



Drill the hole using included drill bit while attaching the hole guide on the case.



After the hole is drilled, insert the screw from the exterior side.



Attach the installation parts to the inserted screw. (Place the insert nut upward.)



Tighten the screw firmly.
(Recommended torque : 0.8 ~ 1.0 N · m)



Place the panel on the panel mount part and tighten the mount screw.



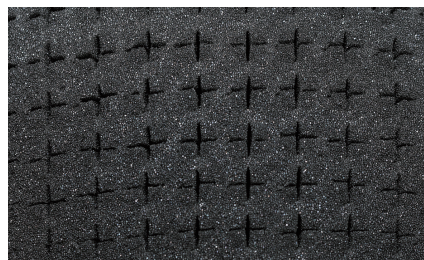
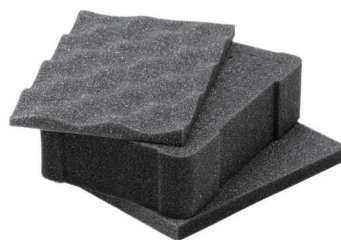
Tighten all the mount screws.

NKSP series**SPONGE FOAM for NK•NKK**

■ Pre-cubed foam can be easily cut to make a suitable storage space.

■ Available as three-layered foam set with waved (for cover side), pre-cubed foam (for base side) and base foam.

※ Pre-cubed foam is not available for NKSP990 model.

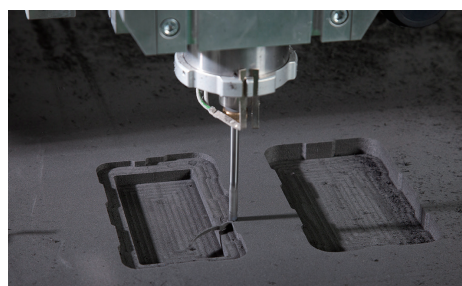


※ Color migration may occur depending on usage conditions.

■ DXF/DWG/PDF drawings available on our website.

Product no. / Details

Product no.	Suitable model	Foam layer details	Cut-line pitch	Weight(g)
NKSP903	NK903	Waved foam x 1 • Pre-cubed foam x 1 • Base foam x 1	12.7	40
NKSP904	NK904	Waved foam x 1 • Pre-cubed foam x 1 • Base foam x 1	12.7	70
NKSP905	NK/NKK905	Waved foam x 1 • Pre-cubed foam x 1 • Base foam x 1	12.7	120
NKSP908	NK/NKK908	Waved foam x 1 • Pre-cubed foam x 2 • Base foam x 1	12.7	158
NKSP909	NK909	Waved foam x 1 • Pre-cubed foam x 1 • Base foam x 1	12.7	158
NKSP910	NK910	Waved foam x 1 • Pre-cubed foam x 1 • Base foam x 1	12.7	150
NKSP915	NK/NKK915	Waved foam x 1 • Pre-cubed foam x 2 • Base foam x 1	12.7	250
NKSP918	NK/NKK918	Waved foam x 1 • Pre-cubed foam x 3 • Base foam x 1	12.7	390
NKSP920	NK/NKK920	Waved foam x 1 • Pre-cubed foam x 2 • Base foam x 1	12.7	320
NKSP923	NK/NKK923	Waved foam x 1 • Pre-cubed foam x 2 • Base foam x 1	12.7	399
NKSP925	NK/NKK925	Waved foam x 1 • Pre-cubed foam x 2 • Base foam x 1	12.7	430
NKSP930	NK/NKK930	Waved foam x 1 • Pre-cubed foam x 2 • Base foam x 1	12.7	540
NKSP933	NK/NKK933	Waved foam x 1 • Pre-cubed foam x 3 • Base foam x 1	12.7	700
NKSP935	NK/NKK935	Waved foam x 1 • Pre-cubed foam x 2 • Base foam x 1	12.7	710
NKSP938	NK/NKK938	Waved foam x 1 • Pre-cubed foam x 4 • Base foam x 1	12.7	856
NKSP940	NK/NKK940	Waved foam x 1 • Pre-cubed foam x 2 • Base foam x 1	15	730
NKSP945	NK/NKK945	Waved foam x 1 • Pre-cubed foam x 2 • Base foam x 1	15	1,000
NKSP950	NK/NKK950	Waved foam x 1 • Pre-cubed foam x 3 • Base foam x 1	15	1,000
NKSP960	NK/NKK960	Waved foam x 1 • Pre-cubed foam x 4 • Base foam x 1	12.7	1,500
NEW NKSP980	NK/NKK980	Waved foam x 1 • Pre-cubed foam x 2 • Base foam x 1	12.7	650
NKSP990	NKK990	Waved foam x 1 • Uncut foam x 2 • Base foam x 1	—	1,490

**CUSTOMIZE**

■ Customizable foam is available.

