

MB-P Series Plastic Connectors

1. Overview

Plug



MB-P-TAG



MB-P-TAG(Z)



MB-2P-TAB



MB-3P-TAG

Panel Mount Receptacle



MB-P-ZKG



MB-P-ZKG(Elbow)



MB-P-ZLG



MB-P-ZLG



MB-P-ZLG



MB-P-ZLG



MB-P-ZLG



MB-P-ZLG



MB-2P-ZKB



MB-3P-ZLG

Cable Mount Receptacle



MB-P-ZRG



MB-P-ZRG(Z)

2. Push-Pull Self-Latching Connection System



Drawing	Specification
	<p>Engaging</p> <p>The self-latching system allows the connector to be mated by simply pushing the plug into the receptacle.</p>
	<p>Latched</p> <p>Once firmly latched, the connection cannot be broken by pulling on the cable or any other component part other than the outer release sleeve.</p>
	<p>Disengaging</p> <p>When required, the connector is disengaged by a single axial pull on the outer release sleeve. This first disengage the latches and then withdraws the plug from the socket.</p>

3. Main Features

- Quick push-pull self-latching connection system
- Solder and PCB (straight and elbow) contacts
- Keying system (G key standard) for connector alignment
- Multiple key options to avoid cross mating of similar connectors
- High-temperature durable plastic out shell (-250C~1250C)
- High density configuration for saving space
- Can be sterilization
- Available custom assembly solutions

