TAKACHI

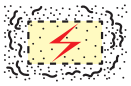
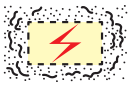
PROTECTION CLASS (IP RATING)

IP67 is

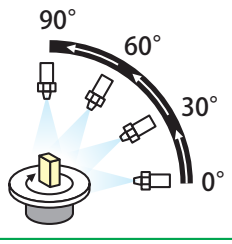
●IEC60529 standard is a system for classifying the degrees of protection provided by the enclosures of electrical equipment, such as against dust and water.

IP □ □

First digit : Solid particle protection

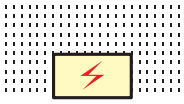
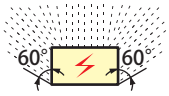
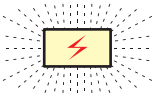
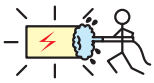
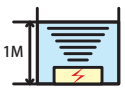
No.	Protection against ingress of solid foreign objects	Protection against access to hazardous parts
0	No Protection	No Protection
1	 Protected against solid objects over 50mm.	 Protected against accidental touch by a large surface of the body, such as by hands. (Tested with a 50mm diameter steel ball.)
2	 Protected against solid objects over 12.5mm.	 Protected against accidental touch by fingers or similar objects (Tested with a 12mm diameter, 80mm long articulated finger)
3	 Protected against solid objects over 2.5mm.	 Protected against accidental touch by tools or thick wires. (Tested with a 2.5mm diameter, 100mm long bar)
4	 Protected against solid objects over 1.0mm.	 Protected against accidental touch by most wires and screws. (Tested with a 1.0mm diameter, 100mm long wire)
5	 Protected against dust; limited ingress, no harmful deposits.	
6	 Complete protection against dust.	

69K



80 to 100 barrel steam jets at 80℃ (±5℃) from a 0°, 30°, 60°, and 90° angle, at a distance of 100 ~ 150mm for 30 sec x 5 sets

Second digit: Liquid ingress protection

No.	Protection against ingress of liquid
0	No Protection
1	 Dripping water (vertically falling drops) for 10 minutes.
2	 Vertically dripping water when tilted at 15° for 10 minutes (2.5 minutes per position).
3	 Spraying water (at any angle) of 0.07ℓ/min up to 60° from the vertical for 10 minutes.
4	 Spraying water of 0.07ℓ/min from all directions for 10 minutes.
5	 Jets of water projected by a φ6.3 nozzle of 12.5ℓ / min from all directions at 1 min / 1㎡ for at least 3 minutes.
6	 Powerful jets of water projected by a φ12.3 nozzle of 100ℓ / min from all directions at 1 min / 1㎡ for at least 3 minutes.
7	 Immersion, up to 1 meter depth (for 30 mins).
8	 Immersion (test depth and duration beyond IPX7 requirements)

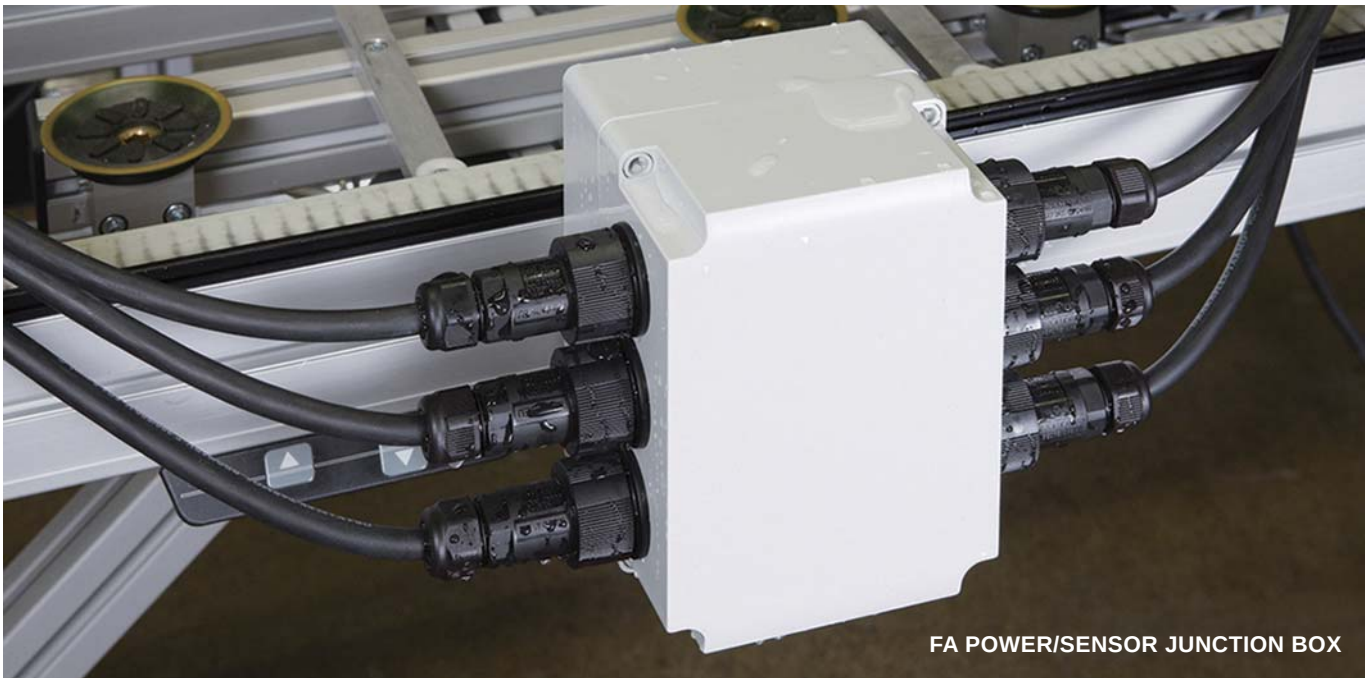
A point of note for Waterproof Boxes

- ●For outdoor use, direct sunlight will accelerate the degradation of the box. For more information, please see page Outdoor Use - 1.
- ●For customers planning to attach their own original mounting brackets onto the waterproof boxes, it is recommended to mill larger holes with enough clearance to attach the bracket. If the milled hole and clearance is too small, it may cause irreparable damage to the box.
- ●Waterproof boxes made of Polycarbonate or ABS plastic material may be damaged if certain types of washing chemicals, solvents, oils, or thread locking adhesives are present on the box. Furthermore, paint not suitable to be used on plastic materials may also cause damage.

IP67 POLYCARBONATE BOX

SPCP・SPCM SERIES APPLICATION EXAMPLE

Made from polycarbonate material, the SPCP・SPCM series features not only high durability, but also comes with IP67 protection.
Suitable to be used in a wide range of applications, such as FA/control, measurement equipment, network communication and so on.



FA POWER/SENSOR JUNCTION BOX

INDUSTRIAL MOTOR JUNCTION BOX



AUTOMATIC DOOR OPEN/CLOSE SWITCH



DIGITAL DIFFERENTIAL MANOMETER

Product by KRONE CORPORATION (Japan)



PARTS FEEDER COUNTER



REMOTE GREENHOUSE MONITORING SYSTEM

Product by SERAKU (Japan)



METEOROLOGICAL MONITOR

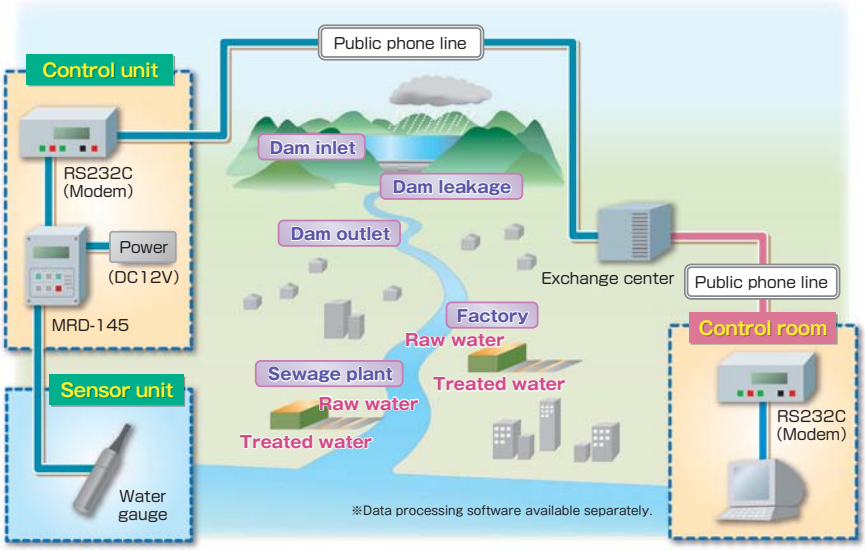
Product by SEC (Japan)



WATER LEVEL METER

Product by HOKUTO RIKEN (Japan)





DIGITAL ANEMOMETER

Product by North One (Japan)



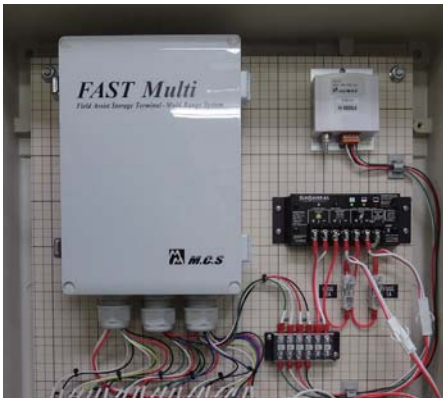
SENSOR NETWORK MONITOR

Product by KYOSAITECHNOS (Japan)



FIELD DATA LOGGER

Product by M.C.S (Japan)



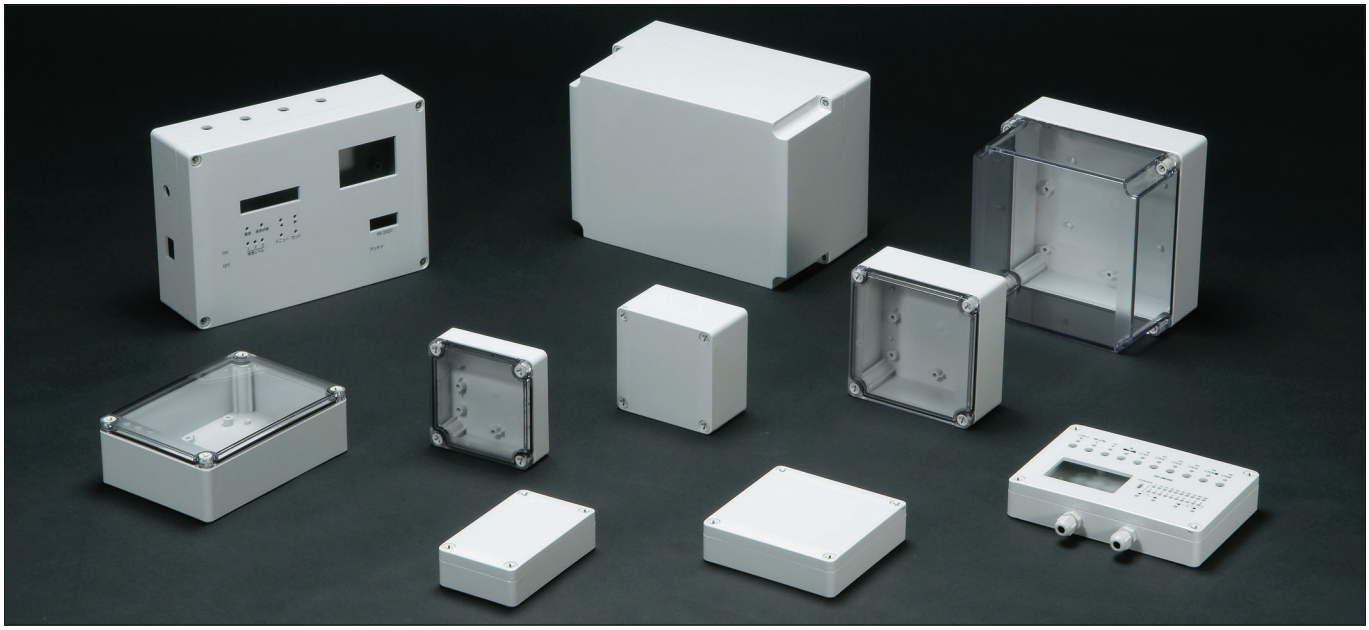
MONITORING CAMERA

Product by ACE PROMOTION (Japan)

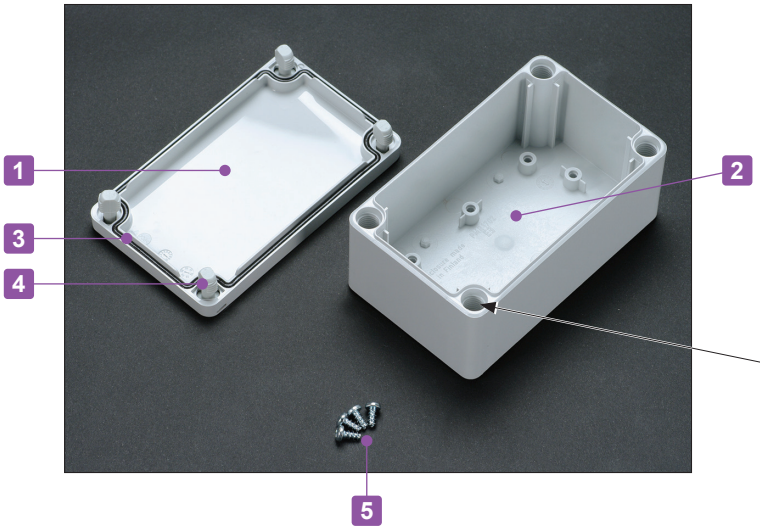


TAKACHI

SPCP series IP66•IP67 POLYCARBONATE BOX



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



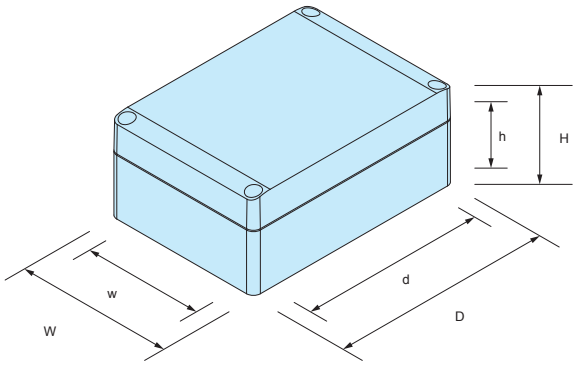
- UL certified products are SPCP.U series. See our website for more details.
- Please see our "PROTECTION CLASS (IP RATING)" document for details on the protection class when selecting your enclosure.
- Tough polycarbonate material for superior impact resistance.
- Available in 28 different sizes, with 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.



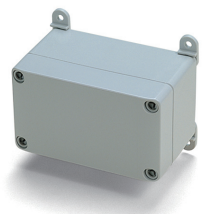
Product no. / Details

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

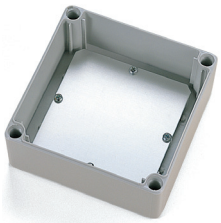
Accessories (Optional parts)



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



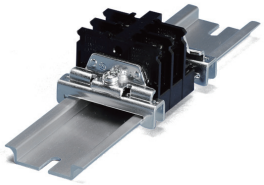
Cable gland
See cable gland pages



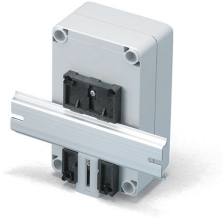
Protective vent PMF series
See PMF pages



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



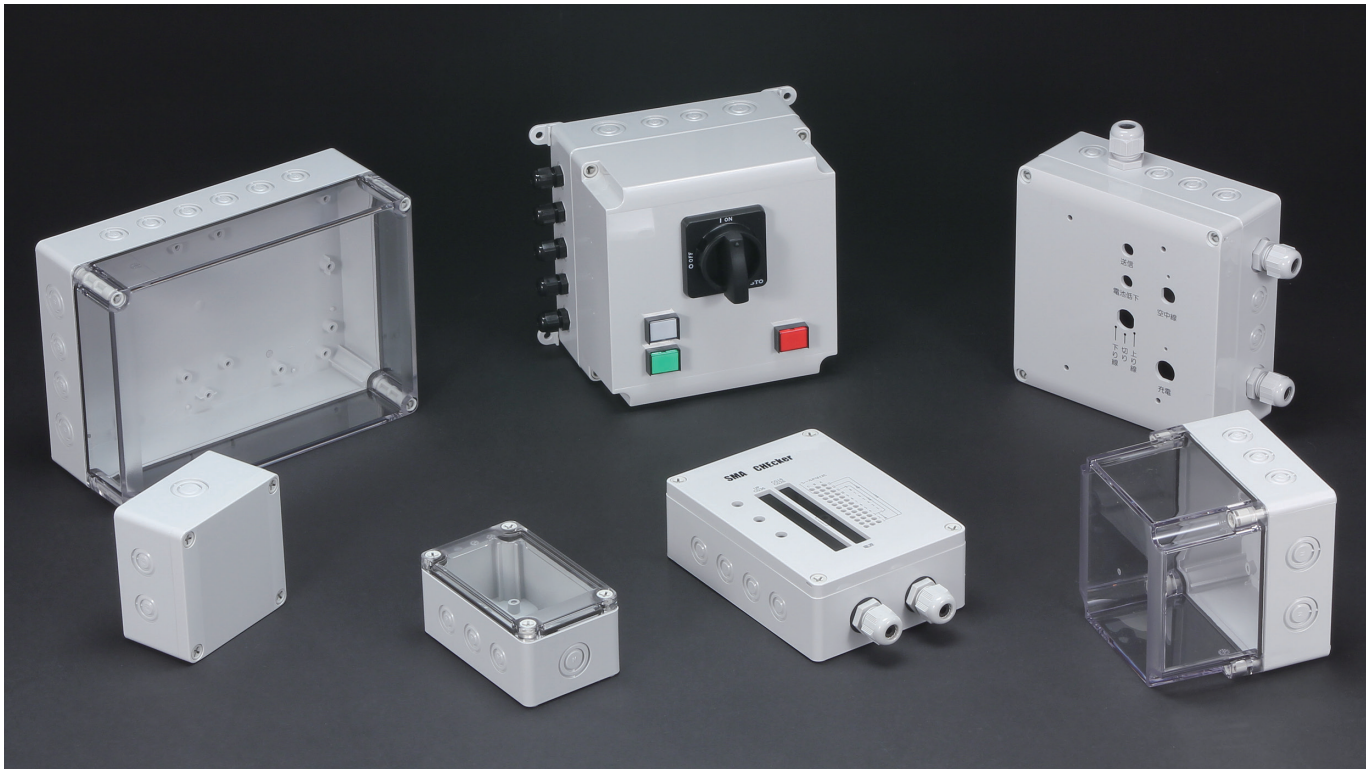
Pole mounting bracket & belt SSK, PKB series
See page SSK-1 ~ SSK-4

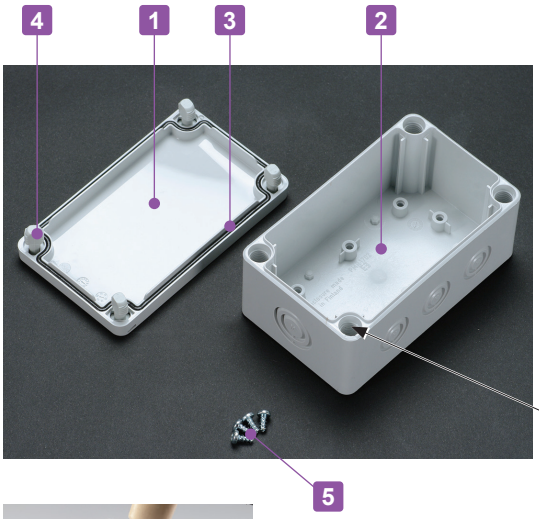


Outdoor roof SR series
See page SPCM • SPCP-ACC-2

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SPCM series IP66•IP67 POLYCARBONATE BOX with METRIC KNOCK-OUTS



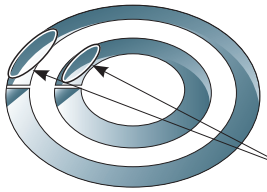


Technical Data
Protection class : IP66 • IP67 Operating temperature : -20°C ~ +75°C Recommended Torque : 1N • m ~ 1.5N • m

- 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.







