

PF SERIES FLAT NETWORK CASE

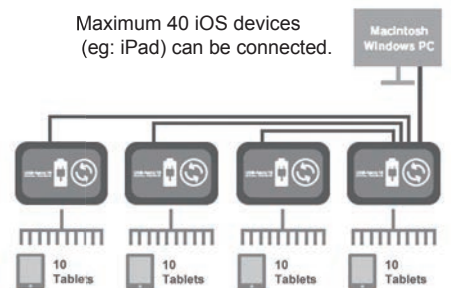
USB-HUB

Self-powered USB-hub enabling power charging and data synchronization for multiple USB devices.

Product by MT-planning, Ltd.(Japan)
Website : mt-planning.com

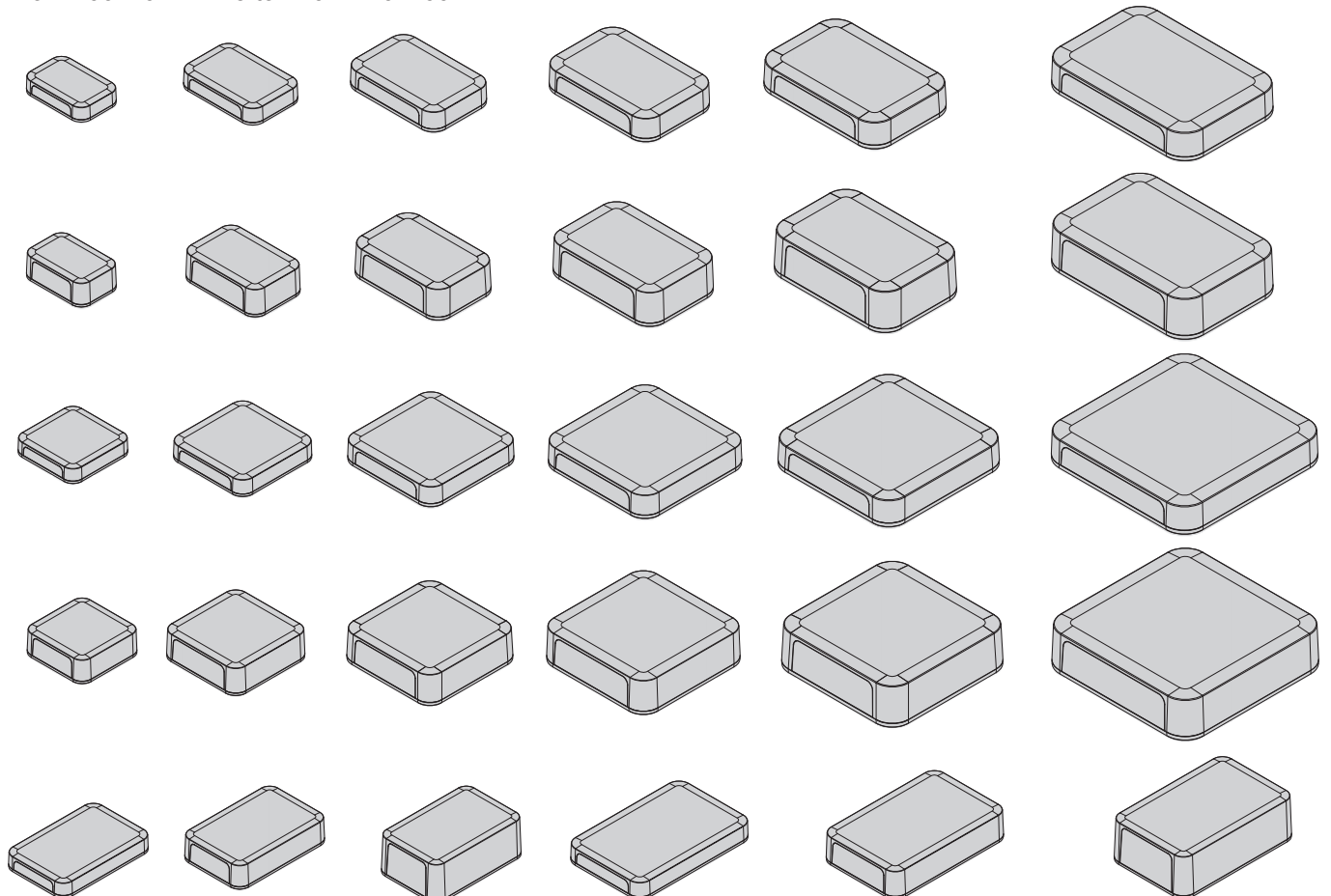


Maximum 40 iOS devices
(eg: iPad) can be connected.



Huge selection, 30 different sizes are now available.

From 100 x 67 x 22.5 to 240 x 240 x 60mm.



APPLICATION EXAMPLE

USB HEMODYNAMIC RESEARCH DEVICE



Product by Cardiovascular Engineering, Inc. (USA)
 website : cardiovascularengineering.com

WIRELESS HOME ELECTRONICS CONTROLLER

Product by AR SMART SAS (Colombia)
 Website : ar-smart.co



iCONSE-T IOT and SENSOR NETWORK TRAINING SYSTEM

Product by Benchmark Electronic Systems (India)
 website : iconse-t.com



G4 FLIGHT TRACKER

Product by Guardian Mobility (Canada)
 website : guardianmobility.com



GSM MODULE

Product by Elmar Electronic d.o.o. (Croatia)
 Website : elmar-el.hr



TOUCH PANEL CONTROLLER

Product by Elmar Electronic d.o.o. (Croatia)
 Website : elmar-el.hr



WIRELESS NETWORK DATA LOGGER

Product by SensingWinTech Co.,Ltd. (Japan)
 Website : sensingwintech.com



ADVANCED TRIGGER STATION

Product by BrainTrends (Italy)
 Website : braintrends.it





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



- Flat designed plastic case with detachable panels.
- Made of flame-resistant ABS UL94V-0, and available in off-white and dark gray color.
- 22 new sizes added for a total of 30 available sizes.
- Equipped with built-in bosses for PCB mounting.
- Suitable for Wi-Fi access point, measuring equipment, controller or other various applications either desktop or wall mounting and so on.

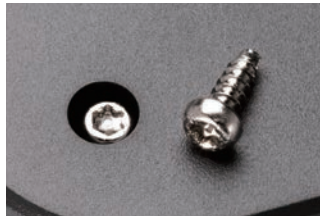
Components

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	Dark gray

Accessories (Optional parts)



PCB mounting screw
EM series See page 135



TORX screw
MR series See page 135



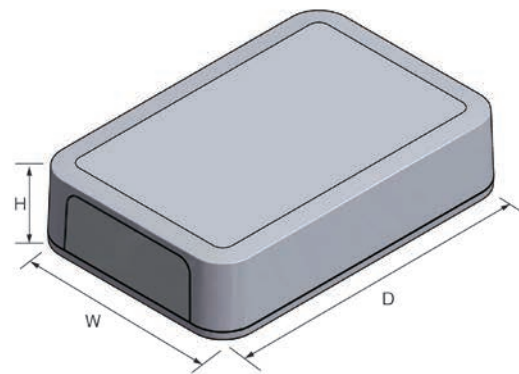
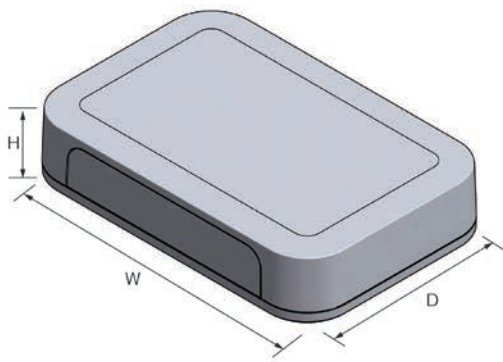
Tapping standoff
TPS series See page 133



