

NOTICE

Changes to Aluminium Material / Finish

- Change: Aluminium material, material finish
- Purpose: To ensure consistent quality throughout via streamlined supply chain and materials.

① ALUMINIUM CONTROL BOX

■ Affected series · color · parts

Product	Series	Color	Parts
SLOPED ENCLOSURE	CF series	GS	Slide panel · Screwed panel
ALUMINIUM CONTROL BOX	FC series	BS·BX·GS	Slide panel · Screwed panel
CONTROL BOX with CARRYING HANDLE	FCH series	GS	Slide panel · Screwed panel
OPEN-CLOSING CONTROL BOX	FCW series	BS·BX·GS	Slide panel · Open-closing panel
		BB	Open-closing panel

■ Details

Current (Old) Panel

Material	Finish
A1050P	Silver Hairline-brushed & Anodized
	Black Anodized



New Panel

Material	Finish
A1100P	Silver Anodized
	Black Anodized

② ALUMINIUM ENLOSURE

■ Affected series · color · parts

Product	Series	Color	Parts
DESKTOP ENCLOSURE	MS series	B·BS·G	Front panel · Rear panel
DESKTOP ENCLOSURE with STAND HANDLE	MSN series	B·BS·G	Front panel · Rear panel
RACK MOUNT ENCLOSURE	MSR series	B·BS·G	Front panel · Rear panel
DESKTOP ENCLOSURE with CARRYING HANDLE	MSY series	B·BS·G	Front panel · Rear panel

■ Details

Current (Old) Panel

Parts	Material	Finish
Front panel	A1050P	Silver Hairline-brushed & Anodized
		Black Hairline-brushed & Anodized
Rear panel	A1050P	Silver Anodized
		Black Anodized



New Panel

Parts	Material	Finish
Front Panel	A1100P	Silver Anodized
		Black Anodized
Rear Panel	A1100P	Silver Anodized
		Black Anodized

③ HEAT-SINK ENCLOSURES

■ Affected series · color · parts

Product	Series	Color	Parts
HEAT-SINK ALUMINIUM CASE	HIT series	SS	Front · Rear panel & Top · Bottom cover

■ Details

Current (Old) Parts

Parts	Material	Finish
Front · Rear panel	A1050P	Silver Hairline-brushed & Anodized
Top · Bottom cover	A1050P	Silver Hairline-brushed & Anodized



New Parts

Parts	Material	Finish
Front · Rear panel	A1100P	Silver Anodized
Top · Bottom cover	A1100P	Silver Anodized

- This change would be carried out as soon as current inventory has been depleted.
- There are no changes to the product number and / or dimensions.
- Pricing for each affected series / product shall remain the same.
- Current (old) parts and new parts may be mixed and shipped together in a bulk order.

Thank you for your understanding.

For more information, kindly contact us at: sales@takachi-el.co.jp

MS SERIES

APPLICATION EXAMPLE

The desktop metal type MS series enclosure is suitable for use as measuring instruments, testing equipment, power supply controller, etc.

A wide variety of 3 different colors and 176 different sizes are available.

DIAGNOSTIC DEVICE



Digital panel recorder by Cors (Japan) can display, analyze, save and transmit measured data.



Measured data is saved on SD card as CSV format.

Product by Cors (Japan)

- Digital panel recorder by Cors (Japan) is embedded onto the MS enclosure.
- Measuring an electric flow on the machine to analyze the machine conditions. Suitable even for machines in severe environment.
- Measured data can be displayed, transmitted and also saved on SD card as CSV format.

X-RAY FLORESCENCE ANALYZER



Product by SinmatrikX (Japan)

- Processor to withdraw max ability of SDD detector from low to high energy X-ray.
- Best used for florescence analysis with low noise, high capacity, wide range and high speed.
- Used as a radiation detector and florescence analysis.

INTENSITY METER



Desktop Type



Rack Mount Type

Product by TOKYO SOKUSHIN (Japan)

- Multi-channel input type seismic monitor.
- Display seismic intensity, scale of intensity and peak acceleration on the color LCD.

PIEZO CONTROLLER



STEPPING PIEZO CONTROLLER



LANGEVIN TRANSDUCER (BLT) CONTROLLER



Product by MESS-TEK (Japan)

PIEZO CONTROLLER

- A device used for precise positioning at the micron/nano meter level with PIEZO actuator.
- Used for semiconductor manufacturing, and biotechnology fields where precise positioning is required.

LANGEVIN TRANSDUCER (BLT) CONTROLLER

- A controller for Langevin Transducer used for ultrasonic experiments where precise work is required.
- Automatically adjust the resonant frequency of the transducer while working.