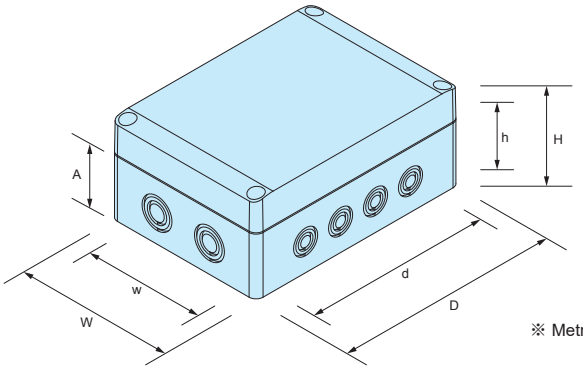
- To knock out the hole covers, rest a flathead screwdriver at the "A" points, and punch out the knock-outs by hammering on the rear end of the screwdriver handle with a hammer.

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.

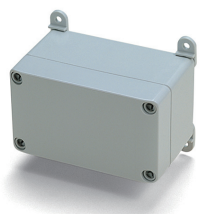


※ Metric knock-outs are on all 4 sides.

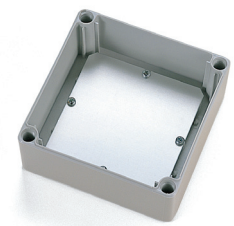
Product no. / Details

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)



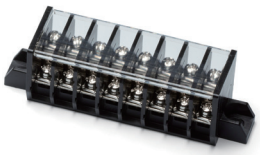
Mounting bracket SFL-1
See page SPCM • SPCP-ACC-1



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



Cable gland
See cable gland pages



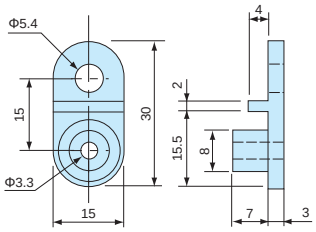
Terminal bock • Terminal cover STB • STC series
See page STB • STC-1 ~ STB • STC-4



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.

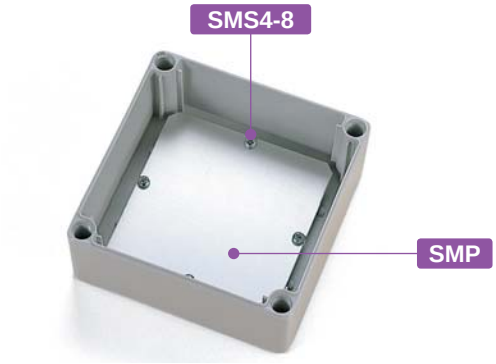
Product no. / Feature

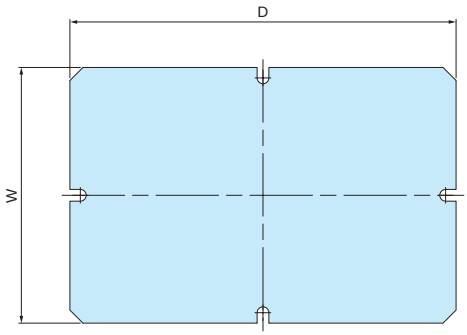
Product no.	Material	Screw	Pcs
SMS4-8 (M4-8 Pan head tapping)	Steel	Trivalent chromate	4

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.



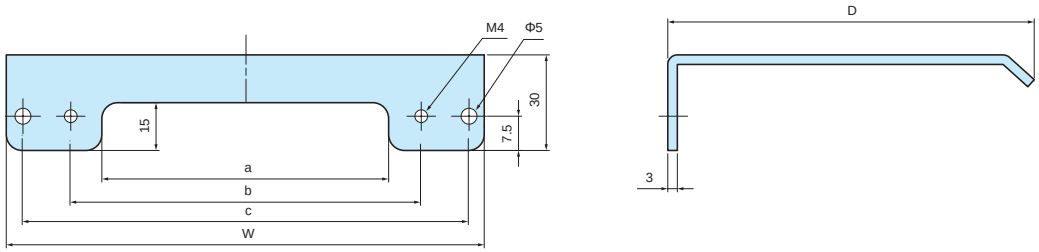


SR SERIES OUTDOOR ROOF for SPCM • SPCP

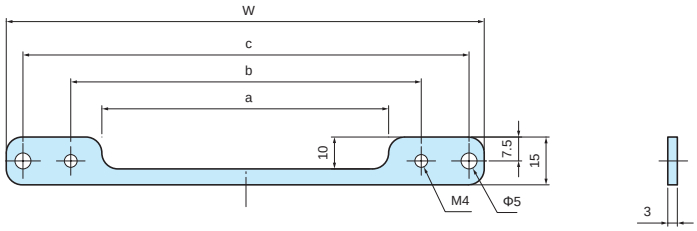


- Roof and spacer attachments are easily attached onto the enclosure using existing cover fastening holes.
- Recommended for outdoor environments for protection against rain, etc.

Roof



Spacer



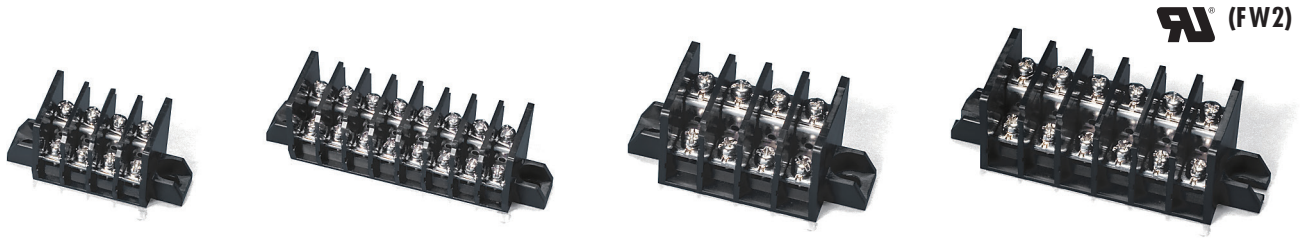
Components

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



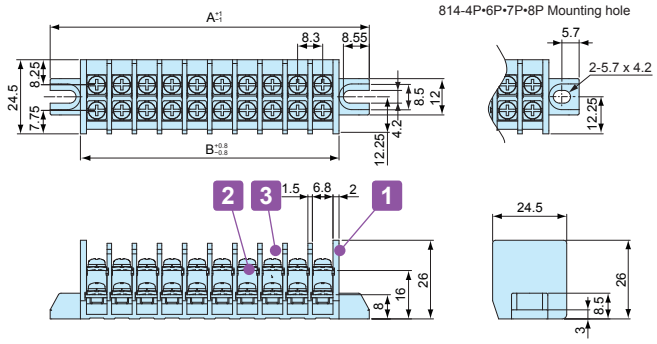
(FW2)

■ 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

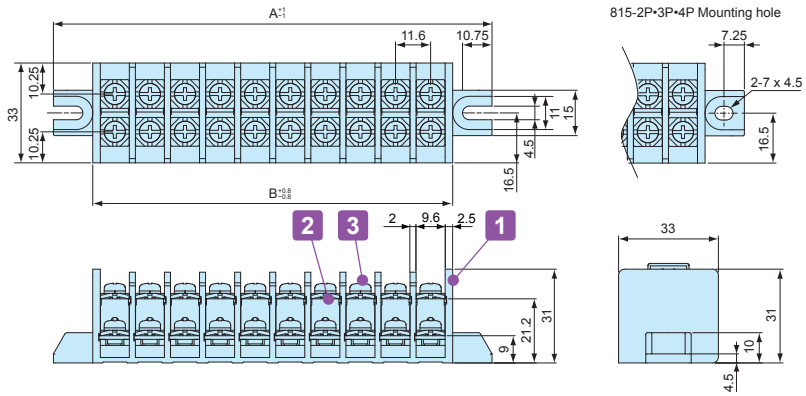
STB-814



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

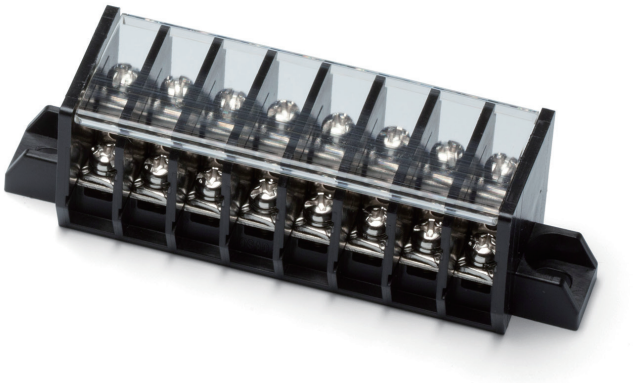
1. Electrical Rating 300V 30A
   (600V 30A JIS IEC compliant)
2. Insulation Resistance DC500V 1000MΩ ~
3. Withstand Voltage AC2500V (Tested for 1 min.)
4. Operating Temp. Range -25°C ~ +80°C
5. Storage Temp. Range -25°C ~ +80°C

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

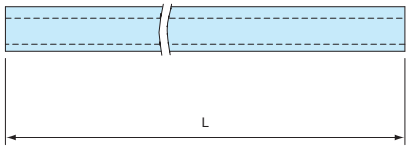
STC SERIES TERMINAL COVER

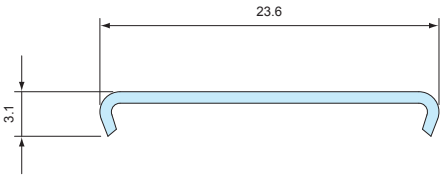




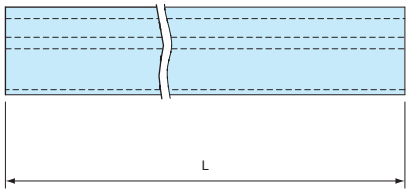
- Terminal cover for STB terminal block.
- Use for protecting terminals.

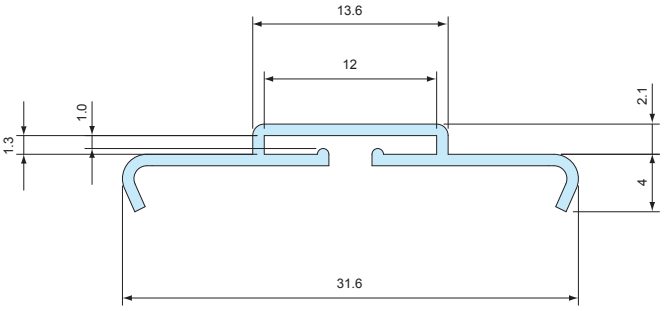
STC814





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

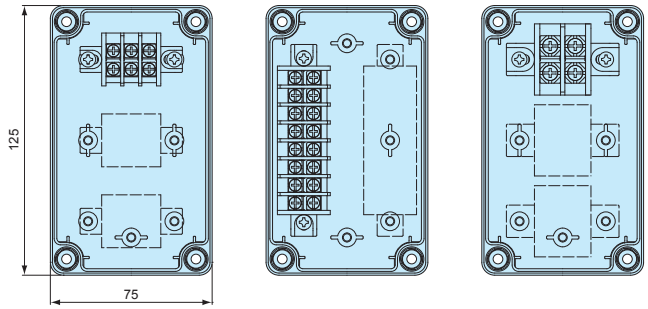
STB TERMINAL BLOCK MOUNTING POSITION

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

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

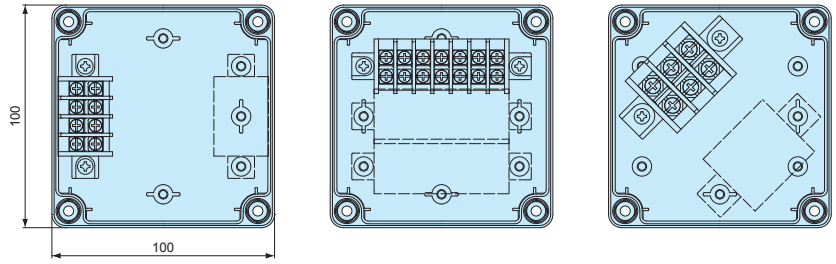
Suitable box SPCM/SPCP 081305 • 081306 • 081308 • 081310 • 081313

814−3P 814−8P 815−2P



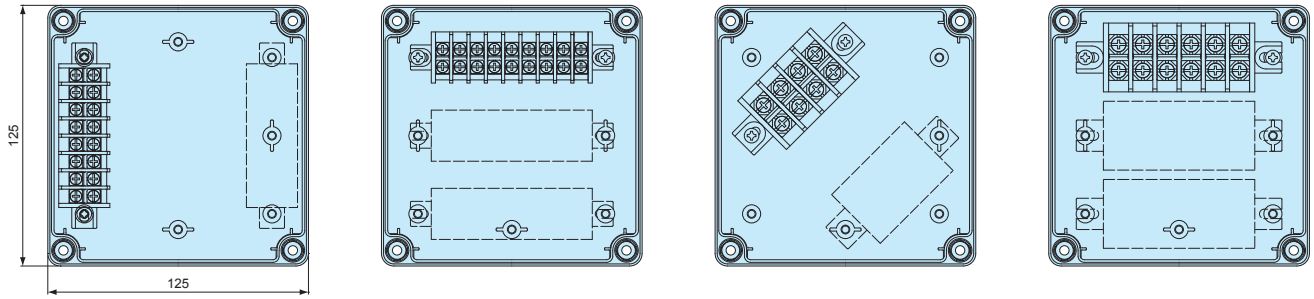
Suitable box SPCM/SPCP 101006

814−4P 814−7P 815−3P



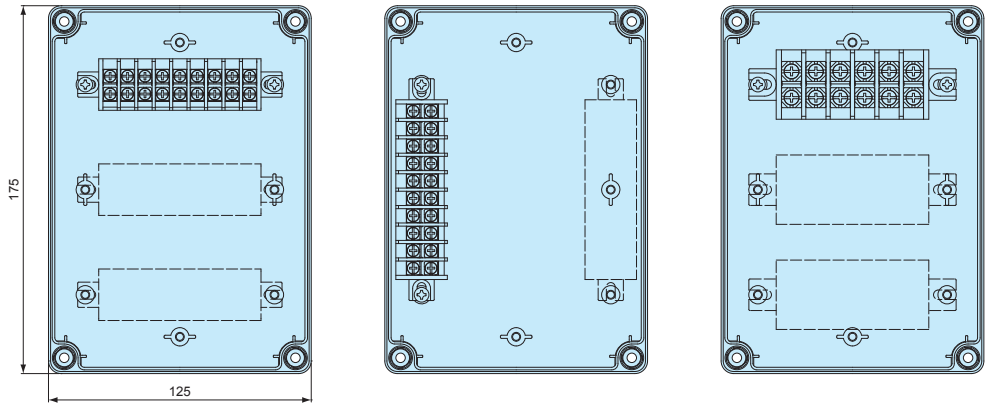
Suitable box SPCM/SPCP 131305 • 131306 • 131308 • 131310 • 131313

814−8P 814−9P 815−4P 815−6P



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

814−9P 814−10P 815−6P



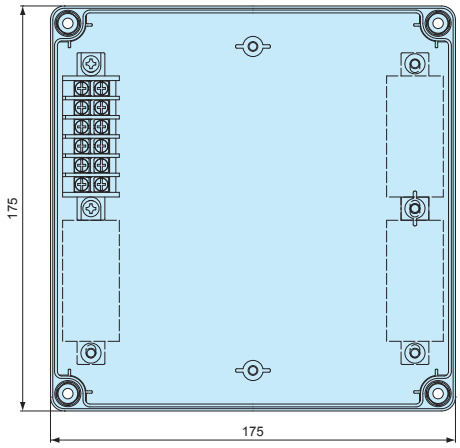
STB TERMINAL BLOCK MOUNTING POSITION

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

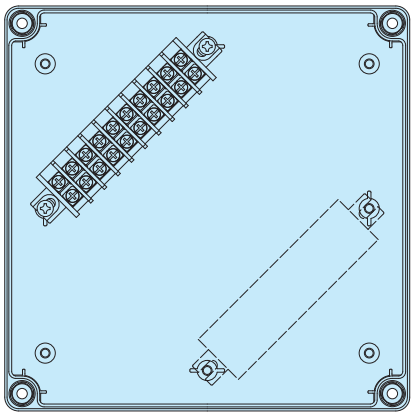
■ Terminals can be installed in the area with dotted lines.

