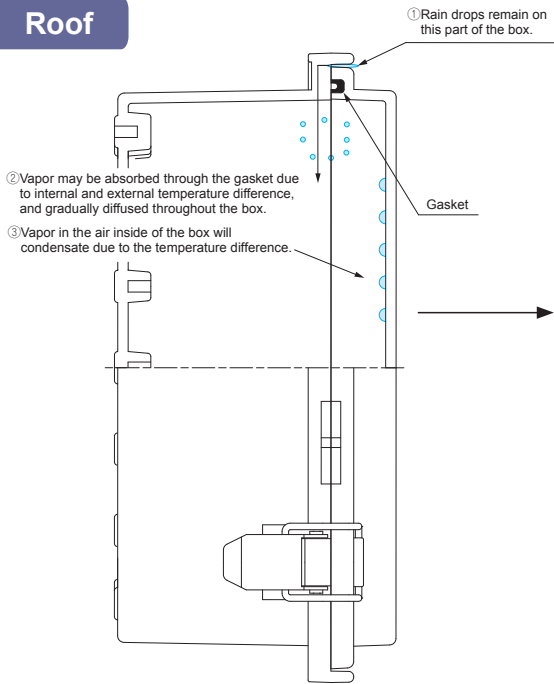


PLASTIC WATERPROOF BOX OUTDOOR USE

*Below are application examples for outdoor use of plastic waterproof boxes. Depending on the usage environment, effectiveness may vary.

Roof



When installing waterproof box outdoors, installation under a roof, or attaching a roof accessory is recommended to prevent condensation inside the box.

This is especially so for transparent lid models which are affected by direct sunlight, causing the temperature inside of the box to be higher than non-transparent lid models.

Higher internal temperature (compared to the external part of the box) may cause vapor absorption, hence the importance of attaching a roof accessory.



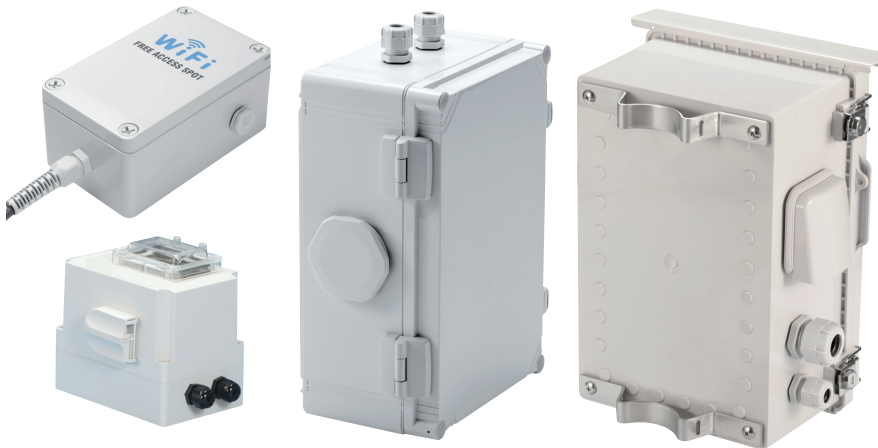
■ Without roof attachment



■ With roof attachment

Protective Vent • Louver • Ventilation

Use to prevent condensation, as well as for ventilation. (Suitable parts vary depending on environment).



Protective Vent
PMF Series
See PMF pages



Louver
V Series
See V • VF pages



Ventilation Parts
VF series
See V • VF pages



Weather Resistant Coating

Weather resistant paint coating to protect against color fade and degradation. (ABS Plastic / 1 year exposure)

■ Before



■ After with coating



■ After without coating



WEATHERBILITY / DURABILITY TEST DATA for IP rated boxes

Weather resistance is the ability of a material to prevent corrosion, loss of material or any sort of deterioration due to prolonged exposure to harsh environmental and weather conditions.

The test data for our weather resistance waterproof/dustproof cases are as detailed below.

TEST DETAILS • TEST INSTRUMENT

Tester : Super Xenon Weather Meter SX75 - Suga Test Instruments Co., Ltd.
 (Testing under conditions closest to the spectral distribution of sunlight by utilizing a xenon lamp and filter system.)
 Irradiation Condition : 180 W/m² at 300 ~ 400nm
 Black panel humidity : 63±3 °C
 Relative Humidity : 50±10 %
 Cycle conditions : 120 minutes (18 min. irradiation + water spray and 102 min. irradiation)
 Test Time : 500 hours (continuous test)
 Radiation Exposure : 324 MJ/m²
 Measurements : Color measurements performed based upon JIS Z 8722 standard, with the results based upon JIS Z8781-4 standard.
 *Lesser color difference infers better weather resistance.

TEST DATA

*Test data results are reference data only; does not reflect actual usage conditions.

Before testing (plastic material color)



After 500 hours testing (plastic material color)

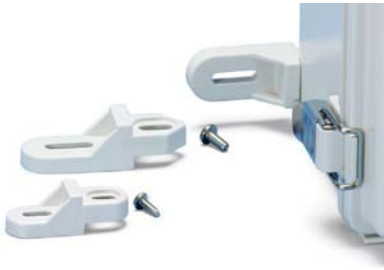


No.	Target box / Material	Test time	Color difference ΔEab
①	WP series - G color type ASA material	100 hrs. 500 hrs.	0.9 3.3
②	SPCP • SPCM series (Body) Glassfiber-filled Polycarbonate material	100 hrs. 500 hrs.	2.9 7.8
③	BCPC • BCPK series (Top cover) Polycarbonate material	100 hrs. 500 hrs.	3.8 7.9
④	BCPC • BCPK series (Base) Glassfiber-filled Polycarbonate material	100 hrs. 500 hrs.	4.7 8.6
⑤	SPCP • SPCM series (Cover) Polycarbonate material	100 hrs. 500 hrs.	3.7 10.6
⑥	BCAP series ABS material	100 hrs. 500 hrs.	3.6 10.8

Better weather resistance



IP65 LATCH-HINGED PLASTIC BOX



Stainless steel and plastic mounting brackets are available. See page 256



BCAR • BCPR series comes with an attachable BRF series outdoor roof. See page 245 ~ 246 and 251 ~ 252



Pole mounting bracket for pole installation See page 257 ~ 258



Dust protection cap (for lock/key type) See page 252



Cable gland For waterproofing enclosure openings for cables and wires See cable gland pages



Mounting plate 3 types of mounting plates are available (plastic / steel / wood) See page 253 ~ 255

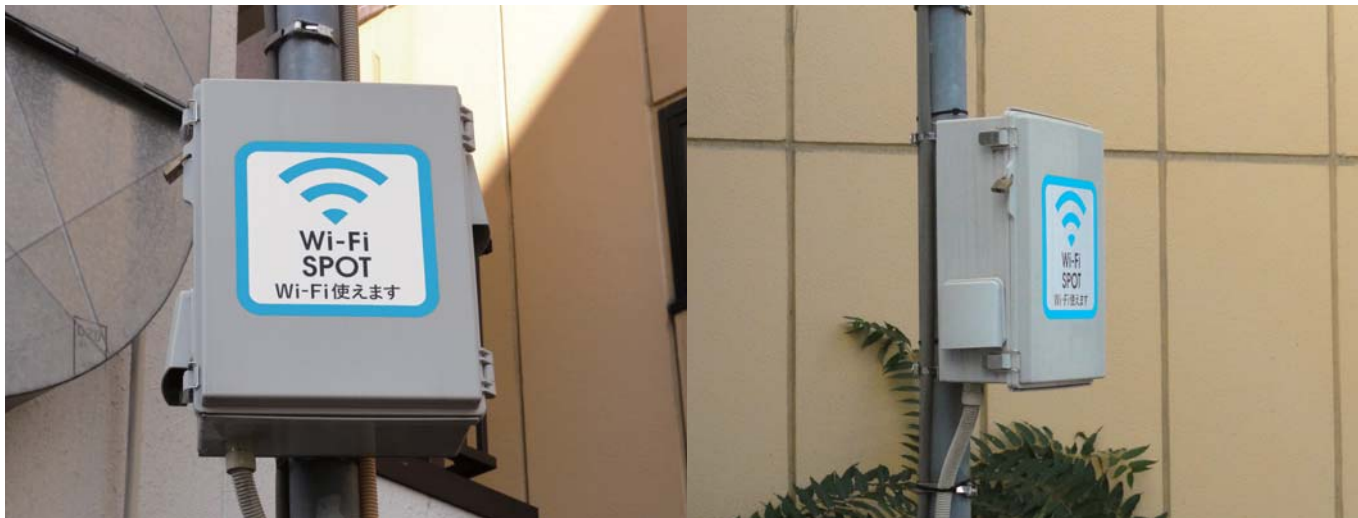


Ventilation cover For heat dissipation and prevention of condensation build-up See page 262

APPLICATION EXAMPLE

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

OUTDOOR WiFi SPOT Product by Spectra Quest Lab. (Japan)



SOLAR POWER JUNCTION BOX Product by Kansai Denki (Japan)

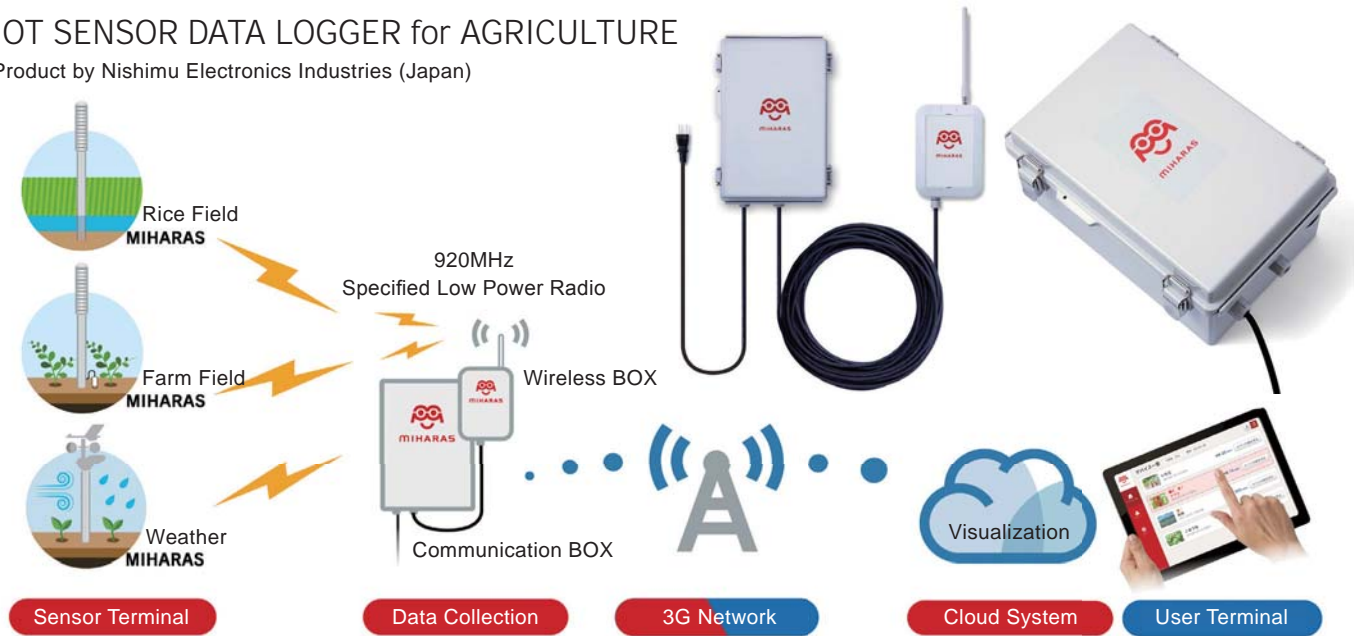


POWER SWITCHBOARD BOX



IOT SENSOR DATA LOGGER for AGRICULTURE

Product by Nishimu Electronics Industries (Japan)



Environmental Data Measurement and Controller Unit

Product by eSOL (Japan)



"SenSu" COMMUNICATION UNIT with SENSOR

Product by DATA TECHNOLOGY (Japan)



NETWORK SENSOR SYSTEM for AGRICULTURE

Product by CM Engineering (Japan)



WILDLIFE DAMAGE MONITORING SYSTEM

Product by CM Engineering (Japan)



VALVE CONTROLLER

Product by EXEN (Japan)



BUILDING SURVEILLANCE UNIT

Product by Showa Denki (Japan)



DIGITAL PRESSURE GAUGE

Product by KRONE CORPORATION (Japan)



RADIATION MONITOR



POWER SAVER for AIR CONDITIONING

Product by Synapes (Japan)

ANEMOMETER

Product by Fieldpro (Japan)



WATER GAUGE

Product by Fieldpro (Japan)



GROUND EXTENSOMETER

Product by GeotechService (Japan)

MONITORING CAMERA

Product by ACE PROMOTION (Japan)



BCAR SERIES

IP65 ABS PLASTIC BOX with OUTDOOR ROOF

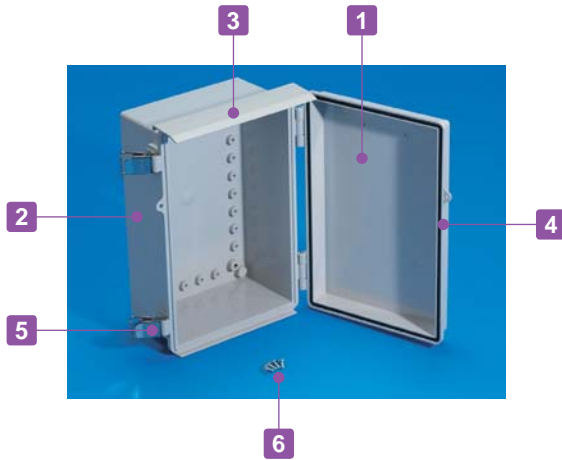
BCPR SERIES

IP65 POLYCARBONATE PLASTIC BOX with OUTDOOR ROOF



Technical Data

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



- Suitable for outdoor use by equipping easy snap-on roof attachment.
- 45 different sizes available.
- BCAR series is made of white gray ABS with 2 different cover type (white gray ABS and transparent polycarbonate).
- BCPR series is made of light gray UL94V-0 polycarbonate, which has good heat resistance properties.
- Transparent cover type is not available for BCAR507018, 507025, 608018, and 608028 models.

