

SHOCKPROOF PLASTIC ENCLOSURE

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

PFG series



6 DIFFERENT COLOR COMBINATIONS AVAILABLE

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

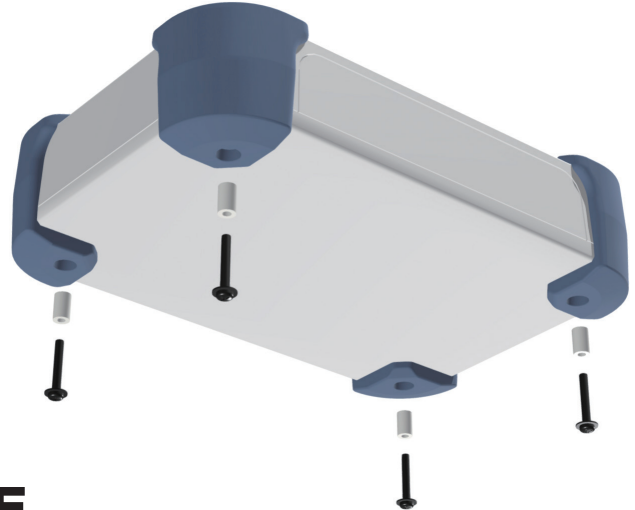


HOW TO ASSEMBLE CORNER GUARDS

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



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



APPLICATION EXAMPLE

Industrial Tablet



Medical Equipment



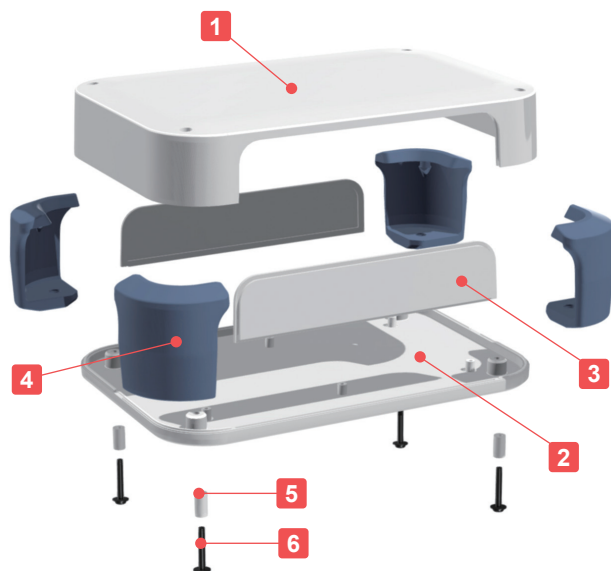
Network Device





Technical Data

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



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

Components

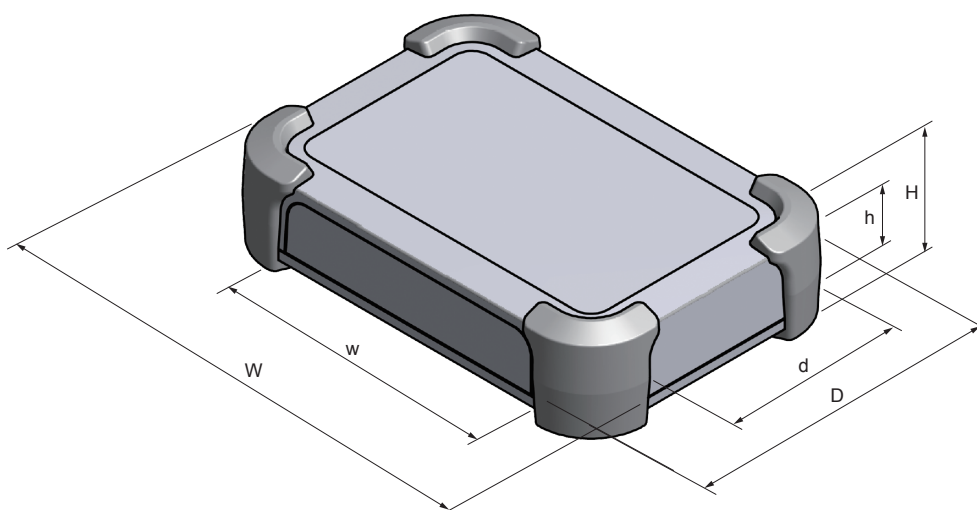
No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94V-0	Off-white • Dark gray
2	Bottom base	1	ABS UL94V-0	Off-white • Dark gray
3	Panel	2	ABS UL94V-0	Off-white • Dark gray
4	Corner guard	4	Silicone	Dark gray • Emerald • Indigo
5	Spacer	4	PA	White
6	Self-tapping screw	4	Steel	Nickel plated

Color Type

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

PFG dimensions

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



Product no. / Details

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

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

■ () value = enclosure dimension.