QUENCHING DEPTH INDICATOR



STEEL DETECTOR



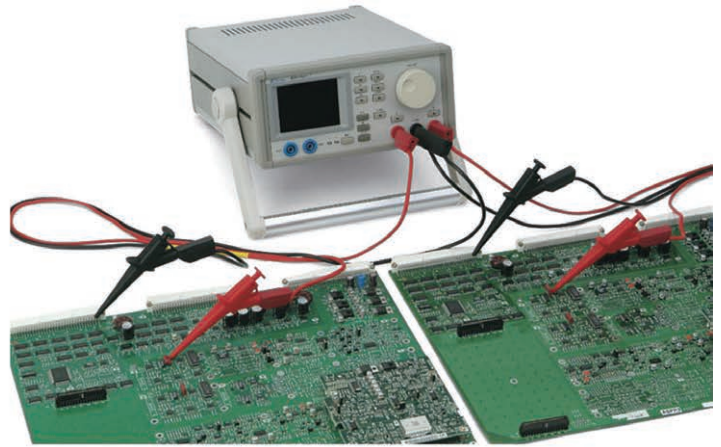
Product by Denshijiki Industry (Japan)

- The survey instrument which does quenching depth measurement in steel without destroying it.
6 probe sensors can analyze the internal texture of the steel and calculate the depth of quenching accurately.
- STEEL DETECTOR can calculate weld quality, hardness, material quality and quenching depth in steel.
4 probe sensors can analyze the transformation of the steel and detect welding quality, hardness, material quality and quenching depth.

MS SERIES

APPLICATION EXAMPLE

EMBEDDED PCB CHECKER Product by KYOSAITECHNOS (Japan)



- A device to test parts on a PCB under de-energized conditions.
- Easy operation to determine the waveform on the display.

PRECISION PROGRAMMABLE RESISTANCE BOX / RTD SIMULATOR Product by Alpha Electronics (Japan)



- Easily able to set to any desired resistance value using a PC.
- Automated inspection to minimize inspection time while avoiding human error.

REFERENCE SIGNAL DISTRIBUTOR Product by Freqtime (Japan)



- A desktop device for the distribution of a signal to 8 ports.

FIBER OPTIC THERMOMETER Product by Anritsu Meter (Japan)



- Enables the measurement of temperature in environments subjected to high-frequency waves, microwaves, or high voltages-areas where electric type thermometers are ineffective.
- Fiber optic thermometer offering a wide measurement range.
- 1 and 4 channel versions are available. Calibration function enables an accuracy range of around $\pm 0.5^{\circ}\text{C}$.

PRECISION PLATINUM RESISTANCE THERMOMETER



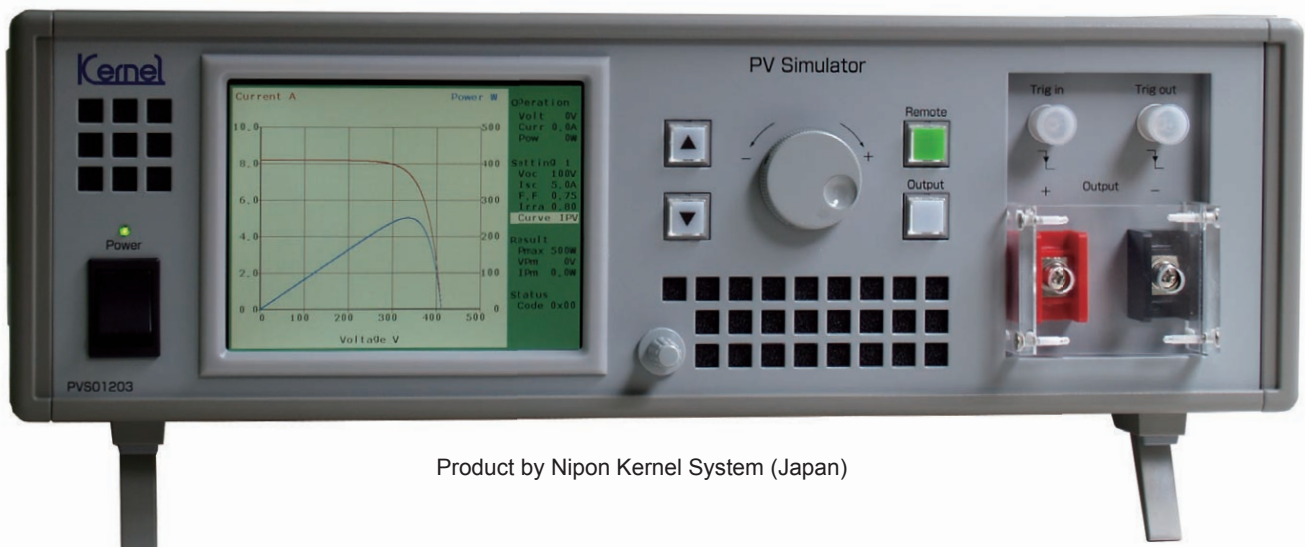
Product by Anritsu Meter (Japan)

ANALOG OUTPUT THERMOMETER



Product by Anritsu Meter (Japan)

PORTABLE PV SIMULATOR



Product by Nipon Kernel System (Japan)

- Compact and portable solar cell simulator with color LCD.
- I-V curve character is calculated according to Semiconductor formula. Setting can be changed during operation. 4 parameters (Voc, Isc, F.F., Irra) can be set individually.
- Large input voltage range (AC85 ~ 264[V]). Only the film condenser of the low volume is connected at output terminal.