Components: BCAR series

■ Box UL class = UL94HB

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

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

Components: BCPR series

■ Box UL class = UL94V-0

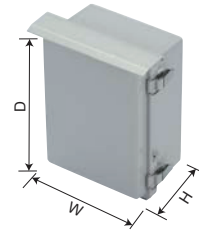
No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	Polycarbonate	Light gray
2	Base	1	Glass fiber filled polycarbonate	Light gray
3	Roof	1	PVC	Light gray
4	Gasket	1	Polyurethane	Black
5	Latch	1~3	Stainless steel	Unfinished
6	Screw	2~8	Steel	Trivalent chromate

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

Color Type

Code	Cover color / Material	Base color / Material
BCAR[G]	White gray / ABS	White gray / ABS
BCAR[T]	Transparent / Polycarbonate	White gray / ABS
BCPR[S]	Light gray / Polycarbonate	Light gray / Glass fiber filled polycarbonate

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



BCAR Product no. / Dimensions

Product no.	W	D	H	Weight (g)	
				G	T
BCAR091207□	90	120	70	213	220
BCAR091208□	90	120	85	228	237
BCAR101507□	100	150	70	291	300
BCAR101508□	100	150	85	309	318
BCAR112107□	110	210	75	379	398
BCAR112110□	110	210	100	442	440
BCAR112607□	110	260	75	451	466
BCAR112610□	110	260	100.5	504	519
BCAR131508□	135	155	85	379	381
BCAR131808□	135	185	85.5	404	434
BCAR131810□	135	185	100.5	420	426
BCAR162110□	160	210	100	495	513
BCAR162113□	160	210	130	544	564
BCAR162610□	160	260	100	605	629
BCAR162613□	160	260	130	701	729
BCAR172211□	170	220	110.5	560	586
BCAR172711□	170	270	110.5	700	710
BCAR192810□	190	280	100.5	755	778
BCAR192814□	190	280	141	909	933
BCAR203013□	200	300	131.5	957	989
BCAR203015□	200	300	151.5	995	1,022
BCAR203018□	200	300	180.5	1,104	1,122
BCAR212110□	210	210	100	666	692
BCAR212113□	210	210	130	740	762
BCAR253515□	250	350	151	1,307	1,378
BCAR253518□	250	350	181.5	1,443	1,510
BCAR282813□	280	280	130.5	1,218	1,251
BCAR283813□	280	380	130	1,506	1,563
BCAR303015□	300	300	151	1,393	1,472
BCAR303018□	300	300	181	1,549	1,630
BCAR304012□	300	400	121	1,562	1,629
BCAR304015□	300	400	150	1,617	1,729
BCAR304018□	300	400	181	1,773	1,907
BCAR353515□	350	350	150	1,757	1,827
BCAR353518□	350	350	181	1,908	1,970
BCAR354512□	350	450	120	2,140	2,239
BCAR354516□	350	450	160	2,454	2,586
BCAR354520□	350	450	201	2,718	2,866
BCAR506018□	530	630	185	5,564	5,737
BCAR506025□	530	630	255	6,203	6,399
BCAR507018G	530	730	188	6,366	—
BCAR507025G	530	730	255	7,037	—
BCAR608018G	630	830	188	8,279	—
BCAR608028G	630	830	288	9,719	—

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

BCPR Product no. / Dimensions

Product no.	W	D	H	Weight (g)
BCPR091207S	90	120	70	242
BCPR091208S	90	120	85	264
BCPR101507S	100	150	70	330
BCPR101508S	100	150	85	354
BCPR112107S	110	210	75	439
BCPR112110S	110	210	100	493
BCPR112607S	110	260	75	513
BCPR112610S	110	260	100.5	589
BCPR131508S	135	155	85	429
BCPR131808S	135	185	85.5	475
BCPR131810S	135	185	100.5	471
BCPR162110S	160	210	100	583
BCPR162113S	160	210	130	638
BCPR162610S	160	260	100	699
BCPR162613S	160	260	130	806
BCPR172211S	170	220	110.5	677
BCPR172711S	170	270	110.5	803
BCPR192810S	190	280	100.5	889
BCPR192814S	190	280	141	1,060
BCPR203013S	200	300	131.5	1,091
BCPR203015S	200	300	151.5	1,165
BCPR203018S	200	300	180.5	1,296
BCPR212110S	210	210	100	777
BCPR212113S	210	210	130	862
BCPR253515S	250	350	151	1,537
BCPR253518S	250	350	181.5	1,722
BCPR282813S	280	280	130.5	1,422
BCPR283813S	280	380	130	1,747
BCPR303015S	300	300	151	1,665
BCPR303018S	300	300	181	1,814
BCPR304012S	300	400	121	1,901
BCPR304015S	300	400	150	1,917
BCPR304018S	300	400	181	2,084
BCPR353515S	350	350	150	2,109
BCPR353518S	350	350	181	2,206
BCPR354512S	350	450	120	2,471
BCPR354516S	350	450	160	2,899
BCPR354520S	350	450	201	3,224
BCPR506018S	530	630	185	6,431
BCPR506025S	530	630	255	7,339
BCPR507018S	530	730	188	7,630
BCPR507025S	530	730	255	8,420
BCPR608018S	630	830	188	10,040
BCPR608028S	630	830	288	11,770

■ Refer to page 247 ~ 250 for detailed dimensions.

Accessories (Optional parts)



Mounting plate BMP series
See page 253 ~ 255



Mounting bracket CK • BFL series
See page 256



Pole mounting bracket SSK series
See page 257 ~ 258



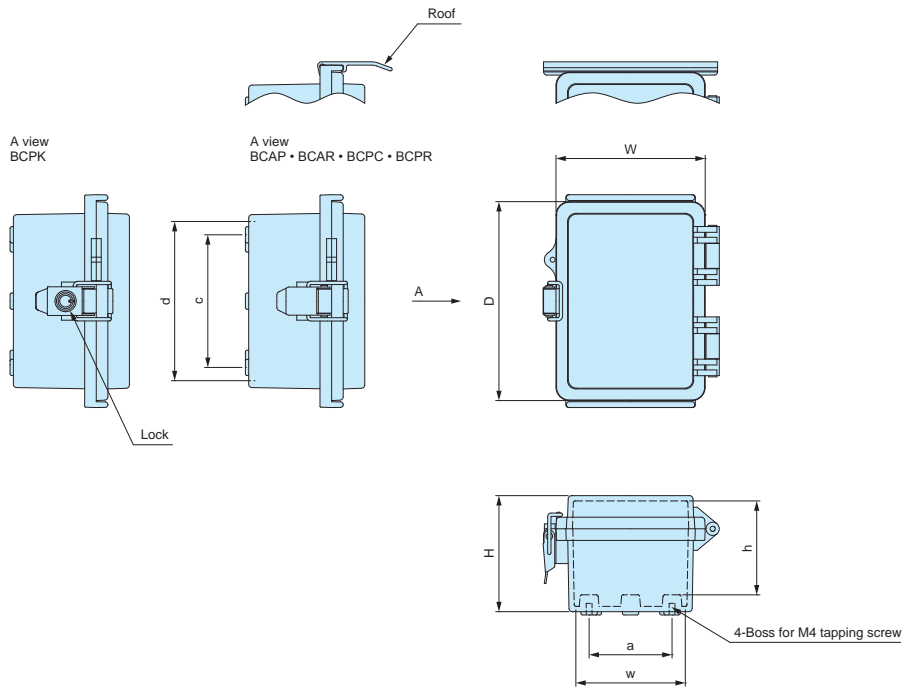
Cable gland
See cable gland pages

Ventilation part
See page 259 ~ 262

BCAP • BCAR • BCPC • BCPK • BCPR dimensions

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

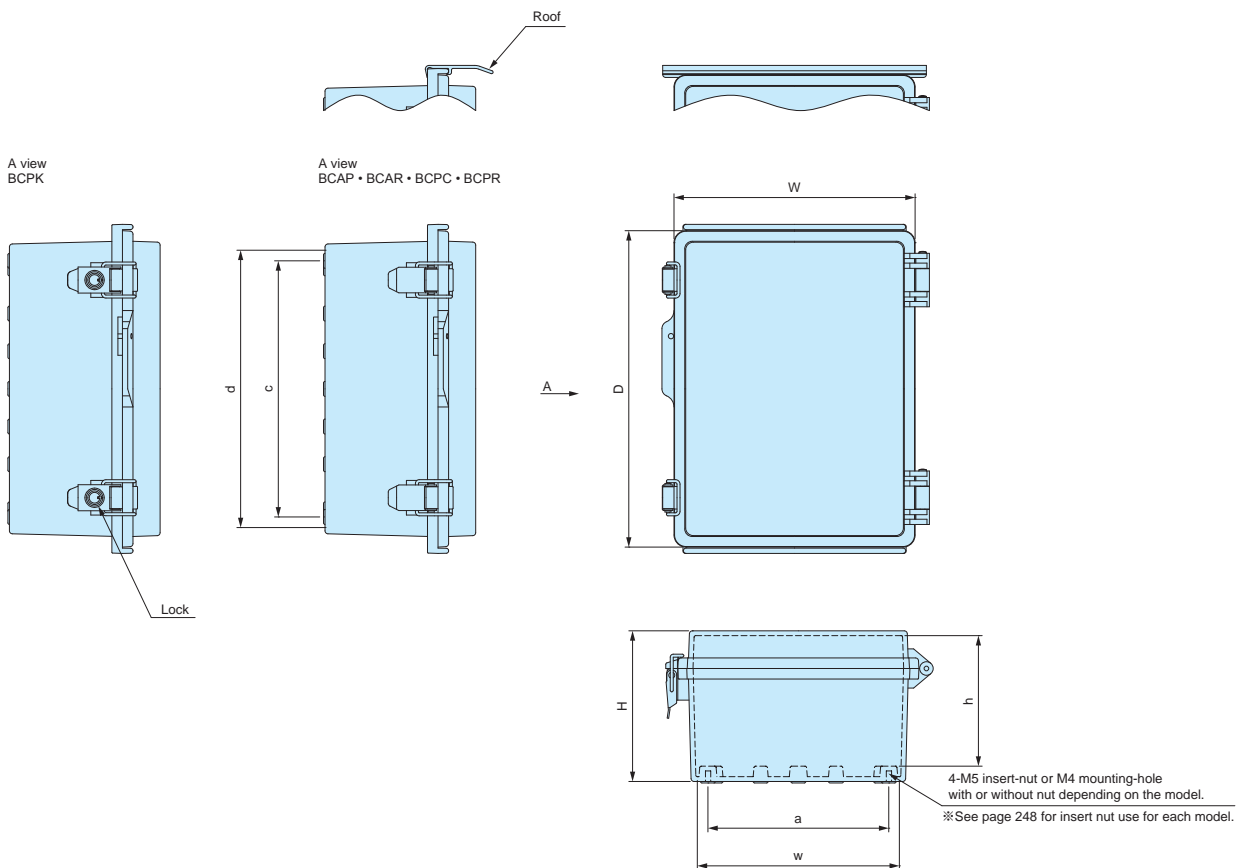
091207, 091208



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

101507 ~ 405020

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





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

APPLICATION EXAMPLE



SURVEILLANCE VIDEO DATA CLOUD ROUTER

Product by LIVELOCK TECHNOLOGIES (Japan)

Product no.	W	D	H	Available range			Bottom hole pitch		Insert nut
				w	d	h	a	c	
BCAP・R, BCPC・K・R101507	100	150	70	76	126	56.5	60	110	without
BCAP・R, BCPC・K・R101508	100	150	85	75.5	125.5	71.5	60	110	without
BCAP・R, BCPC・K・R112107	110	210	75	85.8	185.8	61.5	70	170	without
BCAP・R, BCPC・K・R112110	110	210	100	84.9	184.9	86.5	70	170	without
BCAP・R, BCPC・K・R112607	110	260	75	85.8	235.8	61.5	70	220	without
BCAP・R, BCPC・K・R112610	110	260	100.5	85.1	234.9	87.2	70	220	without
BCAP・R, BCPC・K・R131508	135	155	85	110.5	130.5	71.5	95	115	without
BCAP・R, BCPC・K・R131808	135	185	85.5	110.4	160.4	72.2	95	145	without
BCAP・R, BCPC・K・R131810	135	185	100.5	110.4	160.4	87.1	95	145	without
BCAP, BCPC・K 151509	150	150	90	125.7	125.7	75.5	120	120	without
BCAP, BCPC・K 151512	150	150	120.5	124	124	106	117	117	without
BCAP・R, BCPC・K・R162110	160	210	100	134	184	86.6	120	170	without
BCAP・R, BCPC・K・R162113	160	210	130	134	184	116.5	120	170	without
BCAP・R, BCPC・K・R162610	160	260	100	135.1	235.1	86.6	120	220	without
BCAP・R, BCPC・K・R162613	160	260	130	134	234	116.6	120	220	without
BCAP・R, BCPC・K・R172211	170	220	110.5	144.9	194.9	96.1	132	182	without
BCAP・R, BCPC・K・R172711	170	270	110.5	144.9	244.9	96.1	132	232	without
BCAP・R, BCPC・K・R192810	190	280	100.5	165.3	255.3	84.1	148	238	with
BCAP・R, BCPC・K・R192814	190	280	141	164.2	254.2	124.6	148	238	with
BCAP・R, BCPC・K・R203013	200	300	131.5	173.5	273.5	115.1	152	252	with
BCAP・R, BCPC・K・R203015	200	300	151.5	173.5	273.5	135.1	152	252	with
BCAP・R, BCPC・K・R203018	200	300	180.5	172.4	272.3	164.1	152	252	with
BCAP・R, BCPC・K・R212110	210	210	100	185.1	185.1	86.6	170	170	without
BCAP・R, BCPC・K・R212113	210	210	130	184	184	116.6	170	170	without
BCAP・R, BCPC・K・R253515	250	350	151	222.5	322.5	135.3	206	306	with
BCAP・R, BCPC・K・R253518	250	350	181.5	222.5	322.5	165.8	206	306	with
BCAP・R, BCPC・K・R282813	280	280	130.5	254	254	113.6	238	238	with
BCAP・R, BCPC・K・R283813	280	380	130	254	354	113.6	238	338	with
BCAP・R, BCPC・K・R303015	300	300	151	273	273	134.3	256	256	with
BCAP・R, BCPC・K・R303018	300	300	181	272.5	272.5	164.3	256	256	with
BCAP・R, BCPC・K・R304012	300	400	121	274.1	374.6	104.6	252	352	with
BCAP・R, BCPC・K・R304015	300	400	150	273.5	373.5	133.6	252	352	with
BCAP・R, BCPC・K・R304018	300	400	181	272.5	372.5	164.6	252	352	with
BCAP・R, BCPC・K・R353515	350	350	150	323.6	323.6	133.6	302	302	with
BCAP・R, BCPC・K・R353518	350	350	181	322.5	322.5	164.6	302	302	with
BCAP・R, BCPC・K・R354512	350	450	120	316.7	416.7	103.5	302	402	with
BCAP・R, BCPC・K・R354516	350	450	160	308.7	414.7	142.6	302	402	with
BCAP・R, BCPC・K・R354520	350	450	201	306.9	412.8	183.6	302	402	with
BCAP, BCPC・K 405016	400	500	160	360.4	466.6	144	352	452	with
BCAP, BCPC・K 405020	400	500	201	359.4	465.5	184	352.5	452.5	with

BCAP • BCAR • BCPC • BCPK • BCPR dimensions

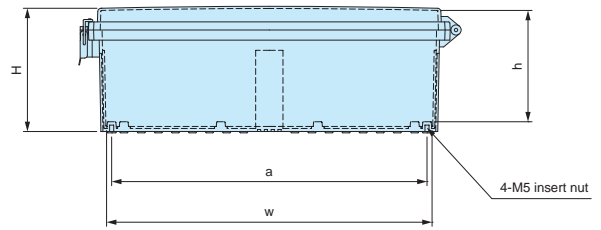
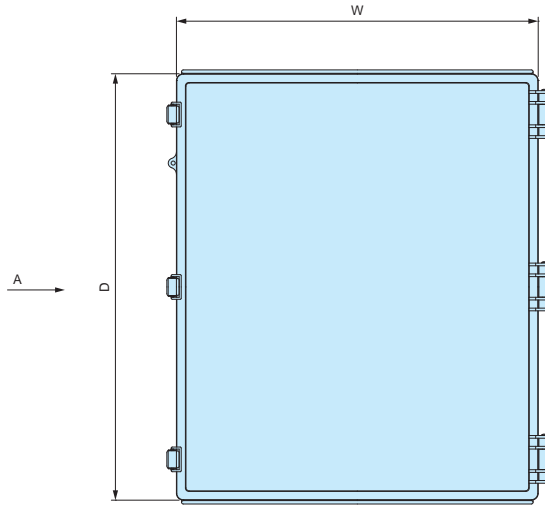
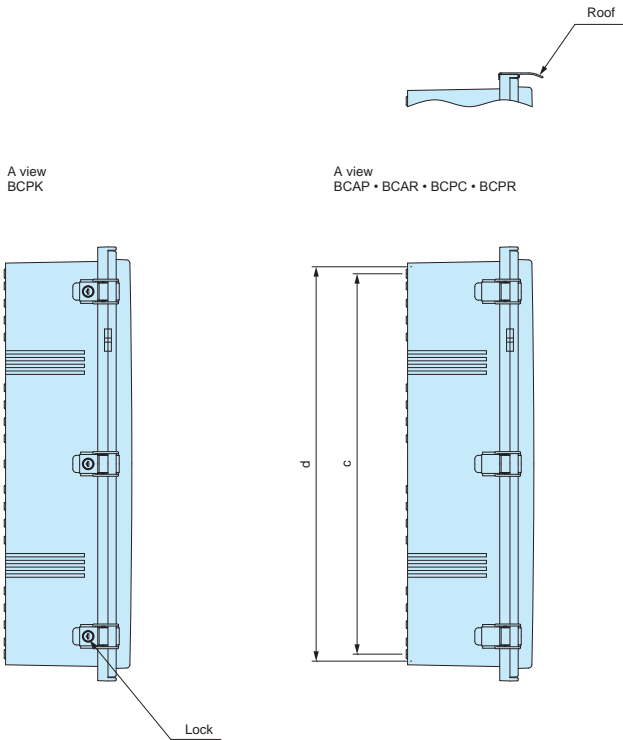
406018 ~ 507025

Not available for BCAR • BCPR 406018 and 406023 models.