Accessories (Optional parts)



Embedded battery box BC series
See page 381 ~ 383



Tapping standoff TPS series
See page 397



PCB mounting screw EM series
See page 398



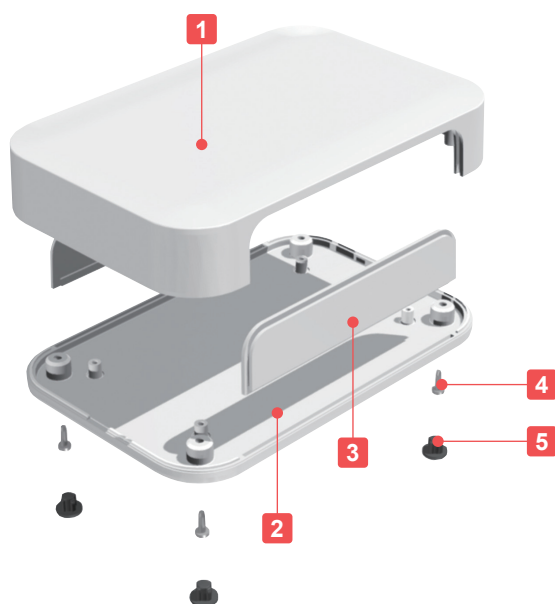
Tilt leg TLW series
See page 239



Technical Data

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

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



Components

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

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

Accessories (Optional parts)



Embedded battery box BC series
See page 381 ~ 383



Tapping standoff TPS series
See page 397



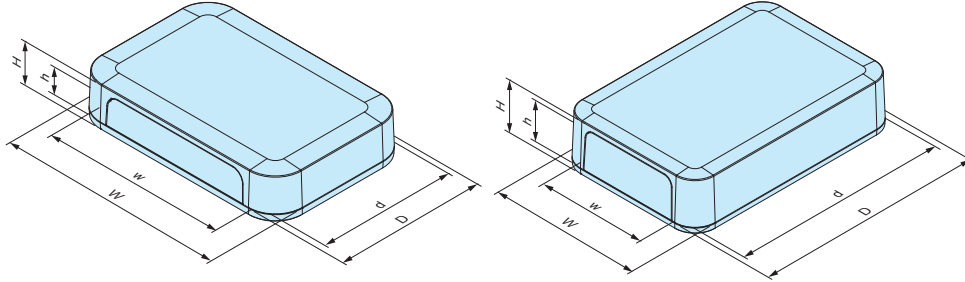
PCB mounting screw EM series
See page 398



Suspension bracket WM series
See page 391

PF dimensions

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



Product no. / Details

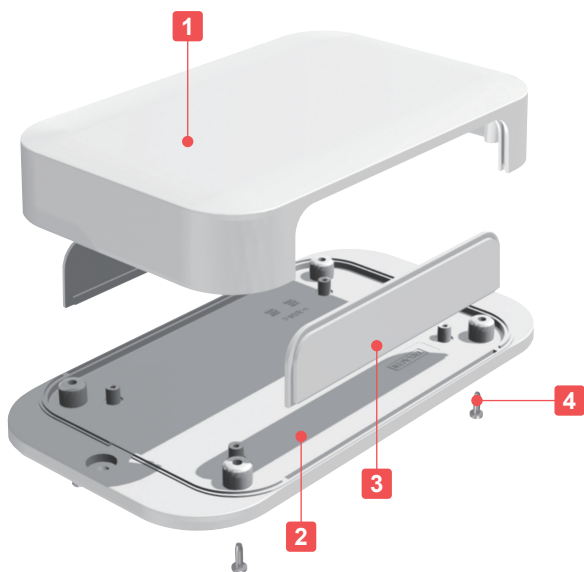
Product no.		External dimensions			Internal dimensions			Weight (g)
● Off-white	● Dark gray	W	H	D	w	h	d	
PF 8- 2- 5W	PF 8- 2- 5D	80	22.5	50	55.5	13.5	42.8	36.2
PF 8- 2- 8W	PF 8- 2- 8D	80	22.5	80	55.5	13.5	72.8	53.3
PF 8- 3- 5W	PF 8- 3- 5D	80	30	50	55.5	21	42.3	41.6
PF 8- 3- 8W	PF 8- 3- 8D	80	30	80	55.5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

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



Technical Data

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



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

Components

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

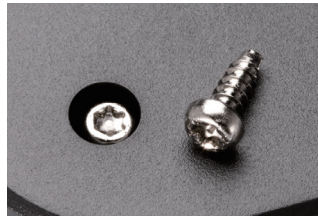
Accessories (Optional parts)



Tapping standoff TPS series
See page 397



PCB mounting screw EM series
See page 398



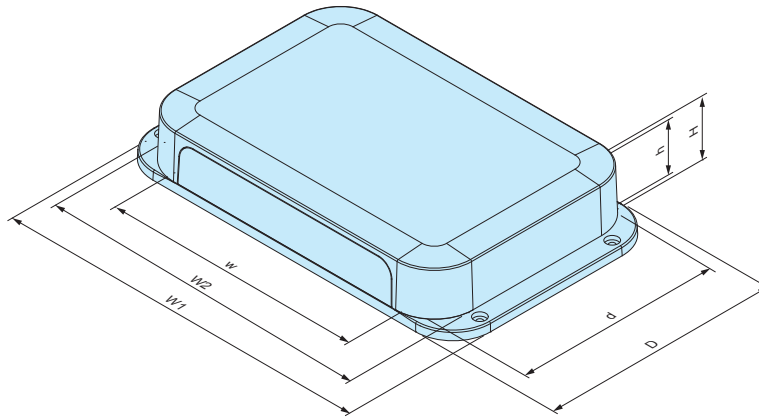
TORX screw MR series
See page 398



Adhesive standoff AST series
See page 394

PFF dimensions

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

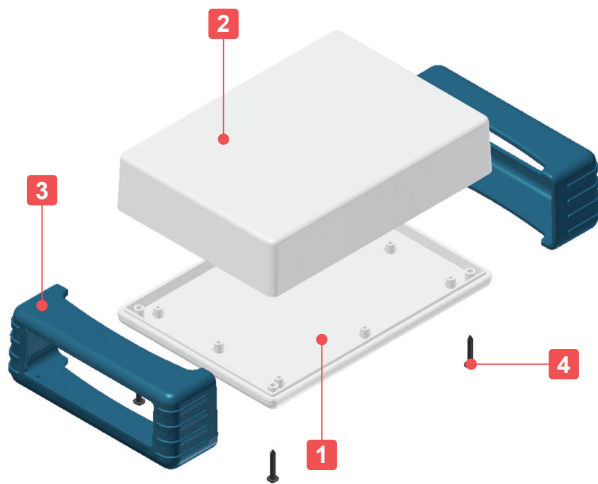


Product no. / Details

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

**Technical Data**

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



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

Components

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

Accessories (Optional parts)