MS SERIES

DESKTOP ENCLOSURE



- Available in 3 different colors and 176 different sizes.
- Screws are hidden out of view for a sophisticated and elegant look.
- Suitable for use as measuring instruments, testing equipment, power supply controller, etc.



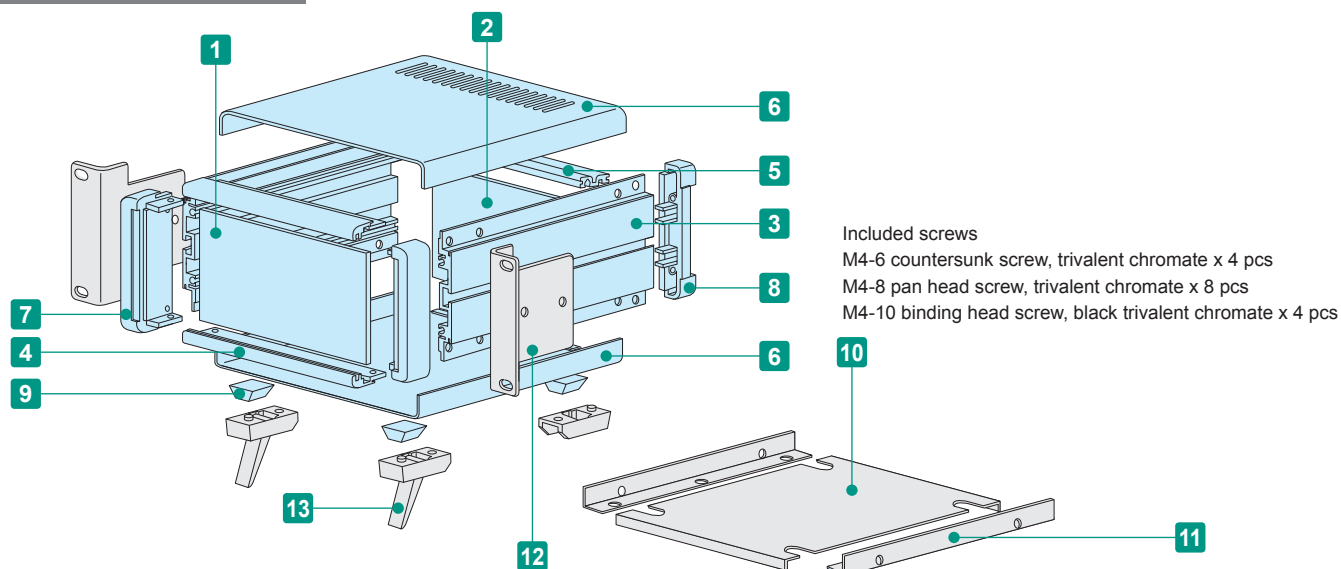
MSN series
Equipped with STAND HANDLE

MSY series
Equipped with CARRYING HANDLE

MSR series
Rack Mount

Variations of MS series, MSN, MSY and MSR series are also available. See website for more details.

Assembly drawings



Components

No.	Part name	Pcs	Material	Color / Finish
1	Front panel	1	Aluminium A1050P t=2.0	Silver • Black / Hairline brushed & Anodized
2	Rear panel	1	Aluminium A1050P t=2.0	Silver • Black / Anodized
3	Side frame	2	Extruded aluminium A6063S-T5	Gray • Black / Painted
4	Front frame	2	Extruded aluminium A6063S-T5	Gray • Black / Painted
5	Rear frame	2	Extruded aluminium A6063S-T5	Silver / Anodized
6	Top • Bottom cover	1 each	Steel SPCC t=1.0	Light gray • Black / Painted
7	Corner block	2	Diecast aluminium ADC12	Gray • Black / Painted
8	Rear feet	2	ABS UL94V-0	Gray • Black
9	Rubber feet	4	Polyurethane	Black

■ Front • Rear panels comes with a protective sheet cover.

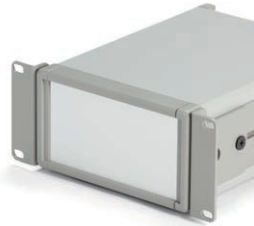
Accessories (Optional parts)