Suspension bracket
WM series See page 129



Neodymium magnet
NMG series See page 130



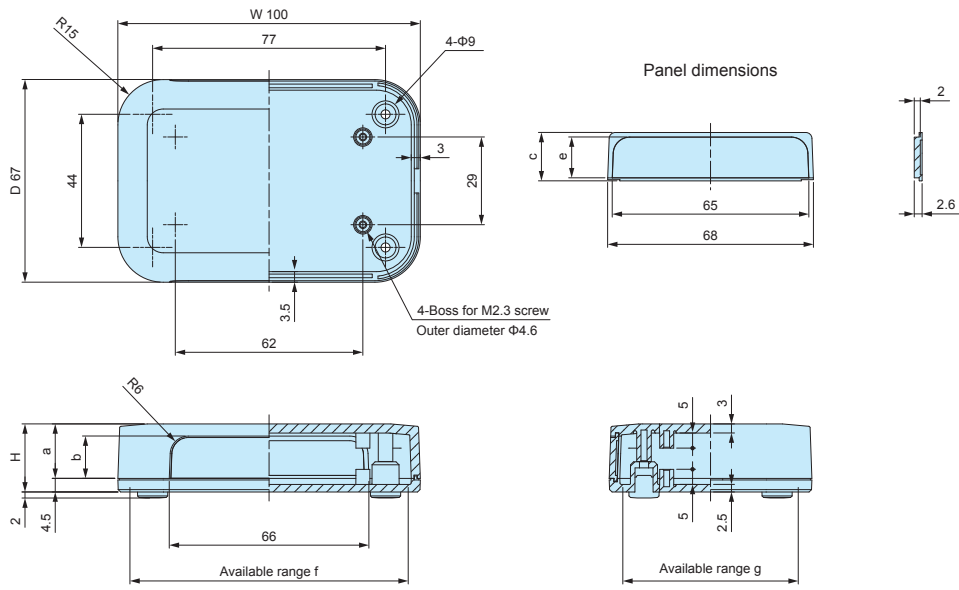
Product no. / Dimensions

※ H dimension is not inclusive of rubber feet. (Rubber feet height = 2mm)

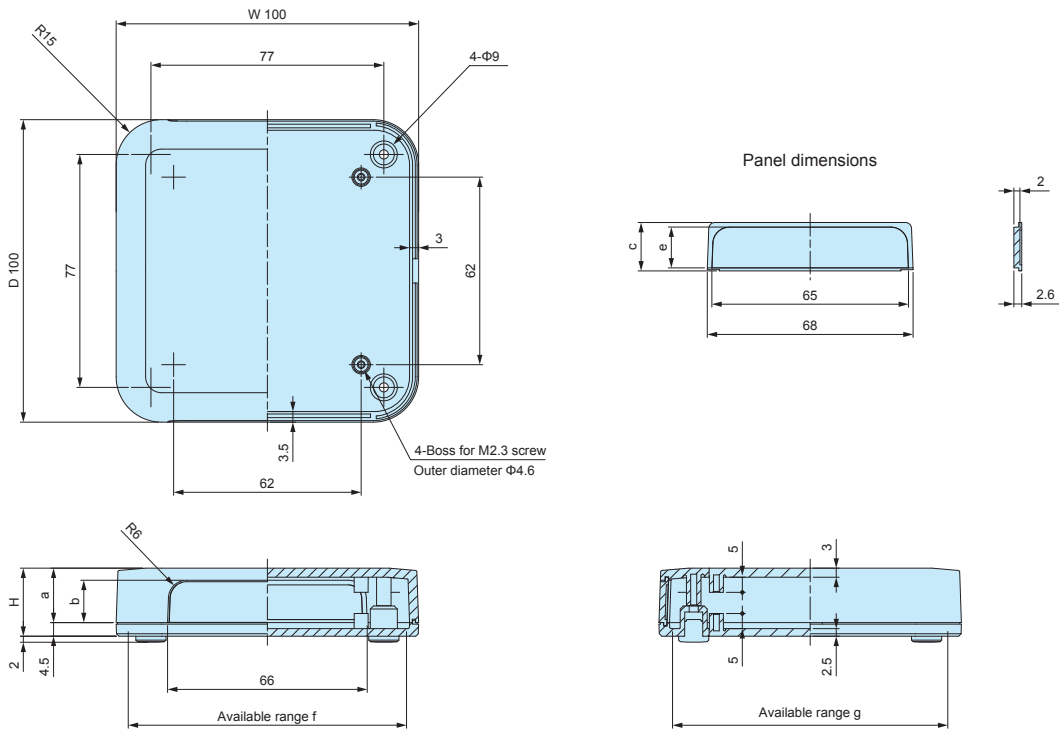
Product no.		Dimensions			Screw	Weight (g)
● Off-white	● Dark gray	W	H	D		
NEW PF10-2- 7W	NEW PF10-2- 7D	100	22.5	67	M2.5-8 x 4 pcs	60
NEW PF10-2-10W	NEW PF10-2-10D	100	22.5	100	M2.5-8 x 4 pcs	82.9
NEW PF10-2-15W	NEW PF10-2-15D	100	22.5	150	M2.5-8 x 4 pcs	120.2
NEW PF10-4- 7W	NEW PF10-4- 7D	100	35	67	M2.5-8 x 4 pcs	65
NEW PF10-4-10W	NEW PF10-4-10D	100	35	100	M2.5-8 x 4 pcs	97.1
NEW PF10-4-15W	NEW PF10-4-15D	100	35	150	M2.5-8 x 4 pcs	132.6
NEW PF10-6-15W	NEW PF10-6-15D	100	55	150	M2.5-8 x 4 pcs	169.1
NEW PF13-3- 9W	NEW PF13-3- 9D	125	25	85	M2.5-8 x 4 pcs	90.8
NEW PF13-3-13W	NEW PF13-3-13D	125	25	125	M2.5-8 x 4 pcs	127.5
NEW PF13-3-19W	NEW PF13-3-19D	125	25	190	M2.5-8 x 4 pcs	186.8
NEW PF13-4- 9W	NEW PF13-4- 9D	125	40	85	M2.5-8 x 4 pcs	108.4
NEW PF13-4-13W	NEW PF13-4-13D	125	40	125	M2.5-8 x 4 pcs	151.4
NEW PF13-4-19W	NEW PF13-4-19D	125	40	190	M2.5-8 x 4 pcs	214.9
NEW PF13-6-19W	NEW PF13-6-19D	125	60	190	M2.5-8 x 4 pcs	250.4
PF15-3-10W	PF15-3-10D	150	30	100	M2.5-8 x 4 pcs	145.5
PF15-3-15W	PF15-3-15D	150	30	150	M2.5-8 x 4 pcs	207.5
PF15-5-10W	PF15-5-10D	150	45	100	M2.5-8 x 4 pcs	166
PF15-5-15W	PF15-5-15D	150	45	150	M2.5-8 x 4 pcs	233.5
NEW PF18-4-12W	NEW PF18-4-12D	175	35	120	M2.5-8 x 4 pcs	188.7
NEW PF18-4-18W	NEW PF18-4-18D	175	35	175	M2.5-8 x 4 pcs	266.8
NEW PF18-5-12W	NEW PF18-5-12D	175	50	120	M2.5-8 x 4 pcs	213.6
NEW PF18-5-18W	NEW PF18-5-18D	175	50	175	M2.5-8 x 4 pcs	302.1
PF20-4-13W	PF20-4-13D	200	40	135	M3-8 x 4 pcs	264
PF20-4-20W	PF20-4-20D	200	40	200	M3-8 x 4 pcs	368.5
PF20-6-13W	PF20-6-13D	200	60	135	M3-8 x 4 pcs	302.5
PF20-6-20W	PF20-6-20D	200	60	200	M3-8 x 4 pcs	417
NEW PF24-4-17W	NEW PF24-4-17D	240	42.5	165	M3-8 x 4 pcs	370.4
NEW PF24-4-24W	NEW PF24-4-24D	240	42.5	240	M3-8 x 4 pcs	521.4
NEW PF24-6-17W	NEW PF24-6-17D	240	60	165	M3-8 x 4 pcs	408.8
NEW PF24-6-24W	NEW PF24-6-24D	240	60	240	M3-8 x 4 pcs	568.7