Embedded battery box BC series
See page 381 ~ 383



Adhesive standoff AST series
See page 394



Tapping standoff TPS series
See page 397



PCB mounting screw EM series
See page 398

Color Type

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

ABS UL94HB (Black enclosure)

Product no. / Details

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

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

■ () value = enclosure dimension.

ABS UL94V-0 (Off-white enclosure)

Product no. / Details

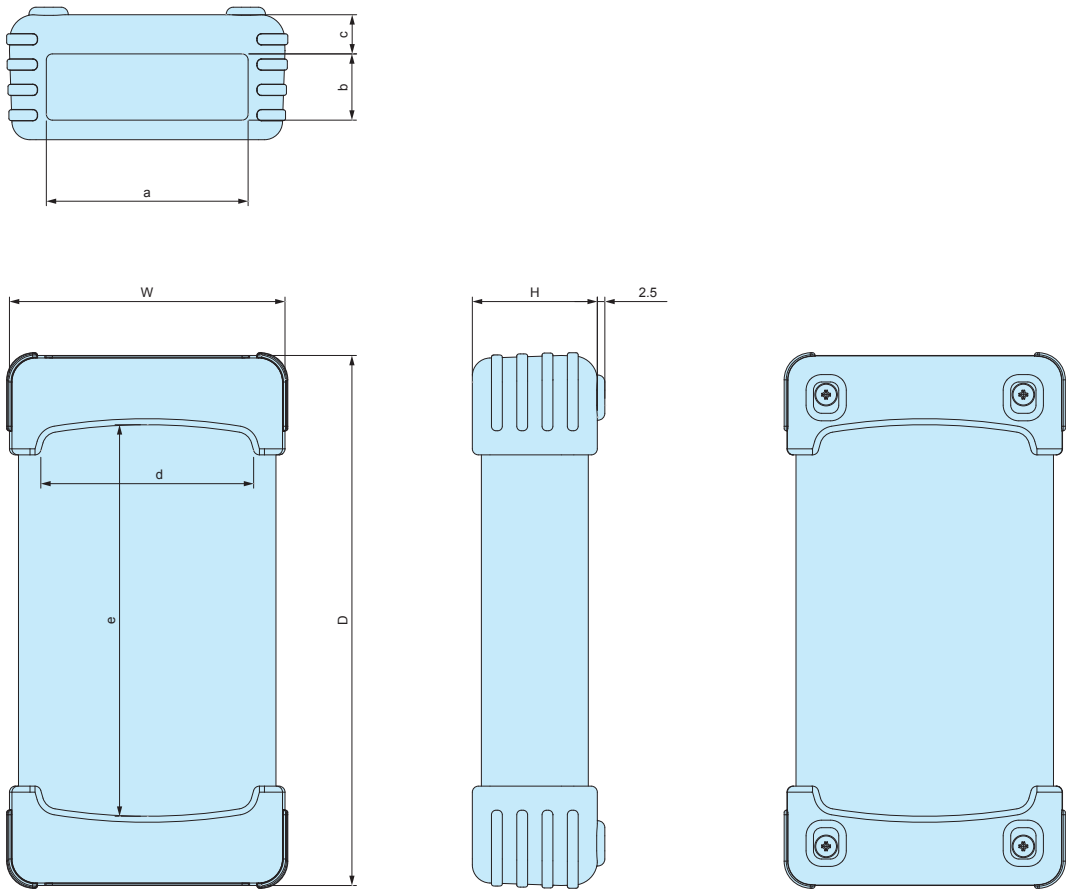
■ Please suffix color code at the end of the product number.

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

■ () value = enclosure dimension.