10 Mounting plate MSC series
See page MSC • MSCL-1



11 L-bracket MSCL series
See page MSC • MSCL-1



12 Rack mounting MSM series
See page MSM • MZ-1



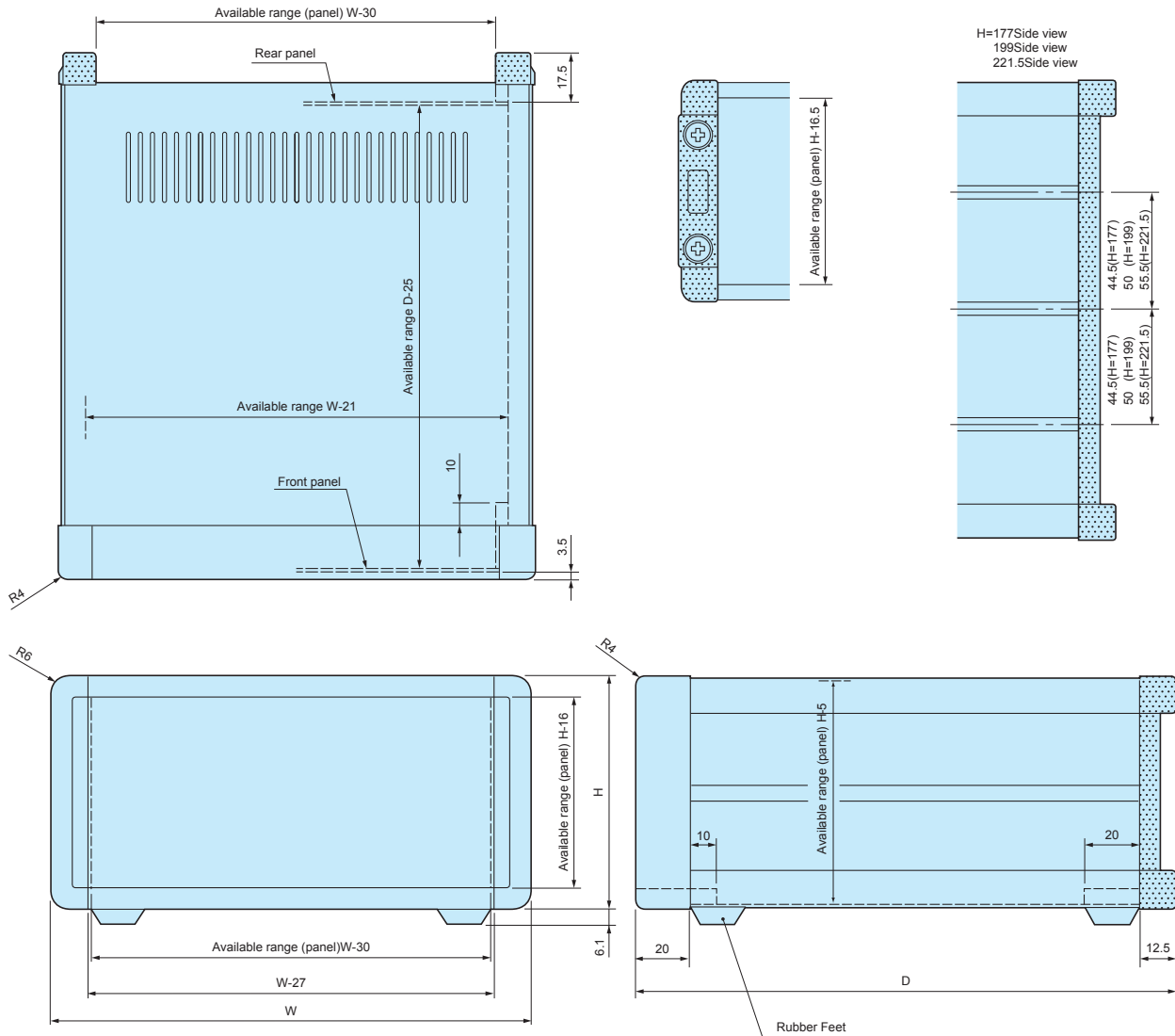
13 Tilt leg TL series
See page TL • CBF-1



Cable hook CBF series
See page TL • CBF-1

MS dimensions

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



■ Top • Bottom cover of sizes 160x160, 160x230, 160x280, 210x160 do not have ventilation holes.

Color Type

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

G		B		BS	
Panel	Silver	Panel	Black	Panel	Silver
Top • Bottom cover	Light gray	Top • Bottom cover	Black	Top • Bottom cover	Black
Side frame	Gray	Side frame	Black	Side frame	Black

Product no. / Dimensions

Product no.	H	W	D	Weight (kg)
MS 66-16-16□	66	160	160	1.0
MS 66-16-23□	66	160	230	1.3
MS 66-16-28□	66	160	280	1.6
MS 66-21-16□	66	210	160	1.2
MS 66-21-23□	66	210	230	1.6
MS 66-21-28□	66	210	280	1.8
MS 66-21-35□	66	210	350	2.2
MS 66-26-23□	66	260	230	1.8
MS 66-26-28□	66	260	280	2.1
MS 66-26-35□	66	260	350	2.6
MS 66-32-23□	66	320	230	2.1
MS 66-32-28□	66	320	280	2.5
MS 66-32-35□	66	320	350	3.0
MS 66-32-45□	66	320	450	3.7
MS 66-37-23□	66	370	230	2.4
MS 66-37-28□	66	370	280	2.8
MS 66-37-35□	66	370	350	3.3
MS 66-37-45□	66	370	450	4.1
MS 66-43-23□	66	430	230	2.7
MS 66-43-28□	66	430	280	3.1
MS 66-43-35□	66	430	350	3.7
MS 66-43-45□	66	430	450	4.6
MS 88-16-16□	88	160	160	1.1
MS 88-16-23□	88	160	230	1.5
MS 88-16-28□	88	160	280	1.7
MS 88-21-16□	88	210	160	1.3
MS 88-21-23□	88	210	230	1.8
MS 88-21-28□	88	210	280	2.1
MS 88-21-35□	88	210	350	2.5
MS 88-26-23□	88	260	230	2.0
MS 88-26-28□	88	260	280	2.5
MS 88-26-35□	88	260	350	2.8
MS 88-32-23□	88	320	230	2.3
MS 88-32-28□	88	320	280	2.8
MS 88-32-35□	88	320	350	3.2
MS 88-32-45□	88	320	450	4.0
MS 88-37-23□	88	370	230	2.6
MS 88-37-28□	88	370	280	3.0
MS 88-37-35□	88	370	350	3.6
MS 88-37-45□	88	370	450	4.4
MS 88-43-23□	88	430	230	2.9
MS 88-43-28□	88	430	280	3.4
MS 88-43-35□	88	430	350	4.0
MS 88-43-45□	88	430	450	5.0