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



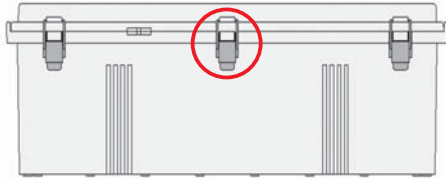
■ Inner bosses vary according to box size.
Refer to DXF/DWG/PDF drawings for more details.



Attention when locking the latch

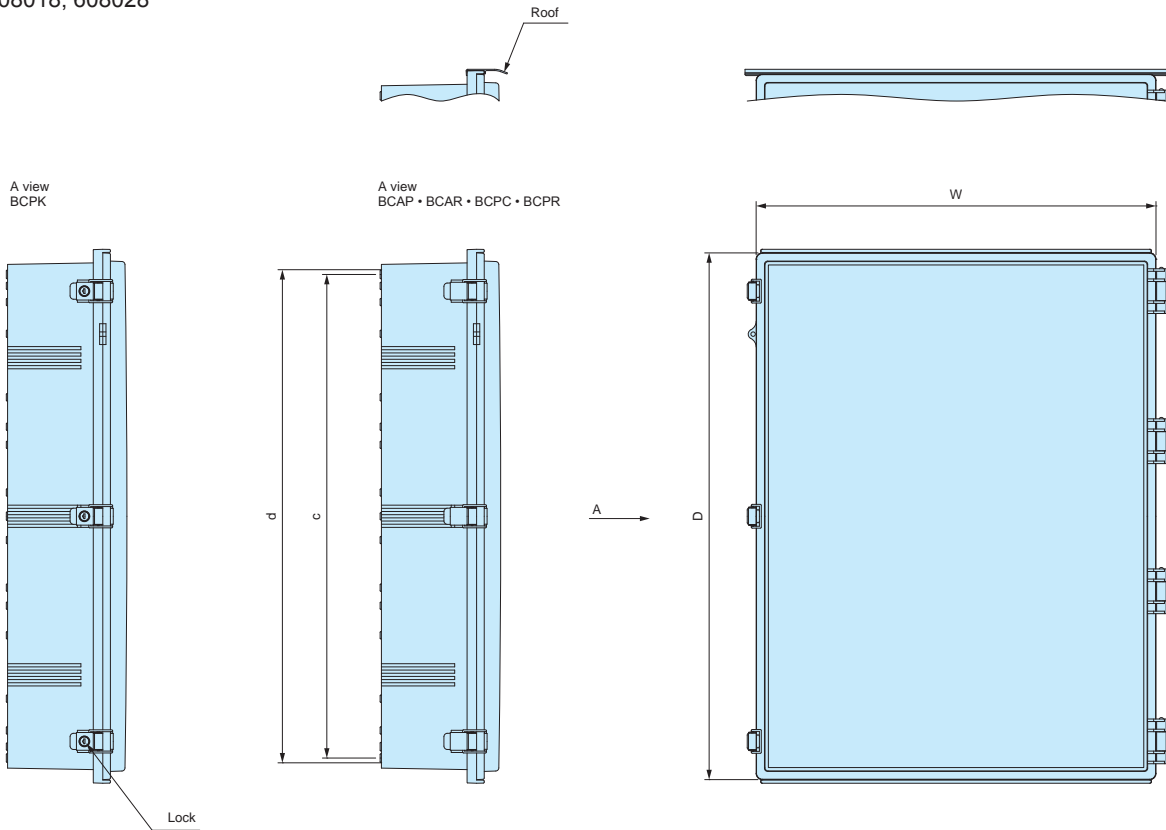
1. Close latches on both ends first.
 2. Close center latch next.
- ※ Closing the center latch first may create a non-watertight seal.

Center latch must be closed last!



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

608018, 608028

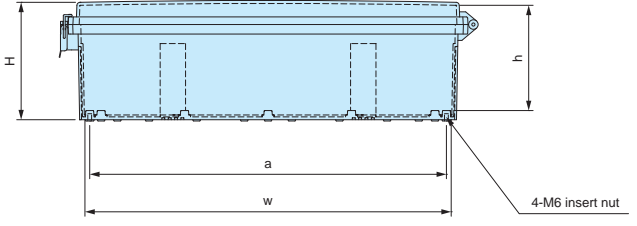


Attention when locking the latch

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

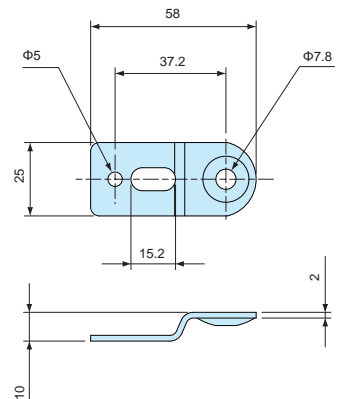
※ Closing the center latch first may create a non-watertight seal.

Center latch must be closed last!



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

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



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

BRF SERIES

OUTDOOR ROOF



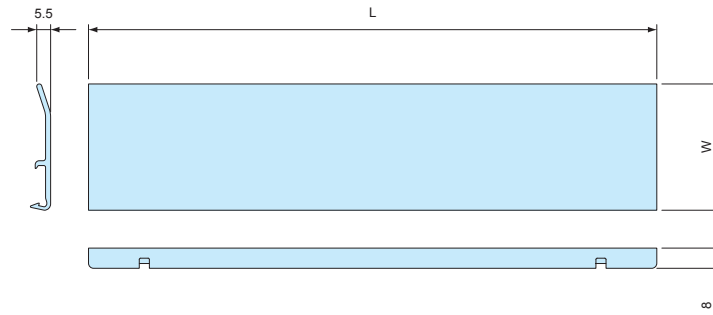
- Recommended to be used for outdoor environments for protection against rain etc.
- Snap-in easy installation.
- Available for BCAP and BCPC • BCPK series except 151509, 151512, 405016, 405020, 406018, and 406023 models.

Color Type

Color code	Material	Color / Finish	Suitable series
G	PVC	White gray / Unpainted	BCAP
S	PVC	Light gray / Painted	BCPC • BCPK

BRF dimensions

Roof for 091207 ~ 353518

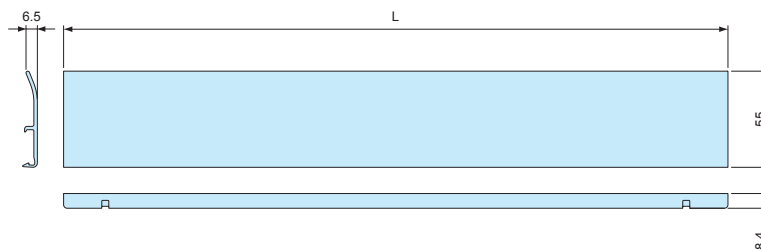


Product no. / Dimensions

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

Product no.	Suitable box	L	W
BRF- 90□	BCAP • BCPC • BCPK 091207 091208	105	45
BRF-100□	BCAP • BCPC • BCPK 101507 101508	115	45
BRF-110□	BCAP • BCPC • BCPK 112107 112110 112607 112610	125	45
BRF-135□	BCAP • BCPC • BCPK 131508 131808 131810	150	45
BRF-160□	BCAP • BCPC • BCPK 162110 162113 162610 162613	175	45
BRF-170□	BCAP • BCPC • BCPK 172211 172711	185	45
BRF-190□	BCAP • BCPC • BCPK 192810 192814	205	45
BRF-210□	BCAP • BCPC • BCPK 212110 212113	225	45
BRF-200□	BCAP • BCPC • BCPK 203013 203015 203018	225	50
BRF-250□	BCAP • BCPC • BCPK 253515 253518	275	50
BRF-280□	BCAP • BCPC • BCPK 282813 283813	305	50
BRF-300□	BCAP • BCPC • BCPK 303015 303018 304012 304015 304018	325	50
BRF-350□	BCAP • BCPC • BCPK 353515 353518	375	50

Roof for 354512 ~ 354520



Product no. / Dimensions

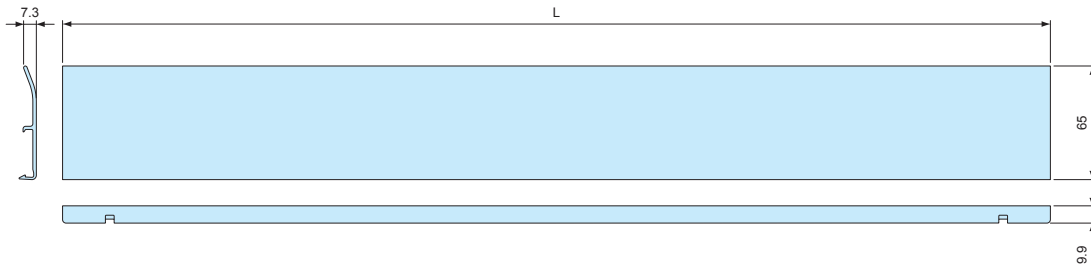
■ Please suffix color code at the end of the product number.

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

■ S color type is light gray painted.

Roof for 506018 ~ 608028

Accessories (Optional parts)



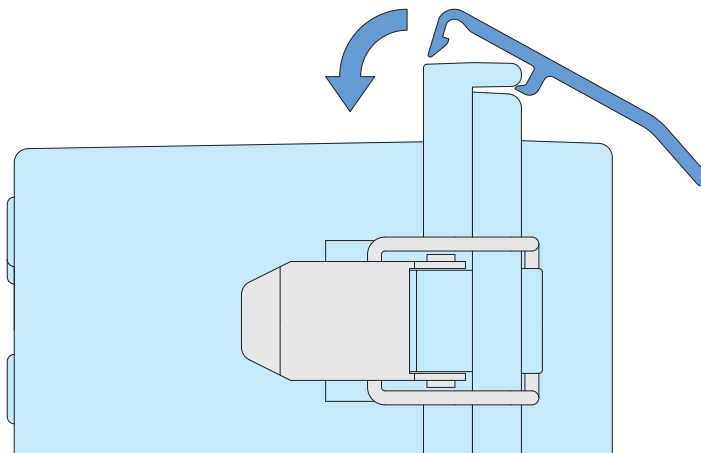
Product no. / Dimensions

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

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

■ S color type is light gray painted.

- How to install BRF outdoor roof.
Refer to illustration.



BCC-1 DUST PROTECTION CAP



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

Product no. / Dimensions

Product no.	Material	Color	Sales unit
BCC-1	Silicone	Black	1 pc

Suitable Box

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

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

BMP-Z SERIES

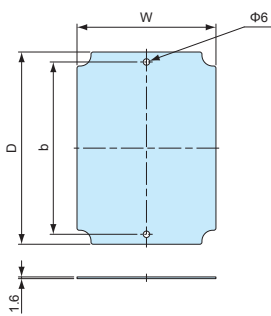
STEEL MOUNTING PLATE

- Tough but easily customizable.
- Large sized (BMP5060Z, 5070Z and 6080Z) plates have a 90° bent edge.

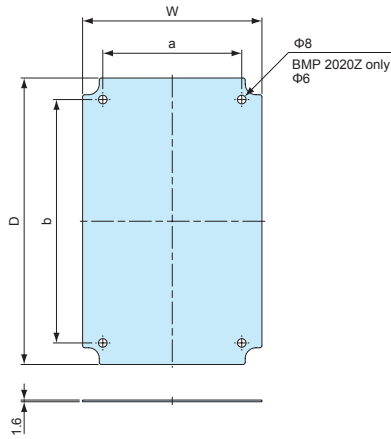
- Customization services (machining, punch press or clinching nut insertion) are available. See website for more details.