TWS dimensions

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

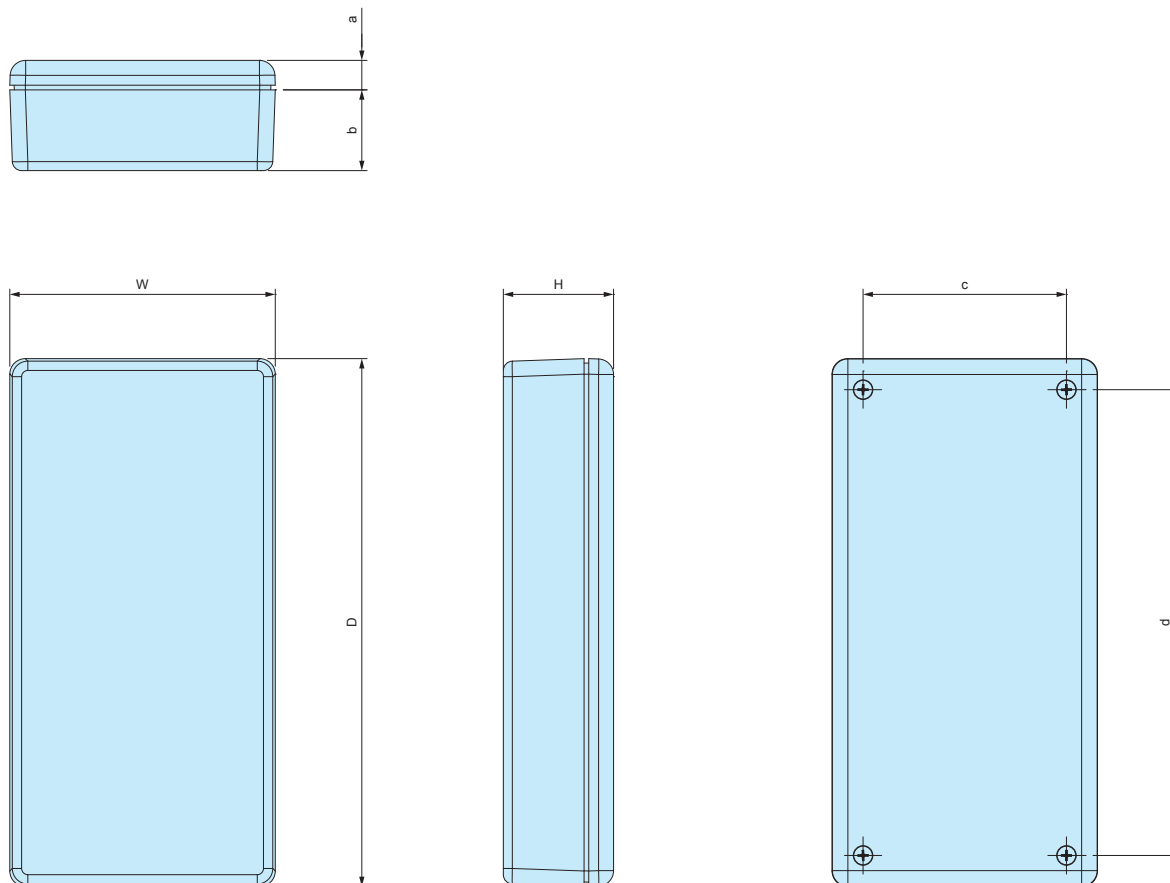


■ Please suffix color code at the end of the product number.

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

Enclosure dimensions

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



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

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



Technical Data

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

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

Battery compartment type



No battery compartment type



Components

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

Accessories (Optional parts)



Tapping standoff TPS series
See page 397



PCB mounting screw EM-2.3
See page 398



TORX screw MR series
See page 398



Key ring CR-20
See page 389



Strap STP series
See page 389

Battery Compartment Type

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

Color Type

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

Product no. / Details

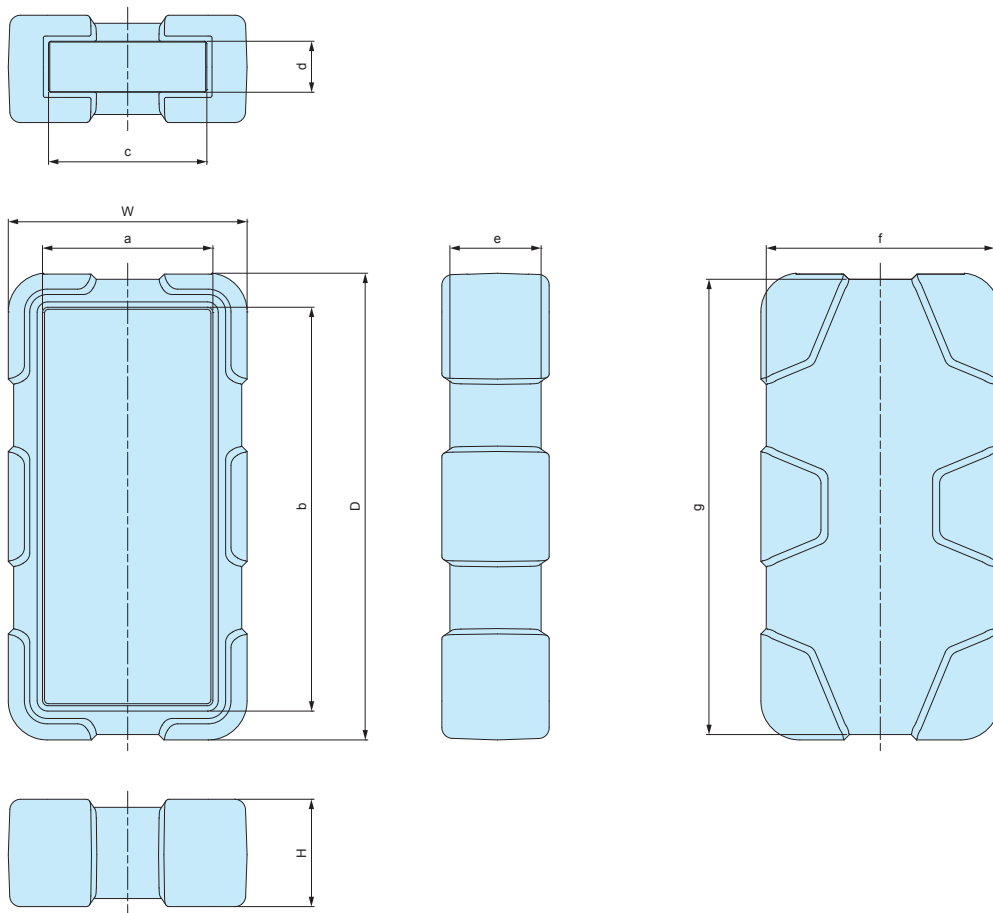
■ Please suffix color code at the end of the product number.

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

■ () value = enclosure dimension.