Product no.	H	W	D	Weight (kg)
MS 99-16-16□	99	160	160	1.1
MS 99-16-23□	99	160	230	1.5
MS 99-16-28□	99	160	280	1.8
MS 99-21-16□	99	210	160	1.4
MS 99-21-23□	99	210	230	1.8
MS 99-21-28□	99	210	280	2.1
MS 99-21-35□	99	210	350	2.5
MS 99-26-23□	99	260	230	2.0
MS 99-26-28□	99	260	280	2.4
MS 99-26-35□	99	260	350	2.8
MS 99-32-23□	99	320	230	2.4
MS 99-32-28□	99	320	280	2.8
MS 99-32-35□	99	320	350	3.3
MS 99-32-45□	99	320	450	4.0
MS 99-37-23□	99	370	230	2.6
MS 99-37-28□	99	370	280	3.0
MS 99-37-35□	99	370	350	3.6
MS 99-37-45□	99	370	450	4.5
MS 99-43-23□	99	430	230	3.0
MS 99-43-28□	99	430	280	3.4
MS 99-43-35□	99	430	350	4.1
MS 99-43-45□	99	430	450	5.0
MS133-16-16□	133	160	160	1.3
MS133-16-23□	133	160	230	1.7
MS133-16-28□	133	160	280	2.0
MS133-21-16□	133	210	160	1.6
MS133-21-23□	133	210	230	2.1
MS133-21-28□	133	210	280	2.4
MS133-21-35□	133	210	350	2.9
MS133-26-23□	133	260	230	2.4
MS133-26-28□	133	260	280	2.8
MS133-26-35□	133	260	350	3.3
MS133-32-23□	133	320	230	2.7
MS133-32-28□	133	320	280	3.2
MS133-32-35□	133	320	350	3.7
MS133-32-45□	133	320	450	4.5
MS133-37-23□	133	370	230	3.0
MS133-37-28□	133	370	280	3.5
MS133-37-35□	133	370	350	4.1
MS133-37-45□	133	370	450	5.0
MS133-43-23□	133	430	230	3.4
MS133-43-28□	133	430	280	3.9
MS133-43-35□	133	430	350	4.6
MS133-43-45□	133	430	450	5.6

Product no. / Dimensions

Product no.	H	W	D	Weight (kg)
MS149-16-16□	149	160	160	1.4
MS149-16-23□	149	160	230	1.8
MS149-16-28□	149	160	280	2.1
MS149-21-16□	149	210	160	1.6
MS149-21-23□	149	210	230	2.1
MS149-21-28□	149	210	280	2.4
MS149-21-35□	149	210	350	2.9
MS149-26-23□	149	260	230	2.4
MS149-26-28□	149	260	280	2.8
MS149-26-35□	149	260	350	3.3
MS149-32-23□	149	320	230	2.7
MS149-32-28□	149	320	280	3.2
MS149-32-35□	149	320	350	3.8
MS149-32-45□	149	320	450	4.6
MS149-37-23□	149	370	230	3.0
MS149-37-28□	149	370	280	3.5
MS149-37-35□	149	370	350	4.1
MS149-37-45□	149	370	450	5.1
MS149-43-23□	149	430	230	3.4
MS149-43-28□	149	430	280	3.9
MS149-43-35□	149	430	350	4.6
MS149-43-45□	149	430	450	5.6
MS177-16-16□	177	160	160	1.6
MS177-16-23□	177	160	230	2.2
MS177-16-28□	177	160	280	2.5
MS177-21-16□	177	210	160	1.9
MS177-21-23□	177	210	230	2.7
MS177-21-28□	177	210	280	3.1
MS177-21-35□	177	210	350	3.6
MS177-26-23□	177	260	230	3.0
MS177-26-28□	177	260	280	3.4
MS177-26-35□	177	260	350	4.0
MS177-32-23□	177	320	230	3.3
MS177-32-28□	177	320	280	3.9
MS177-32-35□	177	320	350	4.5
MS177-32-45□	177	320	450	5.5
MS177-37-23□	177	370	230	3.6
MS177-37-28□	177	370	280	4.2
MS177-37-35□	177	370	350	4.9
MS177-37-45□	177	370	450	6.0
MS177-43-23□	177	430	230	4.0
MS177-43-28□	177	430	280	4.6
MS177-43-35□	177	430	350	5.4
MS177-43-45□	177	430	450	6.6