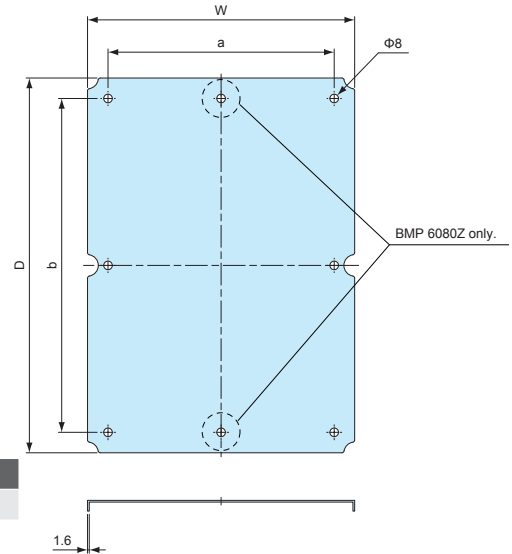
BMP0912Z ~ 1727Z



BMP1928Z ~ 4060Z



BMP5060Z ~ 6080Z



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

Components

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

Product no. / Dimensions

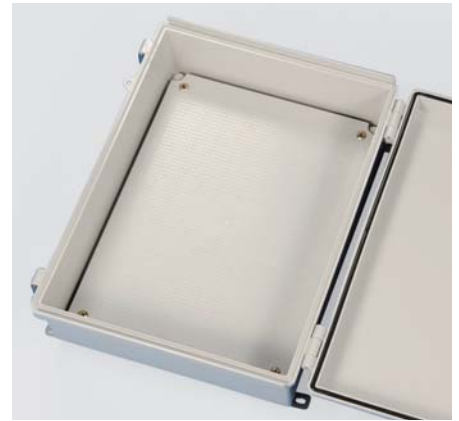
Product no.	W	D	a	b	Suitable box	Weight (g)
BMP0912Z	58	88	-	69	BCAP • R, BCPC • K • R 091207, 091208	53
BMP0813Z	68	118	-	99	BCAP • R, BCPC • K • R 101507, 101508	87
BMP1121Z	77	177	-	158	BCAP • R, BCPC • K • R 112107, 112110	159
BMP1126Z	77	227	-	208	BCAP • R, BCPC • K • R 112607, 112610	210
BMP1315Z	102	122	-	110	BCAP • R, BCPC • K • R 131508	141
BMP1217Z	102	152	-	140	BCAP • R, BCPC • K • R 131808, 131810	180
BMP1515Z	121	121	-	110	BCAP BCPC • K 151509, 151512	172
BMP1520Z	126	176	-	160	BCAP • R, BCPC • K • R 162110, 162113	262
BMP1525Z	127	227	-	210	BCAP • R, BCPC • K • R 162610, 162613	346
BMP1722Z	137	187	-	160	BCAP • R, BCPC • K • R 172211	308
BMP1727Z	137	237	-	210	BCAP • R, BCPC • K • R 172711	391
BMP1928Z	157	247	120	210	BCAP • R, BCPC • K • R 192810, 192814	462.5
BMP2020Z	176	176	120	150	BCAP • R, BCPC • K • R 212110, 212113	371
BMP2030Z	165	265	129	226	BCAP • R, BCPC • K • R 203013, 203015, 203018	519
BMP2535Z	215	315	180	270	BCAP • R, BCPC • K • R 253515, 253518	816
BMP2828Z	246	246	210	210	BCAP • R, BCPC • K • R 282813	727.5
BMP2838Z	246	346	210	310	BCAP • R, BCPC • K • R 283813	1,018
BMP3030Z	264	264	219	219	BCAP • R, BCPC • K • R 303015, 303018	826.5
BMP3040Z	265	365	228	325	BCAP • R, BCPC • K • R 304012, 304015, 304018	1,154
BMP3535Z	315	315	270	270	BCAP • R, BCPC • K • R 353515, 353518	1,196.5
BMP3545Z	301	401	274	365	BCAP • R, BCPC • K • R 354512, 354516, 354520	1,443
BMP4050Z	354	454	328	428	BCAP BCPC • K 405016, 405020	1,998
BMP4060Z	354	551	328	525	BCAP BCPC • K 406018, 406023	2,328
BMP5060Z	474	574	426	526	BCAP • R, BCPC • K • R 506018, 506025	3,286
BMP5070Z	472	672	426	626	BCAP • R, BCPC • K • R 507018, 507025	3,864
BMP6080Z	565	765	526	726	BCAP • R, BCPC • K • R 608018, 608028	5,288.5

■ K = BCPK series / R = BCAR • BCPR series

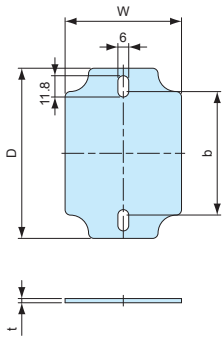
BMP-P SERIES

PLASTIC MOUNTING PLATE

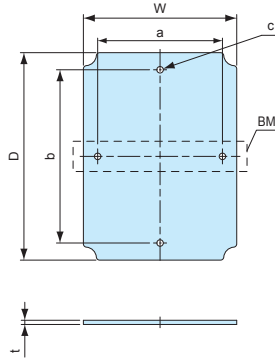
- Lightweight ABS plastic mounting plate.
- Flat plate: BMP0811P ~ BMP1515P
Ribbed plate: BMP1520P ~ BMP4050P
- DXF/DWG/PDF drawings available on our website.



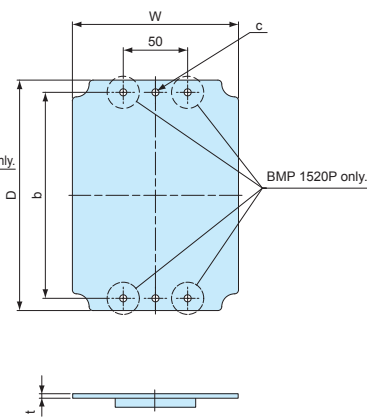
BMP0811P (Flat)



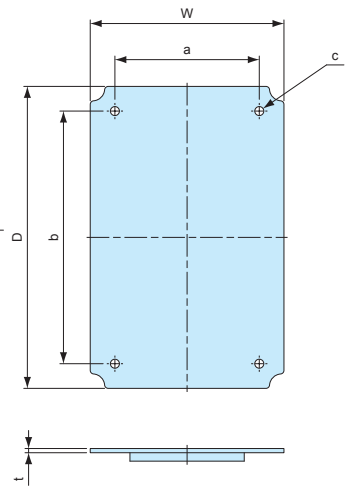
BMP0813P, 1515P (Flat)



BMP1520P, 1525P (Ribbed)



BMP1928P ~ 4050P (Ribbed)



Components

Part name	Material	Color
Mounting plate	ABS	White gray

Product no. / Dimensions

Product no.	W	D	a	b	t	c (Φ)	Suitable box	Weight (g)
BMP0811P	64.5	94.3	-	68.4	3.5	-	BCAP • R, BCPC • K • R 091207, 091208	21
BMP0813P	64.5	114.5	-	99	3	Φ6	BCAP • R, BCPC • K • R 101507, 101508	24
BMP1121P	76.5	176	-	158	3	Φ6	BCAP • R, BCPC • K • R 112107, 112110	40
BMP1126P	76.5	226	-	208	3	Φ6	BCAP • R, BCPC • K • R 112607, 112610	53
BMP1315P	101.5	121.5	-	110	3.5	Φ5.5	BCAP • R, BCPC • K • R 131508	36
BMP1217P	109.5	160	-	140	4	Φ6	BCAP • R, BCPC • K • R 131808, 131810	62
BMP1515P	123	123	110	110	3.5	Φ6	BCAP BCPC • K 151509, 151512	52
BMP1520P	129	179	-	160	3.5	Φ5.5	BCAP • R, BCPC • K • R 162110, 162113, 172211	92
BMP1525P	129	228.5	-	210	3.5	Φ6	BCAP • R, BCPC • K • R 162610, 162613, 172711	112
BMP1928P	158.5	248	120	210	3.5	Φ8	BCAP • R, BCPC • K • R 192810, 192814	162
BMP2020P	178.5	178.5	120	150	3.5	Φ5.5	BCAP • R, BCPC • K • R 212110, 212113	125
BMP2030P	166.5	266	128	225.5	4	Φ8	BCAP • R, BCPC • K • R 203013, 203015, 203018	188
BMP2535P	215.5	315	180	268.5	4	Φ8	BCAP • R, BCPC • K • R 253515, 253518	292
BMP2828P	248.5	248.5	210	210	4	Φ8	BCAP • R, BCPC • K • R 282813	237
BMP2838P	248	347.5	209	309.5	4	Φ8	BCAP • R, BCPC • K • R 283813	368
BMP3030P	262.5	262.5	219	219	4	Φ7.5	BCAP • R, BCPC • K • R 303015, 303018	281
BMP3040P	264.5	364	227	323	4	Φ8	BCAP • R, BCPC • K • R 304012, 304015, 304018	437
BMP3535P	313.5	313.5	269.5	269.5	4	Φ8	BCAP • R, BCPC • K • R 353515, 353518	424.5
BMP3545P	305	405.5	273	364	4	Φ8	BCAP • R, BCPC • K • R 354512, 354516, 354520	539
BMP4050P	357	457	328	428	4	Φ8.5	BCAP BCPC • K 405016, 405020	725.5

■ K = BCPK series / R = BCAR • BCPR series



TAKACHI ELECTRONICS ENCLOSURE CO., LTD.

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November 11, 2019

Notice

BMP-P series Plastic Mounting Plate Changes to Underside (bottom) Shape

■ Affected models

Product Number	Status
BMP0811P	Pending (est. 2nd Quarter 2020)
BMP0818P	Pending (est. 2nd Quarter 2020)
BMP1126P	Pending (est. 3rd Quarter 2020)
BMP1212P	Pending (est. 2nd Quarter 2020)
BMP1217P	Changed

■ Changes : Underside shape/construction

Current shape



New shape



■ Purpose : For the reinforcement and strengthening of small-sized plastic mounting plate(s).

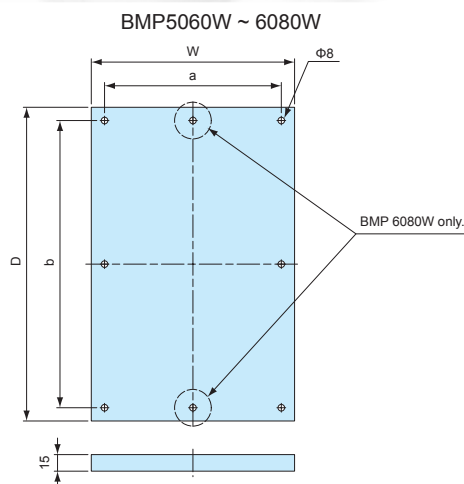
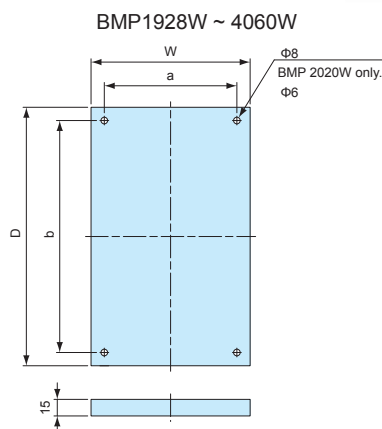
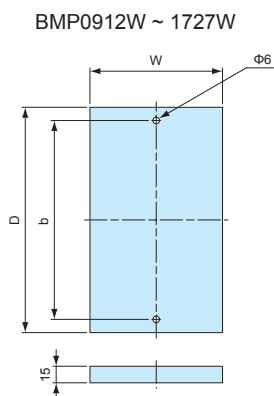
■ Effective date : Once present stock has run out.

■ Note : There will be no changes to product number, color, or pricing.

BMP-W SERIES

WOODEN MOUNTING PLATE

- Easy installation with tapping screws.
- Easily customizable hard wooden plate.
- Plate comes with scales printed on for easy references.
- DXF/DWG/PDF drawings available on our website.



Components

Part name	Pcs	Material	Color / Finish
Mounting plate	1	Wood board t=15	Scaled sheet
Screw	2 ~ 8	Steel	Trivalent chromate

Product no. / Dimensions

Product no.	W	D	a	b	Suitable box	Screw	Weight (g)
BMP0912W	58	92	-	69	BCAP • R, BCPC • K • R 091207, 091208	M4-20 × 2 pcs	62
BMP0813W	68	122	-	99	BCAP • R, BCPC • K • R 101507, 101508	M4-20 × 2 pcs	94
BMP1121W	77	181	-	158	BCAP • R, BCPC • K • R 112107, 112110	M4-20 × 2 pcs	166
BMP1126W	77	231	-	208	BCAP • R, BCPC • K • R 112607, 112610	M4-20 × 2 pcs	191
BMP1315W	102	126	-	110	BCAP • R, BCPC • K • R 131508	M4-20 × 2 pcs	127
BMP1217W	102	156	-	140	BCAP • R, BCPC • K • R 131808, 131810	M4-20 × 2 pcs	190
BMP1515W	118	125	-	110	BCAP BCPC • K 151509, 151512	M4-20 × 2 pcs	172
BMP1520W	126	180	-	160	BCAP • R, BCPC • K • R 162110, 162113	M4-20 × 2 pcs	243
BMP1525W	127	231	-	210	BCAP • R, BCPC • K • R 162610, 162613	M4-20 × 2 pcs	352
BMP1722W	137	191	-	160	BCAP • R, BCPC • K • R 172211	M4-20 × 2 pcs	286
BMP1727W	137	241	-	210	BCAP • R, BCPC • K • R 172711	M4-20 × 2 pcs	212
BMP1928W	150	240	120	210	BCAP • R, BCPC • K • R 192810, 192814	M5-20 × 4 pcs	350
BMP2020W	170	174	120	150	BCAP • R, BCPC • K • R 212110, 212113	M4-20 × 4 pcs	336
BMP2030W	159	256	129	226	BCAP • R, BCPC • K • R 203013, 203015, 203018	M5-20 × 4 pcs	482
BMP2535W	210	300	180	270	BCAP • R, BCPC • K • R 253515, 253518	M5-20 × 4 pcs	688
BMP2828W	240	240	210	210	BCAP • R, BCPC • K • R 282813	M5-20 × 4 pcs	565
BMP2838W	240	340	210	310	BCAP • R, BCPC • K • R 283813	M5-20 × 4 pcs	893
BMP3030W	249	249	219	219	BCAP • R, BCPC • K • R 303015, 303018	M5-20 × 4 pcs	659
BMP3040W	258	355	228	324	BCAP • R, BCPC • K • R 304012, 304015, 304018	M5-20 × 4 pcs	965
BMP3535W	300	300	270	270	BCAP • R, BCPC • K • R 353515, 353518	M5-20 × 4 pcs	964
BMP3545W	301	395	274	365	BCAP • R, BCPC • K • R 354512, 354516, 354520	M5-20 × 4 pcs	1,314
BMP4050W	355	455	328	428	BCAP BCPC • K 405016, 405020	M5-20 × 4 pcs	1,754
BMP4060W	355	552	328	525	BCAP BCPC • K 406018, 406023	M5-20 × 4 pcs	2,015.5
BMP5060W	456	556	426	526	BCAP • R, BCPC • K • R 506018, 506025	M5-20 × 6 pcs	2,650
BMP5070W	456	656	426	626	BCAP • R, BCPC • K • R 507018, 507025	M5-20 × 6 pcs	3,152.5
BMP6080W	556	756	526	726	BCAP • R, BCPC • K • R 608018, 608028	M5/M6-20 × 8 pcs	4,434

■ K = BCPC series / R = BCAR • BCPR series

Accessories (Optional parts)

BFL SERIES

PLASTIC MOUNTING BRACKET



Color G Color S

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

Color Type

Color	Color Name	Suitable Box
G	White gray	BCAP • BCAR
S	Light gray	BCPC • BCPK • BCPR

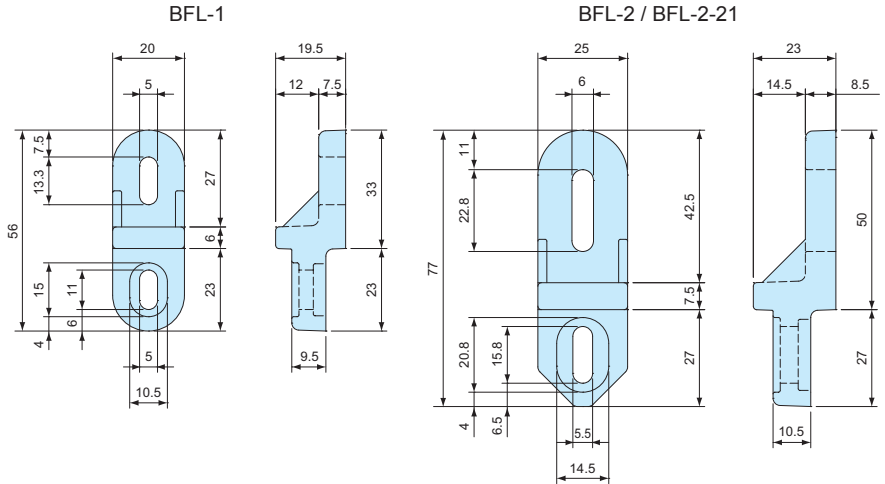
Components

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

Product no. / Dimensions

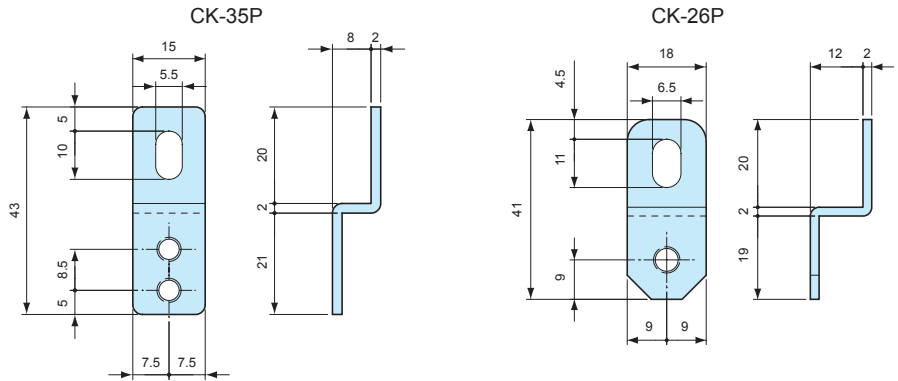
Product no.	Suitable box	Screw
BFL-1□	BCAP • R, BCPC • K • R 0912, 1015, 1121, 1126, 1315, 1318, 1621, 1626, 1722, 1727, 212113	M4-12
BFL-2□	BCAP • R, BCPC • K • R 1928, 2030, 2535, 2828, 2838, 3030, 3040, 3535, 3545, 4050, 4060, 5060	M5-12
BFL-2-21□	BCAP • R, BCPC • K • R 212110	M4-12

- Please suffix color code at the end of the product number.
- ※Not suitable for BCAP1515 model. Use CK-35P (Stainless steel) instead.