4. Technical Characteristics

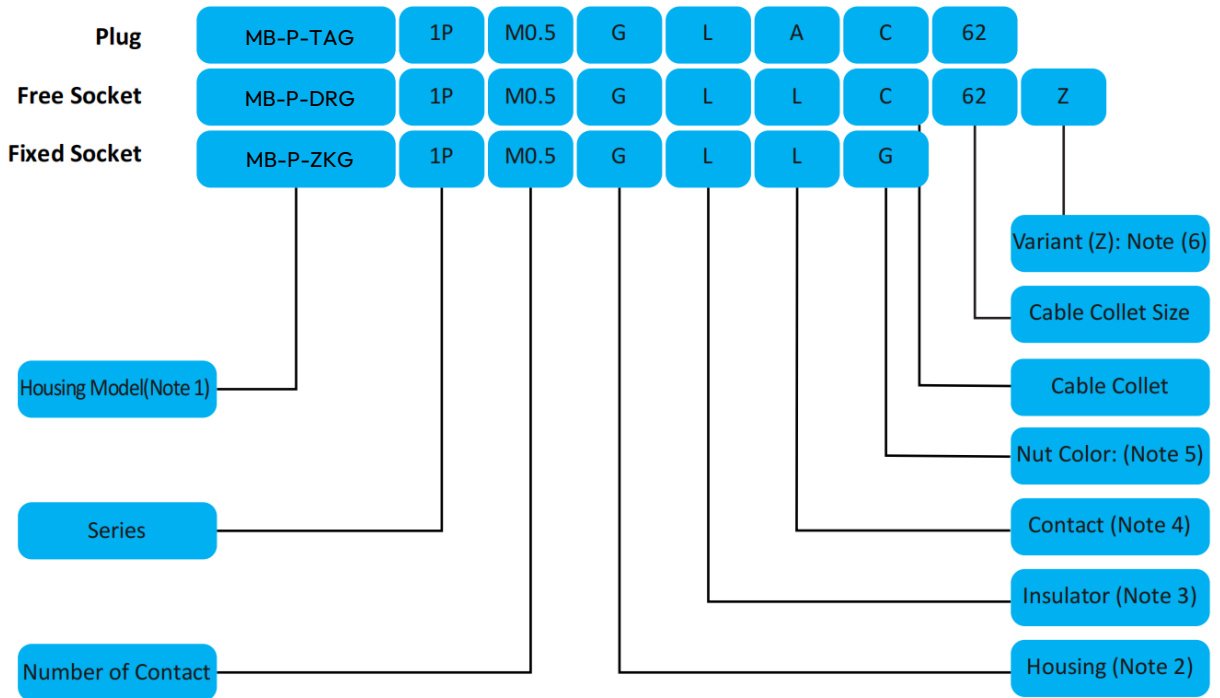
4.1 Mechanical and Climatical

Characteristics	Value	Standard
Endurance	>1000 cycles	IEC 60512-5 test 9a
Humidity	Up to 95% at 60°C	
Temperature Range	-20°C to +120°C	
Resistance to Vibration	10-2000Hz, 15g	IEC 60512-4 test 6d
Shock Resistance	100g, 6ms	IEC 60512-4 test 6c
Salt Spray Corrosion Test	>72h	IEC 60512-6 test 11f
Protection Index (mated)	IP50	IEC 60529
Climatical category	55/175/21	IEC 60068-1

4.2 Electrical

Characteristics		Value	Standard
Shielding Efficiency	at 10 MHZ	>75 dB	IEC 60619-1-3
	at 1 GHZ	>40 dB	IEC 60619-1-3

5. Part Numbering System



***Note 1:**

To place an order for a concave surface, please use the identifier MB12

MB-P-TAG.M0.5GL.AC52A = 1P series 5 pins straight plug, G key (alpha=0), PC housing, PPS insulator, 5.2mm cable collet, blue nut.

MB-P-DRG.M0.5GL.LC52A = 1P series 5 pins cable mounted receptacle, G key (alpha=0), PC housing, PPS insulator, 5.2mm cable collet, blue nut.

***Note 2:**

G=Gray(PC)
 N=Black(PC)
 B=White(PC)

***Note 3:**

L=PPS

***Note 4:**

A=Male soldering contacts
 L=Female soldering contacts
 D=Male straight PCB contacts
 N=Female straight PCB contacts
 W=Male 90° PCB contacts
 V=Female 90° PCB contacts

***Note 5:**

Front Nut Color
 N=Black
 G=Gray
 A=Blue
 R=Red
 J=Yellow
 V=Green

***Note 6:**

To request a model that includes a nut for fitting the bend relief, designate the variant position with the letter "Z" and include the bend relief part numbers MB-GMA.

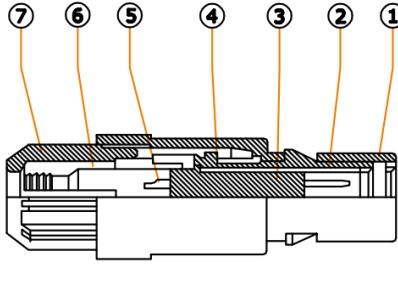
Bend relief color:

N=Black G=Gray A=Blue R=Red J=Yellow V=Green

6. Part Section Showing Internal Components

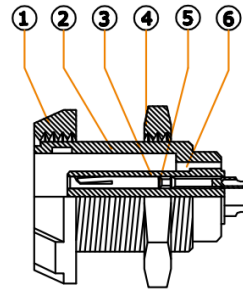
Straight Plug

- ① Outer Shell
- ② Latch Sleeve
- ③ Insulator
- ④ Male Contact
- ⑤ Split Insert Carrier
- ⑥ Collet
- ⑦ Nut



Fixed Receptacle

- ① Outer Shell
- ② Retaining Ring
- ③ Hexagonal Nut
- ④ Locking Washer
- ⑤ Insulator
- ⑥ Female Contact

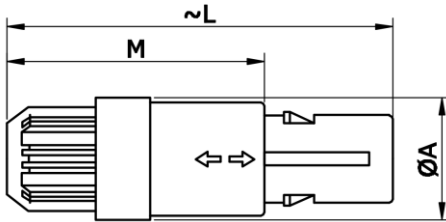


7. Product Size

7.1 1P Series

MB-P-TAG

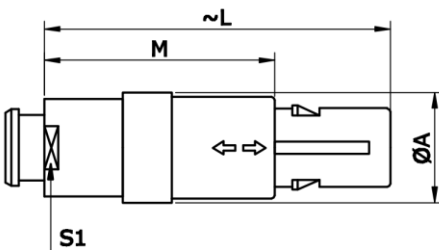
Straight plug, key (G) or keys (A, B, C, H, J), cable collet