■ Custom foam option provide own designed foam around customer needs.

**CUSTOMIZED
EXAMPLE**

Accessories (Optional parts)

IDT-17

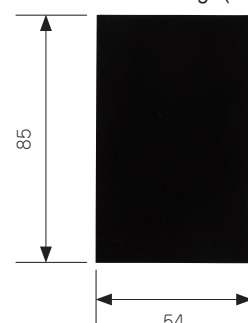
LUGGAGE TAG



IDT dimensions (mm)



Available range (mm)

Available thickness up to $t = 1.5\text{mm}$

- Luggage tag composed of an acrylic holder and silicone cover.
 - The contents and information of the case can be displayed for easy organization and identification.
 - 170mm strap length.
 - Do not pull the strap with excessive force so as to prevent the strap from coming out of the strap fastener.
- ※ Luggage tag is not subject to RoHS regulations.

Installation example



Components

No.	Part name	Pcs	Material	Color
1	Holder	1	Acrylic	Transparent
2	Cover	1	Silicone	Black
3	Strap	1	Polyester	Black
4	Strap fastener	1	ABS	Gray

Product no. / Details

Product no.	Weight (g)	Pack of
IDT-17	35.8	1 set

DP-1527

ADHESIVE DOCUMENT POUCH

Thickness: 50 μm

- Adhesive document pouch for shipping label, etc.
 - Pouch is fully sealable to prevent documentation from slipping out during transit.
 - Documents can be easily retrieved through the perforations on the pouch.
 - Aside from shipping labels, invoices, instruction manuals and so on can be contained within.
 - Possible to stick on protector case, tool case, etc. such as NK, NKK, MINI, XTRA series.
- ※ Adhesive residue or slight peeling may remain.
- Possible to stick on the grained (fine unevenness) polypropylene material.
- ※Note : Depending on the material or surface finish, the pouch may not be able to be removed properly.

Installation example



Components

No.	Part name	Pcs	Material	Color
1	Pouch	1	Polyethylene	Transparent

Product no. / Details

Product no.	Weight (g)	Pack of
DP-1527	77.8	10 pcs

SB1250**SHOULDER STRAP**

- Polypropylene strap with PVC shoulder pad to provide cushioning as well as reducing burden on the shoulders.
- Usable with other bags or cases with a D-ring or similar attachment.
- Strap length is adjustable anywhere from 750mm to 1250mm.
- 38mm strap width.

Can be attached directly onto NK • NKK series cases.

※Not applicable for NK903, NK904, NK909, NK970, NK975, NKK990, NK • NKK938, NK • NKK950, NK • NKK960 and NK • NKK963 models.

Technical Data

Max load : 11kg

※Reference value only.

Components

No.	Part name	Pcs	Material	Color
1	Strap	1	Polypropylene	Black
2	Shoulder pad	1	PVC	Black
3	Strap adjuster	1	POM	Black
4	Swivel snap hook	2	POM	Black

Product no. / Details

Product no.	Weight (g)	Pack of
SB1250	108	1

NSTP810**SHOULDER STRAP**

- Nylon shoulder strap with polyurethane pads to reduce fatigue when carrying.

Components

No.	Part name	Material
1	Belt	Nylon
2	Pad	Neoplane • Polyurethane
3	Hook	Steel (Black painted)

Product no. / Details

Product no.	Weight (g)	Pack of
NSTP810	238	1

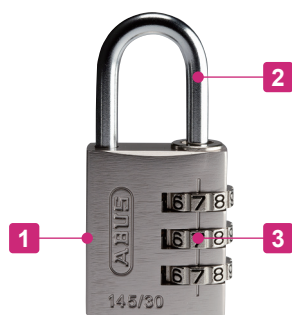
※Belt length can be adjustable from 810mm to 1,170mm

※Not applicable for NK903, NK904, NK909, NK970, NK975, NKK990, NK • NKK938, NK • NKK950, NK • NKK960 and NK • NKK963 models.