Silicone cover dimensions

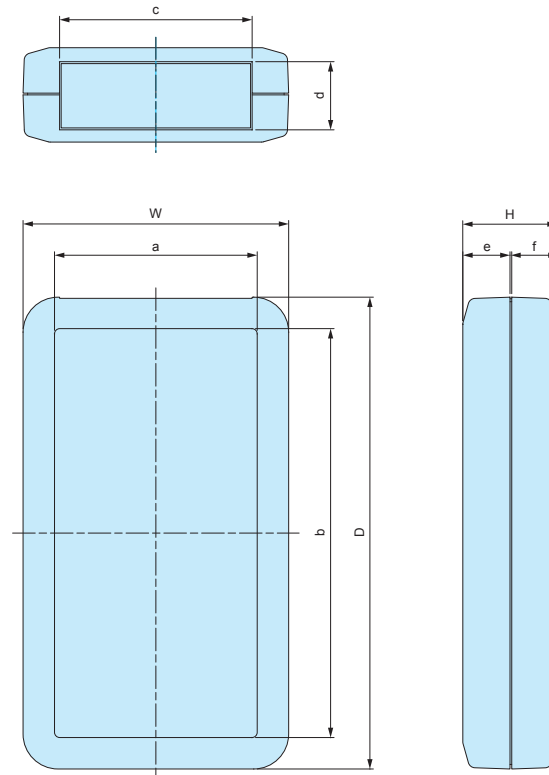
■ DXF/DWG/PDF drawings available on our website.



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

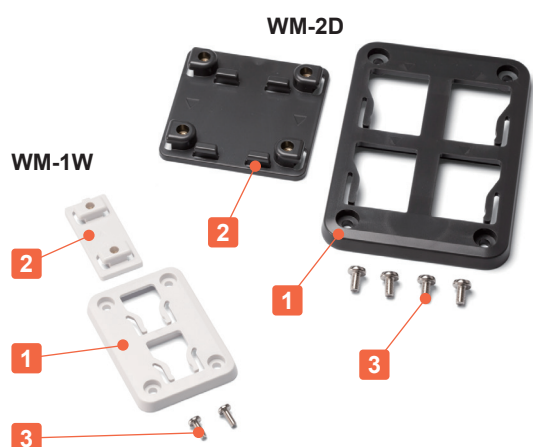
Enclosure dimensions

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



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

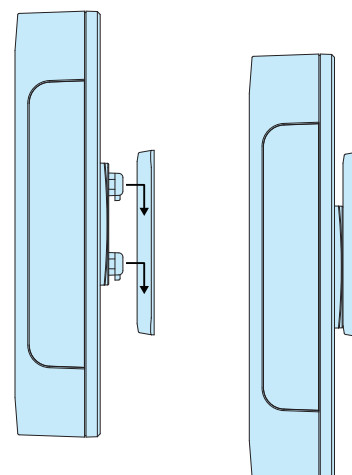
Product no.	W	H	D	a	b	c	d	e	f	Battery compartment
LCT115 -N -□□	69	19.5	115	54	100	48.1	12	10	9	None
LCT115 -F2 -□□	69	19.5	115	54	100	48.1	12	10	9	AAA x 2
LCT115 -F3 -□□	69	19.5	115	54	100	48.1	12	10	9	AAA x 3
LCT115H -N -□□	69	28	115	54	100	48.1	20.5	18.5	9	None
LCT115H -F2 -□□	69	28	115	54	100	48.1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

WM series**SUSPENSION BRACKET**

Installation example



How to install



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

Technical Data

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

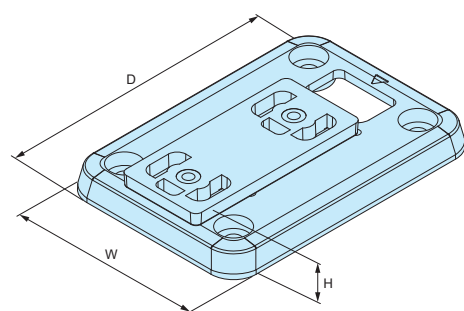
* The max load values listed are static load values only. Use caution when handling.

Components

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

Included Screw

WM-1□ : Bind M3-8
WM-2□ : Bind M4-88

**Product no. / Details**

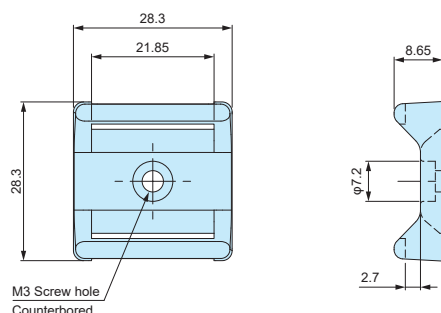
Product no.		W	H	D	Mountable thickness	Weight (g)
● Off-white	● Dark gray					
WM-1W	WM-1D	45	9	65	t0.8~t3.5	11.5
WM-2W	WM-2D	80	11	115	t0.8~t3.5	48