CK SERIES

STAINLESS STEEL MOUNTING BRACKET



Components

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

Product no. / Dimensions

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

MT SERIES

PCB MOUNTING SCREW

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

Product no. / Dimensions

Product no.	Material	Finish	Pack of
MT4-8T	Steel M4	Trivalent chromate	20
MT5-8T	Steel M5	Trivalent chromate	20

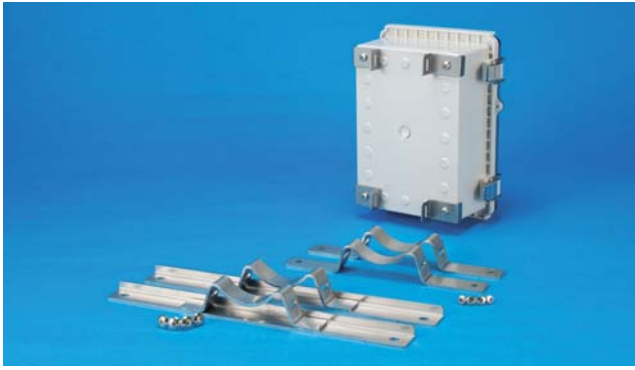


Suitable Box

Product no.	Suitable box	Weight / Torque
MT4-8T	BCAP • R, BCPC • K • R 0912, 1015, 1121, 1126, 1315, 1318, 1515, 1621, 1626, 1722, 1727, 1928, 2121	7kgf • cm (0.7N • m)
MT5-8T	BCAP • R, BCPC • K • R 2030, 2535, 2828, 2838, 3030, 3040, 3535, 3545, 4050, 4060, 5060, 5070, 6080	14kgf • cm (1.4N • m)

SSK SERIES

POLE MOUNTING BRACKET



- Stainless steel pole mounting bracket for BCAP • BCAR and BCPC • BCPK • BCPR series.
- No hole milling is required for maintaining the IP rating of the enclosure.
- Use PKB mounting belt to install onto a pole (See page 258 for PKB series).
- DXF/DWG/PDF drawings available on our website.

APPLICATION EXAMPLE

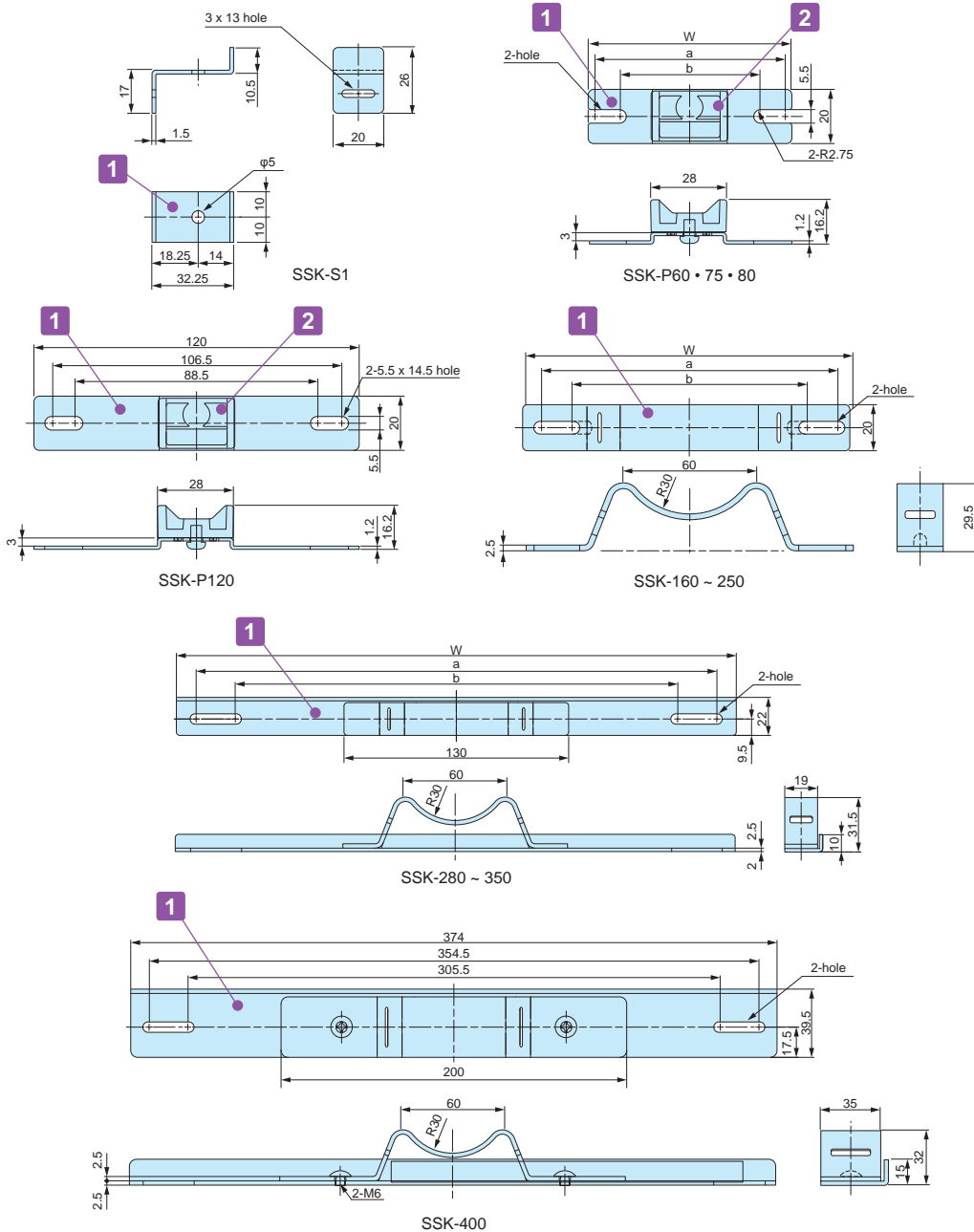


WEATHER STATION DATA LOGGER
Product by Sakaki Corporation (Japan)

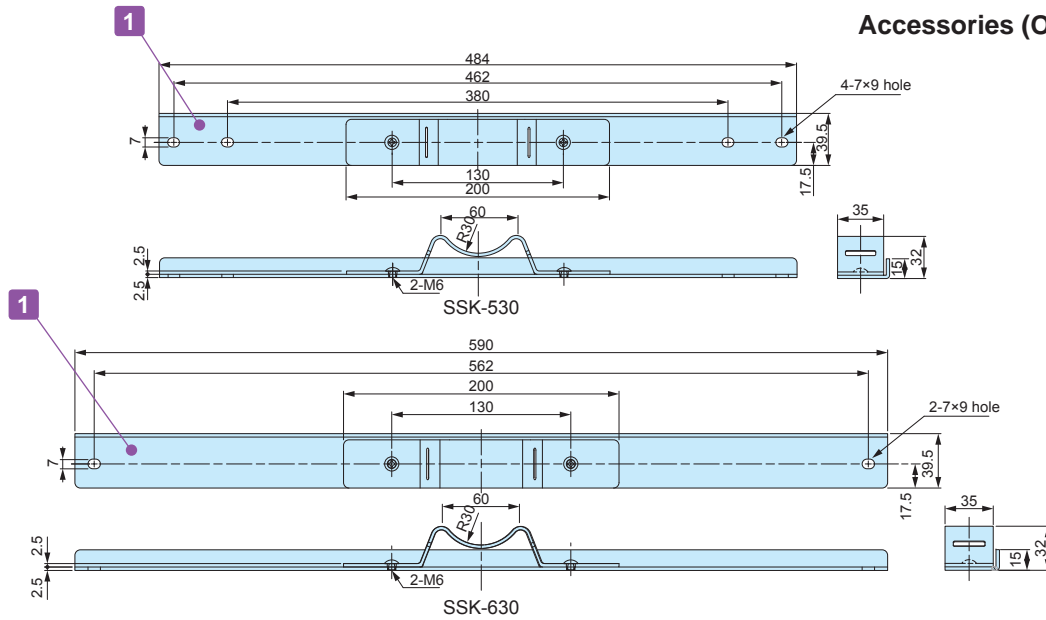


WATER LEVEL DETECTOR
Product by Aspect System (Japan)

SSK dimensions



Accessories (Optional parts)



Components

No.	Part name	Pcs	Material	Color / Finish
1	Bracket	2 / 4	Stainless Steel SUS304	Barrel finish
2	Plastic bracket (SSK-P type only)	2	ASA UL94HB	White gray (RAL7035)
-	Screw	4	Stainless Steel SUS304	Unfinished

Product no. / Dimensions

Product no.	W	a	b	c	Box size	Belt to use with	Pack of
SSK-S1	32.25	18.25	14	-	0912, 1015, 1121, 1126, 1315, 1318, 1621, 1626, 1722, 1727, 2121	PKB-10P, PKB-10S	4
SSK-P60	60	54.5	46.5	5.5x9	0912	PKB-10P, PKB-10S	2
SSK-P75	75	69.5	53.5	5.5x12.5	1015	PKB-10P, PKB-10S	2
SSK-P80	80	74.5	64.5	5.5x10.5	1121, 1126	PKB-10P, PKB-10S	2
SSK-P120	120	106.5	88.5	5.5x14.5	1315, 1318	PKB-10P, PKB-10S	2
SSK-160	142	129.5	101	-	1515, 1621, 1626	PKB-10P, PKB-10S	2
SSK-170	152	142.3	101	-	1722, 1727	PKB-10P, PKB-10S	2
SSK-200	174	161.5	112.5	-	1928, 2030	PKB-10P, PKB-10S	2
SSK-210	192	180.5	131.5	-	2121	PKB-10P, PKB-10S	2
SSK-250	230	215.5	166.5	-	2535	PKB-10P, PKB-10S	2
SSK-280	260	244.5	195.5	-	2828, 2838	PKB-10P, PKB-10S	2
SSK-300	280	264.5	215.5	-	3030, 3040	PKB-10P, PKB-10S	2
SSK-350	324	302.5	253.5	-	3535, 3545	PKB-10P, PKB-10S	2
SSK-400	374	354.5	305.5	-	4050, 4060	PKB-20S	2
SSK-530	484	462	380	7x9	5060, 5070	PKB-20S	2
SSK-630	590	562	-	7x9	6080	PKB-20S	2

PKB SERIES

POLE MOUNTING BELT



PKB-10PM, 10P

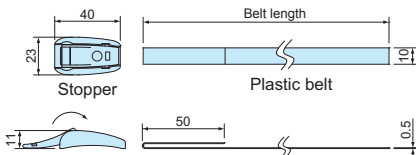


PKB-10S, 20S

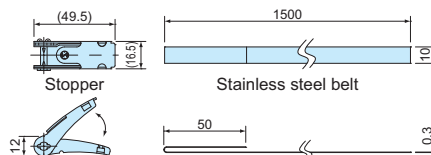
- New shorter belt type PKB-10PM is available for Φ25 to Φ60mm poles. Other belt types are for Φ60 to Φ400mm poles.
- Designed for one time use only (not reusable).
- Strong stainless steel clamping type and easy installation plastic type are available.
- Use SSK mounting bracket for installation onto a pole.

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

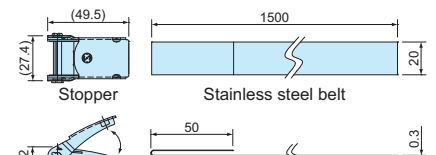
PKB-10PM, 10P



PKB-10S



PKB-20S



Components

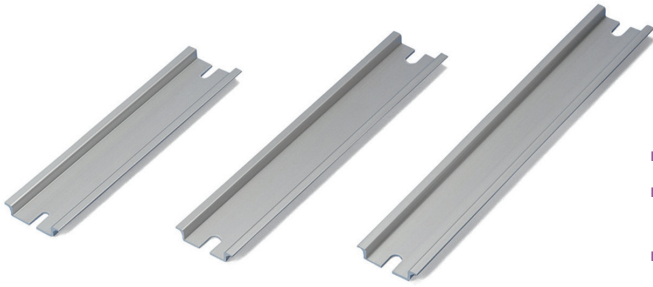
Part name	Pcs	Material	Color / Finish
Stopper	2	POM • Stainless steel SUS304	Black • Barrel finish
Belt	2	PET • Stainless steel SUS430	Gray • Bright annealed finish

Product no. / Dimensions

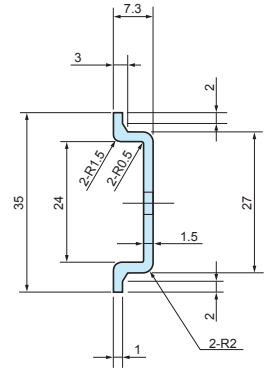
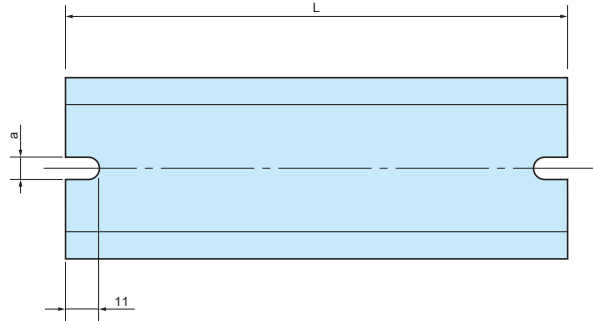
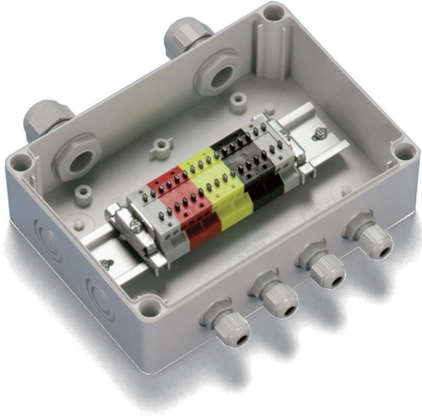
Product no.	W	D	H	a	b	Belt material	Belt length	Tensile strength (horizontal)	Weight (g)	Pack of
NEW PKB-10PM	24	23	11	10	0.5	PET	500mm	0.8kN	14	2
PKB-10P	23	40	11	10	0.5	PET	1,500mm	1.3kN	31.8	2
PKB-10S	(16.5)	(49.5)	12	10	0.3	Stainless steel	1,500mm	1.4kN	101.6	2
PKB-20S	(27.4)	(49.5)	12	20	0.3	Stainless steel	1,500mm	2.9kN	182.2	2

FDR SERIES

DIN-RAIL



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



Feature

Material	Finish
Extruded Aluminium A6063S-T5	Silver anodized

Product no. / Dimensions

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

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

■ FDR-1000 does not have mounting holes.