AB145S

PADLOCK



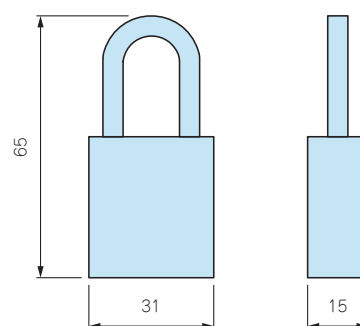
Components

No.	Part name	Material
1	Body	Aluminium
2	Shank	Steel
3	Dial	Zinc alloy

Product no. / Details

Product no.	Weight (g)	Quantity
AB145S	52	1

※Not applicable for NK-T30 model.



NKST series

NAMEPLATE STICKER



Color nameplate can be performed by digital inkjet printing on a white plate.



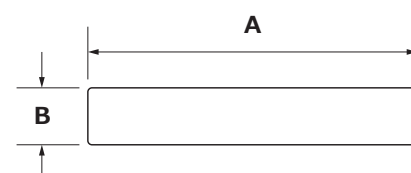
■ 0.3mm thick plastic nameplate with double sided tape on the back.

Custom name plate can be made with your company name, logo, product number or lot number with digital inkjet printing.

■ Digital inkjet print or silkscreen is possible from just 1 piece.

Product no. / Details

Product no.		Suitable model	Dimensions		Quantity
● Black	● White		A	B	
NKST-2B	NKST-2W	NK903,904	62.7	9.1	1
NKST-3B	NKST-3W	NK/NKK905 ~ 960	75.1	9.1	1
		NK-T20,30			



UNIQUE COLORS AVAILABLE

NK-T series

※See page NK-T-1~NK-T-2



Orange



Olive

NK series

※See page NK-1~NK-2



Graphite



Orange



Olive



Tan



Lime



Blue



Red

NKK series

※See page NKK-1~NKK-2



- For NKK series, Olive color is only available for NKK990 model.

Unique color Product no. list.

※See NK, NKK and NK-T pages for the details.

Without-foam type

Product no.							
Orange	Graphite	Olive	Blue	Red	Lime	Tan	Yellow
NK-T20O	—	NK-T20OL	—	—	—	—	—
NK-T30O	—	NK-T30OL	—	—	—	—	—
NK903O	—	NK903OL	—	NK903R	—	—	—
NK904O	NK904G	—	NK904M	NK904R	—	—	—
NK905O	—	—	—	NK905R	—	—	—
—	NK908G	—	—	NK908R	—	—	—
NK909O	NK909G	NK909OL	NK909M	NK909R	—	NK909T	—
NK910O	NK910G	NK910OL	NK910M	NK910R	NK910L	NK910T	—
—	NK915G	NK915OL	NK915M	NK915R	—	—	—
NK918O	NK918G	—	—	—	—	—	—
NK920O	NK920G	—	NK920M	NK920R	—	—	—
—	NK923G	—	—	—	—	—	—
—	NK925G	NK925OL	—	—	—	—	—
NK930O	NK930G	NK930OL	—	—	—	—	—
NK935O	NK935G	NK935OL	NK935M	NK935R	—	—	—
NK938O	—	—	—	—	—	—	—
NK940O	NK940G	—	—	—	—	—	—
NK945O	—	—	—	—	—	—	—
NK950O	NK950G	—	—	—	—	—	—
NK960O	NK960G	—	—	—	—	—	NK960Y
—	—	NKK990OL	—	—	—	—	—