PF dimensions

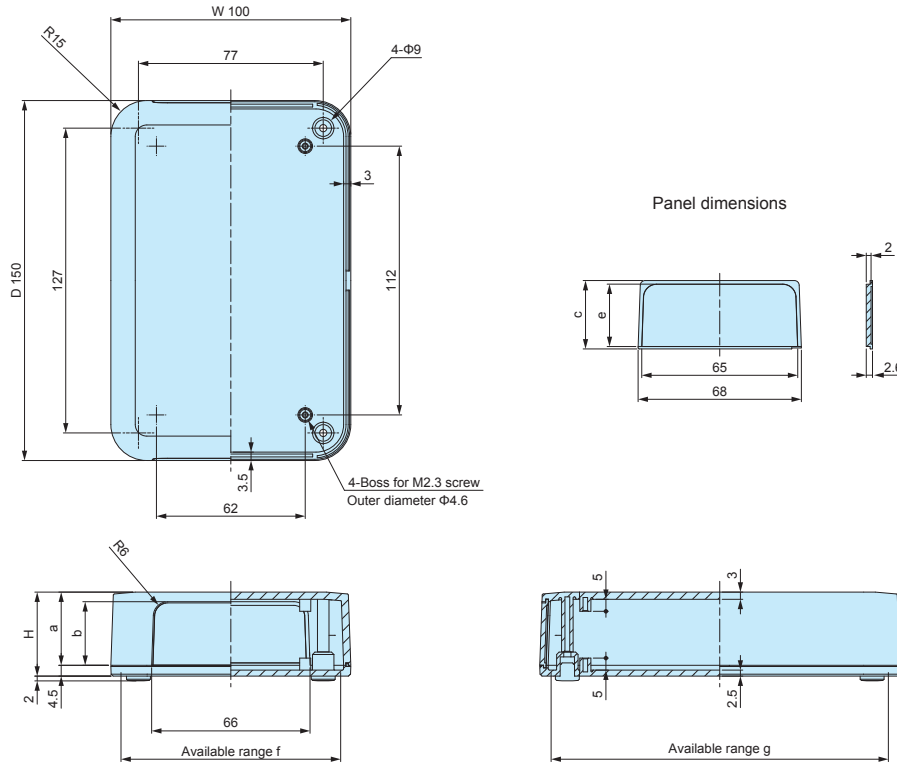
DXF/DWG/PDF drawings available on our website.



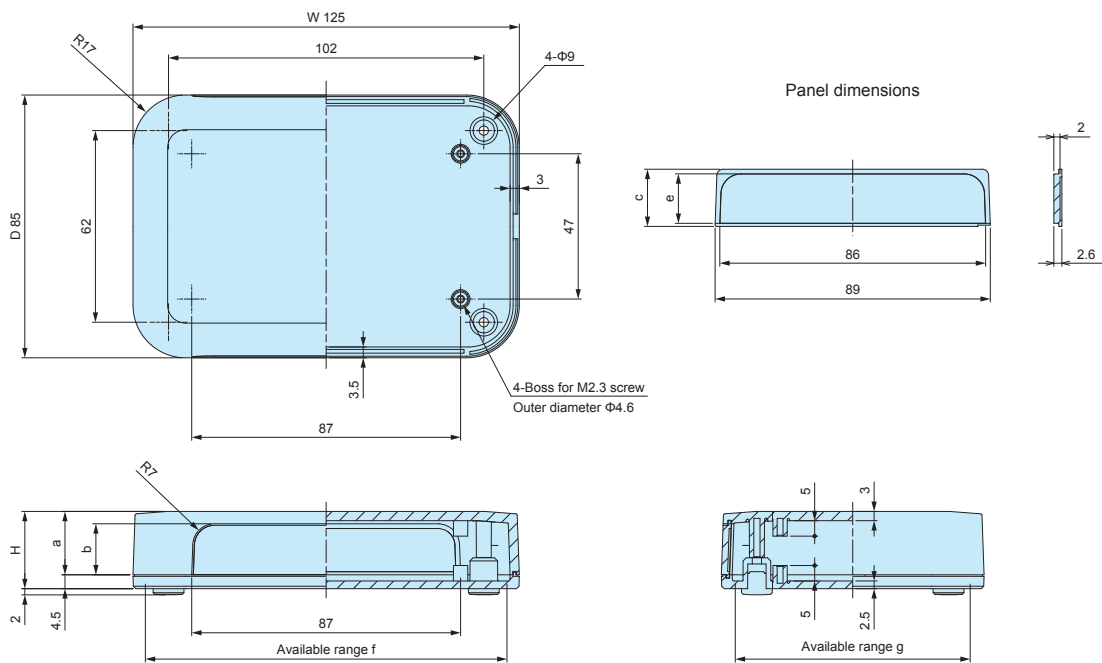
Product no.	W	H	D	a	b	c	e	f	g
PF10-2-7□	100	22.5	67	18	14	16	13.5	92	58
PF10-4-7□	100	35	67	30.5	26.5	28.5	26	91	57



Product no.	W	H	D	a	b	c	e	f	g
PF10-2-10□	100	22.5	100	18	14	16	13.5	92	91
PF10-4-10□	100	35	100	30.5	26.5	28.5	26	91	90



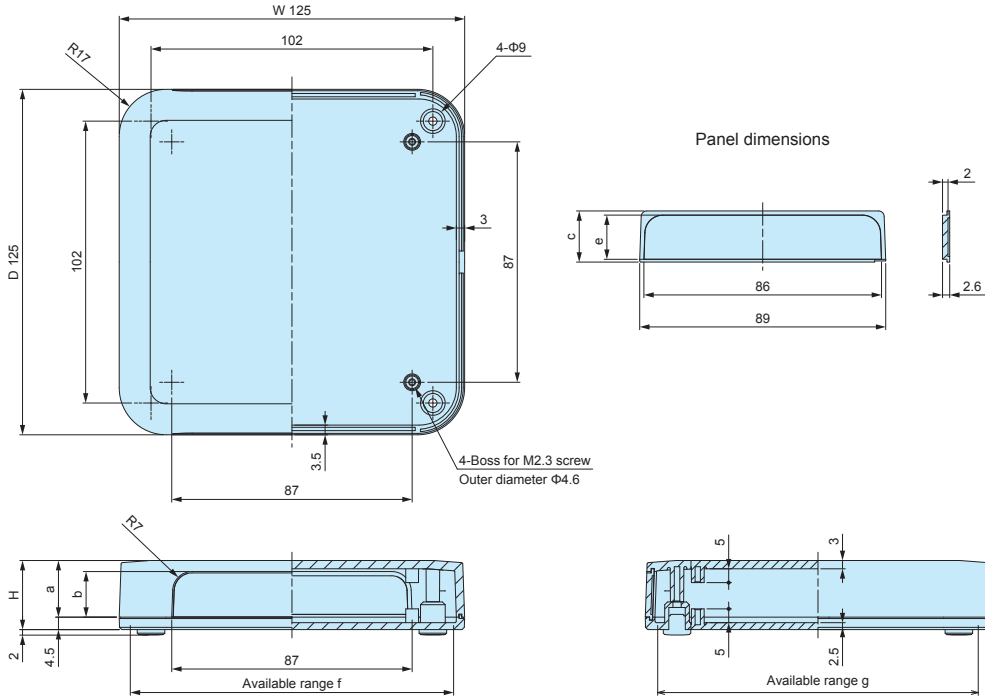
Product no.	W	H	D	a	b	c	e	f	g
PF10-2-15□	100	22.5	150	18	14	16	13.5	92	141
PF10-4-15□	100	35	150	30.5	26.5	28.5	26	91	140
PF10-6-15□	100	55	150	50.5	46.5	48.5	46	90	139



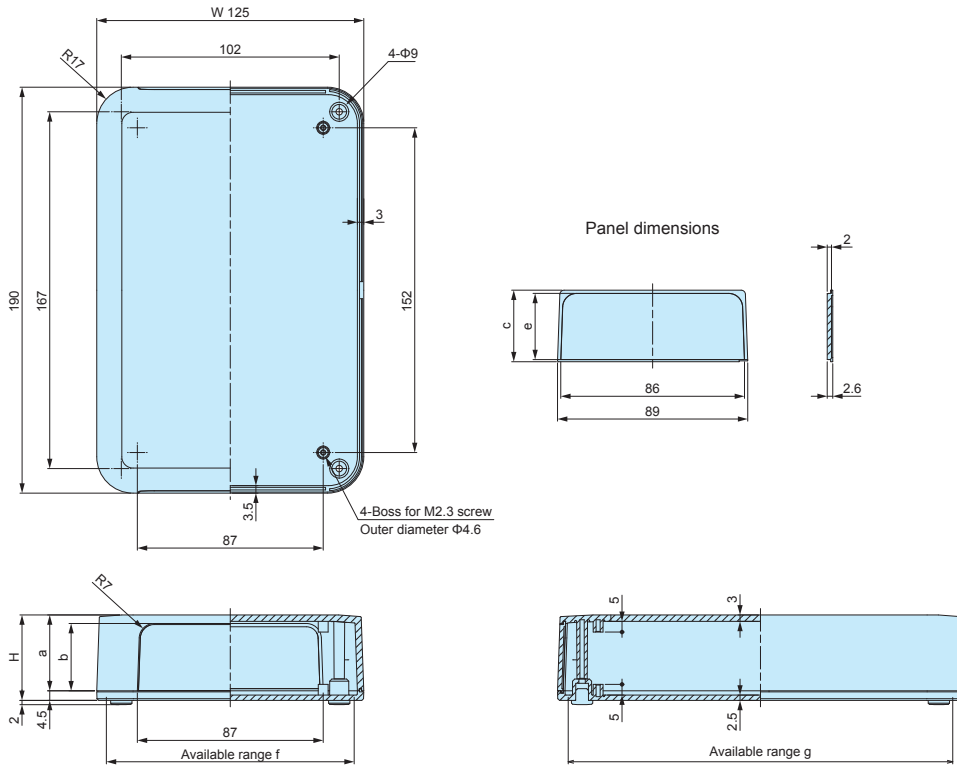
Product no.	W	H	D	a	b	c	e	f	g
PF13-3-9□	125	25	85	20.5	16.5	18.5	16	117	76
PF13-4-9□	125	40	85	35.5	31.5	33.5	31	116	75