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

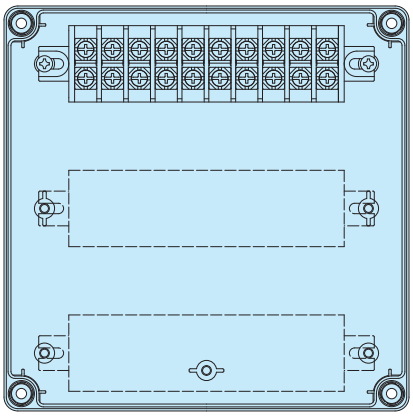
814−6P



814−10P

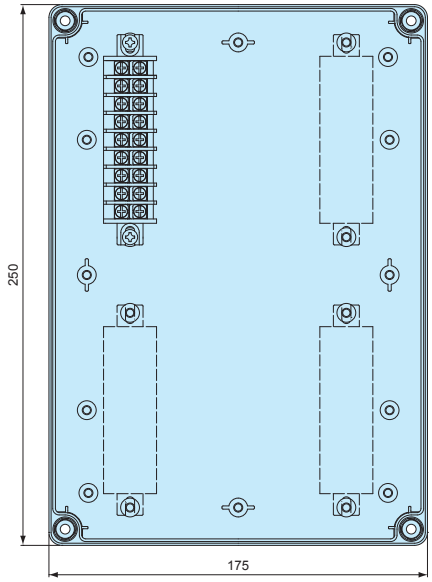


815−10P

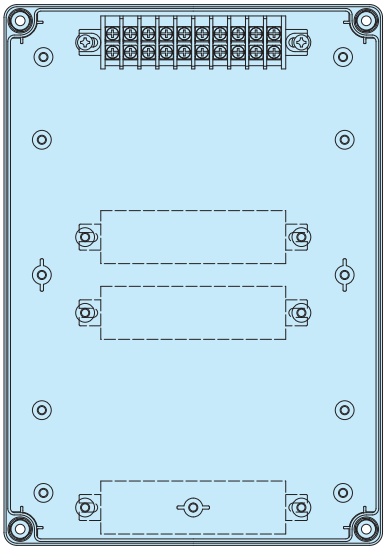


Suitable box SPCM/SPCP 182508 • 182510 • 182515

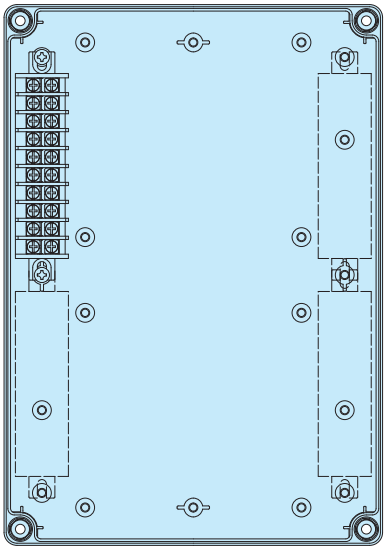
814−9P



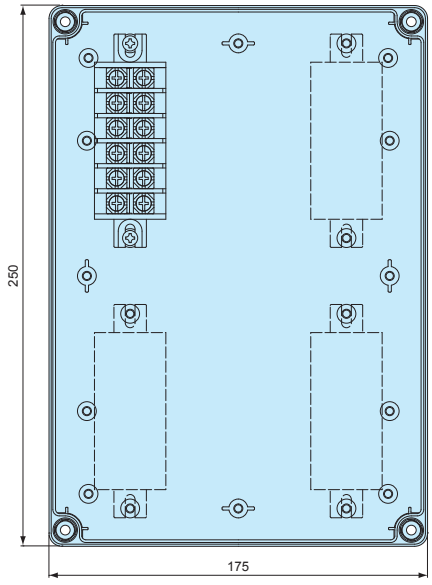
814−10P



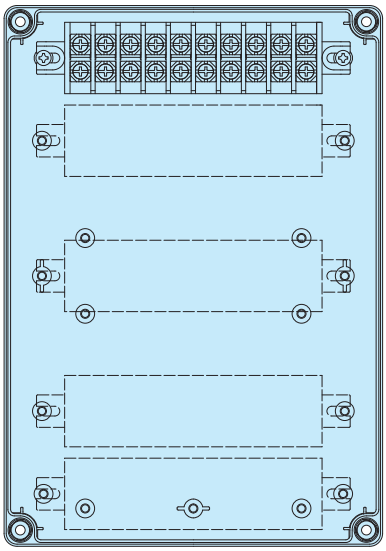
814−10P



815−6P



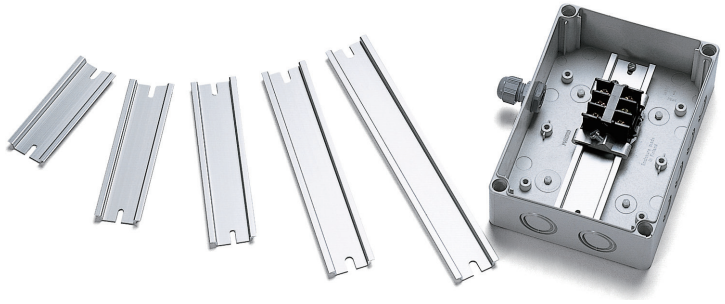
815−10P



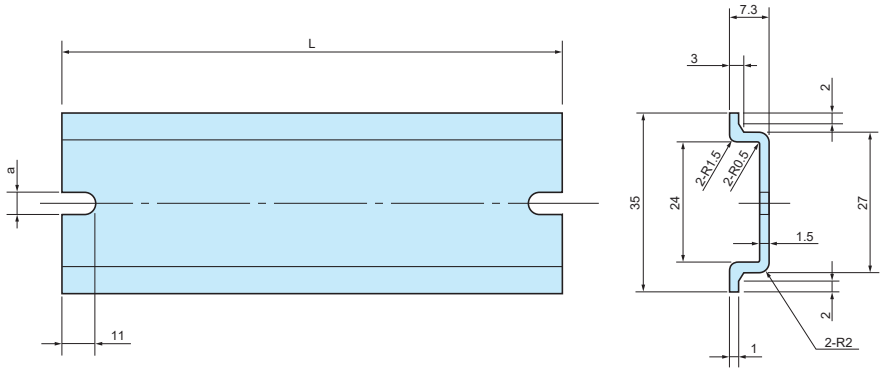
FDR series DIN RAIL

NEW SIZE

Application example



- DIN Rail for installation of terminals, relays, or switches inside enclosures.
- Suitable for DIN Rail types of various manufacturers.



Product no. / Details

Product no.	L	a	Matching boss pitch	Weight
FDR- 50	50	4.2	32 ~ 42	8.6
FDR- 57	57	4.2	39 ~ 49	9.5
FDR- 66	66	4.2	48 ~ 58	10
FDR- 77	77	4.2	59 ~ 69	12
FDR- 80	80	4.2	62 ~ 72	13
FDR- 87	87	4.2	69 ~ 79	14
FDR- 92	92	4.2	74 ~ 84	15
FDR-100	100	4.2	82 ~ 92	17.8
FDR-106	106	4.2	88 ~ 98	19
FDR-110	110	4.2	92 ~ 102	20
FDR-120	120	4.2	102 ~ 112	21
FDR-128	128	4.2	110 ~ 120	23
FDR-137	137	4.2	119 ~ 129	24
FDR-142	142	4.2	124 ~ 134	25
FDR-146	146	4.2	128 ~ 138	26
FDR-150	150	4.2	132 ~ 142	25.8
FDR-168	168	4.2	150 ~ 160	30
FDR-170	170	4.2	152 ~ 162	30
FDR-186	186	4.2	168 ~ 178	32
FDR-202	202	4.2	184 ~ 194	37
FDR-205	205	4.2	187 ~ 197	36
FDR-223	223	4.2	205 ~ 215	39.3
FDR-226	226	4.2	208 ~ 218	39
FDR-235	235	4.2	217 ~ 227	42
FDR-242	242	4.2	224 ~ 234	43
FDR-249	249	4.2	231 ~ 241	43
FDR-283	283	4.2	265 ~ 275	49
FDR-300	300	4.2	282 ~ 292	52
NEW FDR-314	314	4.2	296 ~ 306	51.5
FDR-350	350	4.2	332 ~ 342	60
FDR-400	400	4.2	382 ~ 392	69
FDR-450	450	4.2	432 ~ 442	78
FDR-550	550	4.2	532 ~ 542	94

Product no.	L	a	Matching boss pitch	Weight
NEW FDR-B106	106	6.5	90 ~ 96	17.5
FDR-B124	124	6.5	108 ~ 114	21.4
FDR-B142	142	6.5	126 ~ 132	24
FDR-B160	160	6.5	144 ~ 150	28
FDR-B165	165	6.5	149 ~ 155	28
FDR-B176	176	6.5	160 ~ 166	30
FDR-B183	183	6.5	167 ~ 173	30
FDR-B196	196	6.5	180 ~ 186	33
FDR-B223	223	6.5	207 ~ 213	37
FDR-B256	256	6.5	240 ~ 246	43
FDR-B260	260	6.5	244 ~ 250	45
NEW FDR-B276	276	6.5	260 ~ 266	47.5
FDR-B303	303	6.5	287 ~ 293	52
NEW FDR-B327	327	6.5	311 ~ 317	56.2
FDR-B338	338	6.5	322 ~ 328	57
FDR-B360	360	6.5	344 ~ 350	63
FDR-B376	376	6.5	360 ~ 366	64
FDR-B383	383	6.5	367 ~ 373	65
FDR-B463	463	6.5	447 ~ 453	87
FDR-1000	1,000	–	–	169.5

- Material / Finish: A6063S-T5 / Silver anodized
- FDR-1000 does not have mounting holes.

SSK SERIES POLE MOUNTING BRACKET



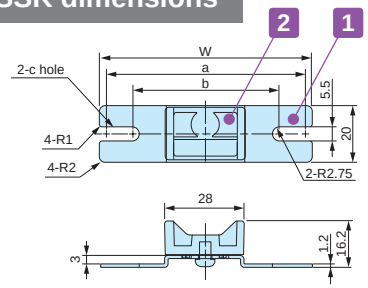


- Stainless steel pole mounting bracket for SPCM • SPCP and BCAL • BCAS series.
- Easy pole mount with the use of SSK-B mounting screw and PKB mounting belt.
- DXF/DWG/PDF drawings available on our website.
- SSK-P models includes plastic mounting brackets.

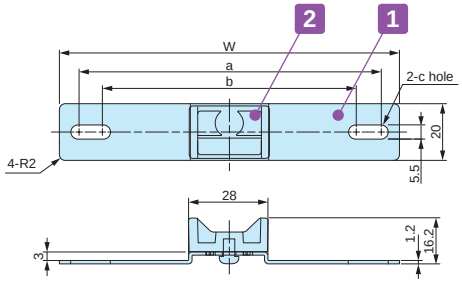


PKB series

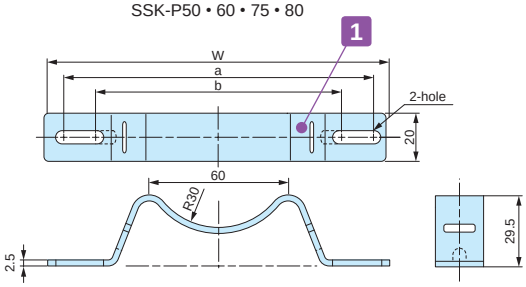
SSK dimensions



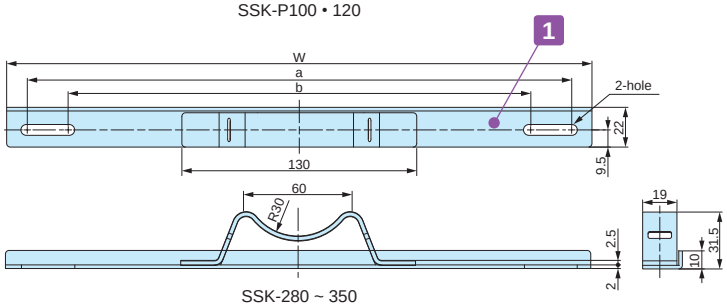
SSK-P50 • 60 • 75 • 80



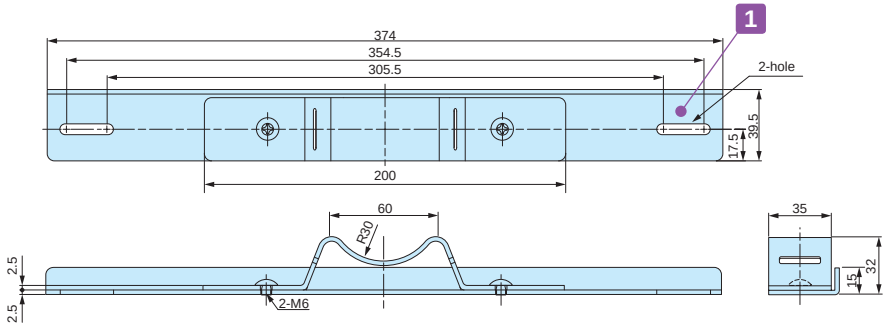
SSK-P100 • 120



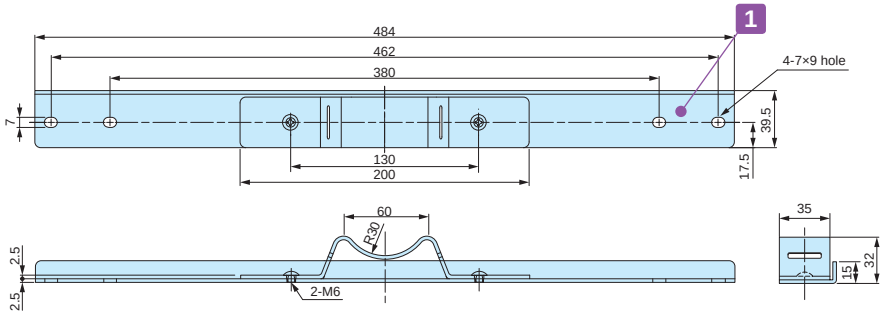
SSK-160 ~ 250



SSK-280 ~ 350



SSK-400



SSK-530

Components

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

■ Screws included with SSK brackets are for BCAP • BCAR • BCPK • BCPR series use only. For other series, please utilize SSK-B screw set.

Product no. / Dimensions

Product no.	W	a	b	c	Suitable mounting belt	Pack of
SSK-P50	50	44.5	37.5	5.5× 9	PKB-10PM, 10P PKB-10S	2
SSK-P60	60	54.5	47.5	5.5× 9	PKB-10PM, 10P PKB-10S	2
SSK-P75	75	69.5	55.5	5.5×12.5	PKB-10PM, 10P PKB-10S	2
SSK-P80	80	74.5	64.5	5.5×10.5	PKB-10PM, 10P PKB-10S	2
SSK-P100	100	88.1	76.5	5.5×11.3	PKB-10PM, 10P PKB-10S	2
SSK-P120	120	106.5	88.5	5.5×14.5	PKB-10PM, 10P PKB-10S	2
SSK-160	142	129.5	106.5	–	PKB-10PM, 10P PKB-10S	2
SSK-170	152	142.3	101	–	PKB-10PM, 10P PKB-10S	2
SSK-200	174	161.5	112.5	–	PKB-10PM, 10P PKB-10S	2
SSK-210	192	180.5	131.5	–	PKB-10PM, 10P PKB-10S	2
SSK-250	230	215.5	166.5	–	PKB-10PM, 10P PKB-10S	2
SSK-280	260	244.5	195.5	–	PKB-10PM, 10P PKB-10S	2
SSK-300	280	264.5	215.5	–	PKB-10PM, 10P PKB-10S	2
SSK-350	324	302.5	253.5	–	PKB-10PM, 10P PKB-10S	2
SSK-400	374	354.5	305.5	–	PKB-20S	2
SSK-530	484	462	380	7×9	PKB-20S	2

SSK-B SERIES MOUNTING SCREW SET for SSK

NEW SIZE

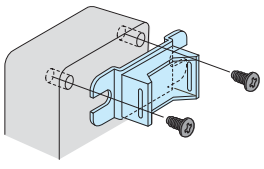
■ Mounting screw set for use with SSK pole mounting bracket.
■ See chart on page SSK-3 for appropriate bracket/screw/box combination.
■ Material / Finish : Stainless steel / Unfinished.