Product no.	H	W	D	Weight (kg)
MS199-16-16□	199	160	160	1.9
MS199-16-23□	199	160	230	2.4
MS199-16-28□	199	160	280	2.7
MS199-21-16□	199	210	160	2.1
MS199-21-23□	199	210	230	2.7
MS199-21-28□	199	210	280	3.1
MS199-21-35□	199	210	350	3.7
MS199-26-23□	199	260	230	3.1
MS199-26-28□	199	260	280	3.5
MS199-26-35□	199	260	350	4.1
MS199-32-23□	199	320	230	3.4
MS199-32-28□	199	320	280	3.9
MS199-32-35□	199	320	350	4.7
MS199-32-45□	199	320	450	5.7
MS199-37-23□	199	370	230	3.8
MS199-37-28□	199	370	280	4.3
MS199-37-35□	199	370	350	5.1
MS199-37-45□	199	370	450	6.0
MS199-43-23□	199	430	230	4.2
MS199-43-28□	199	430	280	4.8
MS199-43-35□	199	430	350	5.6
MS199-43-45□	199	430	450	6.9
MS222-16-16□	222	160	160	2.0
MS222-16-23□	222	160	230	2.5
MS222-16-28□	222	160	280	2.8
MS222-21-16□	222	210	160	2.2
MS222-21-23□	222	210	230	2.8
MS222-21-28□	222	210	280	3.2
MS222-21-35□	222	210	350	3.8
MS222-26-23□	222	260	230	3.2
MS222-26-28□	222	260	280	3.6
MS222-26-35□	222	260	350	4.3
MS222-32-23□	222	320	230	3.6
MS222-32-28□	222	320	280	4.1
MS222-32-35□	222	320	350	4.9
MS222-32-45□	222	320	450	6.0
MS222-37-23□	222	370	230	3.9
MS222-37-28□	222	370	280	4.5
MS222-37-35□	222	370	350	5.3
MS222-37-45□	222	370	450	6.4
MS222-43-23□	222	430	230	4.4
MS222-43-28□	222	430	280	5.0
MS222-43-35□	222	430	350	5.9
MS222-43-45□	222	430	450	7.2

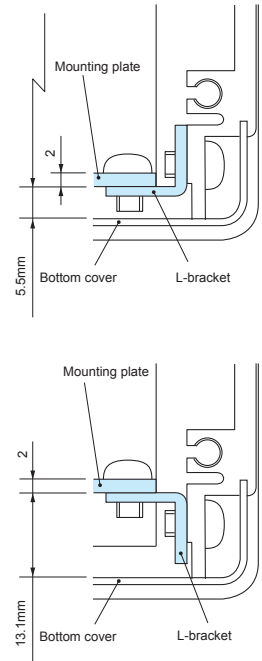
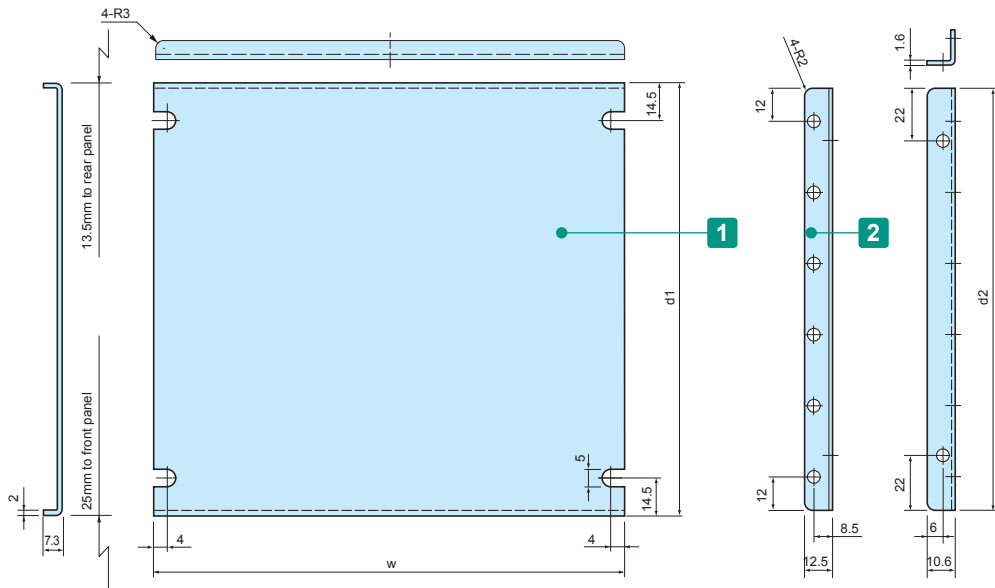
MSC SERIES

MOUNTING PLATE for MS • MSN • MSY • MSR • MO • MON • MOY • MOR

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

■ 1 set = Mounting plate + L-bracket

Mounting example



Components

No.	Part name	Pcs	Material	Color / Finish
1	Mounting plate	1	Aluminium A1050P t=2.0	Unfinished
2	L-bracket	2	Steel SPCC	Trivalent chromate