Reference		Dimensions(mm)		
Model	Series	A	L	M
MB-P-TAG	1P	14	46.5	32

MB-P-TAG

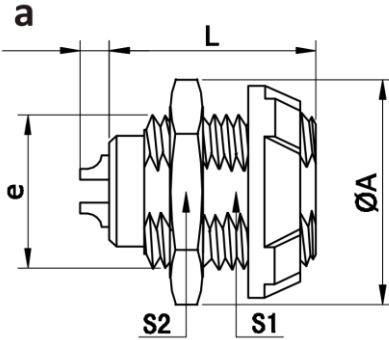
Straight plug, key (G) or keys (A, B, C, H, J), cable collet, nut for fitting a bend relief



Reference		Dimensions(mm)			
Model	Series	A	L	M	S1
MB-P-TAG	1P	14	45.5	32	9

MB-P-ZKG

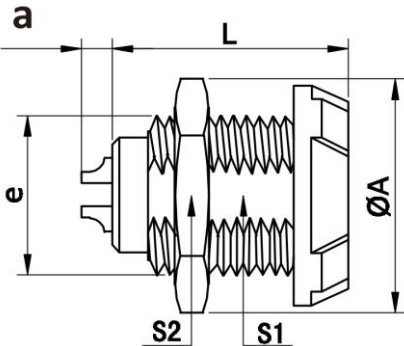
Fixed receptacle with two nuts, key (G) or keys (A, B, C, H, J), back panel mounting



Reference		Dimensions(mm)					
Model	Series	A	L	a	e	S1	S2
MB-P-ZKG	1P	18.5	20.5	2.7	M14*1.0	12.5	17

MB-P-ZLG

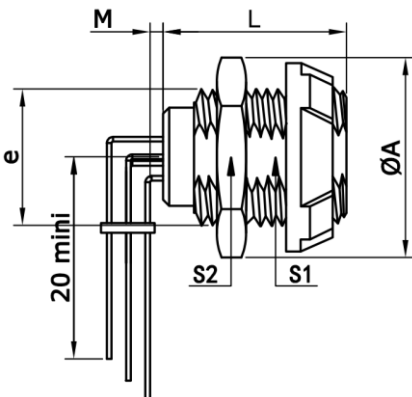
Fixed receptacle, all-in-one type, key (G) or keys (A, B, C, H, J), nut fixing



Reference		Dimensions(mm)					
Model	Series	A	L	a	e	S1	S2
MB-P-ZLG	1P	19.5	20.5	2.7	M14*1.0	12.5	17

MB-P-ZKG(Elbow)

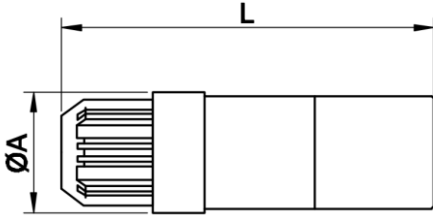
Fixed receptacle, key (G) or keys (A, B, C, H, J), elbow 90° contact for printed circuit



Reference		Dimensions(mm)					
Model	Series	A	L	M	e	S1	S2
MB-P-ZKG	1P	19.5	20.5	2.0	M14*1.0	12.5	17.0

MB-P-ZRG

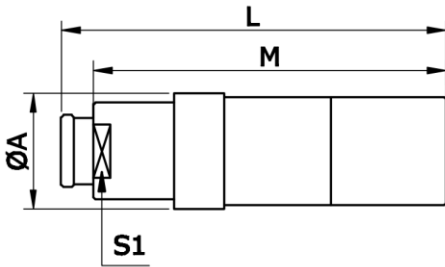
Free cable mount receptacle, key (G) or keys (A, B, C, H, J), cable collet