PF dimensions

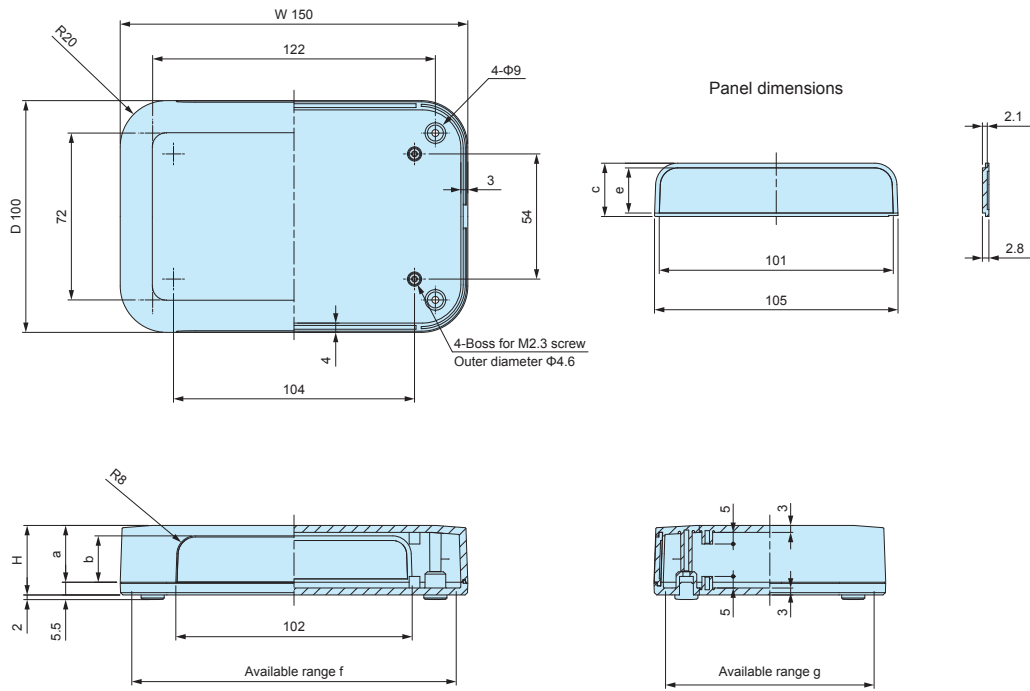
■ DXF/DWG/PDF drawings available on our website.



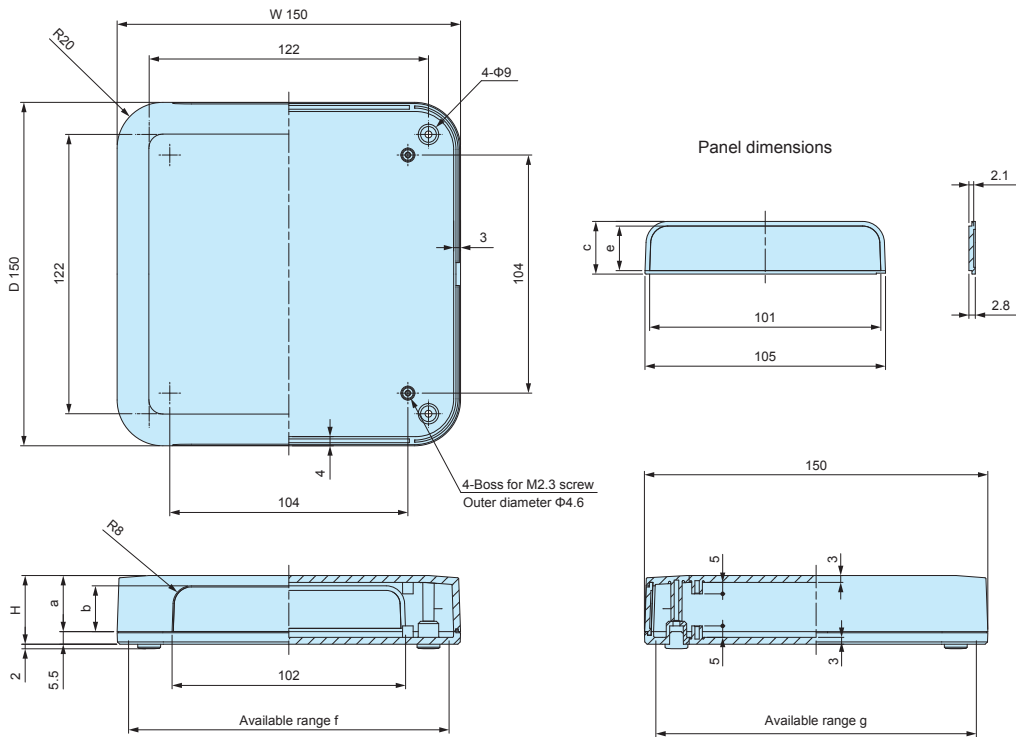
Product no.	W	H	D	a	b	c	e	f	g
PF13-3-13□	125	25	125	20.5	16.5	18.5	16	117	116
PF13-4-13□	125	40	125	35.5	31.5	33.5	31	116	115



Product no.	W	H	D	a	b	c	e	f	g
PF13-3-19□	125	25	190	20.5	16.5	18.5	16	117	181
PF13-4-19□	125	40	190	35.5	31.5	33.5	31	116	180
PF13-6-19□	125	60	190	55.5	51.5	53.5	51	115	179



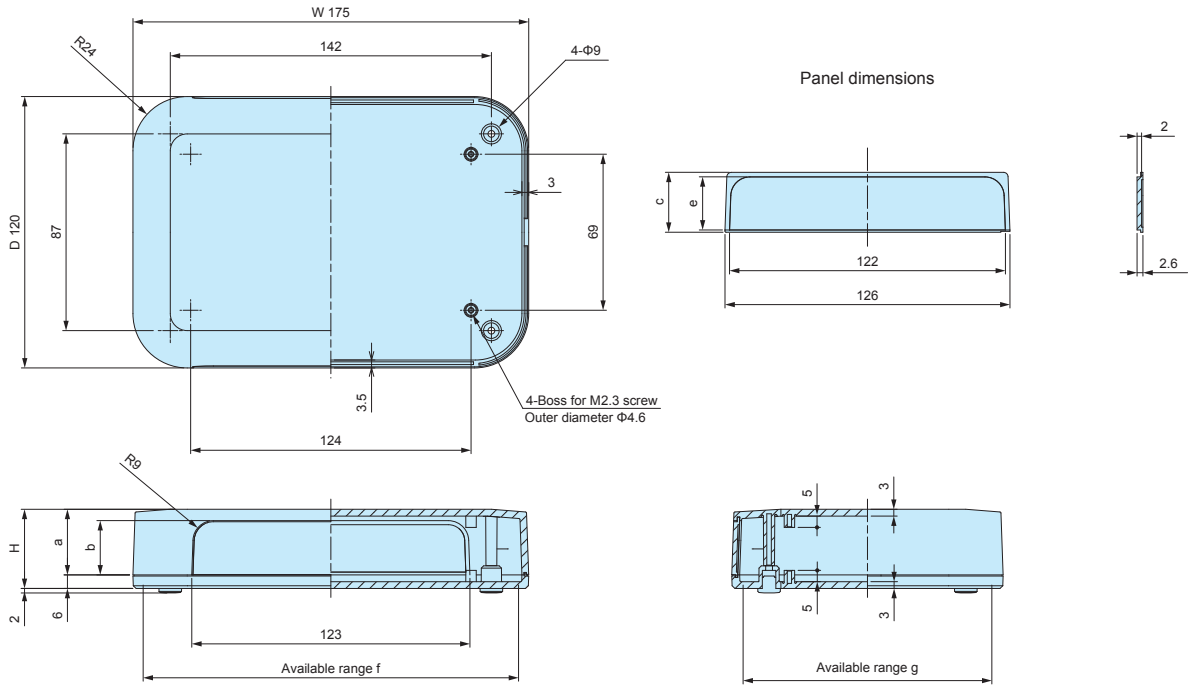
Product no.	W	H	D	a	b	c	e	f	g
PF15-3-10□	150	30	100	24.5	20	23	19.5	142	90
PF15-5-10□	150	45	100	39.5	35	38	34.5	141	89