Matching DIN-Rail Chart

BC□□ series

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

BDN series

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

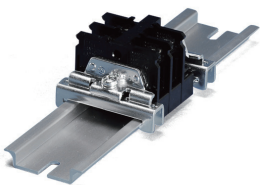
BCAS series

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

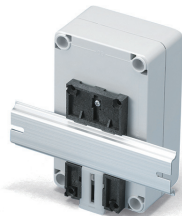
SPCM • SPCP series

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

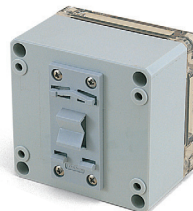
Accessories (Optional parts)



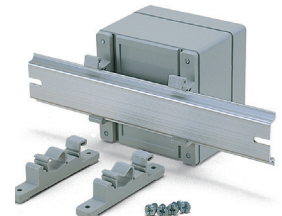
DIN-Rail stopper bracket TKR series
See page DIN-ACC-2



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



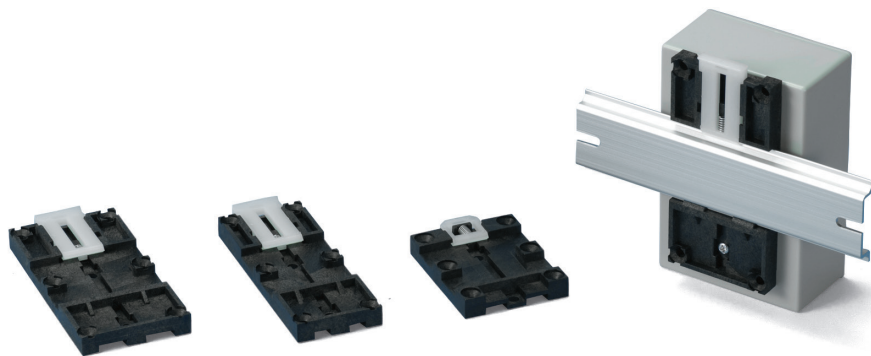
DIN-Rail mounting base DRT series
See page DIN-ACC-1



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

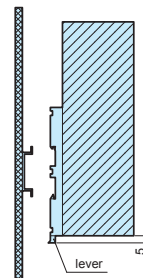
DRA SERIES

DIN-RAIL MOUNTING BASE



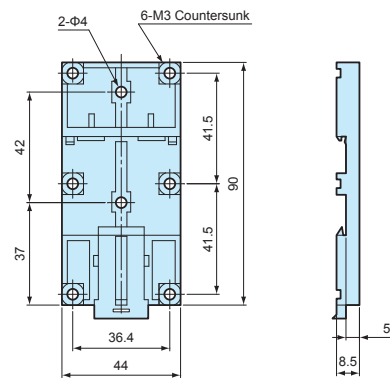
NOTE

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

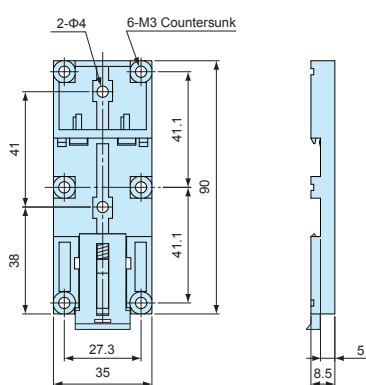


- For installation of enclosures, PCB and other parts onto a DIN rail.
- Simple installation and removal via the pull lever.

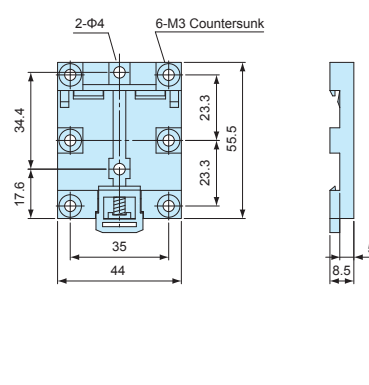
DRA-1



DRA-2



DRA-3

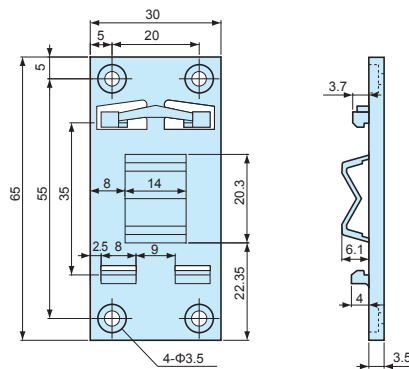
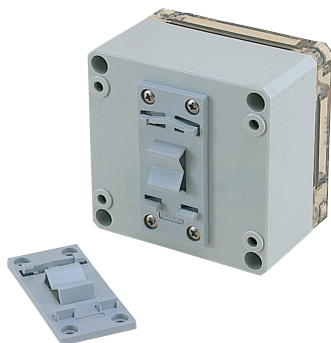


Product no. / Dimensions

Product no.	Material (body)	Material (lever)	Color	Weight (g)	Max load (kg)
DRA-1	PPE : SB UL94V-1	Nylon 66 UL94V-2	Black : Milky white	16.4	5
DRA-2	PPE : SB UL94V-1	Nylon 66 UL94V-2	Black : Milky white	14.5	5
DRA-3	PPE : SB UL94V-1	Nylon 66 UL94V-2	Black : Milky white	10.4	5

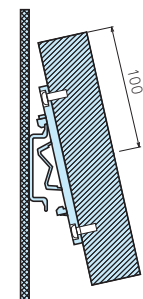
DRT SERIES

DIN-RAIL MOUNTING BASE



NOTE

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



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

Product no. / Dimensions

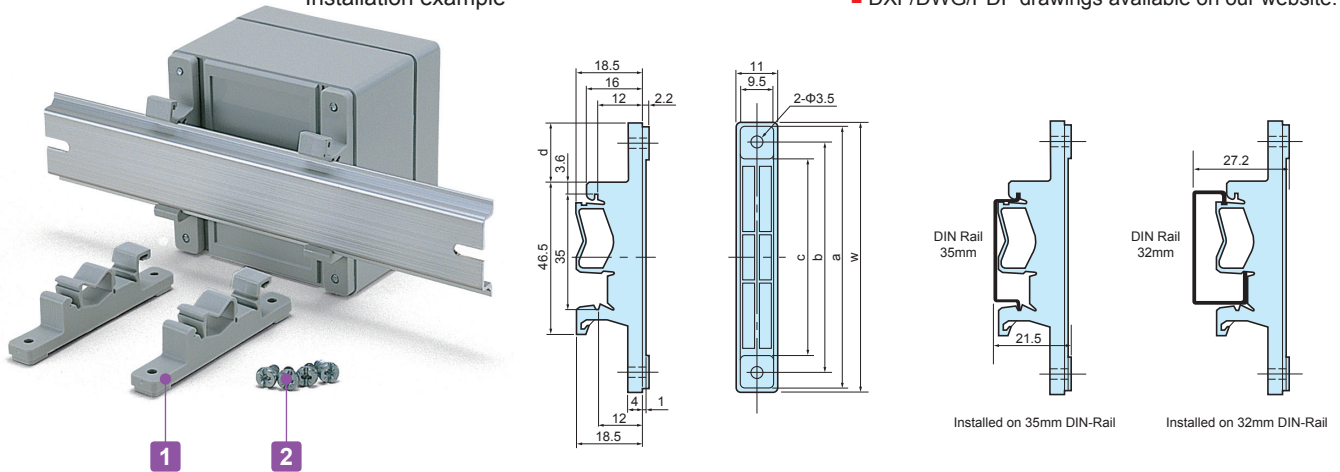
Product no.	Material	Color	Weight (g)	Max load (kg)
DRT-1	PBT UL94V-0	Light gray	7.3	1

CKD SERIES

DIN-RAIL MOUNTING FEET

Installation example

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



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

Technical Data
Max load : 3kg

Components

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

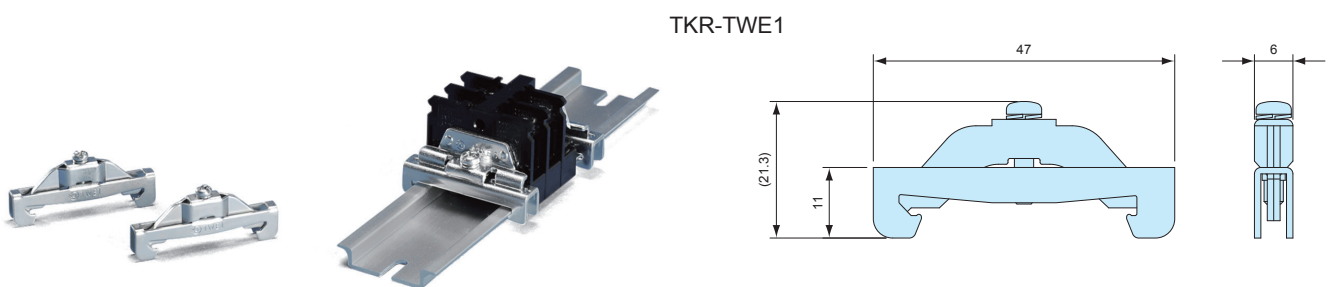
Product no. / Dimensions

Product no.	W	a	b	c	d	Pack of
CKD- 80	77	75	66	56	17	2
CKD-120	117	115	106	96	37	2
CKD-160	157	155	147	136	57	2

TKR SERIES

DIN-RAIL TERMINAL BLOCKS END STOPPER

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



- Stopper bracket for use with 35mm DIN-rail to keep an attachment at a fixed location.
- TKR-TWE1 is used with small DIN rail attachment parts. For larger/higher attachment parts, TKR-JTXE3 is recommended for providing additional support.

Product no. / Feature

Product no.	Material	Color / Finish	Pack of
TKR-TWE1	Steel sheet	Trivalent chromate	2
TKR-JTXE3	Steel sheet	Trivalent chromate	2

PMF-12M

STAINLESS STEEL PROTECTIVE VENT

★ ★ NEW

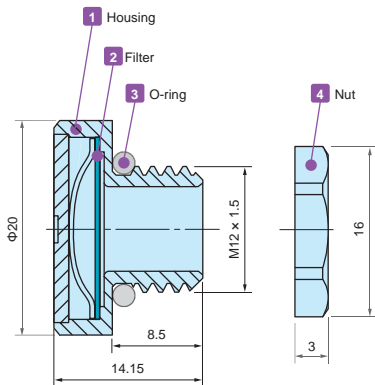
IP68 IP69K



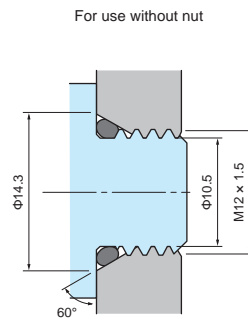
Application example

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

PMF-12M dimensions

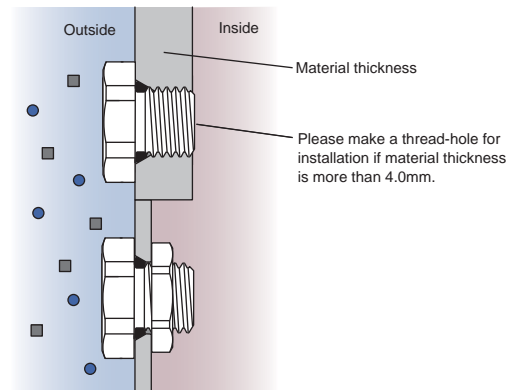


Hole milling drawings



■ While Φ12.2mm through-hole is sufficient for installation, 60° angle tapered hole is recommended to prevent deformation of the O-ring.

Installation drawings



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

Technical Data

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

Product no. / Dimensions

Product no.	Material				G		Nut SW
	1 Housing	2 Filter	3 O-ring	4 Nut	Thread size	Mount hole	
PMF-12M	Stainless steel	PTFE	Silicone	Brass • Nickel plated	M12 x 1.5	Φ12.2	15

PMF SERIES

PROTECTIVE VENT

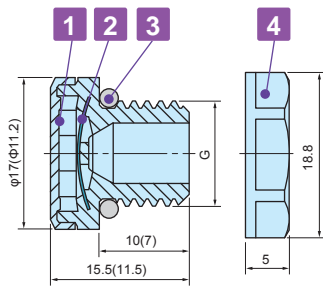


Application example

- Protective vents prevents the ingress of a variety of contaminants, such as water, dust and other particules while allowing water vapor molecules to diffuse through the microporous membrane.
- Equalize pressure and reduce condensation by allowing airflow into and out of sealed enclosures.
- With an IP68 protection class (water depth 2 meters / 60 mins) and -40°C ~ +125°C operating temperature range, it can be used in harsh environmental conditions.
- PMF-6B works up to 2 liters capacity enclosures. Whereas, PMF-12 models work for up to 5 liters and PMF-12HS models work for up to 50 liters.
- For outdoor use, more efficient to install on the side(s).
- Recommended to use for industrial, electric, electronics purpose only.

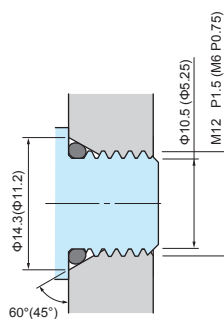
PMF dimensions

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



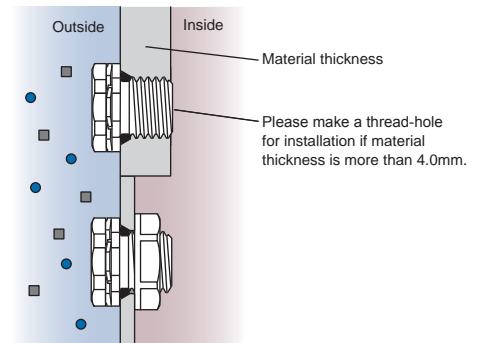
() values are for PMF-6B.
Lock nut is not available for PMF-6B.

Hole milling drawings



■ While Φ12.2mm through-hole is sufficient for installation, 60° angle tapered hole is recommended to prevent deformation of the O-ring.