PMB-1**POLE MOUNTING BRACKET**

Installation example



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

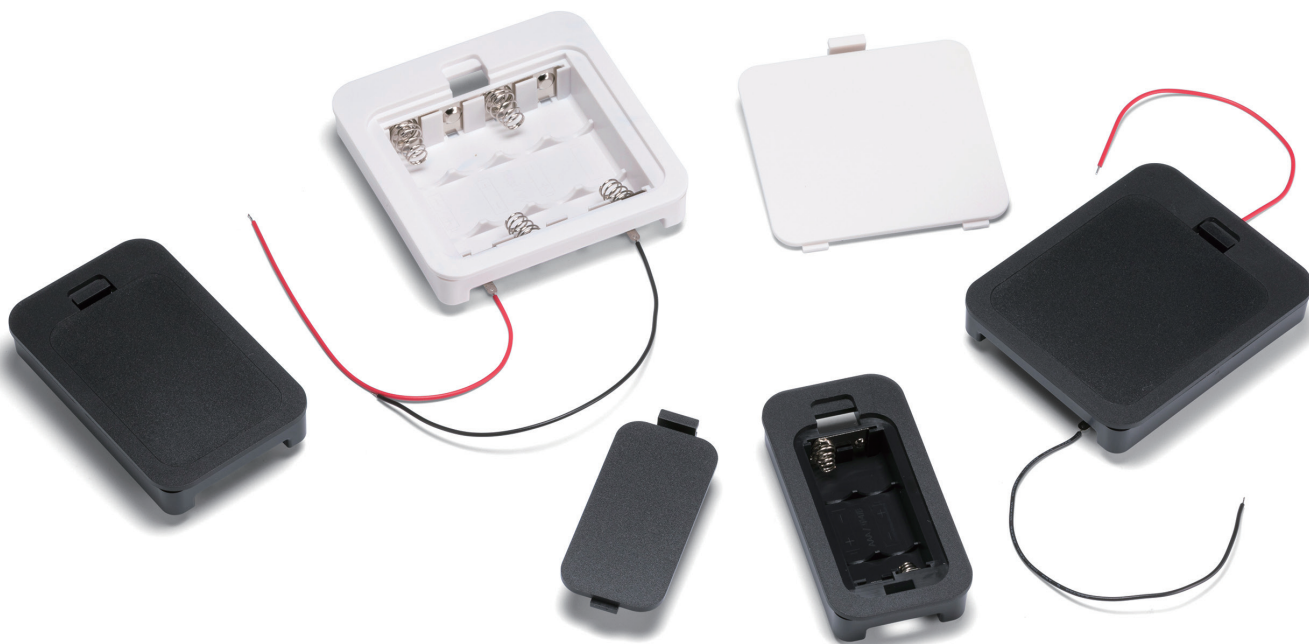


- Small size pole mounting bracket suitable for indoor use.
- Installation screws (M3 size) are separately sold. See page HES • HOS • MT for compatible MT3-4 screws.
- Minimum applicable pole diameter is $\Phi 35$.
- Use SNB • PKB • SCT mounting belt to install onto a pole.

Product no. / Details

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

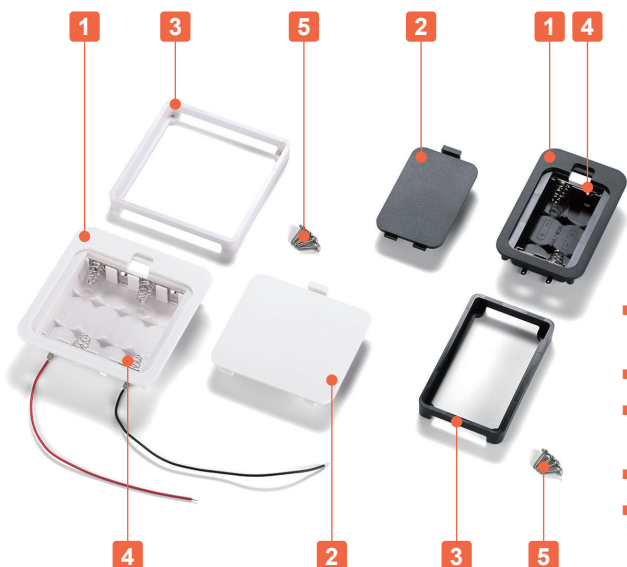
Product no.	Maximum load (kg)	Weight (g)	Pack of
PMB-1	1	3 (1 piece)	2