Product no. / Dimensions

Product no.	Included screws	Suitable box	Pcs
SSK-B4-15N	M4-15 Pan head with nut	BCAS060905 ~ 212310	4
SSK-B4-25N	M4-25 Pan head with nut	SPCP • SPCM series	4
SSK-B5-10	M5-10 Pan head	BCAL series	4

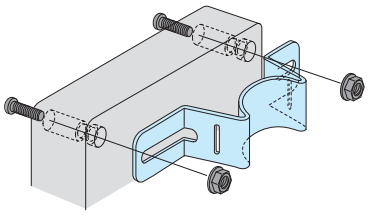
■ Installation Example

BCAS050604, 050605



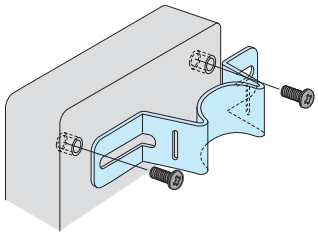
Use screws included with SSK-P

M4 / M5 Pan head with nut fastening



SSK-B4-15N SSK-B4-25N

Pan head screw into insert nut



SSK-B5-10

POLE MOUNTING BRACKET / SCREW SET MATCHING CHART

SPCM • SPCP series

Box Product no.		SSK Product no.		Screw set Product no.
		Vertical mount	Horizontal mount	
SPCP SPCM	081304, 081305 081306, 081308 081310, 081313	SSK-P75	SSK-160	SSK-B4-25N
	101004, 101006	SSK-P100	SSK-P100	SSK-B4-25N
	131304, 131305 131306, 131308 131310, 131313	SSK-160	SSK-160	SSK-B4-25N
	131804, 131805 131806, 131808 131810, 131813, 131815	SSK-160	SSK-200	SSK-B4-25N
	181808, 181810 181813, 181815	SSK-200	SSK-200	SSK-B4-25N
	182508, 182510, 182515	SSK-200	SSK-280	SSK-B4-25N

BCAL series

Box Product no.		SSK Product no.		Screw set Product no.
		Vertical mount	Horizontal mount	
BCAL	191913 ※	SSK-P120	SSK-200	SSK-B5-10
	192813, 192818	SSK-200	SSK-250	SSK-B5-10
	193813, 193818	SSK-200	SSK-350	SSK-B5-10
	282813	SSK-250	SSK-280	SSK-B5-10
	283413	SSK-280	SSK-280	SSK-B5-10
	283813, 283818	SSK-280	SSK-350	SSK-B5-10
	285613	SSK-280	SSK-530	SSK-B5-10
	385618	SSK-400	SSK-530	SSK-B5-10

※Use screws included with SSK bracket for vertical mount

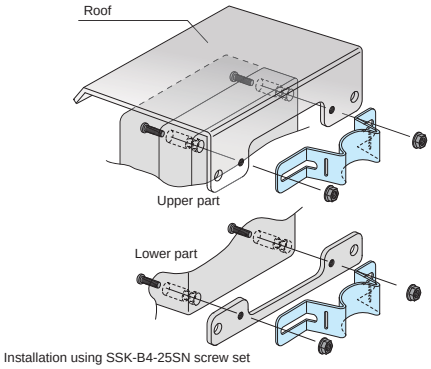
BCAS series

Box Product no.		SSK Product no.		Screw set Product no.
		Vertical mount	Horizontal mount	
BCAS	050604, 050605	SSK-P50	SSK-P60	Use screws included with SSK bracket
	060905	SSK-P60	SSK-P100	SSK-B4-15N
	071005 ※	SSK-P75	SSK-P100	SSK-B4-15N
	080806	SSK-P75	SSK-P75	SSK-B4-15N
	081104, 081107 081108, 081110	SSK-P75	SSK-P120	SSK-B4-15N
	081307, 081308	SSK-P75	SSK-160	SSK-B4-15N
	081807, 081808	SSK-P75	SSK-210	SSK-B4-15N
	082507, 082508	SSK-P75	SSK-280	SSK-B4-15N
	101007, 101010	SSK-P100	SSK-P100	SSK-B4-15N
	101807	SSK-P100	SSK-210	SSK-B4-15N
	102007	SSK-P100	SSK-250	SSK-B4-15N
	102307	SSK-P100	SSK-250	SSK-B4-15N
	121207, 121210	SSK-P120	SSK-200	SSK-B4-15N
	141709	SSK-160	SSK-200	SSK-B4-15N
	142309	SSK-160	SSK-250	SSK-B4-15N
	151507, 151510	SSK-170	SSK-170	SSK-B4-15N
	152004, 152007 152020, 152013, 152016	SSK-170	SSK-250	SSK-B4-15N
	152510, 152513	SSK-170	SSK-280	SSK-B4-15N
	161607	SSK-170	SSK-170	SSK-B4-15N
	202010, 202013 202016, 202019	SSK-250	SSK-250	SSK-B4-15N
	212310	SSK-250	SSK-250	SSK-B4-15N

※Use screws included with SSK bracket for vertical mount

■ **For installation of SR series outdoor roof on SPCM • SPCP series**

SR series (For SPCM • SPCP - see page SPCP • SPCM-ACC-2)

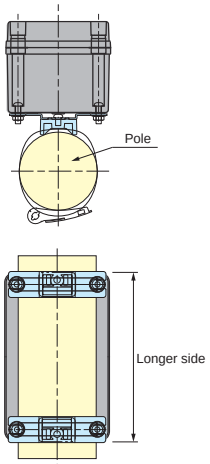


Installation using SSK-B4-25SN screw set

■ **Select SSK bracket depending on mounting type (Vertical or Horizontal).**

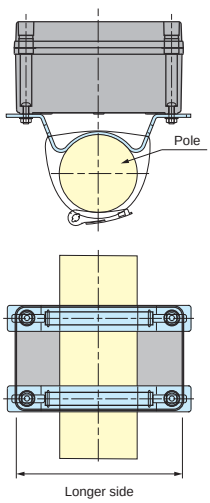
Vertical mount

(Longer vertical side)



Horizontal mount

(Longer horizontal side)



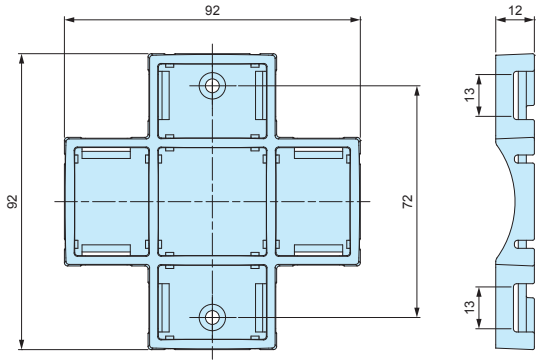
WPMB-M4-3 series POLE MOUNTING BRACKET



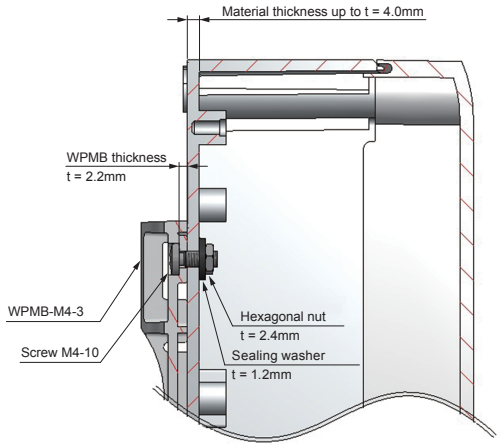
- Pole mount bracket made from weather resistant ASA material.
- Suitable for both vertical and horizontal mounting.
- IPX7 protection can be maintained through the use of sealing washers.
- Hole milling is required for bracket installation.
- Pole mount is possible with the use of PKB series mounting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

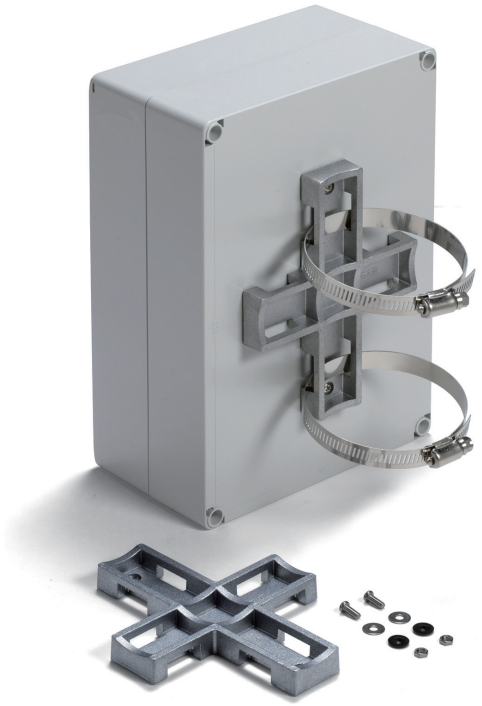
Product no. / Dimensions

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.

WGMB-2SW POLE MOUNTING BRACKET

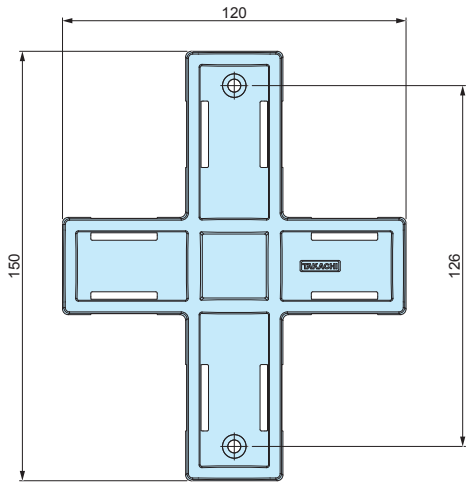
NEW

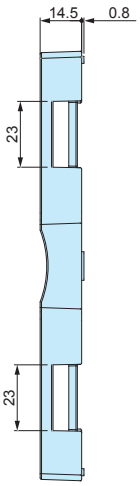


- Pole mount bracket made from robust diecast aluminium.
- Bracket can be mounted on both vertically, and horizontally.
- Sealing washers enables the installation to have a protection class equivalent to IPX7, X5.
- Hole milling on enclosures is required when installing mounting bracket.
- Pole mount is possible with the use of SNB or PKB series mounting belt. (See page 323 ~ 324)
- Installation can be done on a variety of enclosures made from plastic, diecast aluminium or stainless steel.

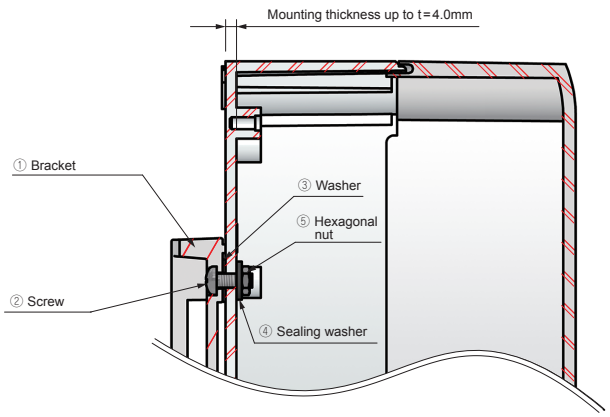
WGMB-2SW dimensions

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





Installation example



Components

No.	Part name	Pcs	Material	Color / Finish
1	Bracket	1	Diecast aluminium ADC12	Natural / Shot blast
2	Screw (Pan head M4-10)	2	Stainless steel	Unfinished
3	Washer	2	Stainless steel	Unfinished
4	Sealing washer	2	NBR, SPCC	Black
5	Hexagonal nut (M4-JIS Type3)	2	Stainless steel	Unfinished

Product no. / Details

Product no.	Mounting thickness	Recommended torque	Weight (g)
WGMB-2SW	Up to t=4.0mm	0.45N • m ~ 0.5N • m	130

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

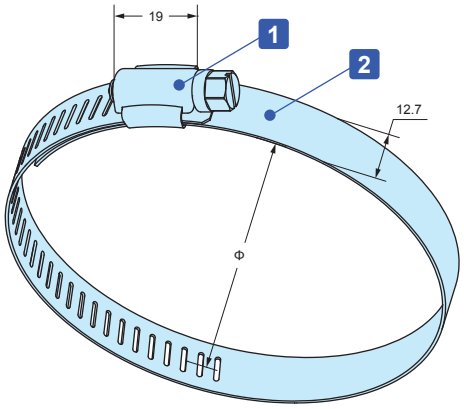
SNB series STAINLESS STEEL POLE MOUNTING STRAP







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

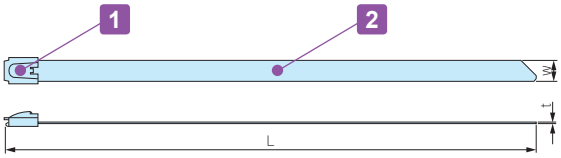
Suitable series	Suitable models						Required
SSK series	SSK-S1	SSK-160	SSK-170	SSK-200	SSK-210	SSK-250	2
	SSK-280	SSK-300	SSK-350	SSK-400	SSK-530		
WGMB series	WGMB-1W						1

SCT series STAINLESS STEEL TIES for POLE MOUNTING

NEW







- Corrosion resistant stainless steel (SUS304) cable tie.
- Can be used to bundle cables or mounting enclosures to poles.
- Self-locking bracket allows easy mounting / cable bundling.
- Designed for one time use only (not reusable).

- Suitable for easy mounting.
- Wear gloves or other protections while installation.

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.	W	L	t	Pack of
SCT 4.6- 100	4.6	100	0.25	10
SCT 4.6- 150	4.6	150	0.25	10
SCT 4.6- 200	4.6	200	0.25	10
SCT 4.6- 300	4.6	300	0.25	10
SCT 4.6- 500	4.6	500	0.25	2
SCT 4.6-1000	4.6	1,000	0.25	2
SCT 4.6-1500	4.6	1,500	0.25	2
SCT 7.9- 100	7.9	100	0.25	10
SCT 7.9- 150	7.9	150	0.25	10
SCT 7.9- 200	7.9	200	0.25	10
SCT 7.9- 300	7.9	300	0.25	10
SCT 7.9- 500	7.9	500	0.25	2
SCT 7.9-1000	7.9	1,000	0.25	2
SCT 7.9-1500	7.9	1,500	0.25	2

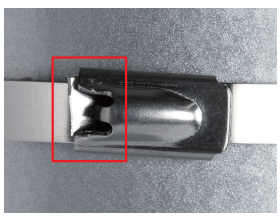
G3388 TIGHTEN GUN for SCT

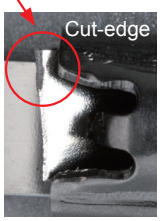
NEW



Note: Tighten gun is not subject to RoHS regulations.

- Tool for cutting and tightening stainless steel strap.
  *Be careful of the sharp cut-edge of strap.





Product no.
G3388

PKB series POLE MOUNTING BELT



PKB−10PM, 10P



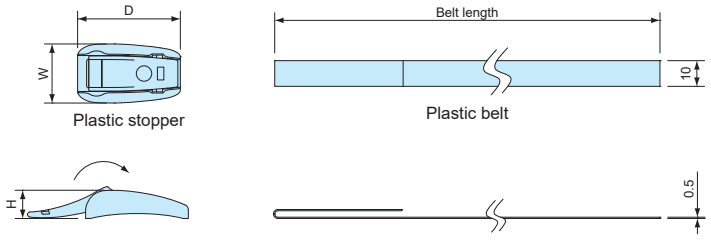
PKB−10S, 20S

- 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.

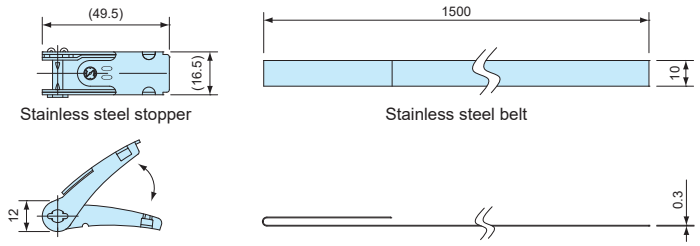
PKB dimensions

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

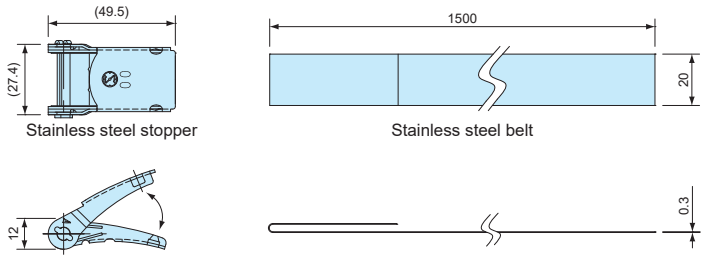
PKB-10PM, 10P



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

PMF series PROTECTIVE VENT

Pressure Equalization / Ventilation



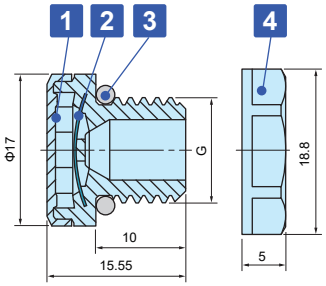


Application Example

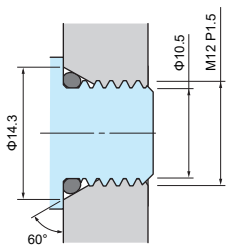
- Protective vent protects the enclosure from deformation by equalizing internal and external pressure differences, as well as venting the gas generated within the enclosure.
- IP68 protection class (water depth 2 meters / 60 mins) with an operating temperature range -40°C ~ +125°C allows them to be 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

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

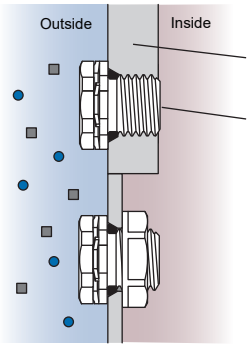


Hole milling drawings



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

Installation drawings



- 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 SW
● Light gray	● Black	1 Housing	2 Filter	3 O-ring	4 Lock nut	Thread size	Mount hole	
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

IP68 IP69K



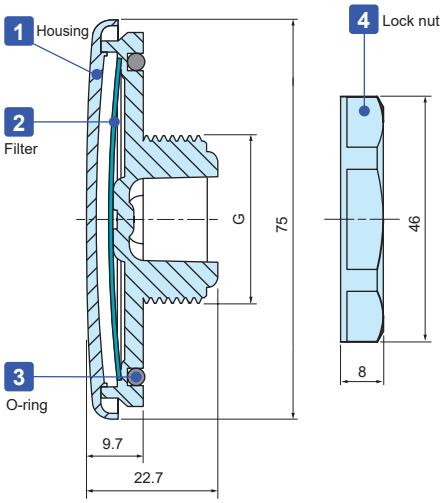


Application Example

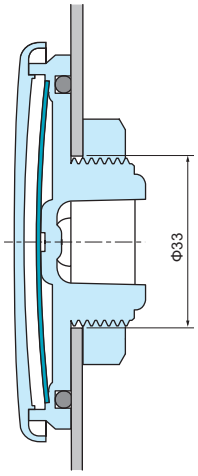
- Maintains exceptionally high airflow in extra-large enclosures with volumes of up to 200 liters in an outdoor environment.
- Protective vent protects the enclosure from deformation by equalizing internal and external pressure differences, as well as venting the gas generated within the enclosure.
- 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.