With-foam type

Product no.							
Orange	Graphite	Olive	Blue	Red	Lime	Tan	Yellow
NK-T20OS	—	NK-T20OLS	—	—	—	—	—
NK-T30OS	—	NK-T30OLS	—	—	—	—	—
NK903OS	—	NK903OLS	—	NK903RS	—	—	—
NK904OS	NK904GS	—	NK904MS	NK904RS	—	—	—
NK905OS	—	—	—	NK905RS	—	—	—
—	NK908GS	—	—	NK908RS	—	—	—
NK909OS	NK909GS	NK909OLS	NK909MS	NK909RS	—	NK909TS	—
NK910OS	NK910GS	NK910OLS	NK910MS	NK910RS	NK910LS	NK910TS	—
—	NK915GS	NK915OLS	NK915MS	NK915RS	—	—	—
NK918OS	NK918GS	—	—	—	—	—	—
NK920OS	NK920GS	—	NK920MS	NK920RS	—	—	—
—	NK923GS	—	—	—	—	—	—
—	NK925GS	NK925OLS	—	—	—	—	—
NK930OS	NK930GS	NK930OLS	—	—	—	—	—
NK935OS	NK935GS	NK935OLS	NK935MS	NK935RS	—	—	—
NK938OS	—	—	—	—	—	—	—
NK940OS	NK940GS	—	—	—	—	—	—
NK945OS	—	—	—	—	—	—	—
NK950OS	NK950GS	—	—	—	—	—	—
NK960OS	NK960GS	—	—	—	—	—	NK960YS
—	—	NKK990OLS	—	—	—	—	—

Handy Carrying Case for Your Everyday Needs



A wide selection to choose from with optional customization services available to suit various designs.

Use as tools storage, precision parts, measurement devices, test samples, medical equipment, and so on.

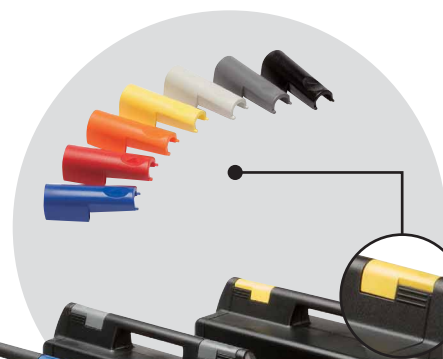


SNAP-IN LATCH for easy handling

Equipped with a SNAP-IN LATCH for easy to open and close.

Best used at locations where storage of equipment are required.

SNAP-IN LATCH on MAXI series are available in 7 different colors: black, gray, marine, red, orange, yellow and light gray.



MAXI • MINI • XTRA-1



Protective sponge foam

Optional foam comes with pre-cubed foam to allow for easy modification by removing the required squares. Foam customization is also available where your own unique form design and cut-outs can be performed.

MILLING

● CNC Foam Milling



CUSTOMIZE

Digital inkjet printing with low initial tooling cost

Digital inkjet printing on tool cases with low initial tooling cost. Full color printing is possible with digital inkjet printing.

PRINTING



MAXI · MINI · XTRA-2

MAXI SERIES

PLASTIC CARRYING CASE



- Universal storing case with easy opening/closing snap-in latch.
- Available in 25 different sizes.
- Optional foam are available to protect your device or equipment.
- Suitable for storing tools, jigs, precision parts, measurement devices, test samples, medical equipment, and so on.

Technical Data

Operating temperature : -20℃~+60℃

APPLICATION EXAMPLE



Light gray color is also available.

► See page SP-Custom-1~SP-Custom-2 for custom foam and custom inkjet printing.



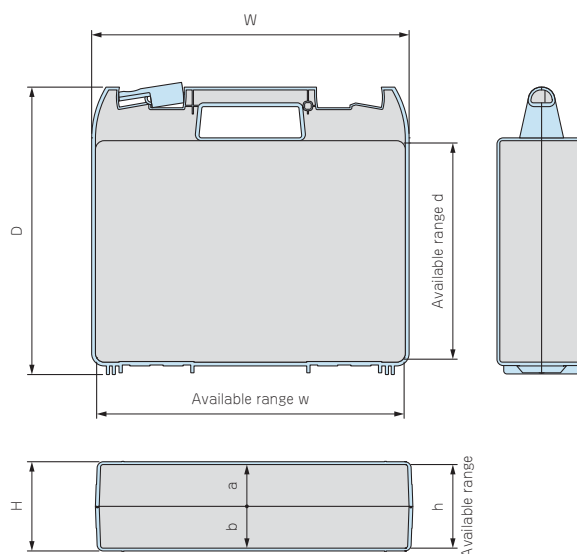
Components

No.	Part name	Material
1	Cover	ABS
2	Base	ABS
3	Snap-in latch	ABS
4	Hinge	PP

MAXI dimensions

■ Drawings below are reference examples only.