Reference		Dimensions(mm)	
Model	Series	A	L
MB-P-ZRG	1P	14	40


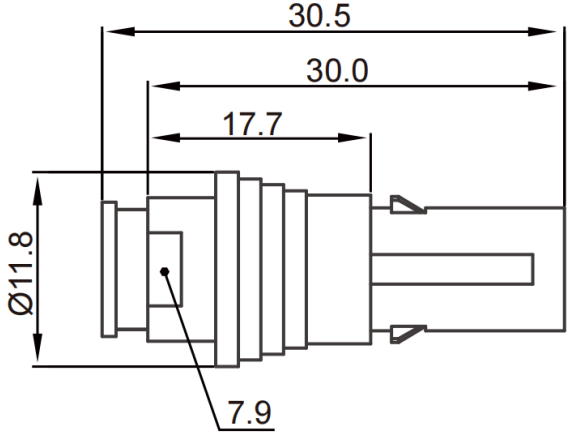

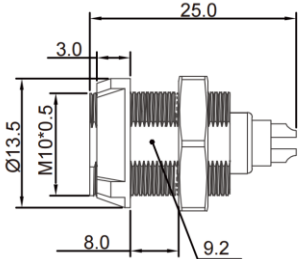

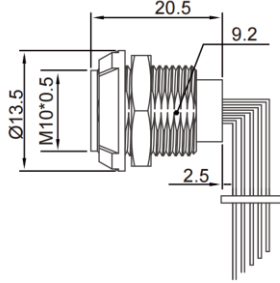
MB-P-ZRG

Free cable mount receptacle, key (G) or keys (A, B, C, H, J), cable collet, nut for fitting a bend relief