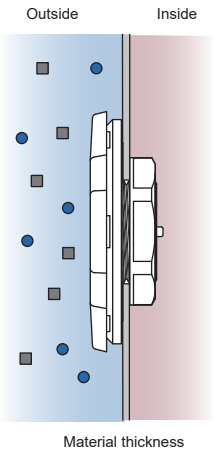
PMF-32 dimensions



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



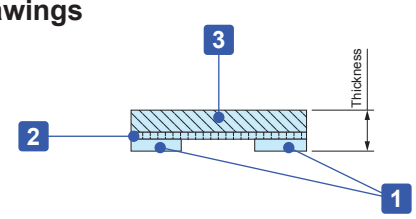
Technical Data
Protection class : Dustproof IP6X Waterproof IPX4, IPX7 Airflow : 3,300ml/min/cm2 (at 7Kpa) Operating temperature : -40°C ~ +100°C

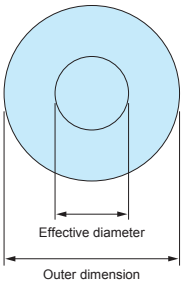
- Vent filter protects the enclosure from deformation by equalizing internal and external pressure differences, as well as venting the gas generated within the enclosure.
- Allows water vapor molecules to diffuse through the microporous membrane.
- Highly water and oil repellent membrane protects electronic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

CAUTION

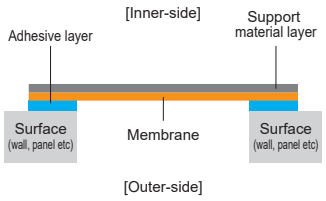
- Install only on the inner surface of the case / box with the membrane and adhesive side facing outwards.
- An initial period of 24 hours is required for the adhesive to properly bond to the surface. Avoid using the vent filter with a heavy load.
- Please do not adhere onto the top-side of enclosures. 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



Adhesive type protective vent filter can be installed on any flat surface.

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)

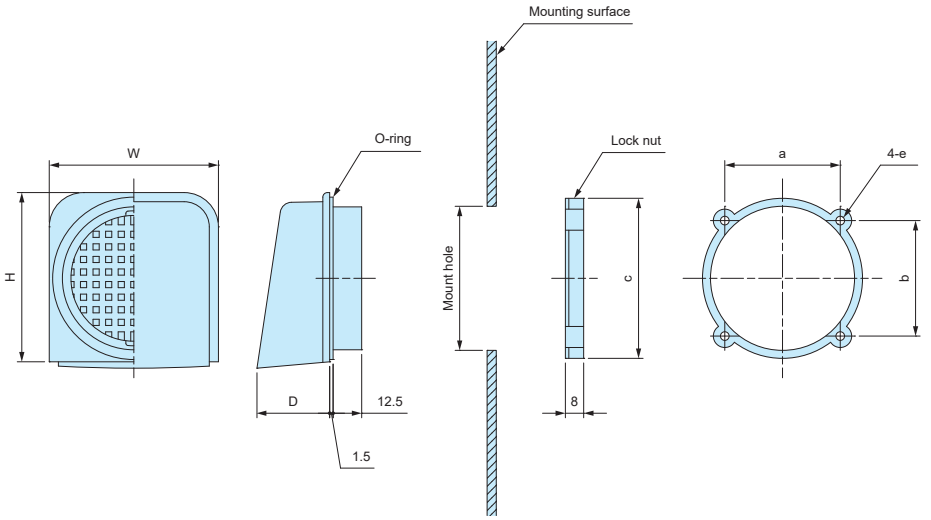
V series VENTILATION LOUVER



- 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

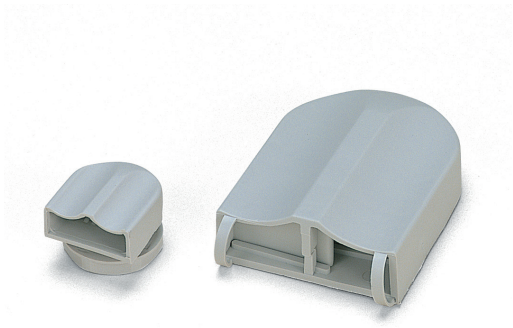
Product no.	Material	Color	Mount hole	W	H	D	a	b	c	e
V60	ABS	White gray	Φ63	74	74	31.8	50.5	50.5	70	Φ3.8
V80	ABS	White gray	Φ88	100	100	37	71.5	71.5	94.8	Φ3.3
V60S	Polycarbonate	Light gray	Φ63	74	74	31.8	50.5	50.5	70	Φ3.8
V80S	Polycarbonate	Light gray	Φ88	100	100	37	71.5	71.5	94.8	Φ3.3

■ O-ring material : EPDM / Black

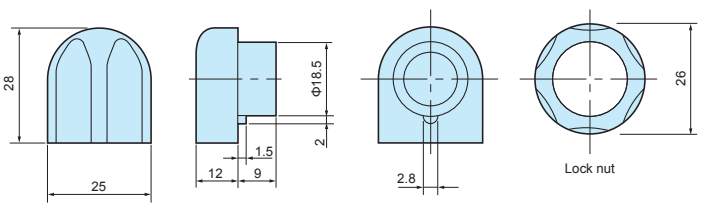
VF series VENTILATION PARTS

VF dimensions

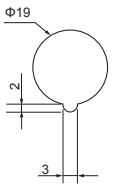
■ DXF/DWG/PDF drawings available on our website.



VF-1



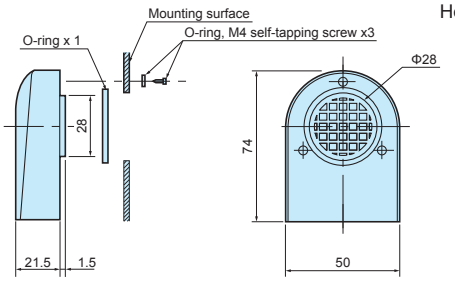
Hole layout for mounting



Technical Data

Protection class : VF-1 IP33
VF-2 IP24

VF-2

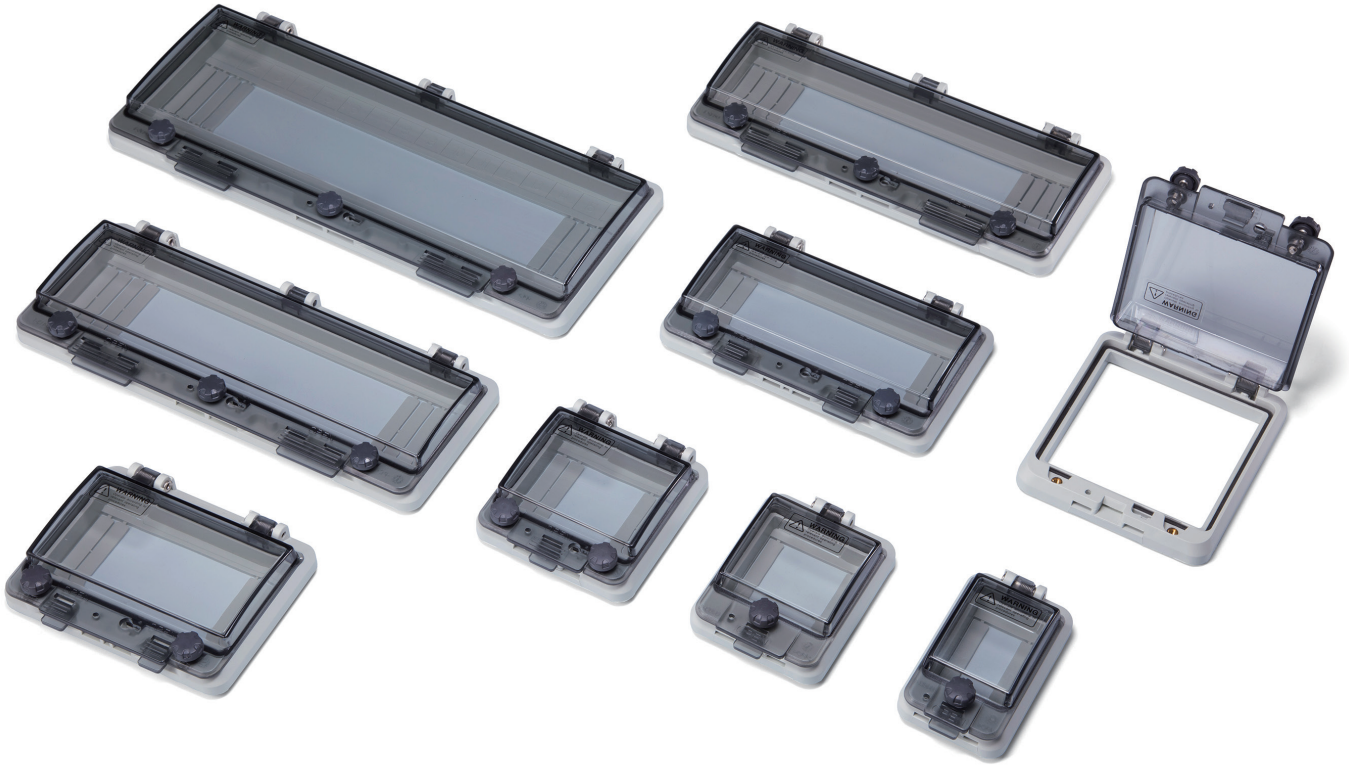


Hole layout for mounting

Product no. / Details

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

IW series HINGED INSPECTION WINDOW





IP64 IP54

Technical Data

Protection class : IP64
IW0412B
IW0413B
IW0416B
IW0416A
IP54 Category 2*
(*Prevents dust ingress with no negative pressure inside)
Operating temperature : -20°C ~ +75°C
Recommended torque to install : 1.1N • m ~ 1.5N • m
Required panel thickness to install : 2.0 ~ 6.0mm

- IP64 water resistant see-through hinged inspection window.
- Smartly designed window for protection of switches and displays, etc.
  Use in situations where component status, access and maintenance is necessary.
- Knurled thumb screws for easy securing.

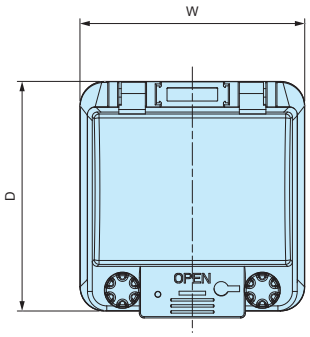
- Be careful not to get fingers caught on the spring loaded self-closing cover.
- See TECHNICAL INFORMATION on our website for more information on the protection class IP rating.

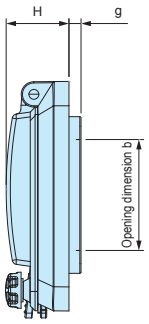
Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	Polycarbonate UL94V-2	Smoke gray
2	Base	1	PC + ABS UL94V-0	Light gray
3	Gasket	2	Polyurethane	Black
4	Knurled thumb screw	1 / 2 / 3	PC + ABS • Stainless steel	Black • Unfinished
–	Screw	4 / 6 / 8	Steel	Zinc plated

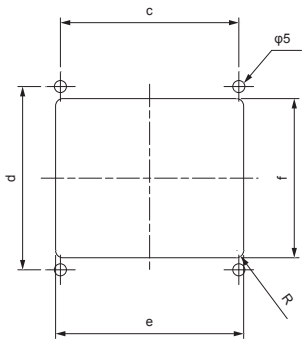
IW dimensions

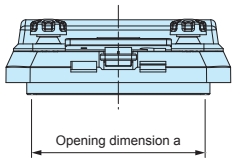
■ DXF/DWG/PDF drawings available on our website.





Hole layout for mounting





Product no. / Details

Product no.	W	D	H	a	b	c	d	e	f	g	Weight (g)
IW0402B	57.2	95.2	(26)	36	46	38	76	42	62	5	69
IW0403B	75.2	95.2	(26)	54	46	56	76	60	62	5	82
IW0404B	93.2	95.2	(26)	72	46	74	76	78	66	5	98
IW0405B	107.2	121.7	(31)	86.8	87.2	88	102	92	92	—	114
IW0406B	129.2	95.2	(26)	108	46	105	76	114	66	5	122.5
IW0408B	165.2	95.2	(26)	144	46	140	76	149	66	5	145
IW0412B	237.2	95.2	(26)	216	46	213	76	221	66	5	202
IW0413B	255.2	95.2	(26)	234	46	230	76	239	66	5	215
IW0416B	309.2	95.2	(26)	288	46	282	76	293	66	5	254
IW0416A	309.2	125.2	(26)	288	46	282	106	293	96	5	314

APPLICATION EXAMPLE

Circuit Breaker Cover



Connector Cover



Command Panel Cover

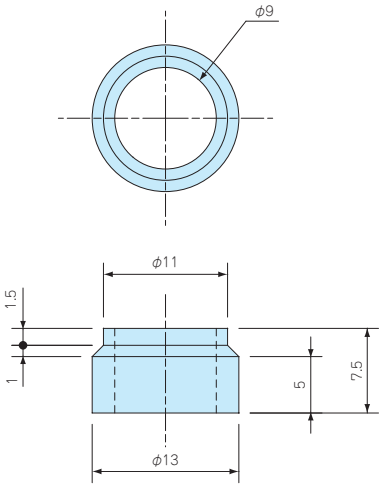


Switch Cover



RB-9 RUBBER BUSH



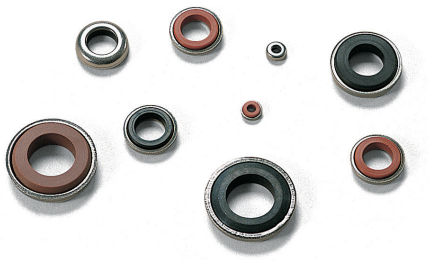


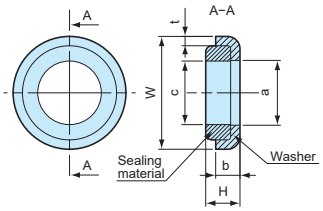
- Rubber bush for TMC series terminal junction box.
- Applicable for Φ8 ~ Φ9mm diameter cable.

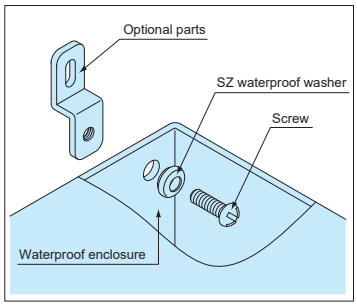
Product no. / Details

Product no.	Material	Color	Cable range	Pack of
RB-9	NBR	Black	Φ8 ~ Φ9mm	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) / 1hour

Product no. / Details

- Shape of the sealing material vary by product.

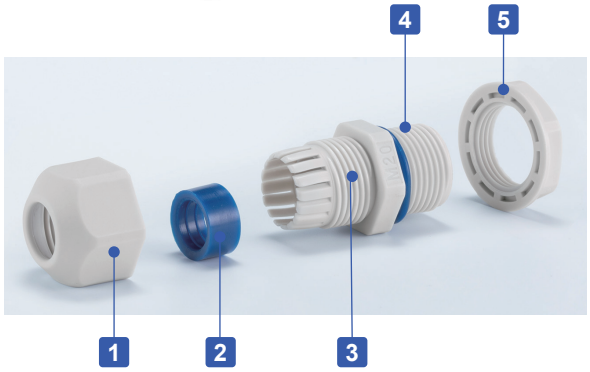
Product no.	W	H	a	b	c	t	Washer material	Sealing material	Color	Screw size	Pack of
SZ- 3N	7	2.7	3.2	2.2	3.1	0.5	SUS304	NBR	Black	M 3	1
SZ- 3S	7	2.7	3.2	2.2	3.1	0.5	SUS304	Silicone	Brown	M 3	1
SZ- 4N	8	2.8	4.2	2.1	4.1	0.5	SUS304	NBR	Black	M 4	1
SZ- 4S	8	2.8	4.2	2.1	4.1	0.5	SUS304	Silicone	Brown	M 4	1
SZ- 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

RMW series WEATHERPROOF CABLE GLAND





IP67



- Weatherproof cable gland equipped with high ultraviolet and degradation resistant silicone sealing insert and O-ring.
- Recommended to use outdoors where waterproofing is critical.
- Protection class equivalent to IP67.

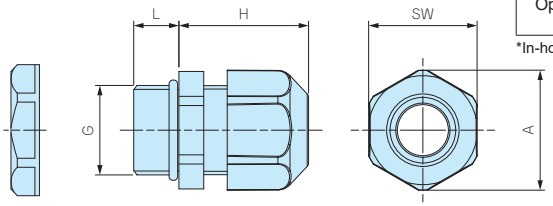
Components

■ PA = Polyamide

No.	Part name	Material
1	Cap	PA66 UL94V-2
2	Sealing insert	Silicone
3	Connector	PA66 UL94V-2
4	O-ring	Silicone
5	Lock nut	PA66 UL94V-2

RMW dimensions

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



Technical Data
Protection class : Equivalent to IP67*
Operating temperature : -20°C ~ +80°C

*In-house test

- Lock nut is not included for RMW10S-6.
  Please drill a proper thread hole into the enclosure for installation.