DXF/DWG/PDF drawings available on our website.



■ Red and black snap-in latches are included. You can exchange to your preferred color.

See page MAXI · XTRA-ACC-1 for how to exchange the snap-in latch.

● Red



● Black

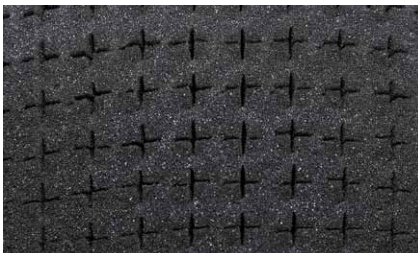


Product no. / Dimensions

Product no.	Dimensions (External)			Dimensions (Internal)					Weight (kg)
● Black	W	D	H	w	d	h	a	b	
MAXI 252307 B	254	230	72	242	169	66	33	33	0.4
MAXI 272408 B	271	241	84	258	180	78	39	39	0.5
MAXI 292610 B	289	256	97	276	194	91	45.5	45.5	0.6
MAXI 292612 B	289	256	117	276	192	111	45.5	65.5	0.65
MAXI 292614 B	289	256	137	274	192	131	65.5	65.5	0.68
MAXI 353106 B	345	308	61	333	242	54	27	27	0.78
MAXI 353107 B	345	308	72	333	242	65	27	38	0.8
MAXI 353108 B	345	308	83	332	242	76	38	38	0.8
MAXI 353111 B	345	308	112.5	328	238	105.5	27	78.5	0.9
MAXI 353112 B	345	308	123.5	328	238	116.5	38	78.5	1.0
MAXI 353116 B	345	308	164	328	238	157	78.5	78.5	1.2
MAXI 393309 B	390	334	88	377	267	80	40	40	1.0
MAXI 393310 B	390	334	103	377	265	95.5	40	55.5	1.1
MAXI 393312 B	390	334	118	377	265	111	55.5	55.5	1.1
MAXI 433614 B	432	363	138	412	290	131	65.5	65.5	1.5
MAXI 433617 B	432	363	174	408	286	166.5	101	65.5	1.6
MAXI 433621 B	432	363	210	408	286	202	101	101	1.74
MAXI 453809 B	452	383	89	438	314	81	40.5	40.5	1.3
MAXI 453811 B	452	383	109	436	312	101	40.5	60.5	1.4
MAXI 453813 B	452	383	129	436	312	121	60.5	60.5	1.5
MAXI 453814 B	452	383	144.5	432	308	136.5	40.5	96	1.6
MAXI 453816 B	452	383	164.5	432	308	156.5	60.5	96	1.7
MAXI 453820 B	452	383	200	432	308	192	96	96	1.8
MAXI 544517 B	539	450	169	516	365	162	81	81	2.4
MAXI 544521 B	539	450	205	516	362	197	81	116	2.7

MASP SERIES

FOAM SET for MAXI



- Pre-cubed polyurethane foam can be easily cut to make a suitable storage space.
- Available as a three-layered sponge foam set with waved (for cover side), pre-cubed foam (for base side) and base layer.
- DXF/DWG/PDF drawings available on our website.