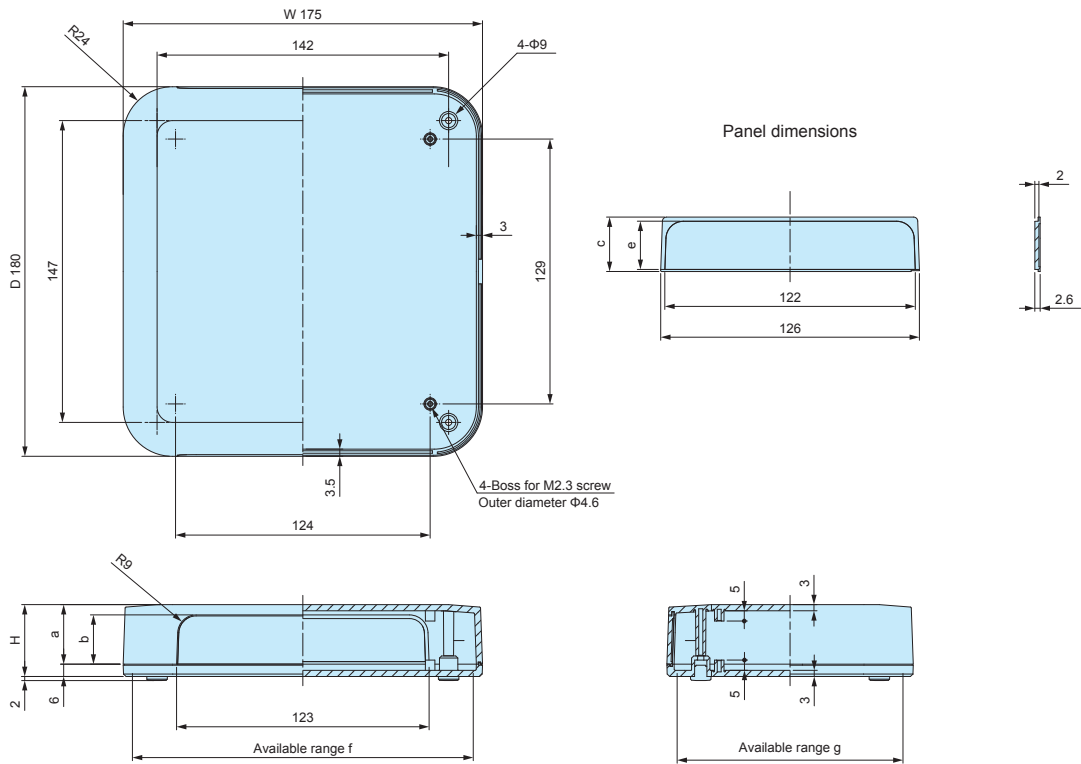
Product no.	W	H	D	a	b	c	e	f	g
PF15-3-15□	150	30	150	24.5	20	23	19.5	142	140
PF15-5-15□	150	45	150	45	39.5	38	34.5	141	139

PF dimensions

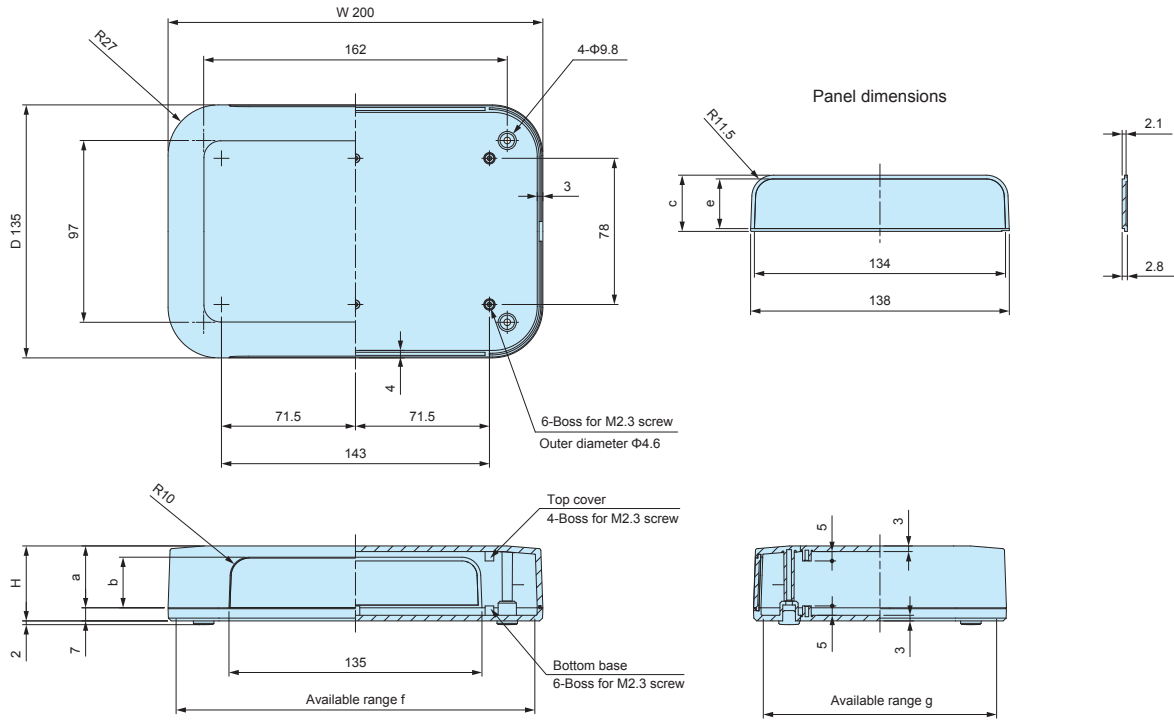
DXF/DWG/PDF drawings available on our website.



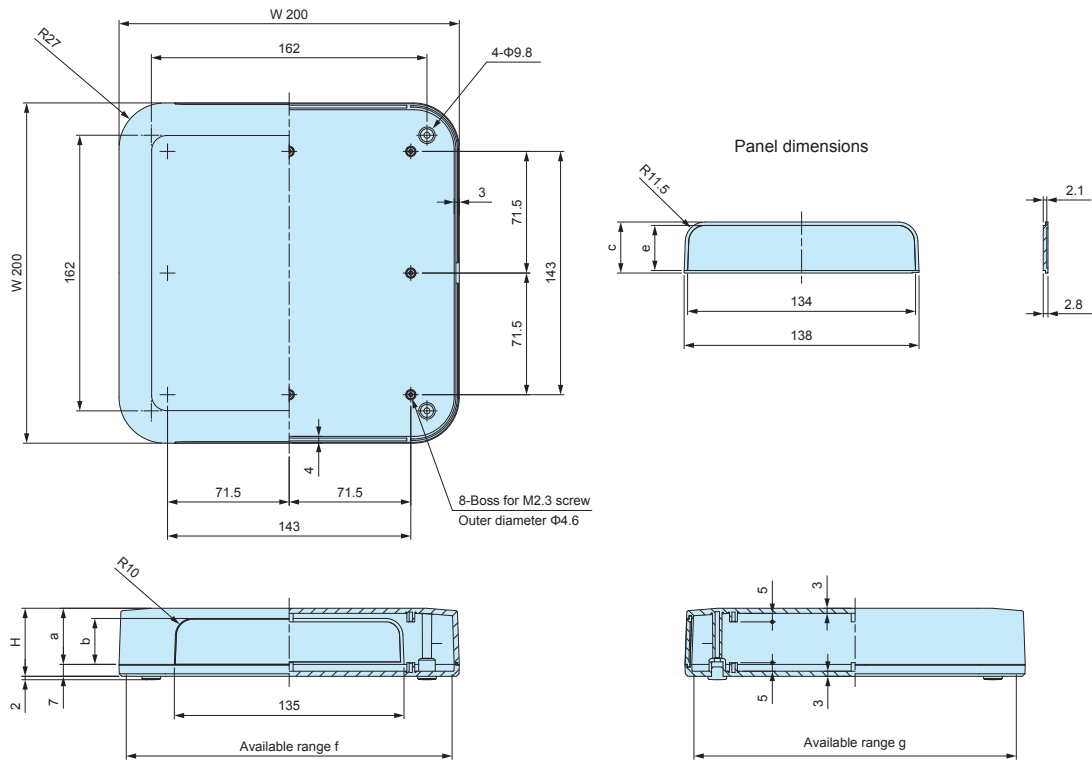
Product no.	W	H	D	a	b	c	e	f	g
PF18-4-12□	175	35	120	29	24	26.5	23.5	166	110
PF18-5-12□	175	50	120	29	24	41.5	38.5	165	109