Cap design varies by size



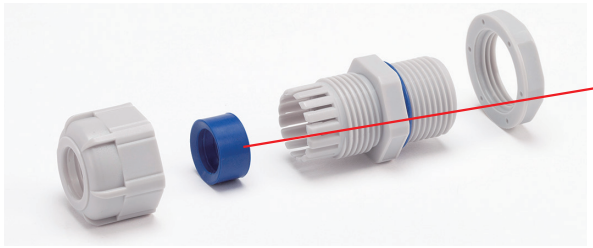
RMW40 or smaller | RMW50

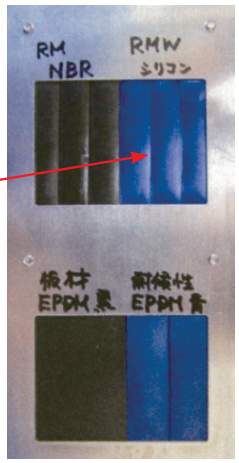
Product no. / Details

Product no.		G		Cable range		L	H Max	SW	A	Pack of
● Black	● Light gray	Thread size	Mounting hole	Min	Max					
RMW8L-2.5B	RMW8L-2.5S	M8×1.25	Φ8.2	1	2.5	13	19.5	12	13.6	1
RMW8L-4B	RMW8L-4S	M8×1.25	Φ8.2	2.5	4	13	19.5	12	13.6	1
RMW10S-6B	RMW10S-6S	M10×1.5	—	3	6	8	20.5	13	14.6	1
RMW10L-6B	RMW10L-6S	M10×1.5	Φ10.2	3	6	13	20.5	13	14.6	1
RMW12S-7B	RMW12S-7S	M12×1.5	Φ12.2	3.5	7	9	20.5	16	17.7	1
RMW12L-7B	RMW12L-7S	M12×1.5	Φ12.2	3.5	7	14.5	20.5	16	17.7	1
RMW16S-8B	RMW16S-8S	M16×1.5	Φ16.2	4	8	9	23.5	19.2	21.3	1
RMW16L-8B	RMW16L-8S	M16×1.5	Φ16.2	4	8	15	24	19.2	21.3	1
RMW20S-12B	RMW20S-12S	M20×1.5	Φ20.2	6	12	10	29	24.3	26.8	1
RMW20L-12B	RMW20L-12S	M20×1.5	Φ20.2	6	12	15	28.5	24.3	26.8	1
RMW25L-17B	RMW25L-17S	M25×1.5	Φ25.2	11	17	15	35	33.3	36.8	1
RMW32L-21B	RMW32L-21S	M32×1.5	Φ32.3	13	21	15	38	36.1	39.8	1
RMW40L-27B	RMW40L-27S	M40×1.5	Φ40.3	18	27	18	43.5	46.1	51.2	1
RMW50L-38B	RMW50L-38S	M50×1.5	Φ50.4	27	38	20	50.5	60	66.5	1
RMW10L-6B-P	RMW10L-6S-P	M10×1.5	Φ10.2	3	6	13	20.5	13	14.6	100
RMW12S-7B-P	RMW12S-7S-P	M12×1.5	Φ12.2	3.5	7	9	20.5	16	17.7	100
RMW12L-7B-P	RMW12L-7S-P	M12×1.5	Φ12.2	3.5	7	14.5	20.5	16	17.7	100
RMW16S-8B-P	RMW16S-8S-P	M16×1.5	Φ16.2	4	8	9	23.5	19.2	21.3	100
RMW16L-8B-P	RMW16L-8S-P	M16×1.5	Φ16.2	4	8	15	24	19.2	21.3	100
RMW20S-12B-P	RMW20S-12S-P	M20×1.5	Φ20.2	6	12	10	29	24.3	26.8	100
RMW20L-12B-P	RMW20L-12S-P	M20×1.5	Φ20.2	6	12	15	28.5	24.3	26.8	100

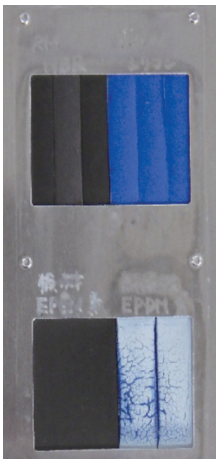
RMW series silicone sealing insert weatherproof test report

Object: Cut into a piece of the silicone sealing insert from RMW series and attach it onto an aluminium plate.
For comparison, NBR sealing insert from our RM and EPDM sealing insert from another manufacturer is also attached.





Before



After

Testing conditions

Equipment : 7.5kW Super Xenon Weather Meter SX75 (Suga Test Instruments Co., Ltd.- http://www.sugatest.co.jp/english/)

Conditions : JIS B7754 : 1991
Testing with an authorized Xenon arc lamp weathering test equipment under the conditions denoted below.
Irradiance : 180W/m^2 at 300-400nm
Black Panel Temperature : 63±3°C Humidity Range : 50±10%
Cycle Conditions : 120 minutes cycle (18 minutes irradiation + water spray - 102 minutes irradiation)

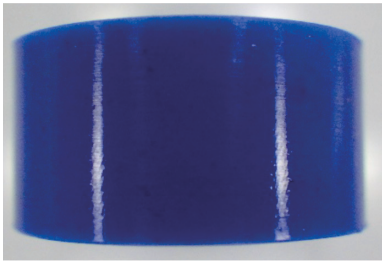
Time period : 2,000 hours (equivalent to a period of 4 years under natural conditions)

Total radiant exposure : 1296MJ/m^2

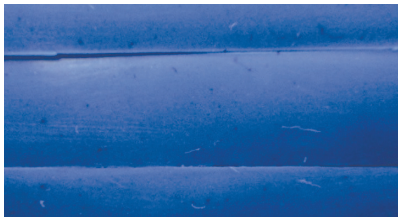
Test result (visual / touch inspection)

Silicone sealing insert material : No cracks, no gloss transition, no powder - no appearance change at all. Flexibility remains unchanged.

Before



After



NBR material from our RM series : Lost glossiness on the surface and material is stiffened.

Before

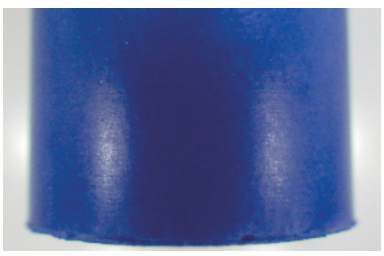


After

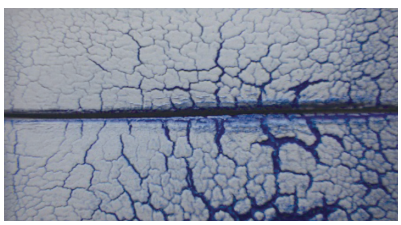


EPDM material from weatherproof cable gland of another manufacturer : Cracked, color drastically faded and powder appeared on the surface.

Before

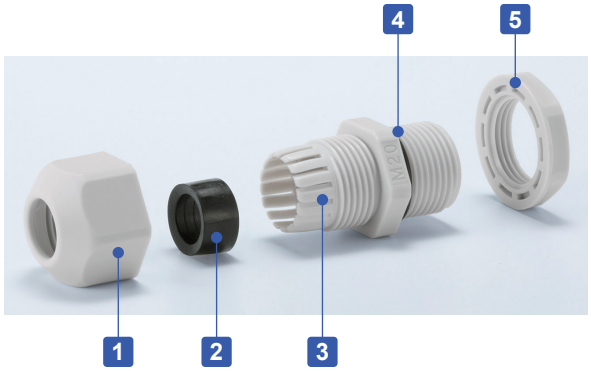


After



RM series POLYAMIDE CABLE GLAND





- Low cost cable glands made from polyamide material.
- Wide selection, for M8 ~ M63, suitable for Φ1mm ~ Φ44 mm cable.
- High oil resistant NBR rubber sealing and O-ring.
- Protection class equivalent to IP67.

Technical Data
Protection class : Equivalent to IP67* Operating temperature : -20°C ~ +80°C

*In-house test

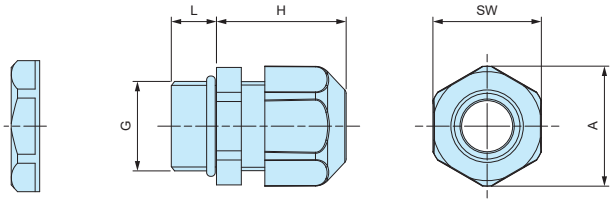
Components

■ PA = Polyamide

No.	Part name	Material
1	Cap	PA66 UL94V-2
2	Sealing insert	NBR
3	Connector	PA66 UL94V-2
4	O-ring	NBR
5	Lock nut	PA66 UL94V-2

RM dimensions

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



■ Lock nut is not included for RM8S-2.5, 8S-4, and 10S-6 models.
Please drill an appropriate thread hole into the enclosure for installation.

Cap design varies by size



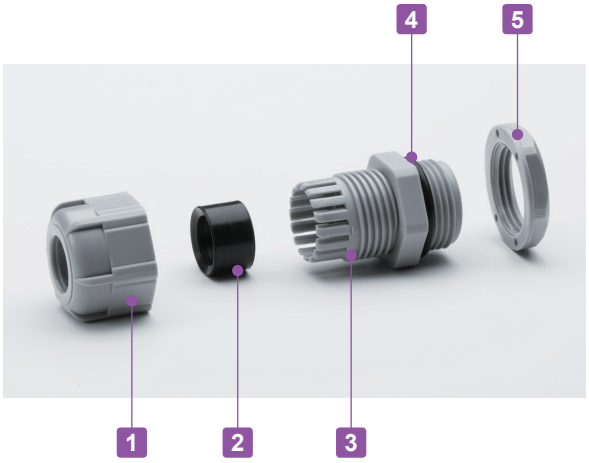
RM40 or smaller | RM50 or larger

Product no. / Details

Product no.		G		Cable range		L	H Max	SW	A	Pack of
● Black	● Light gray	Thread size	Mounting hole	Min	Max					
RM8S-2.5B	RM8S-2.5S	M8×1.25	—	1	2.5	7.5	19.5	12	13.6	1
RM8L-2.5B	RM8L-2.5S	M8×1.25	Φ8.2	1	2.5	13	19.5	12	13.6	1
RM8S-4B	RM8S-4S	M8×1.25	—	2.5	4	7.5	19.5	12	13.6	1
RM8L-4B	RM8L-4S	M8×1.25	Φ8.2	2.5	4	13	19.5	12	13.6	1
RM10S-6B	RM10S-6S	M10×1.5	—	3	6	8	20.5	13	14.6	1
RM10L-6B	RM10L-6S	M10×1.5	Φ10.2	3	6	13	20.5	13	14.6	1
RM12S-7B	RM12S-7S	M12×1.5	Φ12.2	3.5	7	9	20.5	16	17.7	1
RM12L-7B	RM12L-7S	M12×1.5	Φ12.2	3.5	7	14.5	20.5	16	17.7	1
RM16S-8B	RM16S-8S	M16×1.5	Φ16.2	4	8	9	23.5	19.2	21.3	1
RM16L-8B	RM16L-8S	M16×1.5	Φ16.2	4	8	15	24	19.2	21.3	1
RM20S-12B	RM20S-12S	M20×1.5	Φ20.2	6	12	10	29	24.3	26.8	1
RM20L-12B	RM20L-12S	M20×1.5	Φ20.2	6	12	15	28.5	24.3	26.8	1
RM25L-17B	RM25L-17S	M25×1.5	Φ25.2	11	17	15	35	33.3	36.8	1
RM32L-21B	RM32L-21S	M32×1.5	Φ32.3	13	21	15	38	36.1	39.8	1
RM40L-27B	RM40L-27S	M40×1.5	Φ40.3	18	27	18	43.5	46.1	51.2	1
RM50L-38B	RM50L-38S	M50×1.5	Φ50.4	27	38	20	50.5	60	66.5	1
RM63L-44B	RM63L-44S	M63×1.5	Φ63.4	37	44	20	53	68	75.5	1
RM10L-6B-P	RM10L-6S-P	M10×1.5	Φ10.2	3	6	13	20.5	13	14.6	100
RM12S-7B-P	RM12S-7S-P	M12×1.5	Φ12.2	3.5	7	9	20.5	16	17.7	100
RM12L-7B-P	RM12L-7S-P	M12×1.5	Φ12.2	3.5	7	14.5	20.5	16	17.7	100
RM16S-8B-P	RM16S-8S-P	M16×1.5	Φ16.2	4	8	9	23.5	19.2	21.3	100
RM16L-8B-P	RM16L-8S-P	M16×1.5	Φ16.2	4	8	15	24	19.2	21.3	100
RM20S-12B-P	RM20S-12S-P	M20×1.5	Φ20.2	6	12	10	29	24.3	26.8	100
RM20L-12B-P	RM20L-12S-P	M20×1.5	Φ20.2	6	12	15	28.5	24.3	26.8	100
RM25L-17B-P	RM25L-17S-P	M25×1.5	Φ25.2	11	17	15	35	33.3	36.8	100

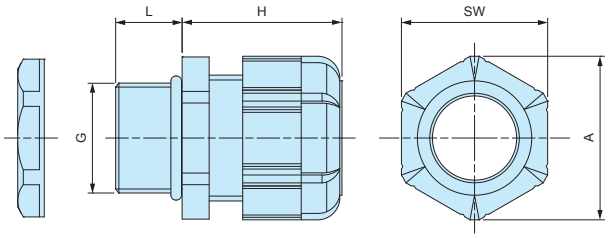
RPG SERIES POLYAMIDE CABLE GLAND





- Inexpensive cable glands made from polyamide material with PG threading.
- High oil resistant NBR rubber sealing and O-ring.
- IP67 protection class.

RPG dimensions



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

Components

- PA = Polyamide

No.	Part name	Material
1	Cap	PA66 UL94V-2
2	Sealing insert	NBR
3	Connector	PA66 UL94V-2
4	O-Ring	NBR
5	Lock-nut	PA66 UL94V-2

Technical Data

Protection class: IP67
Operating temperature: -20°C ~ +80°C

Product no. / Dimensions

Product no.		G			Cable range		L	H Max	SW	A	Pack of
● Black	● Gray	Thread size	Thread dia.	Mounting hole	Min	Max					
RPG7-7B	RPG7-7G	PG7	12.5	Φ12.7	3	7	9	20.5	16	17.7	1
RPG9-8B	RPG9-8G	PG9	15.2	Φ15.4	4	8	9	23.5	19	21	1
RPG11-10B	RPG11-10G	PG11	18.6	Φ18.8	5	10	9	26	22	24	1
RPG13.5-11B	RPG13.5-11G	PG13.5	20.4	Φ20.6	6	11	10	29	24	26.4	1
RPG16-14B	RPG16-14G	PG16	22.5	Φ22.7	8	14	10	30	26.7	29.5	1
RPG21-18B	RPG21-18G	PG21	28.3	Φ28.5	13	18	12	35	33	36.5	1
RPG29-25B	RPG29-25G	PG29	37	Φ37.2	18	25	12	41.5	42	46.5	1

AG series HIGH WATER PROTECTION CABLE GLAND

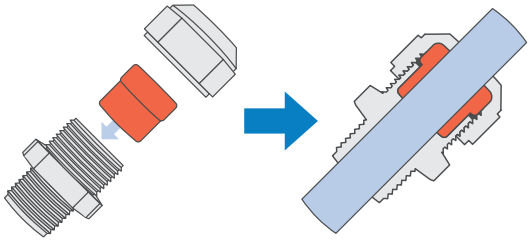


- High water protection IP68 (1bar / 30min) polyamide cable gland.
- Wide selection, for M8 ~ M50, suitable for Φ2.5mm ~ Φ42 mm cable.
- Super tough and superior heat resistant PA6GF (glass fiber filled PA6) material on cap and connector.
- Safer halogen free, eco-friendly product.

Technical Data
Protection class : IP68 1bar / 30min Operating temperature : -20°C ~ +100°C Compliant with EN50262 Ver. A

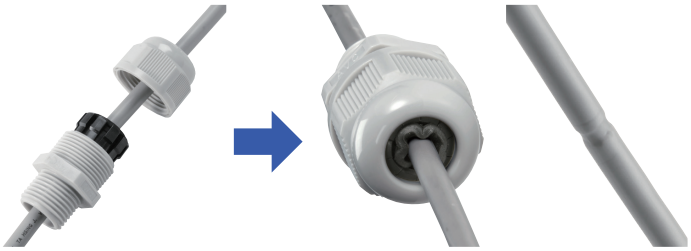
AG series

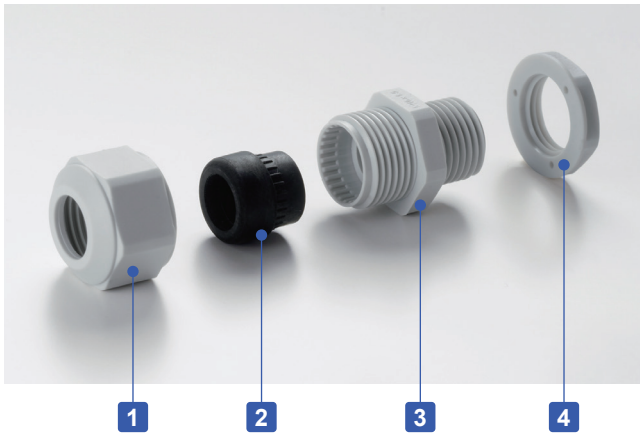
Thicker sealing insert evenly hold a cable by having a larger holding area. Remains durable even after repeated tightening / loosening.



Lamellar insert type

If over-tightened, it can cause the rubber bush or cable to deform, which can allow water to seep in.





Components

■ PA6GF = Polyamide6 Glass Fiber Filled

No.	Part name	Material
1	Cap	PA6GF
2	Sealing insert	TPE
3	Connector	PA6GF
4	Lock nut	PA6

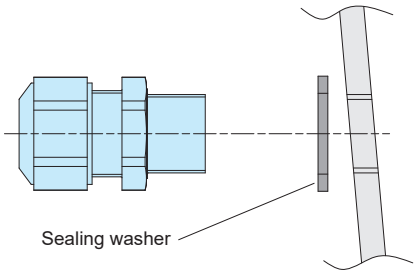
■ Lock nut is not included for M8 and M10 sizes.
Please drill an appropriate thread hole into the enclosure for installation.

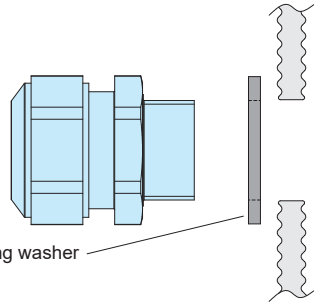
■ Appropriate tightening torque varies by each cable diameter. Tighten the cap until top of the sealing insert forms a small bead between the cap and the cable.



■ No optional sealing washer is required when installing on an even surface because of the built-in waterproof rib.