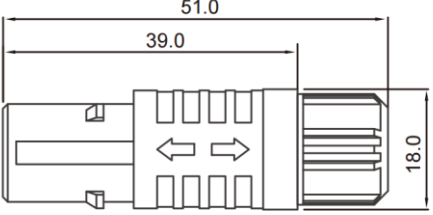

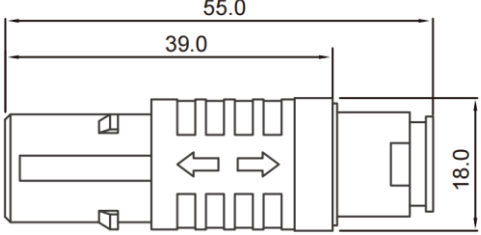

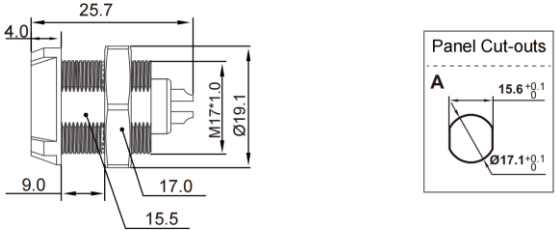

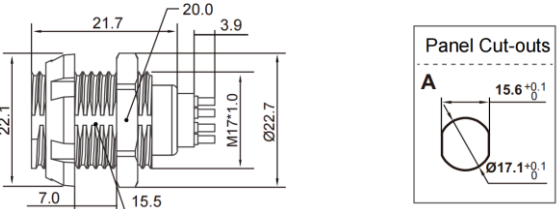

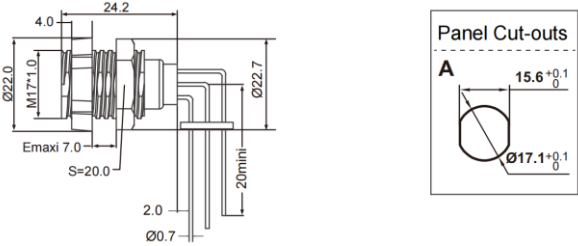


Reference		Dimensions(mm)	
Model	Series	A	L
MB-P-ZRG	1P	14	40


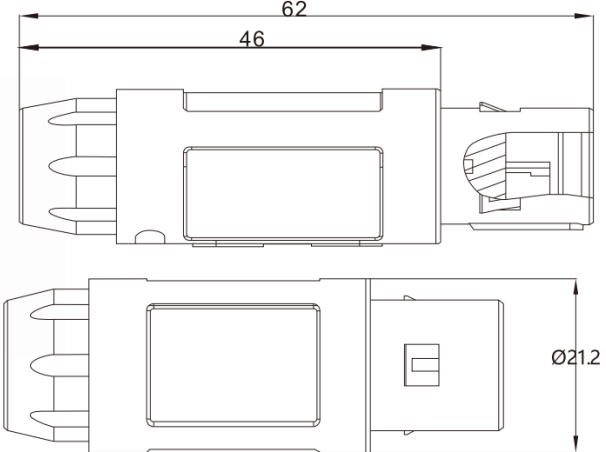

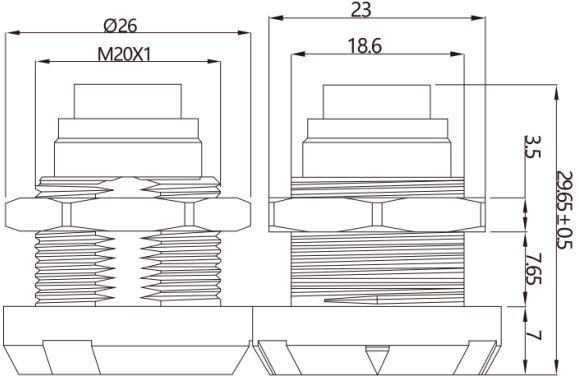
7.2 OP Series

Part Number	Image	Size
MB-OP-TAG		
MB-OP-ZKG		 <div data-bbox="1130 1067 1288 1259" style="border: 1px solid black; padding: 5px;"> <p>Panel Cut-outs</p> <p>A</p> <p>$9.3^{+0.1}_0$</p> <p>$\varnothing 10.1^{+0.1}_0$</p> </div>
MB-OP-ZKG		 <div data-bbox="1125 1433 1282 1626" style="border: 1px solid black; padding: 5px;"> <p>Panel Cut-outs</p> <p>A</p> <p>$9.3^{+0.1}_0$</p> <p>$\varnothing 10.1^{+0.1}_0$</p> </div>

7.3 2P Series

Part Number	Image	Size
MB-2P-TAB		
MB-2P-TAB(Z)		
MB-2P-ZLB		
MB-2P-ZKB		
MB-2P-ZKB (Elbow)		

7.2 3P Series

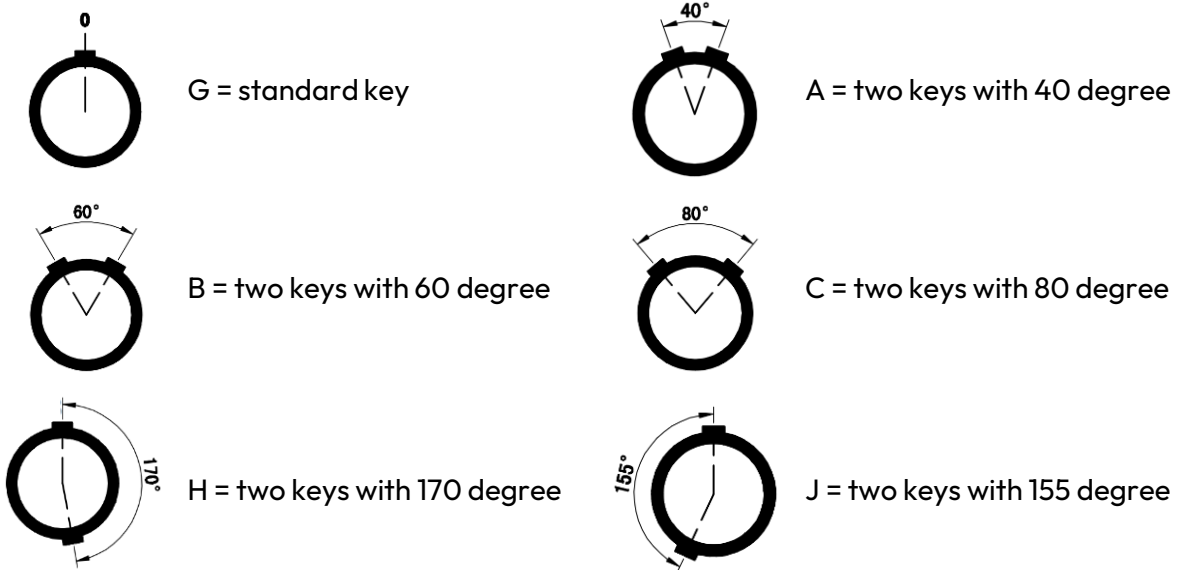
Part Number	Image	Size
MB-3P-TAG		
MB-3P-ZLG		