Product no. / Suitable case

Product no.	Suitable case	Foam layer details	Cut-line pitch
MASP 252307	MAXI 252307 B	Waved layer x 1 • Pre-cubed foam layer x 1 • Base layer x 1	15mm
MASP 272408	MAXI 272408 B	Waved layer x 1 • Pre-cubed foam layer x 1 • Base layer x 1	15mm
MASP 292610	MAXI 292610 B	Waved layer x 1 • Pre-cubed foam layer x 1 • Base layer x 1	15mm
MASP 292612	MAXI 292612 B	Waved layer x 1 • Pre-cubed foam layer x 2 • Base layer x 1	15mm
MASP 292614	MAXI 292614 B	Waved layer x 1 • Pre-cubed foam layer x 2 • Base layer x 1	15mm
MASP 353106	MAXI 353106 B	Waved layer x 1 • Pre-cubed foam layer x 1 • Base layer x 1	15mm
MASP 353107	MAXI 353107 B	Waved layer x 1 • Pre-cubed foam layer x 1 • Base layer x 1	15mm
MASP 353108	MAXI 353108 B	Waved layer x 1 • Pre-cubed foam layer x 2 • Base layer x 1	15mm
MASP 353111	MAXI 353111 B	Waved layer x 1 • Pre-cubed foam layer x 2 • Base layer x 1	15mm
MASP 353112	MAXI 353112 B	Waved layer x 1 • Pre-cubed foam layer x 4 • Base layer x 1	15mm
MASP 353116	MAXI 353116 B	Waved layer x 1 • Pre-cubed foam layer x 1 • Base layer x 1	15mm
MASP 393309	MAXI 393309 B	Waved layer x 1 • Pre-cubed foam layer x 1 • Base layer x 1	15mm
MASP 393310	MAXI 393310 B	Waved layer x 1 • Pre-cubed foam layer x 1 • Base layer x 1	15mm
MASP 393312	MAXI 393312 B	Waved layer x 1 • Pre-cubed foam layer x 1 • Base layer x 1	15mm
MASP 433614	MAXI 433614 B	Waved layer x 1 • Pre-cubed foam layer x 2 • Base layer x 1	15mm
MASP 433617	MAXI 433617 B	Waved layer x 1 • Pre-cubed foam layer x 4 • Base layer x 1	15mm
MASP 433621	MAXI 433621 B	Waved layer x 1 • Pre-cubed foam layer x 1 • Base layer x 1	15mm
MASP 453809	MAXI 453809 B	Waved layer x 1 • Pre-cubed foam layer x 1 • Base layer x 1	20mm
MASP 453811	MAXI 453811 B	Waved layer x 1 • Pre-cubed foam layer x 1 • Base layer x 1	20mm
MASP 453813	MAXI 453813 B	Waved layer x 1 • Pre-cubed foam layer x 2 • Base layer x 1	20mm
MASP 453814	MAXI 453814 B	Waved layer x 1 • Pre-cubed foam layer x 2 • Base layer x 1	20mm
MASP 453816	MAXI 453816 B	Waved layer x 1 • Pre-cubed foam layer x 4 • Base layer x 1	20mm
MASP 453820	MAXI 453820 B	Waved layer x 1 • Pre-cubed foam layer x 2 • Base layer x 1	20mm
MASP 544517	MAXI 544517 B	Waved layer x 1 • Pre-cubed foam layer x 2 • Base layer x 1	20mm
MASP 544521	MAXI 544521 B	Waved layer x 1 • Pre-cubed foam layer x 3 • Base layer x 1	20mm

MINI SERIES

PLASTIC CARRYING CASE



- Light weight and simple tool case.
- Optional foam available to protect your device or equipment.
- Suitable for storing test samples, tools, precision parts, and so on.
- Made from PP plastic, and available in light gray color.

Technical Data

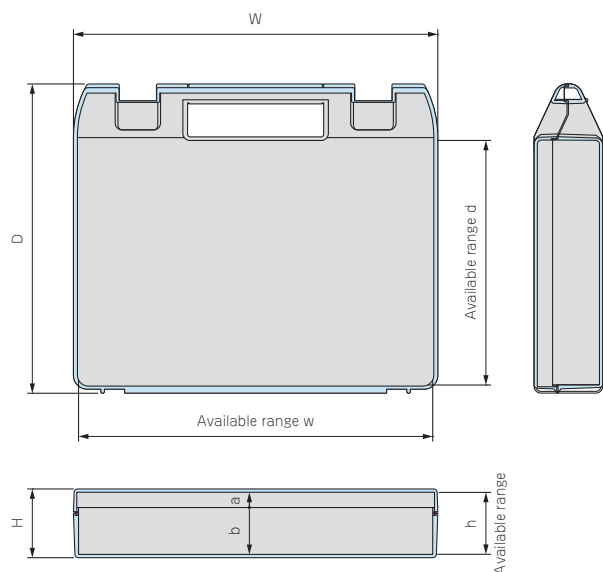
Operating temperature : -20℃~+60℃

APPLICATION EXAMPLE



► See page SP-Custom-1~SP-Custom-2 for custom foam and custom inkjet printing.