Technical Data

Operating temperature: -10°C ~ +60°C

Mount Example



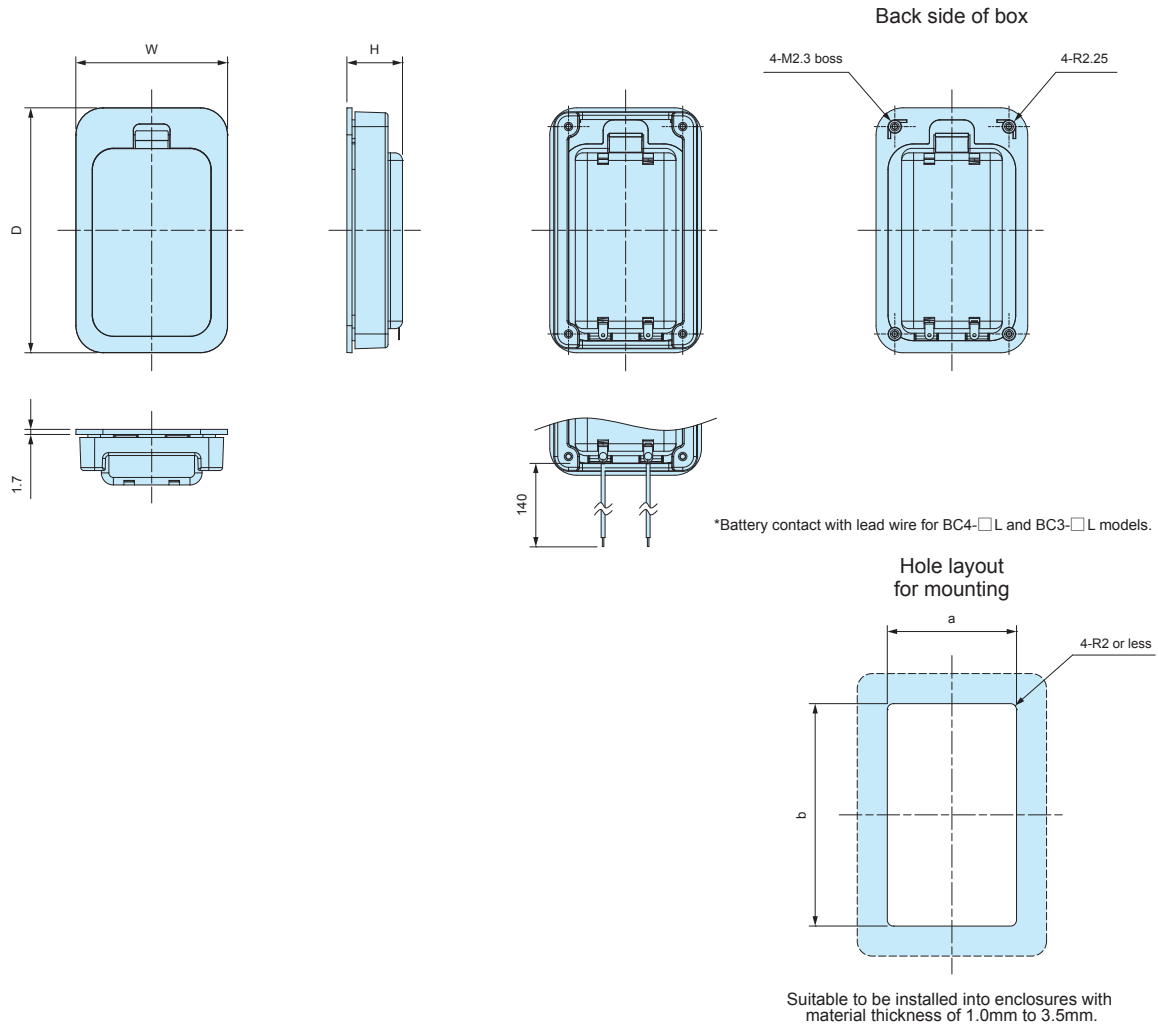
- Suitable to be installed into enclosures with material thickness of 1.0mm to 3.5mm.
- Cover can be opened/closed without any tool for easy battery replacement.
- 5 different battery layouts are available as AA x 2, AA x 3, AA x 4, AAA x 2 and AAA x 4. Each layout comes in 2 models: with lead-wire,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

Components

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

BC dimensions

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



Type: Without Lead Wire

Product no. / Details

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

*Alkaline or manganese batteries

Type: With Lead Wire

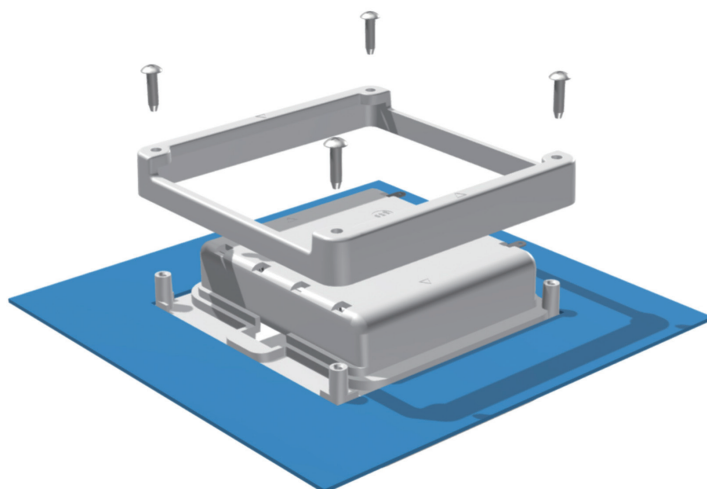
Product no. / Details

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

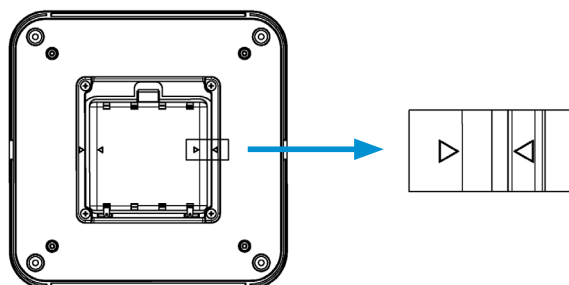
*Alkaline or manganese batteries

How to mount on the enclosures

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



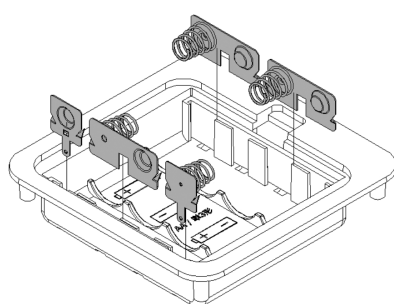
- For BC3-4□ models, ▷ markings are shown on the frame. Install by matching the markings.