Included screws: M4-6 pan head, trivalent chromate x8

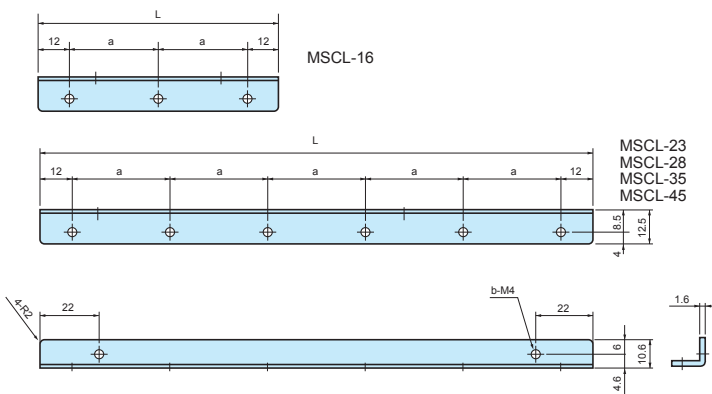
Product no. / Dimensions

Product no.	w	d1	d2	Enclosure W×D	Weight (g)
MSC16-16	130	96.5	91.5	160 × 160	120
MSC16-23	130	166.5	161.5	160 × 230	210
MSC16-28	130	216.5	211.5	160 × 280	270
MSC21-16	180	96.5	91.5	210 × 160	150
MSC21-23	180	166.5	161.5	210 × 230	250
MSC21-28	180	216.5	211.5	210 × 280	330
MSC21-35	180	286.5	281.5	210 × 350	430
MSC26-23	230	166.5	161.5	260 × 230	300
MSC26-28	230	216.5	211.5	260 × 280	390
MSC26-35	230	286.5	281.5	260 × 350	510
MSC32-23	290	166.5	161.5	320 × 230	360

Product no.	w	d1	d2	Enclosure W×D	Weight (g)
MSC32-28	290	216.5	211.5	320 × 280	460
MSC32-35	290	286.5	281.5	320 × 350	600
MSC32-45	290	386.5	381.5	320 × 450	810
MSC37-23	340	166.5	161.5	370 × 230	410
MSC37-28	340	216.5	211.5	370 × 280	520
MSC37-35	340	286.5	281.5	370 × 350	680
MSC37-45	340	386.5	381.5	370 × 450	910
MSC43-23	400	166.5	161.5	430 × 230	460
MSC43-28	400	216.5	211.5	430 × 280	590
MSC43-35	400	286.5	281.5	430 × 350	770
MSC43-45	400	386.5	381.5	430 × 450	1,040

MSCL SERIES

L-BRACKET for MS • MSN • MSY • MSR • MO • MON • MOY • MOR



- Use with your original mounting plate or PCB.
- 1 pair of L-bracket are included with each MSC mounting plate.

Components

Part name	Material	Color / Finish
L-bracket	Steel SPCC	Trivalent chromate

Product no. / Dimensions

Product no.	L	a	b	Sales unit
MSCL-16	91.5	33.75	5	1 set (2 pcs)
MSCL-23	161.5	27.5	8	1 set (2 pcs)
MSCL-28	211.5	37.5	8	1 set (2 pcs)
MSCL-35	281.5	51.5	8	1 set (2 pcs)
MSCL-45	381.5	71.5	8	1 set (2 pcs)

MSM SERIES

RACK MOUNT BRACKET

Components

Material	Color / Finish
Extruded aluminium A6063S-T5	Gray • Black / Painted

Included screws : M5-10 Flat head x 4 pcs / Black trivalent chromate + Nut x 4 pcs

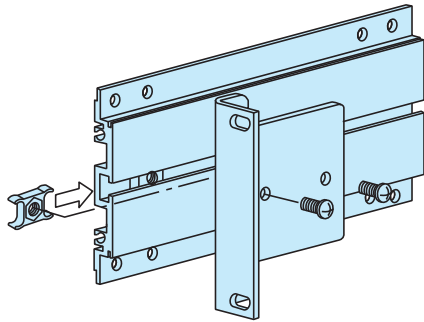
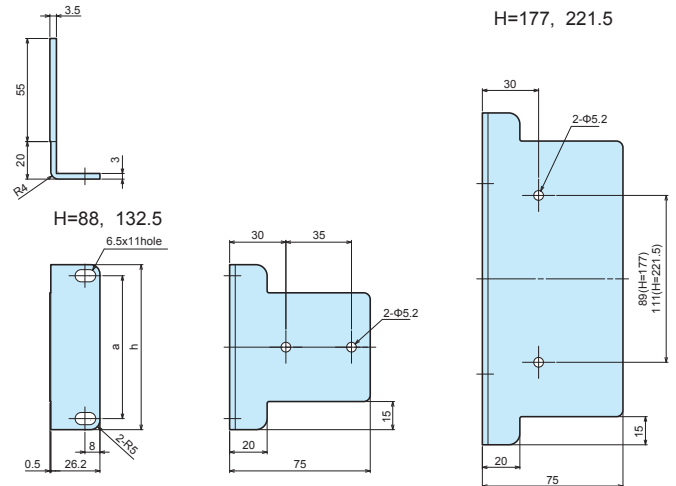
Color Type