Installation drawings



■ If used with a lock nut, material thickness should not exceed 4.0mm, and Φ12.2mm through-hole is sufficient.

Technical Data

Product no.	PMF-6B	PMF-12	PMF-12HA
Airflow	300ml / min (dp = 7 kPa)	450ml / min (dp = 7 kPa)	4000ml / min (dp = 7 kPa)
Recommended Torque	0.2 ~ 0.4 N · m	0.6 ~ 0.8 N · m	0.6 ~ 0.8 N · m
Certifications	IEC60529 (Protection class test): IP66 • IP67 • IP68 • IP69K (Not for PMF-6B) IEC60068-2-1, 2, 14 (Heat resistance test): - 40°C ~ +125°C (~+150°C for PMF-6B) IEC60068-2-78 (Humidity test): 85°C • 85% humidity • 1000 hours IEC60068-2-64 (Vibration test) (PMF-6B only) UL94V-0 (Flame-resistant) • UL746C f1		

Product no. / Dimensions

Product no.		Material				G		Nut SW
● Light gray	● Black	1 Housing	2 Filter	3 O-ring	4 Lock nut	Thread size	Mount hole	
—	NEW PMF-6B	PA6 (Body) PA66 (Cap)	PTFE	Silicone	n/a	M6 x 0.75	—	—
PMF-12S	PMF-12B	PA6	PTFE	Silicone	PA6 (UL94V-2)	M12 x 1.5	Φ12.2	17
PMF-12HAS	PMF-12HAB	PA6	PTFE	Silicone	PA6 (UL94V-2)	M12 x 1.5	Φ12.2	17

PMF-32 SERIES

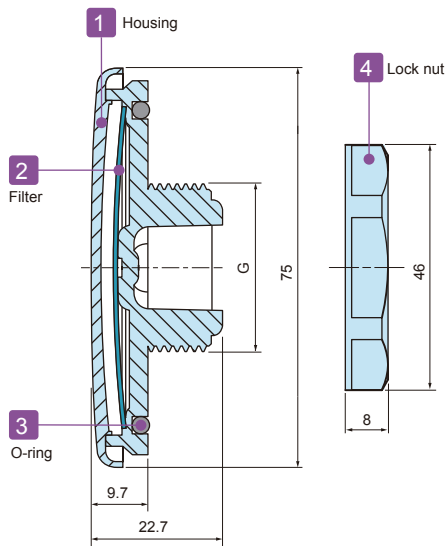
LARGE PROTECTIVE VENT



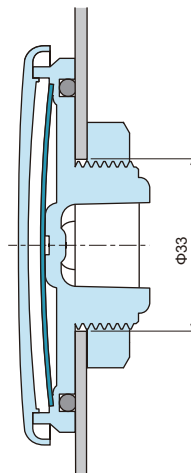
Application example

- Maintaining high airflow for large enclosures in an outdoor environment.
- Equalize pressure and reduce condensation by allowing airflow into and out of sealed enclosures.
- Simple and flat design allows it to be used on a wide variety of enclosure types.
- IP68 protection class rated 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.
- For superior performance, installation on the side of the enclosure is recommended.

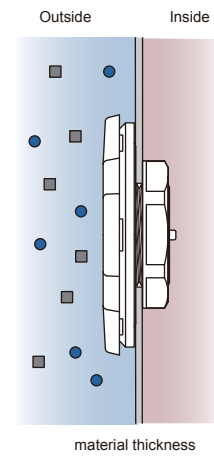
PMF-32 Dimensions



Hole milling drawings



Installation drawings



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

Technical Data

Airflow	16 ℓ / min (dp = 12 mbar)
Recommended torque	5 N · m
Certifications (without nut)	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 • 1000 hours IEC62108.10.8 • 9 (Solar industry test): Freezing - high temperature test • Hail impact test UL94V-0 (Flame-resistant) • UL746C

Product no. / Dimensions

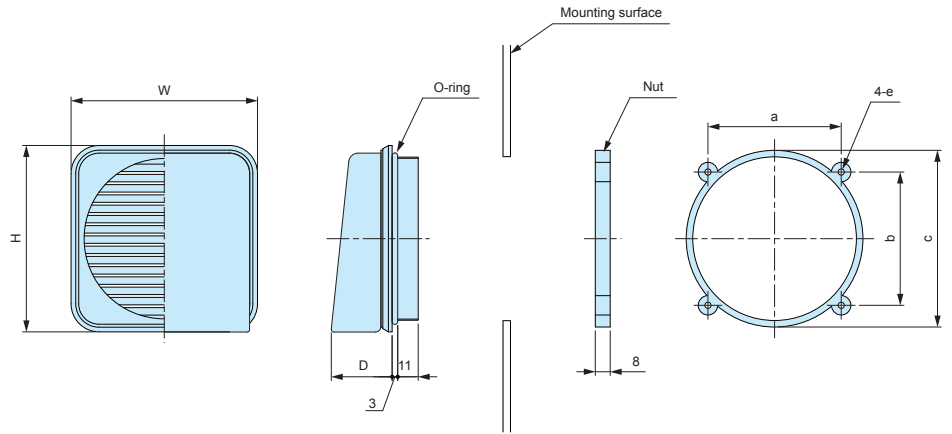
Product no.	Material				G		Nut SW
	1 Housing	2 Filter	3 O-ring	4 Lock nut	Thread size	Mount hole	
PMF-32S	PC	PTFE	Silicone	PA6	M32×1.5	Φ33	41.5

V SERIES

VENTILATION LOUVER



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



Product no. / Dimensions

Product no.	Material	Color	Installation hole	W	H	D	a	b	c	e
V60	ABS	White gray	Φ63	74.5	74.5	30.8	50.5	50.5	70	Φ3.8
V80	ABS	White gray	Φ88	100	100	36	71.5	71.5	94.8	Φ3.3
V60S	Polycarbonate	Light gray	Φ63	74.5	74.5	30.8	50.5	50.5	70	Φ3.8
V80S	Polycarbonate	Light gray	Φ88	100	100	36	71.5	71.5	94.8	Φ3.3

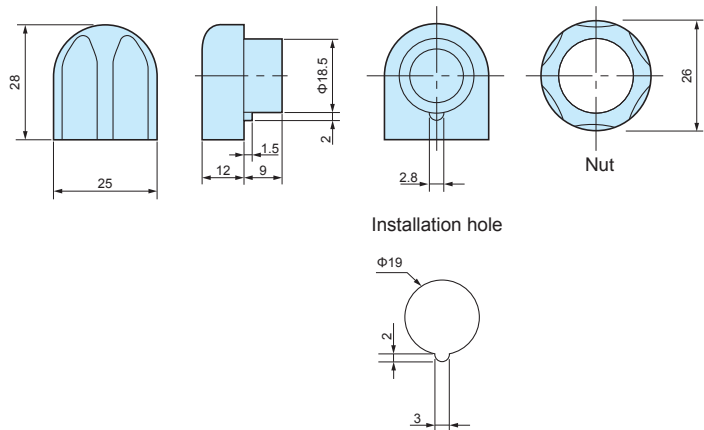
■ O-ring material: NBR Black

VF SERIES

VENTILATION PARTS



VF-1

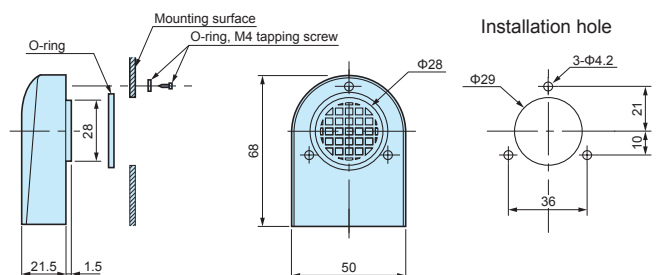


Technical Data	
Protection class:	VF-1 IP33 VF-2 IP24

Product no.

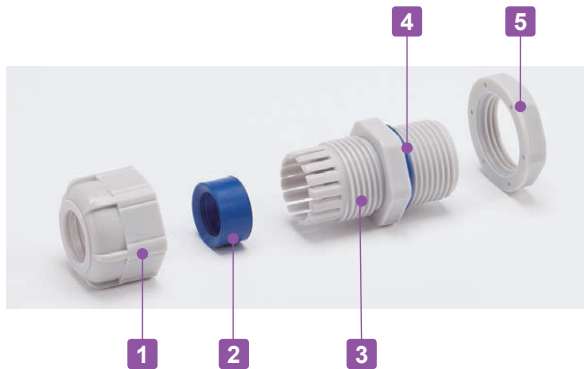
Product no.	Material / Color
VF-1	Polyamide / White gray
VF-2	Polyamide / White gray

VF-2





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

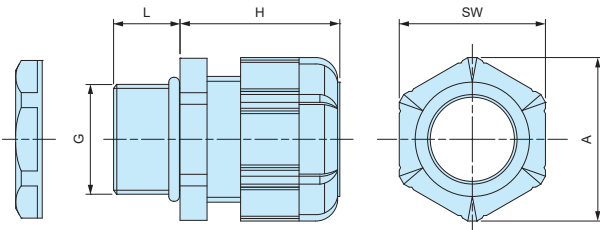


Components

■ 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	Nut	PA66 UL94V-2

RMW dimensions



Technical Data

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

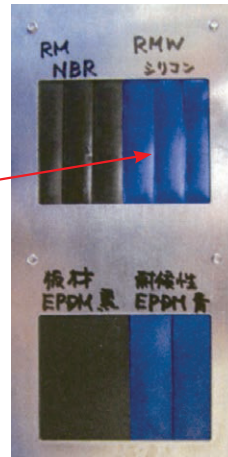
- DXF/DWG/PDF drawings available on our website.
- Lock nut is not included for RMW10S-6.
Please drill a proper thread hole into the enclosure for installation.

Product no. / Dimensions

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	11.8	13.5	1
RMW8L-4B	RMW8L-4S	M8×1.25	Φ8.2	2.5	4	13	19.5	11.8	13.5	1
RMW10S-6B	RMW10S-6S	M10×1.5	—	3	6	8	20.5	13	14.4	1
RMW10L-6B	RMW10L-6S	M10×1.5	Φ10.2	3	6	13	20.5	13	14.4	1
RMW12S-7B	RMW12S-7S	M12×1.5	Φ12.2	3.5	7	9	20.5	16	17.6	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	21	1
RMW16L-8B	RMW16L-8S	M16×1.5	Φ16.2	4	8	15	24	19	21	1
RMW20S-12B	RMW20S-12S	M20×1.5	Φ20.2	6	12	10	29	24	26.2	1
RMW20L-12B	RMW20L-12S	M20×1.5	Φ20.2	6	12	15	28.5	24	26.2	1
RMW25L-17B	RMW25L-17S	M25×1.5	Φ25.2	11	17	15	35	33	36.2	1
RMW32L-21B	RMW32L-21S	M32×1.5	Φ32.3	13	21	15	38	36	39.5	1
RMW40L-27B	RMW40L-27S	M40×1.5	Φ40.3	18	27	18	43.5	45.7	50.5	1
RMW50L-38B	RMW50L-38S	M50×1.5	Φ50.4	27	38	20	50.5	60	66.5	1
RMW8L-2.5B-P	RMW8L-2.5S-P	M8×1.25	Φ 8.2	1	2.5	13	19.5	11.8	13.5	100
RMW8L-4B-P	RMW8L-4S-P	M8×1.25	Φ 8.2	2.5	4	13	19.5	11.8	13.5	100
RMW10L-6B-P	RMW10L-6S-P	M10×1.5	Φ10.2	3	6	13	20.5	13	14.4	100
RMW12S-7B-P	RMW12S-7S-P	M12×1.5	Φ12.2	3.5	7	9	20.5	16	17.6	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	21	100
RMW16L-8B-P	RMW16L-8S-P	M16×1.5	Φ16.2	4	8	15	24	19	21	100
RMW20S-12B-P	RMW20S-12S-P	M20×1.5	Φ20.2	6	12	10	29	24	26.2	100
RMW20L-12B-P	RMW20L-12S-P	M20×1.5	Φ20.2	6	12	15	28.5	24	26.2	100
RMW25L-17B-P	RMW25L-17S-P	M25×1.5	Φ25.2	11	17	15	35	33	36.2	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 for comparison purposes.



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/m² 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/m²

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

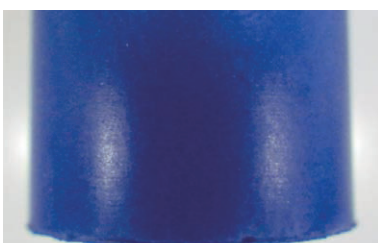


After

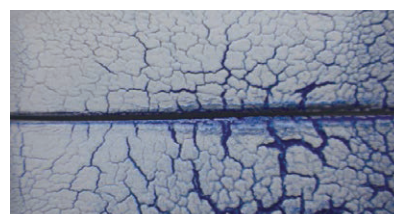


EPDM material from weatherproof cable gland of another manufacturer : Cracked, color drastically faded and powder appeared on the surface.

Before

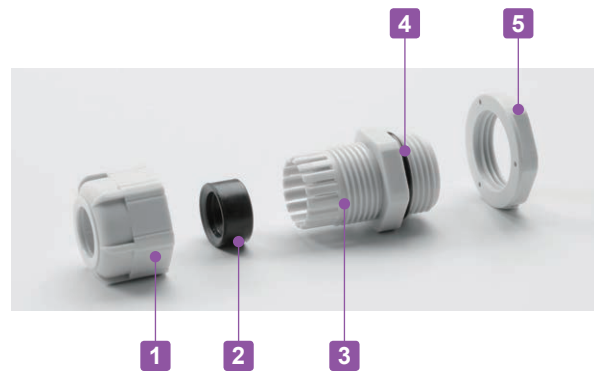


After



RM SERIES

POLYAMIDE CABLE GLAND



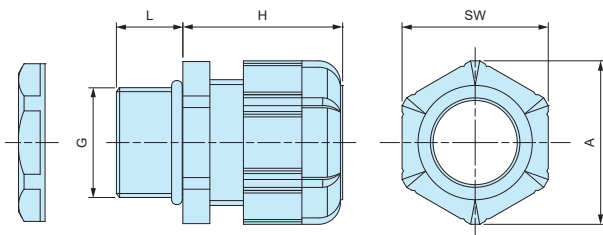
- Low cost cable glands made from polyamide material.
- Wide selection, for M8 ~ M63, suitable for $\Phi 1\text{mm} \sim \Phi 44\text{ mm}$ cable.
- High oil resistant NBR rubber sealing and O-ring.
- IP67 protection class.

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



Technical Data

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

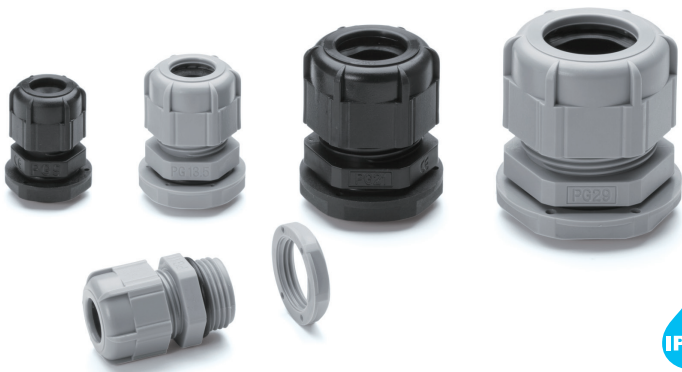
- DXF/DWG/PDF drawings available on our website.
- Lock nut is not included for RM8S-2.5, 8S-4, and 10S-6 models.
Please drill a proper thread hole into the enclosure for installation.