Product no.	W	H	D	a	b	c	e	f	g
PF18-4-18□	175	35	175	29	24	26.5	23.5	166	165
PF18-5-18□	175	50	175	44	39	41.5	38.5	165	164



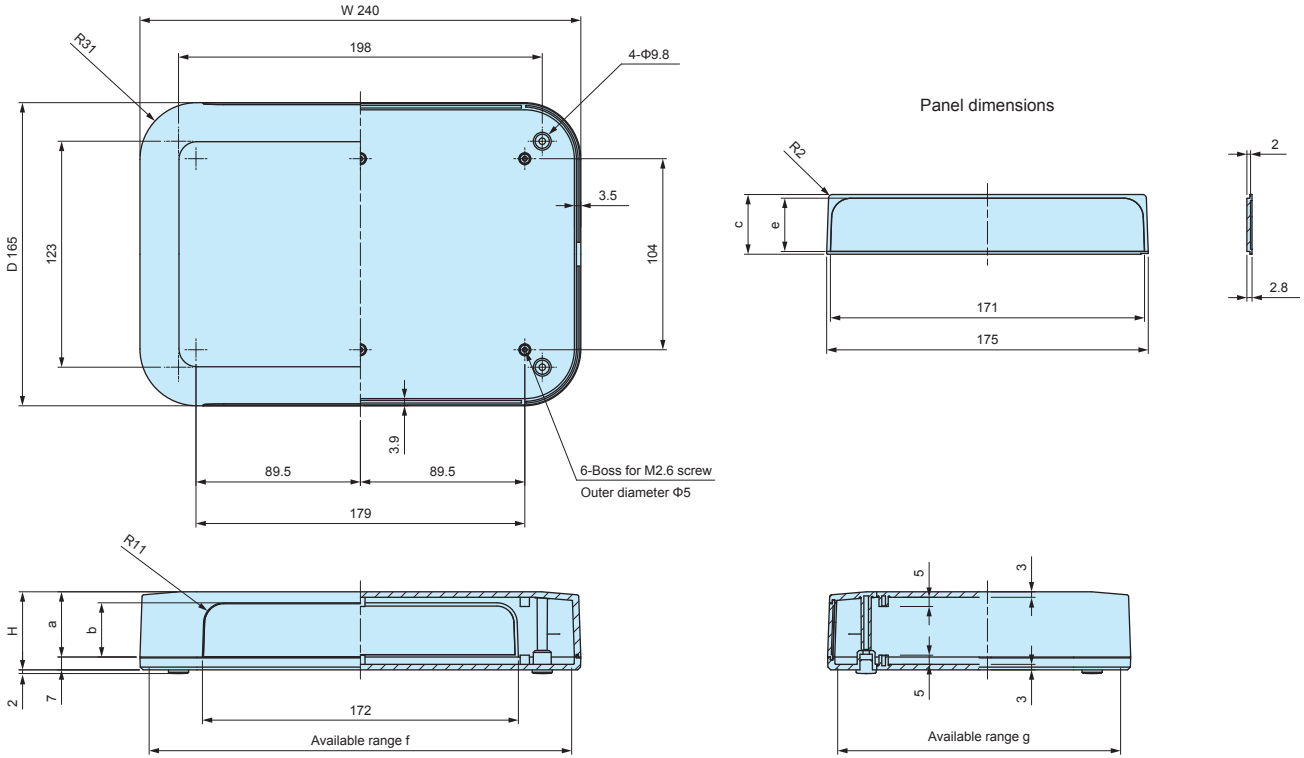
Product no.	W	H	D	a	b	c	e	f	g
PF20-4-13□	200	40	135	33	27	30	26.5	191.5	124.5
PF20-6-13□	200	60	135	53	47	50	46.5	190	123



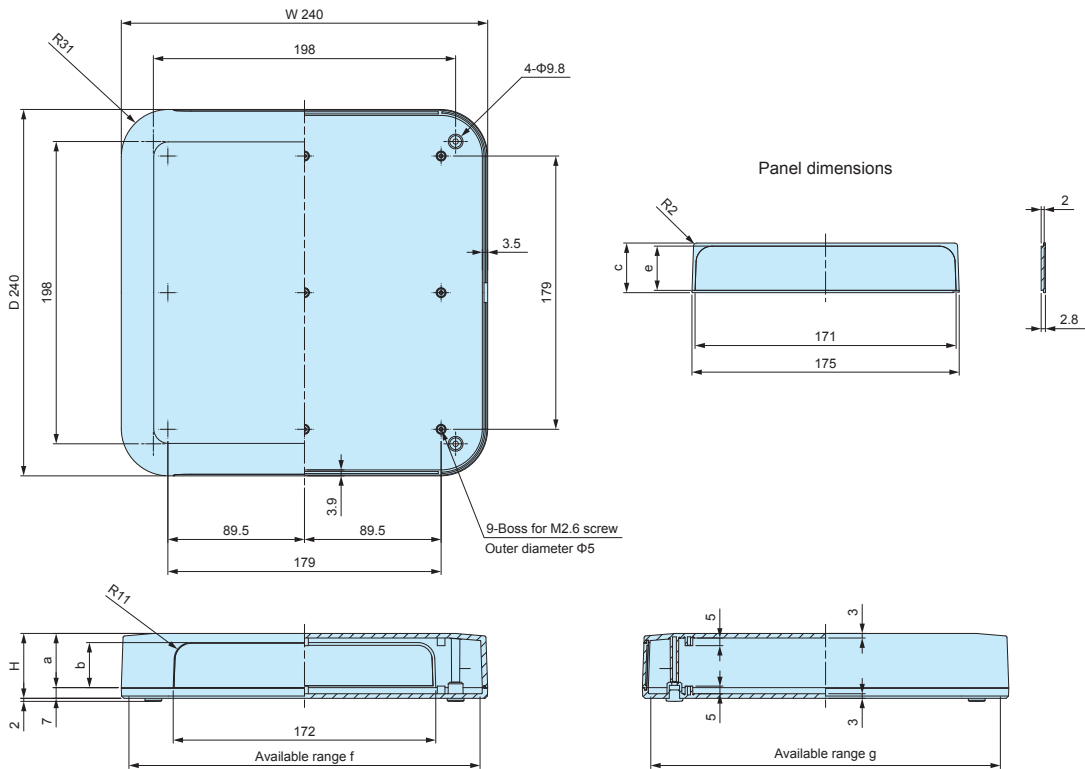
Product no.	W	H	D	a	b	c	e	f	g
PF20-4-20□	200	40	200	33	27	30	26.5	191.5	189.5
PF20-6-20□	200	60	200	53	47	50	46.5	190	188

PF dimensions

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



Product no.	W	H	D	a	b	c	e	f	g
PF24-4-17□	240	42.5	165	35.5	29.5	32.5	29	230	154
PF24-6-17□	240	60	165	53	47	50	46.5	229	153



Product no.	W	H	D	a	b	c	e	f	g
PF24-4-24□	240	42.5	240	35.5	29.5	32.5	29	230	229
PF24-6-24□	240	60	240	53	47	50	46.5	229	228

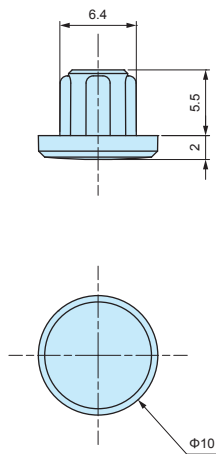
PFRF SERIES

RUBBER FEET for PF

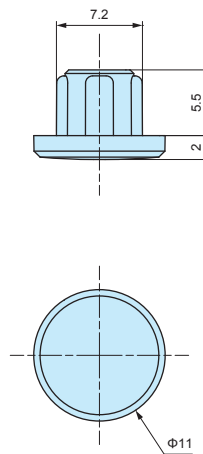


- Rubber feet for PF series.
- Inserted into the screw holes on the underside of box.
- Elastomer material is resistant against color migration.