■ An optional sealing washer is required when installing on an uneven surface. (See website for more information on the optional sealing washer AGP series)



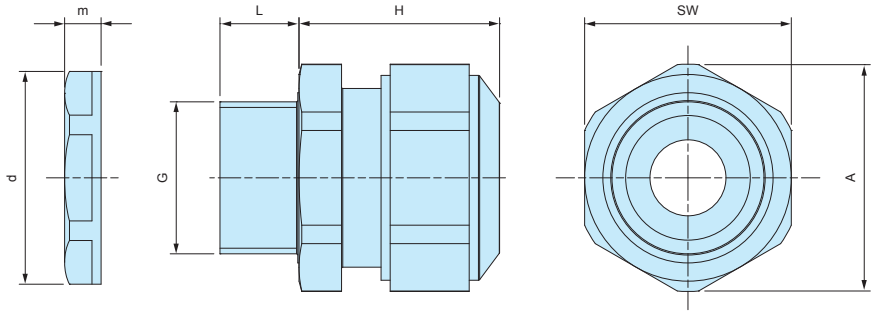






AG dimensions

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

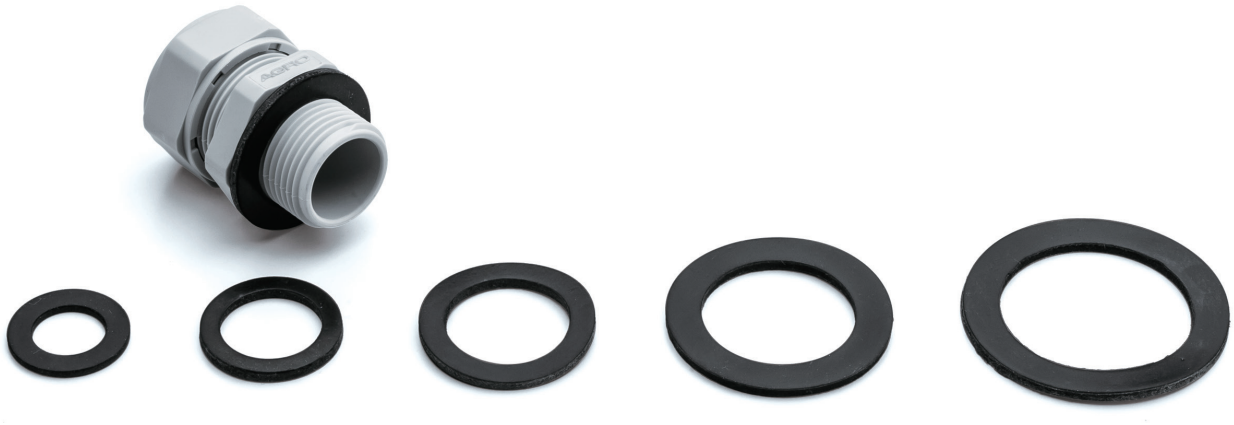


■ Lock nut is not included for M8 and M10 sizes.
Please drill an appropriate thread hole into the enclosure for installation.

Product no. / Details

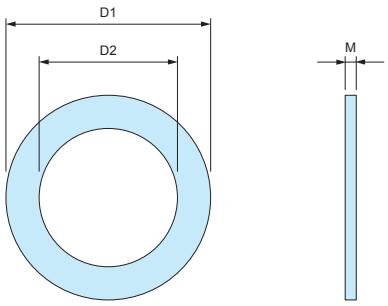
Product no.		G		Cable range		L	H Max	SW	A	d	m	Pack of
● Black	● Light gray	Thread size	Mounting hole	Min	Max							
AG8-3.5B	AG8-3.5S	M8×1.0	—	2.5	3.5	10	17	12	13.2	—	—	1
AG8-5B	AG8-5S	M8×1.0	—	3.5	4.7	10	17	12	13.2	—	—	1
AG10-6B	AG10-6S	M10×1.0	—	4	6	10	19	15	16.5	—	—	1
AG12-5B	AG12-5S	M12×1.5	Φ12.2	3.5	4.7	12	23.5	17	18.7	18.8	5	1
AG12-6.5B	AG12-6.5S	M12×1.5	Φ12.2	5	6.5	12	23	17	18.7	18.8	5	1
AG12-8B	AG12-8S	M12×1.5	Φ12.2	6.5	7.8	12	23	17	18.7	18.8	5	1
AG16-10B	AG16-10S	M16×1.5	Φ16.2	8	10	12	26	21	23.1	24.3	5	1
AG20-15B	AG20-15S	M20×1.5	Φ20.2	11	15	13	27	27	29.7	29	6	1
AG25-16B	AG25-16S	M25×1.5	Φ25.2	12.5	16	13	34	34	37.4	36	6.7	1
AG25-20B	AG25-20S	M25×1.5	Φ25.2	16	20	13	34	34	37.4	36	6.7	1
AG32-25.5B	AG32-25.5S	M32×1.5	Φ32.3	21	25.5	15	36	41	45.6	46	8	1
AG40-28.5B	AG40-28.5S	M40×1.5	Φ40.3	24	28.5	15	41	50	55.4	53.5	9	1
AG40-33B	AG40-33S	M40×1.5	Φ40.3	28.5	33	15	41	50	55.4	53.5	9	1
AG50-37B	AG50-37S	M50×1.5	Φ50.4	33	37	16	45	60	65.5	66	9.6	1
AG50-42B	AG50-42S	M50×1.5	Φ50.4	37	42	16	45	60	65.5	66	9.6	1

AGP SERIES SEALING WASHER for AG • AGSP

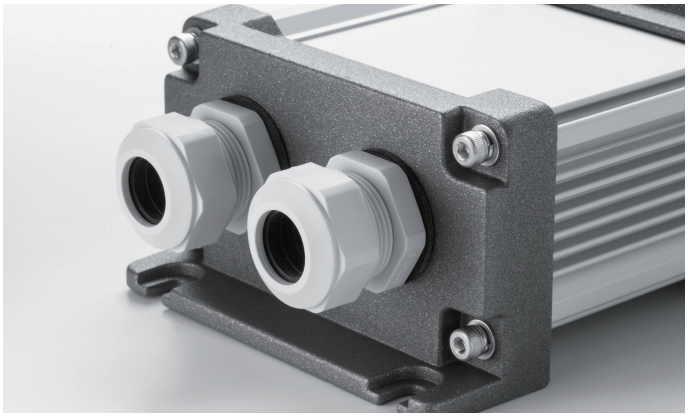


- Sealing washer for AG series.
- Made from oil resistant NBR material.
- Use in the case of installation on a rough or uneven surfaces.
- Selectable in 7 sizes (from M12 to M50)
- Sealing washer is not necessary for installation on flat surfaces.

AGP Dimensions



- Material : NBR



Product no. / Dimensions

Product no.	D1	D2	M	Suitable cable gland	Pack of
AGP-12	20	12	1.6	AG12	10
AGP-16	23.5	16.5	2.0	AG16	10
AGP-20	29	20	2.0	AG20	10
AGP-25	37	25	2.0	AG25	10
AGP-32	44	32	2.2	AG32	5
AGP-40	52	40	2.2	AG40	5
AGP-50	64	50	3.1	AG50	5

TAKACHI

THA45 series IP68 SEAMLESS CABLE GLAND



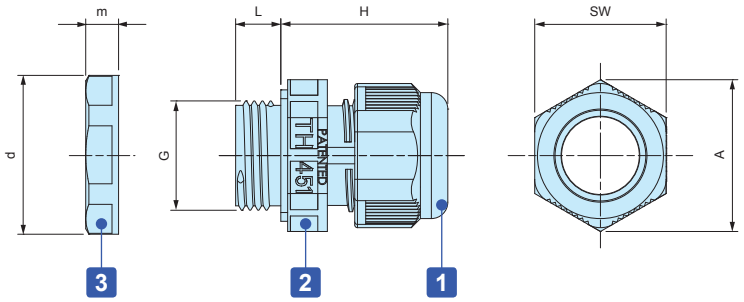
■ Seamless construction of connector and sealing insert for superb waterproof performance.



Technical Data

Protection class : IP68 5bar/1h (1 hour / 50m depth)
Operating temperature : -40°C ~ +125°C
EN50262 VarA compliant

THA45 dimensions



Color

Code	L Light gray / Gray	B Black / Gray	G Black / Green
Color			

Components

■ PA66 = Polyamide 66
■ PA66GF = Glass fiber filled polyamide 66

No.	Part name	Material
1	Cap	*PA66 • PA66GF
2	Connector	PA66 • TPE
3	Lock nut	PA66

*PA66 material for THA452-25 models.

Product no. / Details

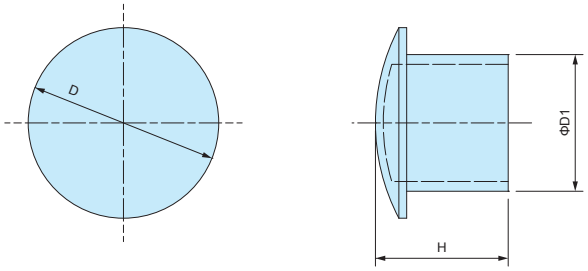
■ Please suffix color code at the end of the product number.

Product no.	G			Cable range		L	H Max	SW	A	d	m	Pack of
	Thread size	Thread diameter	Mounting hole	Max	Min							
THA450-16S□	M16×1.5	15.3	Φ15.7	5	7.5	8	29.5	19	21.6	24	5	1
THA450-16L□	M16×1.5	15.3	Φ15.7	7.5	9.5	8	29.5	19	21.6	24	5	1
THA451-20□	M20×1.5	20	Φ20.2	10.5	14	8	31	24	26.3	26.5	7	1
THA451-20-2□	M20×1.5	20	Φ20.2	Φ6×2		8	31	24	26.3	26.5	7	1
THA452-25□	M25×1.5	25	Φ25.2	14	17	8	34	29	32	35.2	6	1

SP SERIES SEALING PLUG



SP dimensions



- Material : Nylon

- Sealing plug for cable glands when not in use.
- Maintain a waterproof seal when plugged into the sealing insert on cable glands.

Product no. / Dimensions

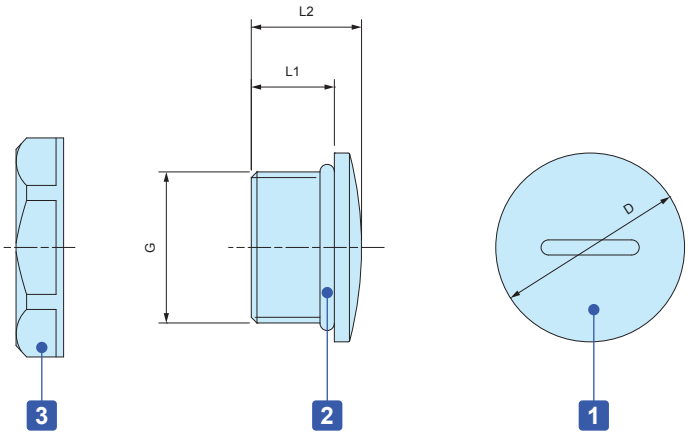
Product no.	D	D1	H	Suitable cable glands	Pack of
SP-12	10.2	6	15.5	RMW12, RM12, RMW16, RM16, RPG7, RPG9	10
SP-16	15.6	9.5	15.5	RMW20, RM20, RPG11, RPG13.5	10
SP-20	19.6	13.5	16.5	RPG16	10
SP-25	24.4	17.5	17	RMW25, RM25, RMW32, RM32, RPG21	5
SP-40	32.5	24.5	17.5	RMW40, RM40, RPG29	5
SP-50	47.2	38.9	17.6	RMW50, RM50	5

SHP series BLIND PLUG with O-ring



- A hole plug for sealing holes that are not in use.
- IP67 rating is achieved through the use of a lock nut.
- Waterproofing is not guaranteed when directly secured through thread holes.

SHP dimensions





A gloss-like finish distinctive to injection molded products may be visible in certain areas of the black color type. This does not affect the performance of the product.

Components

■ PA = Polyamide

No.	Part name	Material
1	Housing	PA66 (UL94V-2)
2	O-ring	NBR
3	Lock nut	PA66 (UL94V-2)

Product no. / Details

Product no.		G		D	L1	L2	Pack of
● Black	● Light gray	Thread size	Mounting hole				
SHP-12B	SHP-12S	M12×1.5	Φ12.2	Φ16	9	12.2	1
SHP-16B	SHP-16S	M16×1.5	Φ16.2	Φ20	9	12.2	1
SHP-20B	SHP-20S	M20×1.5	Φ20.2	Φ25	11	14.6	1
SHP-25B	SHP-25S	M25×1.5	Φ25.2	Φ30	11	14.5	1
SHP-32B	SHP-32S	M32×1.5	Φ32.3	Φ38	11	15	1
SHP-40B	SHP-40S	M40×1.5	Φ40.3	Φ46	12	16	1

RSP series STRAIN RELIEF CABLE GLAND



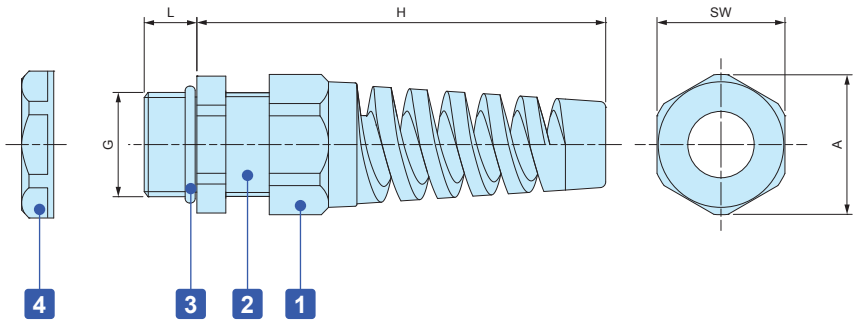
- A total of 14 models available for selection.
- Strain relief cap protects cables by preventing it from bending beyond its limit and breaking.
- Economical price but high waterproofing capability equivalent to IP67.

Technical Data
Protection class : Equivalent to IP67*
Operating temperature : -20°C ~ +80°C

*In-house test

RSP dimensions

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



Components

- PA = Polyamide

No.	Part name	Material
1	Stain relief cap	PA66 UL94V-2
-	Sealing insert	NBR
2	Connector	PA66 UL94V-2
3	O-ring	NBR
4	Lock nut	PA66 UL94V-2

Product no. / Details

Product no.		G		Cable range		L	H	SW	A	Pack of
● Black	● Light gray	Thread size	Mounting hole	Min	Max					
RSP 8-2.5B	RSP 8-2.5S	M 8×1.25	Φ 8.2	1	2.5	10.5	48	12.1	13.8	1
RSP 8-4B	RSP 8-4S	M 8×1.25	Φ 8.2	2.5	4	10.5	48	12.1	13.8	1
RSP10-6B	RSP10-6S	M10×1.5	Φ10.2	3	6	12.2	54	13.1	14.5	1
RSP12-6B	RSP12-6S	M12×1.5	Φ12.2	3.5	6	9	62	16	17	1
RSP16-8B	RSP16-8S	M16×1.5	Φ16.2	4	8	9	69	19.5	21	1
RSP20-11B	RSP20-11S	M20×1.5	Φ20.2	6	11	10	82	24	26	1
RSP25-16B	RSP25-16S	M25×1.5	Φ25.2	11	16	12	102	33	36	1

TAKACHI

REL series RIGHT ANGLED CABLE GLAND

NEW



IP67

- L-shape cable gland with M type threads.
- Allow wires to be routed vertically.
- Equivalent to IP67 protection class.

Technical Data
Protection class : Equivalent to IP67*
Operating temperature : -20°C ~ +80°C

*In-house test

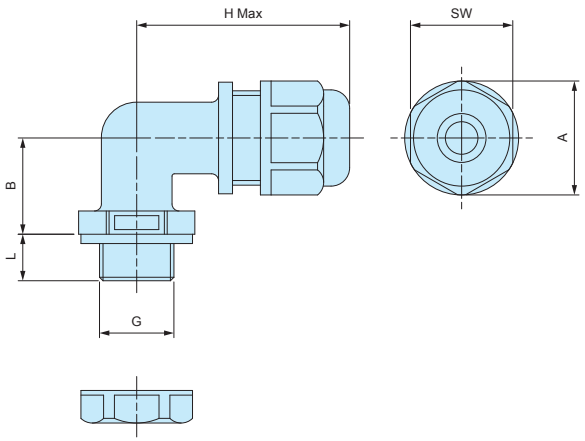


Components

No.	Part name	Material
1	Cap	PA66
2	Sealing Insert	NBR/PA66
3	Connector	PA66
4	O-ring	NBR
5	Lock Nut	PA66

REL dimensions

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



Installation example



Product no. / Details

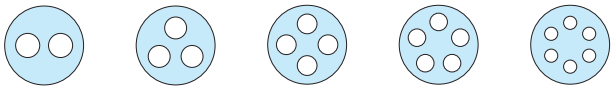
Product no.	G		Cable range		H Max	L	SW	A	B	Pack of
● Black	Thread size	Mounting hole	Min	Max						
REL16- 7B	M16×1.5	Φ16.1	5	7	45.8	10	22	24.5	20.7	1
REL16-10B	M16×1.5	Φ16.1	8	10	45.8	10	22	24.5	20.7	1
REL20-11B	M20×1.5	Φ20.1	7	11	52.4	15	27.3	30.8	24.9	1
REL20-14B	M20×1.5	Φ20.1	11	14	52.4	15	27.3	30.8	24.9	1
REL25-16B	M25×1.5	Φ25.1	12	16	58	15	33.2	36.8	29.5	1
REL25-18B	M25×1.5	Φ25.1	15	18	58	15	33.2	36.8	29.5	1
REL32-22B	M32×1.5	Φ32.1	18	22	70	15	41	45.7	33.9	1

RMH series MULTI-HOLE CABLE GLAND



- Multihole cable gland with M threads.
- Multiple cables can be protected with single cable gland.
- Equivalent to IP65 protection class.
- Please use cables of the same diameter.

Up to a maximum of 6 cables can be protected with 1 cable gland.