Color code	Material	Color / Finish
G	Extruded aluminium A6063S-T5	Gray / Painted
B	Extruded aluminium A6063S-T5	Black / Painted

Product no. / Dimensions

Product no.	h (Enclosure H)	a	Pack of
MSM- 88□	88	76.2	2
MSM-133□	132.5	57.1	2
MSM-177□	177	101.6	2
MSM-222□	221.5	146	2

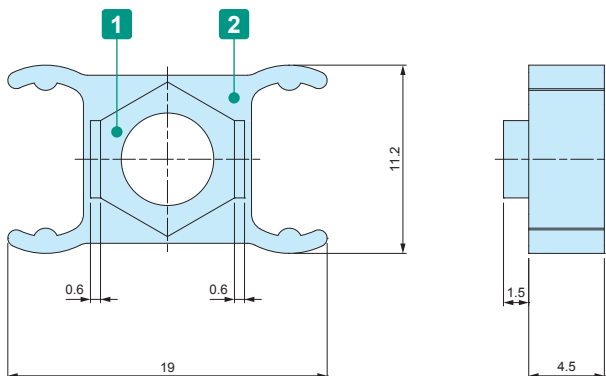
■ Please suffix color code at the end of the product number.



MZ SERIES

SIDE FRAME NUT

■ Side frame nut for MS • MSN • MSY • MSR • MO • MON • MOY • MOR series.



Components

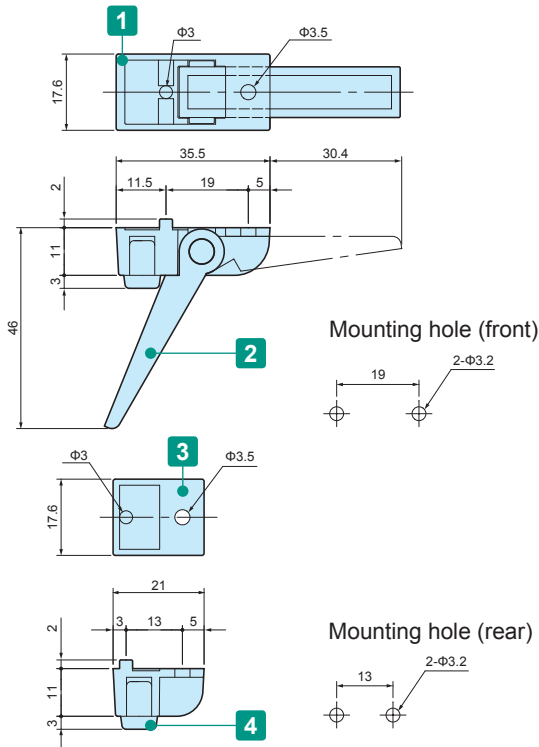
No.	Part name	Material	Color / Finish
1	Nut	Brass • Steel	Nickel plated
2	Holder	Polyethylene	Black

Product no. / Feature

Product no.	Screw size	Nut material	Pack of
MZ-4	M4	Brass	10
MZ-5	M5	Steel	10

TL SERIES

TILT LEG



Components

* Maximum load = 7 kg

No.	Part name	Pcs	Material	Color / Finish
1	Front feet	2	ABS UL94HB	Black • Gray • Light gray
2	Leg	2	ABS UL94HB	Black • Gray • Light gray
3	Rear feet	2	ABS UL94HB	Black • Gray • Light gray
4	Rubber feet	4	EPDM	Gray • Black
-	Screw	4	Steel	Black trivalent chromate

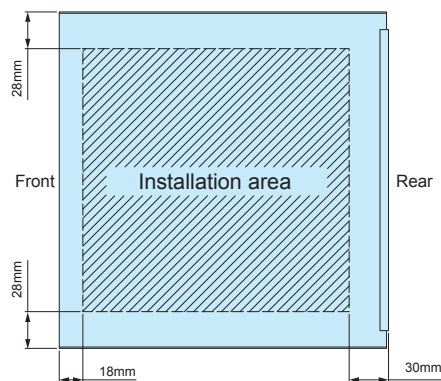
■ Included screws: M3-8 and M3 nut (with washer) set.

Product no. / Dimensions

Product no.	Color (body)	Color (rubber feet)	Sales unit
● TL-45BB	Black	Black	1 set
● TL-45GG	Gray	Gray	1 set
● TL-45SG	Light gray	Gray	1 set

■ EPDM (black) may have its color migrate onto the placement surface.

MS SERIES INSTALLATION AREA



CBF SERIES

CABLE HOOK



- Used for wrapping and securing cords and wires.
- Can be used with a variety of different enclosure series and models.
- Requires a panel thickness of between 1.0 ~ 3.0mm.

Product no. / Dimensions

Product no.	Material	Pack of
● Gray	● Black	
CBF-1G	CBF-1B	POM
		4

■ Included screws: M3-8 trivalent chromate (with washer) x 4 pcs



APPLICATION EXAMPLE