PFRF-M2.5D



PFRF-M3D

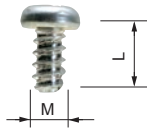


Product no. / Dimensions

Product no.	Suitable case	Material	Color	Pack of
PFRF-M2.5D	PF10-2-7, 10-2-10, 10-2-15, 10-4-7, 10-4-10, 10-4-15 PF10-6-15, 13-3-9, 13-3-13, 13-3-19, 13-4-9, 13-4-13 PF13-4-19, 13-6-19, 15-3-10, 15-3-15, 15-5-10, 15-5-15 PF18-4-12, 18-4-18, 18-5-12, 18-5-18	Elastomer	Dark gray	4
PFRF-M3D	PF20-4-13, 20-4-20, 20-6-13, 20-6-20, 24-4-17, 24-4-24 PF24-6-17, 24-6-24	Elastomer	Dark gray	4

EM SERIES

PCB MOUNTING SCREW



- 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. / Dimensions

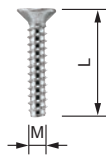
Product no.	M	L	Material	Finish	Suitable enclosures	Pack of
EM-1.6	1.6	4	Steel	Trivalent chromate	CSS • CS • PS • WC	50
EM-2	2	5	Steel	Trivalent chromate	TW • TWN • TWF • WP (M2 size)	50
EM-2.3	2.3	6	Steel	Trivalent chromate	LCT • LCS • LC • WH PF • PFF (M2.3 size) TW • TWN • TWF (M2.3 size) WP (M2.3 size)	50
NEW EM-2.6	2.6	6	Steel	Trivalent chromate	PF • PFF (M2.6 size)	50
EM-3	3	5	Steel	Trivalent chromate	TW • TWN • TWF (M3 size) • SU	50
EM-3-6	3	6	Steel	Trivalent chromate		50

MR SERIES

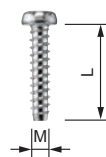
TORX SCREW



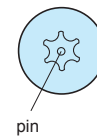
Countersunk head



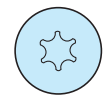
Pan head



With pin



★ Without pin



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

Product no. / Dimensions

★Mark = Without pin

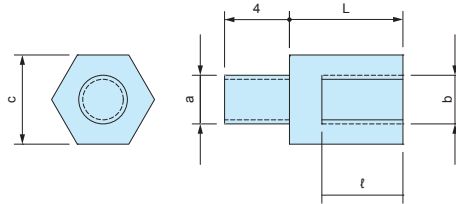
Product no.	M	L	head no.	Head style	Material	Finish	Suitable enclosures	Pack of
MR1.6-6S★	1.6	6	T3	Pan	Steel	Nickel plated	CS • CSS	20
MR2.5-8PS	2.5	8	T8	Pan	Steel	Nickel plated	PF • PFF (M2.5 size)	20
MR2.6-10S★	2.6	10	T8	Countersunk	Steel	Nickel plated	TW5-2-5 / 5-3-5	20
MR2.6-10B★	2.6	10	T8	Countersunk	Steel	Black trivalent chromate	TW • TWN4-2-5 / 4-2-6 / 4-2-8 / 5-2-7 TW • TWN5-3-7 / 5-4-7 / 8-2-8 / 8-4-8 TWF5-2-7 / 5-3-7 / 5-4-7	20
MR2.6-12PS	2.6	12	T8	Pan	Steel	Nickel plated	LCT • LCS • LC115-F2 / F3 LCT • LCS • LC145S-F6	20
MR2.6-14PS	2.6	14	T8	Pan	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
MR2.6-14S	2.6	14	T8	Countersunk	Steel	Nickel plated	LCT • LCS • LC115-F2 / F3 LCT • LCS • LC145S-F6 TW • TWN7-2-11 / 7-4-11 / 7-5-11	20
MR2.6-18S	2.6	18	T8	Countersunk	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	20
MR3-8PS	3	8	T10	Pan	Steel	Nickel plated	PF • PFF (M3 size)	20
MR3-14S★	3	14	T10	Countersunk	Steel	Nickel plated	TW5-3-10	20
MR3-14B★	3	14	T10	Countersunk	Steel	Black trivalent chromate	TW • TWN5-3-9 / 7-3-13 / 7-5-13 / 9-4-17 / 9-6-17 TWF7-3-13 / 7-5-13 / 9-4-17 / 9-6-17	20
MR-1S	3	5	T10	Countersunk	Steel	Nickel plated	UC	20
MR-1B	3	5	T10	Countersunk	Steel	Black trivalent chromate	UC • UCY • US	20
MR-2S	3	10	T10	Countersunk	Steel	Nickel plated	HEN	20

TPS SERIES

TAPPING STANDOFF



- Tapping screw head allows for easy installation onto existing enclosure boss mount.
- 4 different sizes available: M2, M2.3, M2.6 and M3 size.



Product no. / Dimensions

■ Material / Finish: Brass / Unfinished

Product no.	Screw size (a)	Screw size (b)	c	L	φ	Pack of	Recommended enclosure models
TPS-M2.3-4	M2.3	M2.3	5	4	3	4	WH series • WP series (M2.3 only)
TPS-M2.3-5	M2.3	M2.3	5	5	3	4	LC • LCS • LCT series
TPS-M2.3-6	M2.3	M2.3	5	6	4	4	PF10-2-7 / 10-2-10 / 10-2-15 / 10-4-7 / 10-4-10 / 10-4-15
TPS-M2.3-7	M2.3	M2.3	5	7	5	4	10-6-15 / 13-3-9 / 13-3-13 / 13-3-19 / 13-4-9 / 13-4-13
TPS-M2.3-8	M2.3	M2.3	5	8	6	4	13-4-19 / 13-6-19 / 15-3-10 / 15-5-10 / 15-3-15
TPS-M2.3-10	M2.3	M2.3	5	10	6	4	15-5-15 / 18-4-12 / 18-4-18 / 18-5-12 / 18-5-18
TPS-M2.3-12	M2.3	M2.3	5	12	6	4	20-4-13 / 20-6-13 / 20-4-20 / 20-6-20
TPS-M2.6-4	M2.6	M2.6	5	4	3	4	TW • TWN • TWF5-3-9 / 7-2-11 / 7-4-11 / 7-5-11
TPS-M2.6-5	M2.6	M2.6	5	5	3	4	TW5-3-10 • TW • TWN • TWF8-2-8 / 8-4-8
TPS-M2.6-7	M2.6	M2.6	5	7	5	4	
TPS-M2.6-10	M2.6	M2.6	5	10	6	4	
TPS-M2.6-12	M2.6	M2.6	5	12	6	4	
TPS-M3-4	M3	M3	5.5	4	3	4	
TPS-M3-5	M3	M3	5.5	5	3	4	
TPS-M3-6	M3	M3	5.5	6	4	4	
TPS-M3-7	M3	M3	5.5	7	5	4	
TPS-M3-8	M3	M3	5.5	8	5	4	
TPS-M3-10	M3	M3	5.5	10	6	4	
TPS-M3-12	M3	M3	5.5	12	6	4	

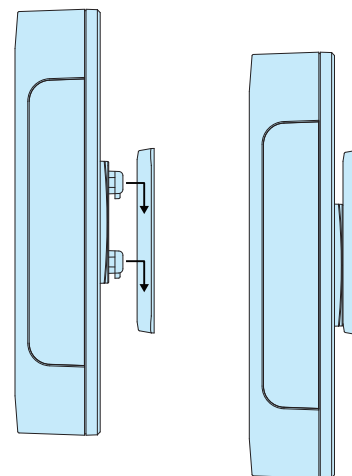


- Please use a suitably sized driver to both secure and loosen the tapping standoff.