Product no. / Dimensions

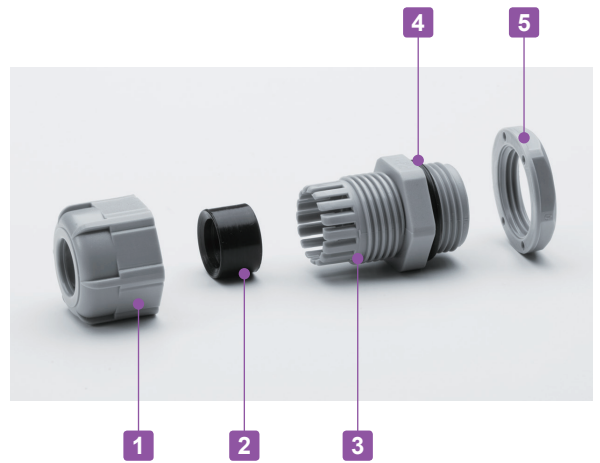
Product no.		G		Cable range		L	H Max	SW	A	Pack of
● Black	● Light gray	Thread size	Mounting hole	Min	Max					
RM8S-2.5B	RM8S-2.5S	M8×1.25	—	1	2.5	7.5	19.5	11.8	13.5	1
RM8L-2.5B	RM8L-2.5S	M8×1.25	$\Phi 8.2$	1	2.5	13	19.5	11.8	13.5	1
RM8S-4B	RM8S-4S	M8×1.25	—	2.5	4	7.5	19.5	11.8	13.5	1
RM8L-4B	RM8L-4S	M8×1.25	$\Phi 8.2$	2.5	4	13	19.5	11.8	13.5	1
RM10S-6B	RM10S-6S	M10×1.5	—	3	6	8	20.5	13	14.4	1
RM10L-6B	RM10L-6S	M10×1.5	$\Phi 10.2$	3	6	13	20.5	13	14.4	1
RM12S-7B	RM12S-7S	M12×1.5	$\Phi 12.2$	3.5	7	9	20.5	16	17.6	1
RM12L-7B	RM12L-7S	M12×1.5	$\Phi 12.2$	3.5	7	14.5	20.5	16	17.7	1
RM16S-8B	RM16S-8S	M16×1.5	$\Phi 16.2$	4	8	9	23.5	19	21	1
RM16L-8B	RM16L-8S	M16×1.5	$\Phi 16.2$	4	8	15	24	19	21	1
RM20S-12B	RM20S-12S	M20×1.5	$\Phi 20.2$	6	12	10	29	24	26.2	1
RM20L-12B	RM20L-12S	M20×1.5	$\Phi 20.2$	6	12	15	28.5	24	26.2	1
RM25L-17B	RM25L-17S	M25×1.5	$\Phi 25.2$	11	17	15	35	33	36.2	1
RM32L-21B	RM32L-21S	M32×1.5	$\Phi 32.3$	13	21	15	38	36	39.5	1
RM40L-27B	RM40L-27S	M40×1.5	$\Phi 40.3$	18	27	18	43.5	45.7	50.5	1
RM50L-38B	RM50L-38S	M50×1.5	$\Phi 50.4$	27	38	20	50.5	60	66.5	1
RM63L-44B	RM63L-44S	M63×1.5	$\Phi 63.4$	37	44	20	53	68	75.5	1
RM8L-2.5B-P	RM8L-2.5S-P	M8×1.25	$\Phi 8.2$	1	2.5	13	19.5	11.8	13.5	100
RM8L-4B-P	RM8L-4S-P	M8×1.25	$\Phi 8.2$	2.5	4	13	19.5	11.8	13.5	100
RM10L-6B-P	RM10L-6S-P	M10×1.5	$\Phi 10.2$	3	6	13	20.5	13	14.4	100
RM12S-7B-P	RM12S-7S-P	M12×1.5	$\Phi 12.2$	3.5	7	9	20.5	16	17.6	100
RM12L-7B-P	RM12L-7S-P	M12×1.5	$\Phi 12.2$	3.5	7	14.5	20.5	16	17.7	100
RM16S-8B-P	RM16S-8S-P	M16×1.5	$\Phi 16.2$	4	8	9	23.5	19	21	100
RM16L-8B-P	RM16L-8S-P	M16×1.5	$\Phi 16.2$	4	8	15	24	19	21	100
RM20S-12B-P	RM20S-12S-P	M20×1.5	$\Phi 20.2$	6	12	10	29	24	26.2	100
RM20L-12B-P	RM20L-12S-P	M20×1.5	$\Phi 20.2$	6	12	15	28.5	24	26.2	100
RM25L-17B-P	RM25L-17S-P	M25×1.5	$\Phi 25.2$	11	17	15	35	33	36.2	100

RPG SERIES

POLYAMIDE CABLE GLAND

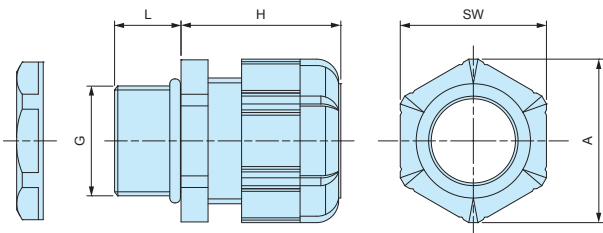


IP67



- 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

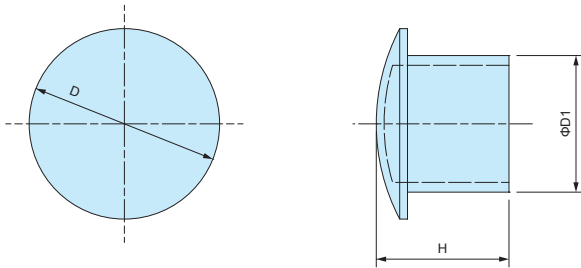
Product no.		G			Cable range		L	H Max	SW	A	Pack of
● Black	● Gray	Thread size	Thread dia.	Mounting hole	Min	Max					
RPG7-7B	RPG7-7G	PG7	12.5	Φ12.7	3	7	9	20.5	16	17.7	1
RPG9-8B	RPG9-8G	PG9	15.2	Φ15.4	4	8	9	23.5	19	21	1
RPG11-10B	RPG11-10G	PG11	18.6	Φ18.8	5	10	9	26	22	24	1
RPG13.5-11B	RPG13.5-11G	PG13.5	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

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



- High water protection IP68 (1bar / 30min) polyamide cable gland.
- Wide selection, for M8 ~ M50, suitable for $\Phi 2.5\text{mm} \sim \Phi 42\text{mm}$ cable.
- Super tough and superior heat resistant PA6GF (glass fiber filled PA6) material on cap and connector.
- Safer halogen free, eco-friendly product.

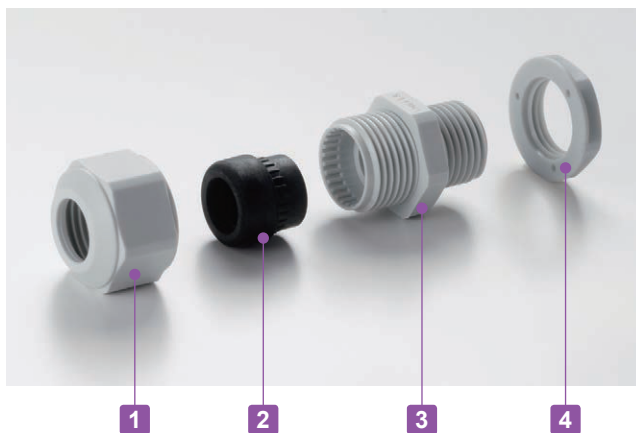
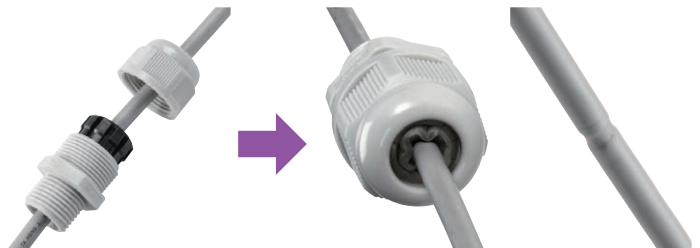
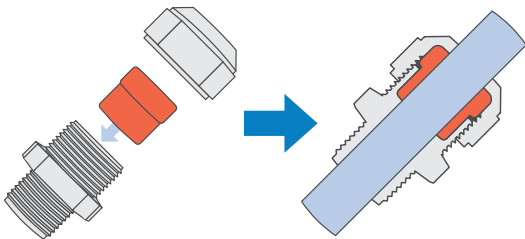
Technical Data
Protection class: IP68 1bar / 30min
Operating temperature: -20°C ~ +100°C
Compliant with EN50262 Ver. A

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

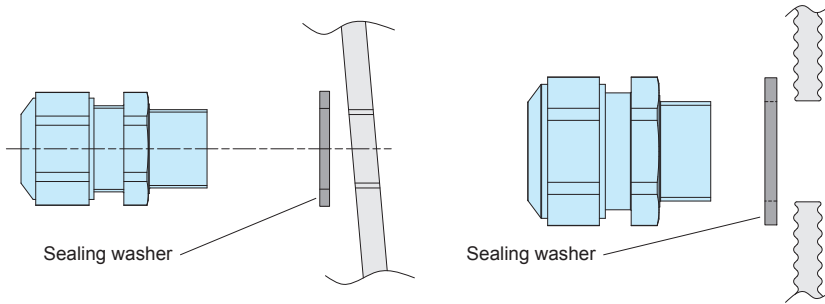
■ Lock nut is not included for M8 and M10 sizes.
Please drill a proper thread hole into the enclosure for installation.

- Proper 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.



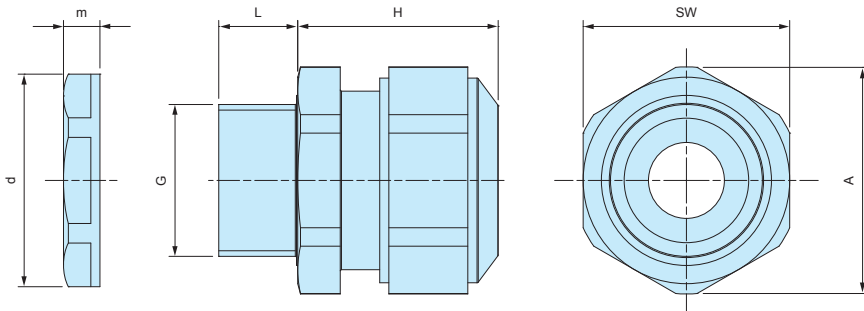
■ No optional sealing washer is required when installing on an even surface because of the built-in waterproof rib.

■ An optional sealing washer is required when installing on an uneven surface. (See page AGP-1 for more information on the optional sealing washer)



AG dimensions

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



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

Product no. / Dimensions

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

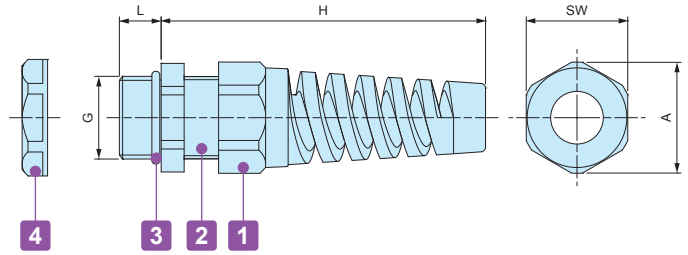
RSP SERIES

STRAIN RELIEF CABLE GLAND



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

RSP dimensions



Components

■ PA = Polyamide

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

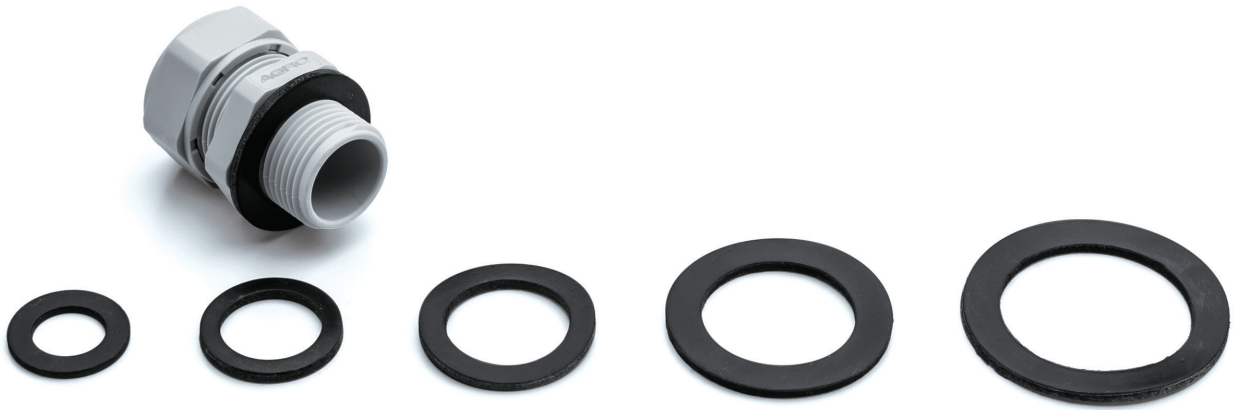
Technical Data
Protection class : IP67 Temperature range -20°C ~ +80°C

Product no. / Dimensions

Product no.		G		Cable range		L	H Max	SW	A	Pack of
● Black	● Light gray	Thread size	Mounting hole	Min	Max					
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

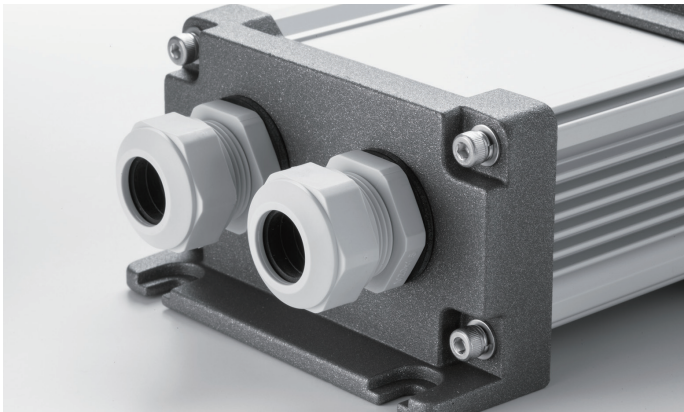
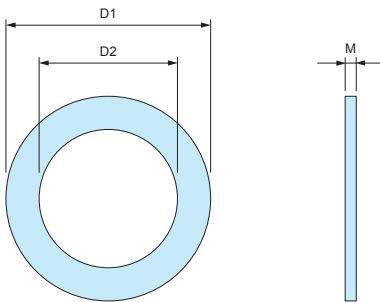
AGP SERIES

SEALING WASHER for AG • AGSP



- Sealing washer for AG • AGSP 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 / AGSP12-6.5	10
AGP-16	23.5	16.5	2.0	AG16 / AGSP16-8	10
AGP-20	29	20	2.0	AG20 / AGSP20-12	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