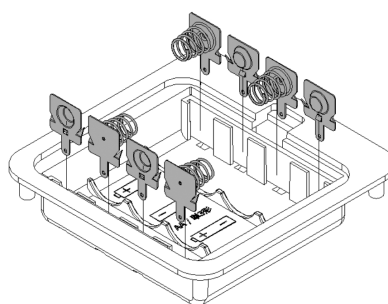
Parallel circuit conversion on BC series battery box

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

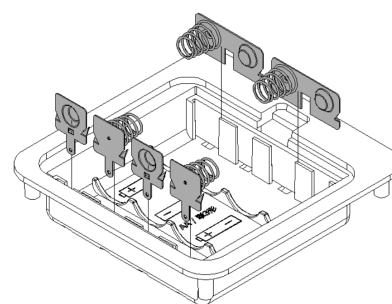
Conversion Example



Series Circuit (Standard)

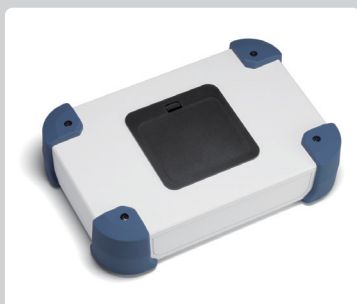


Parallel Circuit (4 batteries)



Parallel Circuit (2 batteries x 2)

Customization Available



For more information, contact us here:

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

CBS series**RUBBER STRAIN RELIEF CORD PROTECTOR****Application example**

Installed onto SIC series

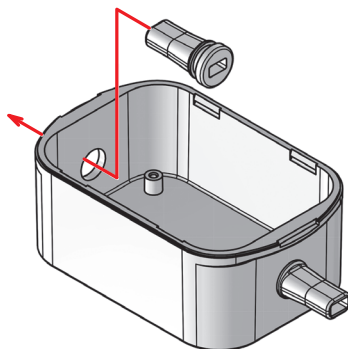


Installed onto EX series

- A total of 8 different sizes available for selection.
- Strain relief cord protector helps relieve flex stress and prevents damage to cables.
※ Does not prevent cables from being dislodged.
- 2 types - round and flat - are available.
- Insert from the inner side of the case / panel of the enclosure.
- Made from high heat resistant silicone material.

Technical Data

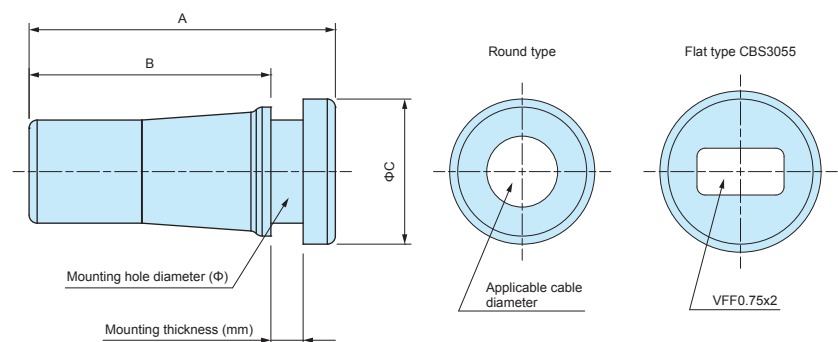
Operating temperature:
-40°C ~ +100°C

Installation steps

- ① Insert into the mounting hole from the inside.
 - ② Thread the cable through the protector.
- ※ Protector must be installed first.

CBS dimensions

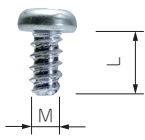
■ DXF/DWG/PDF drawings available on our website.

**Product no. / Details**

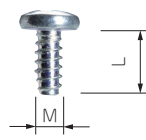
Product no.		A	B	C	Applicable cable diameter / type	Mounting hole diameter (Φ)	Mounting thickness (mm)	Material	Pack of
● Black	● Off-white								
CBS3055-15B	CBS3055-15W	18.5	15	10	VFF0.75x2	7.6 ~ 7.8	1.5 ~ 2.0	Silicone	10
CBS3055-20B	CBS3055-20W	19	15	10	VFF0.75x2	7.6 ~ 7.8	2.0 ~ 2.5	Silicone	10
CBS35-15B	CBS35-15W	16.5	13	8	Φ3.5	5.6 ~ 5.8	1.5 ~ 2.0	Silicone	10
CBS35-20B	CBS35-20W	17	13	8	Φ3.5	5.6 ~ 5.8	2.0 ~ 2.5	Silicone	10
CBS45-15B	CBS45-15W	18.5	15	9	Φ4.5	6.6 ~ 6.8	1.5 ~ 2.0	Silicone	10
CBS45-20B	CBS45-20W	19	15	9	Φ4.5	6.6 ~ 6.8	2.0 ~ 2.5	Silicone	10
CBS60-15B	CBS60-15W	20.5	17	10.5	Φ6.0	8.1 ~ 8.3	1.5 ~ 2.0	Silicone	10
CBS60-20B	CBS60-20W	21	17	10.5	Φ6.0	8.1 ~ 8.3	2.0 ~ 2.5	Silicone	10

EM series**PCB MOUNTING SCREW**

Pan head



Bind head



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

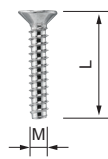
Product no. / Details

■ Material / Finish : Steel / Trivalent chromate

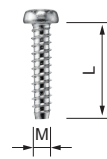
Product no.	M	L	Head type	Suitable models	Pack of
EM-1.6	1.6	4	Pan	SMW • CSS • CS SIC • SIM • WC • PS (M1.6 boss models)	50
EM-2	2	5	Pan	PS • TW • TWN • TWF SIC • SIM • PF • WC • WP (M2 boss models)	50
NEW EM-B2	2	5	Bind	SIC • SIM (M2 boss models) SIC • SIM6-12-□ (when installing PCB46-101)	50
EM-2.3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

MR series**TORX SCREW**

Flat head



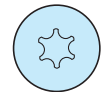
Pan head



With pin



★ Without pin



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

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

Product no. / Details

★ Mark = Without pin

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