WM SERIES

SUSPENSION BRACKET

How to install

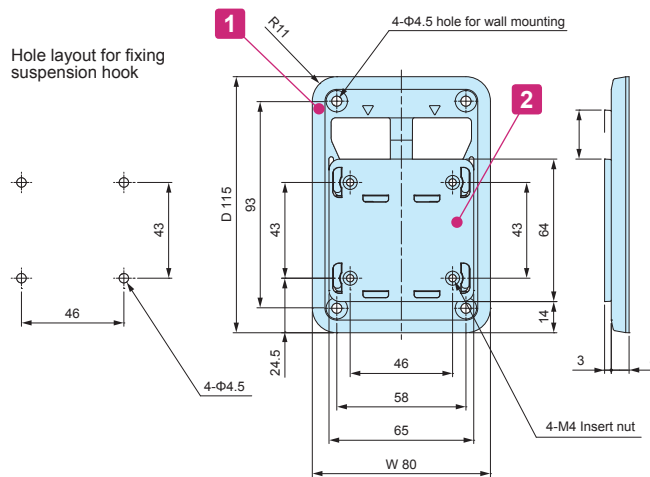
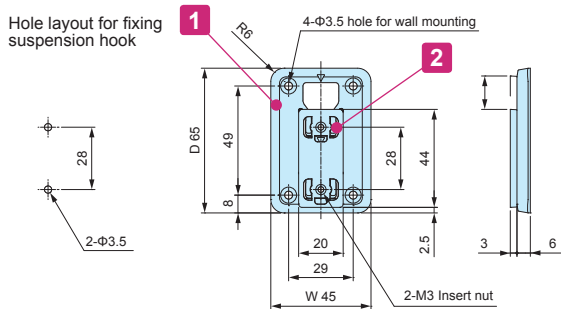


- Plastic wall mounting bracket. Easy attachment and removal.
 - Large and small brackets are available.
 - Applicable not only for the PF series, but also other plastic/metal enclosures with a panel thickness of 0.8 ~ 3.5mm.
 - To attach the suspension hook onto the enclosure, hole milling is required.
-
- The max load values listed are static load values only. Use caution when handling.
 - Please be aware of the insertion direction of the suspension hook against the mounting base when attaching.

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

WM-1

WM-2



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

Components

No.	Part 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
-	Insert nut	2 / 4	Brass	Unfinished
-	Screw	2	M3-8 Steel binding = WM-1	Nickel plated
-	Screw	4	M4-8 Steel binding = WM-2	Nickel plated

Product no. / Dimensions

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

NMG SERIES

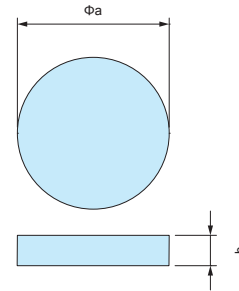
NEODYMIUM MAGNET



Round magnet



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



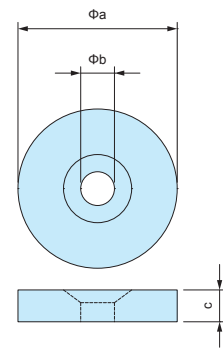
Components

Product no.	a	b	Weight (g)
NMG3-15N	15	3	4
NMG3-20N	20	3	7.1
NMG5-22N	22	5	11.4
NMG5-25N	25	5	18.4

Round magnet with countersunk hole



- Please fasten with a screw.



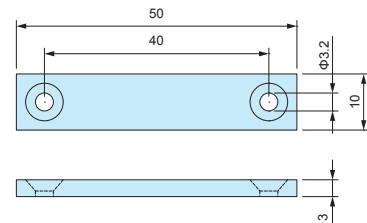
Components

Product no.	a	b	c	Countersunk size	Weight (g)
NMG3-15M3	15	3.2	3	M3	3.8
NMG3-20M3	20	3.2	3	M3	6.9
NMG5-22M4	22	4.3	5	M4	13.7
NMG5-25M5	25	5.3	5	M5	17.6

Rectangular magnet with countersunk holes



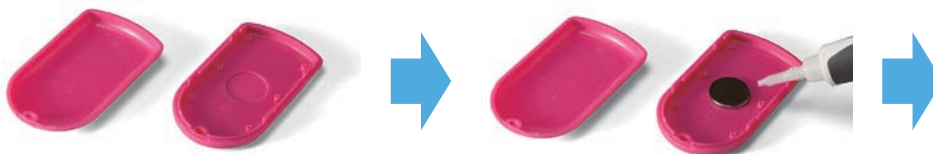
- Please fasten with a screw.



Components

Product no.	a	b	c	Countersunk size	Weight (g)
NMG3-50M3	50	10	3	M3	11.3

Example 1 The magnetic force remains strong even through plastic.



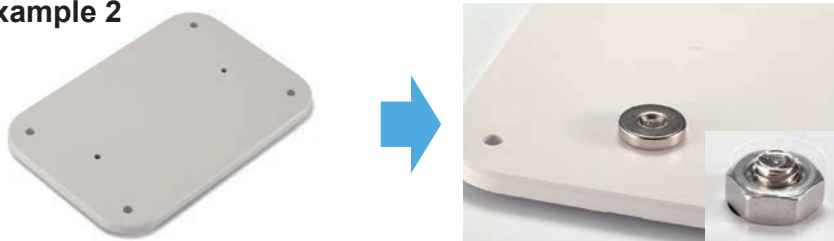
Make recessed pocket on the inside wall.

Glue on.



Attach onto a metallic surface.

Example 2



Make holes

Fasten with a screw and nut.



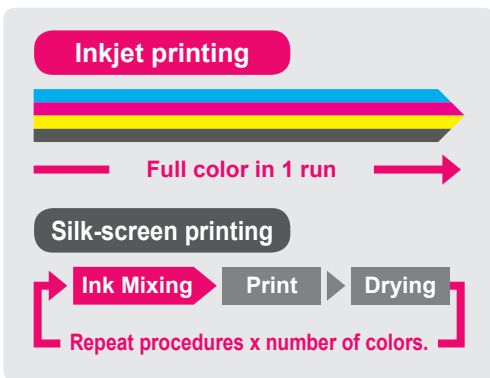
Attach onto a metallic surface.

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

INKJET PRINTING



Full color digitally designed image can be printed in 1 run.
No cost difference regardless of the number of colors used.



Low printing cost
Full color print possible
in small quantities

Inkjet printing 1 run only for full color print

Printing cost
Full color

Silk-screen printing Printing cost x number of colors

Printing cost Color 1	Printing cost Color 2	Printing cost Color 3	Printing cost Color 4
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High quality printing of photo image and color gradation.

Print photo images in maximum 1,800 x 1,800 dpi quality.

Pictures, logos and unique designs with color gradation can be recreated in a high quality print.



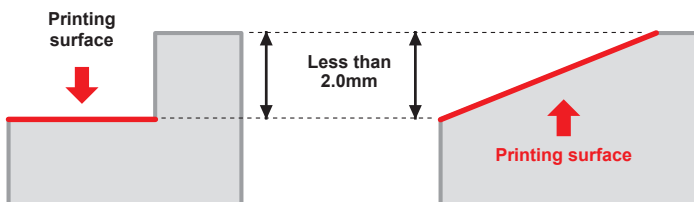
Maximum printable enclosure size



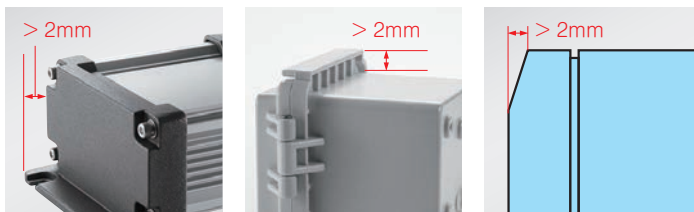
Printable on surfaces with height differential

Printing is possible on recessed, sloped and rounded sections.

Gap difference is less than 2.0mm.



*Not suitable if height difference is more than 2.0mm.



Printed example



CNC MACHINING

CNC milling is a form of computer controlled machining. Similar in operation to drilling and cutting, it is able to create various hole styles and shapes by using a rotating cutting tool to bore into the object.



- Mainly used for plastic, aluminium die-cast, and aluminium extrusion material types.
- Able to perform milling for various shapes and sizes.
- Recommended for small quantity customization.