IP65

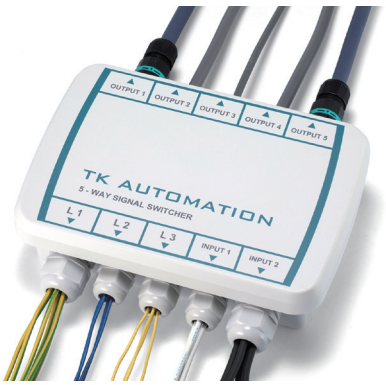
Technical Data
Protection class : equivalent to IP65 Operating temperature : -20°C ~ +80°C

*In-house test

Components

No.	Part name	Material
1	Cap	PA66 UL94V-2
2	Sealing insert	NBR/PA66 UL94V-2
3	Connector	PA66 UL94V-2
4	O-ring	NBR
5	Lock nut	PA66 UL94V-2

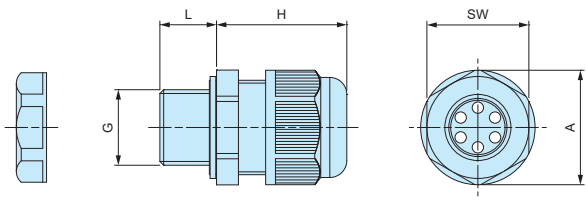




Installation Examples

RMH dimensions

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



Product no. / Details

Product no.		G		Cable range		No. of holes	L	H	SW	A	Pack of
● Black	○ Light gray	Thread size	Mounting hole	Min.	Max.						
RMH12-2B	RMH12-2S	M12×1.5	Φ12.2	2.5	3	2	9.4	26	18.9	21.2	1
RMH12-3B	RMH12-3S	M12×1.5	Φ12.2	2	2.5	3	9.4	26	18.9	21.2	1
RMH12-4B	RMH12-4S	M12×1.5	Φ12.2	2	2.5	4	9.4	26	18.9	21.2	1
RMH16-2B	RMH16-2S	M16×1.5	Φ16.2	3	4	2	15	29	22	24.7	1
RMH16-3B	RMH16-3S	M16×1.5	Φ16.2	3	4	3	15	29	22	24.7	1
RMH16-4B	RMH16-4S	M16×1.5	Φ16.2	2	3	4	15	29	22	24.7	1
RMH16-5B	RMH16-5S	M16×1.5	Φ16.2	2	2.5	5	15	29	22	24.7	1
RMH16-6B	RMH16-6S	M16×1.5	Φ16.2	1.5	2	6	15	29	22	24.7	1
RMH20-2B	RMH20-2S	M20×1.5	Φ20.2	4.5	6	2	15	34.5	27	30.3	1
RMH20-3B	RMH20-3S	M20×1.5	Φ20.2	4	5	3	15	34.5	27	30.3	1
RMH20-4B	RMH20-4S	M20×1.5	Φ20.2	4	4.5	4	15	34.5	27	30.3	1
RMH20-5B	RMH20-5S	M20×1.5	Φ20.2	3	4	5	15	34.5	27	30.3	1
RMH20-6B	RMH20-6S	M20×1.5	Φ20.2	2	3	6	15	34.5	27	30.3	1
RMH25-2B	RMH25-2S	M25×1.5	Φ25.2	6	8	2	15	37.5	33	37	1
RMH25-3B	RMH25-3S	M25×1.5	Φ25.2	5	7	3	15	37.5	33	37	1
RMH25-4B	RMH25-4S	M25×1.5	Φ25.2	4	6	4	15	37.5	33	37	1
RMH25-5B	RMH25-5S	M25×1.5	Φ25.2	4.5	5.5	5	15	37.5	33	37	1
RMH25-6B	RMH25-6S	M25×1.5	Φ25.2	3	4.5	6	15	37.5	33	37	1
RMH32-2B	RMH32-2S	M32×1.5	Φ32.3	8.5	11	2	15	44	42	46.5	1
RMH32-3B	RMH32-3S	M32×1.5	Φ32.3	9	10	3	15	44	42	46.5	1
RMH32-4B	RMH32-4S	M32×1.5	Φ32.3	8	9	4	15	44	42	46.5	1
RMH32-5B	RMH32-5S	M32×1.5	Φ32.3	6	8	5	15	44	42	46.5	1
RMH32-6B	RMH32-6S	M32×1.5	Φ32.3	5.5	7	6	15	44	42	46.5	1

RSC series IP67 SPLIT INSERT CABLE GLAND

NEW

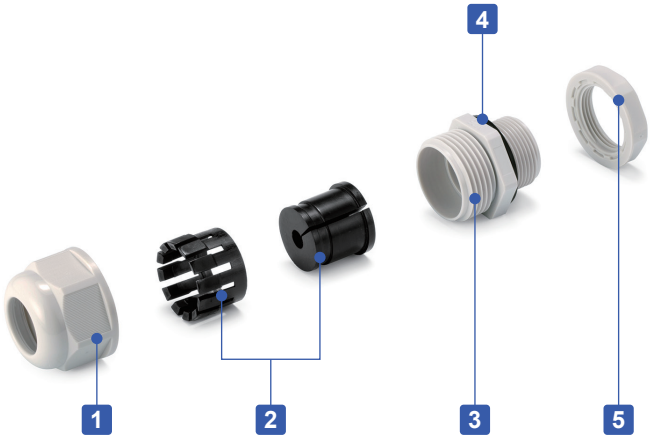


IP67

■ Split type sealing insert can protect cables with connector.

Technical Data
Protection class : Equivalent to IP67*
Operating temperature : -20°C ~ +80°C

*In-house test

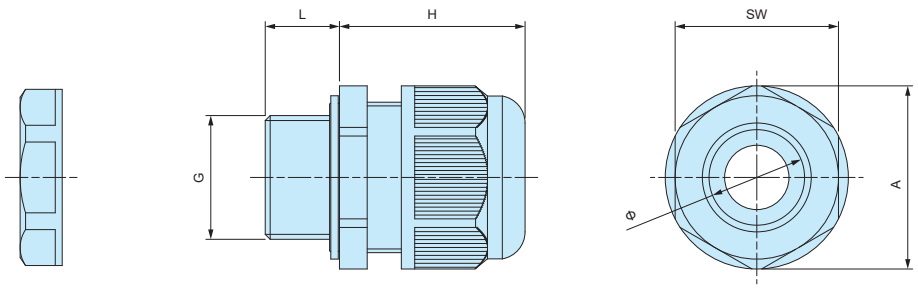


Components

No.	Part name	Material
1	Cap	PA66 (UL94V-2)
2	Sealing Insert	Silicone / PA66 (UL94V-2)
3	Connector	PA66 (UL94V-2)
4	Sealing Washer	Silicone
5	Lock Nut	PA66 (UL94V-2)

RSC dimensions

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



Product no. / Details

Product no.		G		Cable range		L	H Max	SW	A	Φ	Pack of
● Black	● Light gray	Thread size	Mounting hole	Min	Max						
RSC25-6.5B	RSC25-6.5S	M25×1.5	Φ25.2	5	6.5	15	37.5	33	37	19	1
RSC25-10.5B	RSC25-10.5S	M25×1.5	Φ25.2	7.5	10.5	15	37.5	33	37	19	1
RSC32-6.5B	RSC32-6.5S	M32×1.5	Φ32.3	5	6.5	15	44	42	46.5	25	1
RSC32-10.5B	RSC32-10.5S	M32×1.5	Φ32.3	7.5	10.5	15	44	42	46.5	25	1

TWH series INTERCHANGEABLE HEAD TORQUE WRENCH NEW



- Torque wrench with interchangeable head.
- Suitable for the tightening of cable glands requiring a specific torque.
- Open end interchangeable head (spanner head) TWE series available separately.
- Spanner head is not included.

Product no. / Details

Product no.	Length	Torque range (N • m)	Increments (N • m)
TWH0.5-5	215	0.5 ~ 5.0	0.05

Notes

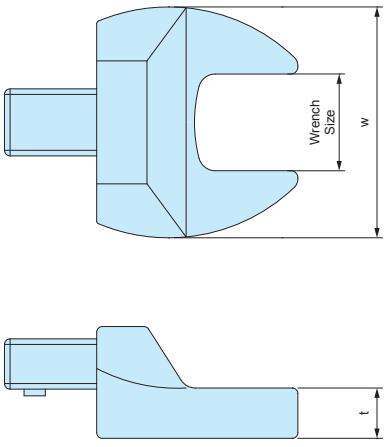
The torque wrench is not subject to RoHS regulations.
Since it is an OEM product and not a JIS-compliant product, no calibration services or inspection reports, etc. are provided.

When tightening, proceed first with a low value (half of the reference) of the recommended torque,
and set the appropriate tightening torque for the cable and mounting part that will be tightened thereafter.

Please read the operation manual (refer to TAKACHI website) before use to ensure correct and safe usage of the product.

TWE series OPEN END INTERCHANGEABLE HEAD NEW





- Dedicated open end interchangeable head for TWH series.
- Various interchangeable heads are available to fit a range of cable gland sizes.

Product no. / Details

Product no.	Wrench size	w	t
TWE- 8	8	27	6
TWE- 9	9	27	6
TWE-11	11	27	6
TWE-12	12	30	6
TWE-13	13	31	6
TWE-15	15	40	9
TWE-16	16	40	9
TWE-17	17	41	9
TWE-18	18	42	9
TWE-19	19	42	10
TWE-21	21	47	10

Product no.	Wrench size	w	t
TWE-22	22	52	10
TWE-23	23	53	11
TWE-24	24	55	11
TWE-27	27	58	13
TWE-29	29	58	13
TWE-30	30	65	14
TWE-32	32	65	14
TWE-33	33	65	14
TWE-34	34	70	15
TWE-36	36	72	15

Note: These open end head is not subject to RoHS regulations.

Suitable TWE model

RM • RMW series

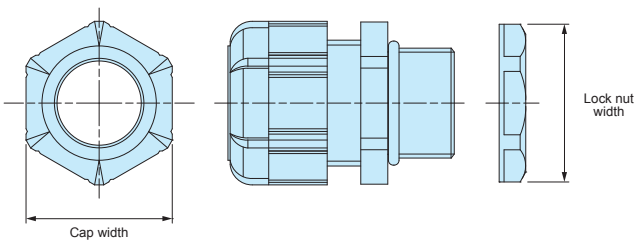
Product no.	Cap width	Suitable model	Lock nut width	Suitable model
RM8S-2.5	11.8	TWE-12	–	n/a
RM • RMW8L-2.5	11.8	TWE-12	12.6	TWE-13
RM8S-4	11.8	TWE-12	–	n/a
RM • RMW8L-4	11.8	TWE-12	12.6	TWE-13
RM • RMW10S-6	13	TWE-13	–	n/a
RM • RMW10L-6	13	TWE-13	14.8	TWE-15
RM • RMW12S-7	16	TWE-16	17	TWE-17
RM • RMW12L-7	16	TWE-16	17	TWE-17
RM • RMW16S-8	19	TWE-19	22	TWE-22
RM • RMW16L-8	19	TWE-19	22	TWE-22
RM • RMW20S-12	24	TWE-24	26.2	n/a
RM • RMW20L-12	24	TWE-24	26.2	n/a
RM • RMW25L-17	33	TWE-33	32.6	n/a
RM • RMW32L-21	36	TWE-36	40.3	n/a
RM • RMW40L-27	45.7	n/a	51	n/a
RM • RMW50L-38	60	n/a	61.2	n/a
RM63L-44	68	n/a	73.4	n/a

RPG series

Product no.	Cap width	Suitable model	Lock nut width	Suitable model
RPG7-7	16	TWE-16	18.7	TWE-19
RPG9-8	19	TWE-19	21.8	TWE-22
RPG11-10	22	TWE-22	23.7	TWE-24
RPG13.5-11	24	TWE-24	27	TWE-27
RPG16-14	26.7	TWE-27	29.8	TWE-30
RPG21-18	33	n/a	35.8	TWE-36
RPG29-25	42	n/a	45.8	n/a

RSP series

Product no.	Cap width	Suitable model	Lock nut width	Suitable model
RSP12-6	16	TWE-16	17	TWE-17
RSP16-8	19.5	n/a	22	TWE-22
RSP20-11	24	TWE-24	26.2	n/a
RSP25-16	33	TWE-33	32.6	n/a



Note 1) ""n/a"" indicates no suitable spanner head size and torque value available.
Note 2) Dimensions of Cap and Lock nut width are in mm.

AG series

Product no.	Cap width	Suitable model	Lock nut width	Suitable model
AG8-3.5	12	TWE-12	–	n/a
AG8-5	12	TWE-12	–	n/a
AG10-6	15	TWE-15	–	n/a
AG12-5	17	TWE-17	17	TWE-17
AG12-6.5	17	TWE-17	17	TWE-17
AG12-8	17	TWE-17	17	TWE-17
AG16-10	21	TWE-21	22	TWE-22
AG20-15	27	TWE-27	27	TWE-27
AG25-16	34	TWE-34	33	TWE-33
AG25-20	34	TWE-34	33	TWE-33
AG32-25.5	41	n/a	42	n/a
AG40-28.5	50	n/a	48	n/a
AG40-33	50	n/a	48	n/a
AG50-37	60	n/a	59	n/a
AG50-42	60	n/a	59	n/a

AGM series

Product no.	Cap width	Suitable model	Lock nut width	Suitable model
AGM6-2.5	8	TWE-8	9	TWE- 9
AGM6-3	8	TWE-8	9	TWE- 9
AGM6-3.5	8	TWE-8	9	TWE- 9
AGM8-5	11	TWE-11	11	TWE-11
AGM10-6	13	TWE-13	13	TWE-13
AGM12-8	15	TWE-15	15	TWE-15
AGM16-10.5	18	TWE-18	19	TWE-19
AGM20-15	24	TWE-24	24	TWE-24
AGM25-20	30	TWE-30	30	TWE-30
AGM32-25.5	36	TWE-36	36	TWE-36
AGM40-28.5	46	n/a	51	n/a
AGM40-33	46	n/a	51	n/a
AGM50-37	55	n/a	60	n/a
AGM50-42	55	n/a	60	n/a

AGE series

Product no.	Cap width	Suitable model	Lock nut width	Suitable model
AGE12-5	15	TWE-15	15	TWE-15
AGE12-6.5	15	TWE-15	15	TWE-15
AGE16-10.5	18	TWE-18	19	TWE-19
AGE20-15	24	TWE-24	24	TWE-24
AGE25-20	30	TWE-30	30	TWE-30
AGE32-25	36	n/a	36	n/a

AGH series

Product no.	Cap width	Suitable model	Lock nut width	Suitable model
AGH10-6	13	TWE-13	13	TWE-13
AGH12-8	15	TWE-15	15	TWE-15
AGH16-10.5	18	TWE-18	19	TWE-19
AGH20-15	24	TWE-24	24	TWE-24
AGH25-20	30	TWE-30	30	TWE-30
AGH32-25.5	36	TWE-36	36	TWE-36

TWH0.5-5 Torque Wrench Operation Manual

1 For Safety Use

Safety Precautions

Please read this manual carefully before use while following operation instructions. The manufacturer / retailer etc. will not be are not liable for any personal injuries, damage to the product, or other property damage, etc. caused by improper use.

Warnings



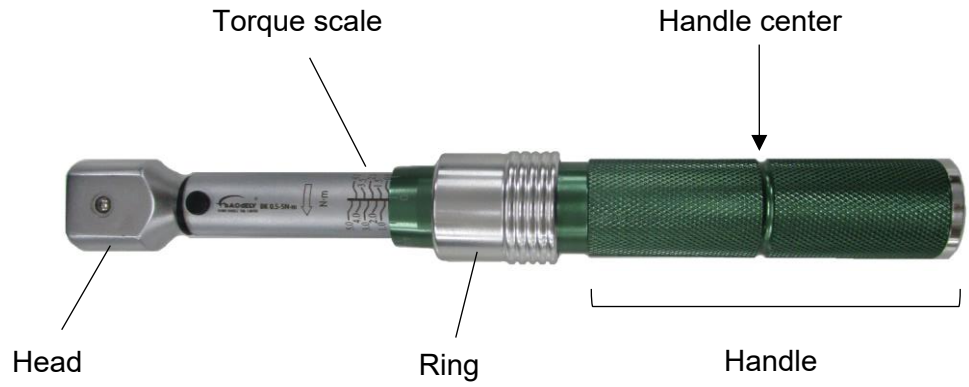
- **Do not use beyond the maximum torque value. This may cause damage and injury.**
- **Do not use the torque wrench as a hammer or lever, or applying strong impact.**
- **Do not modify or disassemble the torque wrench. These may cause strength or accuracy problems, which may lead to accidents and injuries.**
- **Before use, check for damage, cracks, rust, or deformation. These may cause damage and injury.**
- **Do not use the torque wrench to loosen nuts or caps as it is a precision instrument.**
- **Do not operate the torque wrench with oily or greasy hands. This may cause your hands to slip while tightening, leading to accidents or injuries.**
- **Wear safety glasses or other eye protection while using.**
- **Be careful not to hit your hands or elbows on surrounding objects when working with a torque wrench.**
- **Do not use the torque wrench underwater or in the sea.**
- **When working on elevated platforms, take measures to prevent torque wrenches from falling.**

Cautions



- **Set the torque before each use.**
- **Do not lower the scale below the minimum.**
- **Do not use it outside of the torque scale range.**
- **Every time before setting the torque, ensure that the handle lock is in the unlock position first before rotating the handle.**
- **Grip the center of the handle to tighten. Gripping the edge of the handle may cause incorrect torque value.**
- **Tighten slowly while applying minimal force. Otherwise applied torque value may be incorrect.**
- **Stop tightening after hearing, or feeling a clicking sound or sensation. Further tightening may result in overtorque.**
- **Do not use parts such as a pipe to extend the handle.**
- **Do not drop the torque wrench or apply strong impact.**
- **Do not use in high temperature and humid environments.**
- **After use, set the torque wrench to the minimum value.**
- **After use, remove dirt, dust, mud, oil, water, etc. before storing.**
- **Store in a dry place when not in use for an extended period of time.**

2 Components



3 How to use

① Push and hold the ring down to unlock.	② Turn the handle.
	 ・Turn the handle while the ring is in the unlock position.
③ Adjust to required torque.	**④ Release the ring.**
	 ・The ring will spring back to its original (lock) position.

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