MINI dimensions



■ Drawings below are reference examples only.
DXF/DWG/PDF drawings available on our website.

Product no. / Dimensions

Product no.	Dimensions (External)			Dimensions (Internal)					Weight (g)
	W	D	H	w	d	h	a	b	
MINI 231905 G	230	187	45	222	140.5	40	9	31	230
MINI 272305 G	265	225	50	258	175	45	11	34	330
MINI 332806 G	327	275	55	319	225	49	13	36	470
MINI 352808 G	345	284	83	336	225	78	22.5	55.5	630

Accessories (Optional parts)

MISP SERIES

FOAM SET for MINI



- Pre-cubed polyurethane foam can be easily cut to make a suitable storage space.
- Available as a three-layered foam set with waved (for cover side), pre-cubed foam (for base side) and base layer.
- DXF/DWG/PDF drawings available on our website.



Product no. / Suitable case

Product no.	Suitable case	Foam layer details
MISP 2319	MINI 231905 G	Waved layer x 1 · Pre-cubed foam layer x 1 · Base layer x 1
MISP 2723	MINI 272305 G	Waved layer x 1 · Pre-cubed foam layer x 1 · Base layer x 1
MISP 3328	MINI 332806 G	Waved layer x 1 · Pre-cubed foam layer x 1 · Base layer x 1
MISP 3528	MINI 352808 G	Waved layer x 1 · Pre-cubed foam layer x 1 · Base layer x 1

XTRA SERIES**PLASTIC CARRYING CASE**

- Slim and rounded handle tool case.
- Optional foam are available to protect your device or equipment.
- Suitable for storing measuring devices, test samples, tools, precision parts, and so on.

Technical Data

Operating temperature : -20°C~+60°C

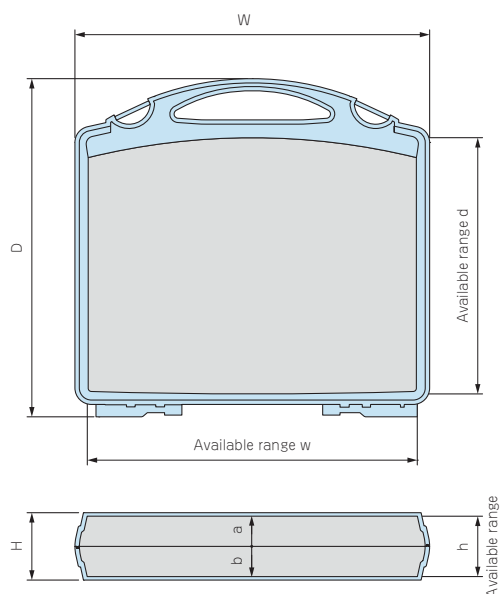
APPLICATION EXAMPLE**Components**

No.	Part name	Material
1	Cover	PP or ABS
2	Base	PP or ABS
3	Latch	PP

※ABS material is used for the Cover and Base of XTRA494614B/G models.

► See page SP-Custom-1~SP-Custom-2 for custom foam and custom inkjet printing.

XTRA dimensions



■ Drawings below are reference examples only.
DXF/DWG/PDF drawings available on our website.

Product no. / Dimensions

Product no.		Dimensions (External)			Dimensions (Internal)					Weight (kg)
● Black	● Light gray	W	D	H	w	d	h	a	b	
XTRA 262505 B	XTRA 262505 G	258	246	49	240	188	42	21	21	0.4
XTRA 323108 B	XTRA 323108 G	320	308	81	296	230	76	38	38	0.6
XTRA 403810 B	XTRA 403810 G	397	377	96	368	290	90	45	45	0.9
XTRA 494614 B	XTRA 494614 G	486	460	136	450	355	131	65.5	65.5	1.66

Accessories (Optional parts)

XTSP SERIES

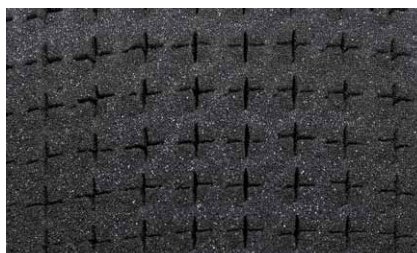
FOAM SET for MINI



■ Pre-cubed polyurethane foam can be easily cut to make a suitable storage space.

■ Available as a three-layered foam set with waved (for cover side), Pre-cubed foam (for base side) and base layer.

■ DXF/DWG/PDF drawings available on our website.



Product no. / Suitable case

Product no.	Suitable case	Foam layer details	Cut-line pitch
XTSP 2625	XTRA 262505 B/G	Waved layer x 1 · Pre-cubed foam layer x 1 · Base layer x 1	15mm
XTSP 3231	XTRA 323108 B/G	Waved layer x 1 · Pre-cubed foam layer x 1 · Base layer x 1	15mm
XTSP 4038	XTRA 403810 B/G	Waved layer x 1 · Pre-cubed foam layer x 1 · Base layer x 1	15mm
XTSP 4946	XTRA 494614 B/G	Waved layer x 1 · Pre-cubed foam layer x 1 · Base layer x 1	20mm

Both waved and base layer has a double-sided tape attached on the back side. Peel off to adhere onto the inner side of the case.

HSTP SERIES

SHOULDER STRAP

Product no. / Feature

Product no.	Weight (g)	Quantity
HSTP1000	129	1

- Hole milling is required on the case for shoulder strap installation.
- Recommended hole for installation is $\phi 6.2\text{mm}$.

ML SERIES

COLOR LATCH for MAXI

- Replacement latch for MAXI case.


How to remove latch

Hold the case and pull the latch.


How to install latch

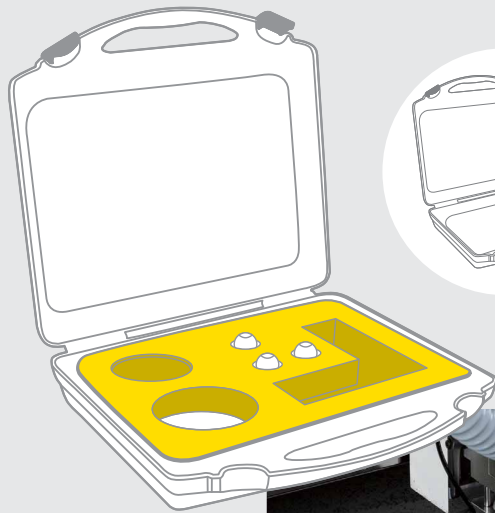
Hold the case, insert thinner side first, and push the opposite side in.


Product no. / Suitable case

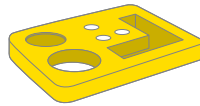
Product no.							Suitable case	Quantity
● Black	● Marine	● Yellow	● Orange	● Red	● Light gray	● Gray		
ML-SB	ML-SM	ML-SY	ML-SO	ML-SR	ML-SL	ML-SG	MAXI 252307 B ~ MAXI 292614 B	2
ML-LB	ML-LM	ML-LY	ML-LO	ML-LR	ML-LL	ML-LG	MAXI 353106 B ~ MAXI 544521 B	2

CNC Foam Milling

Customize based on
how you want it to be!



+



+



CNC foam cutting machine enables quick and cost-effective hole milling service.



For mass production, cost-effective mold press cutting is also available.

APPLICATION EXAMPLE



CNC Machining • Printing Service for Case

CNC Machining

■ CNC machining for your switch, connector, display and so on is possible from just 1 piece.



Printing Service

■ Digital inkjet printing, silkscreen printing and nameplate sticker printing is possible from just 1 piece.

Low initial
cost
No plate
processing
fee

Inkjet printing

Low printing cost for small quantities.

● Data adjustment fees may be charged again if significant changes are required on your repeat order.

● If the data in recommended format is provided

Data adjustment
fees

● Data or images other than recommended formats

Data creation fees +
Data adjustment fees

Silk-screen initial tooling

Low printing cost for large quantity single color print.

Silk-screen initial tooling

Plate making

Silk-screen making

Recommended data formats

PDF (.pdf -100%)		Vector file (.ai)		EPS (.eps)	
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Initial cost can be reduced with the recommended formats.



Able to Inkjet print on rigid urethane foam.



APPLICATION EXAMPLE