8. Alignment Key and Polarized Keying System

8.1 1P Series

Keying (Plug Front View)						
	G	A	B	C	H	J

Alignment Keys



8.2 Other Series

Keying (Plug Front View)			
	OP	2P	3P

9. Nut Code

	Code	Color		Code	Color
	G	Gray		N	Black
	A	Blue		R	Red
	Code	Color		Code	Color
	G	Gray		N	Black
	A	Blue		R	Red
	Code	Color		Code	Color
	G	Gray		N	Black
	A	Blue		R	Red
	Code	Color		Code	Color
	G	Gray		N	Black
	A	Blue		R	Red
	Code	Color		Code	Color
	G	Gray		N	Black
	A	Blue		R	Red
				V	Green

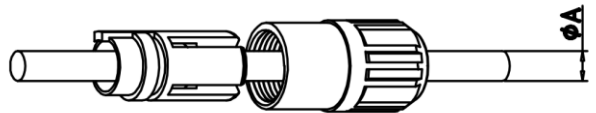
10. Bend Relief Code

	Code	Color		Code	Color
	G	Gray		V	Green
	A	Blue		W	White
	J	Yellow		B	Brown
	N	Black		O	Orange
				I	Beige
				R	Red

11. Bend Relief Size

	Size	ØA	AWG	
			ØB(Max.)	ØB(Min.)
	OP	4.0	3.9	2.7
		5.0	4.9	3.7
	1P	4.2	4.1	3.0
		5.2	5.1	4.0
		6.5	6.4	5.2
	2P	5.2	5.1	4.0
		7.2	7.1	6.0
		8.0	7.9	6.8
	3P	9.0	8.9	7.8
		12.0	12.0	11.0

12. Cable Collet Size



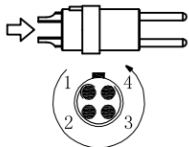
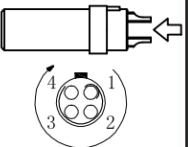






















Cable Clamp Set	Cable Collet (mm)	Cable dia Range	
	ØA	Min	Max
1P-040	4.0	2.7	4.0
1P-052	5.2	4.0	5.2
1P-060	6.0	5.5	6.0

Cable Clamp Set	Cable Collet (mm)	Cable dia Range	
	ØA	Min	Max
2P	52	3.3	5.2
	72	5.3	7.2
	92	7.3	9.2

Cable Clamp Set	Cable Collet (mm)	Cable dia Range	
	ØA	Min	Max
OP	40	2.7	3.9
OP	50	3.7	4.9
3P	12	11.0	12.0

13. MB-P Series Multipole Layout

Series	Insulator	Pin Array		ØA (mm)	Contact resistance (mΩ)	Related current (A)	Test voltage (V)	Work Voltage(V)
		Solder male contact	Solder female contact					
OP	02			0.9	6	10	1000	450
	03			0.9	6	8	875	400
	04			0.7	7.5	7	875	300
	05			0.7	7.5	6.5	750	350
	06			0.5	10	2.5	750	300
	07			0.5	10	2.5	750	250
	09			0.5	10	2	600	200

Series	Insulator	Pin Array		ØA (mm)	Contact resistance (mΩ)	Related current (A)	Test voltage (V)	Work Voltage(V)
		Solder male contact 	Solder female contact 					
1P	02			1.3	5	10	1200	500
	03			1.3	5	9	1200	500
	04			0.9	6	8	1200	500
	05			0.9	6	7	1050	500
	06			0.7	7.5	6	1050	450
	07			0.7	7.5	5	1050	450
	08			0.7	7.5	5	1050	400
	09			0.5	10	3	850	333
	10			0.5	10	3	850	333
	12			0.5	10	2.2	750	333
	14			0.5	10	2	600	550

Series	Insulator	Pin Array		ØA (mm)	Contact resistance (mΩ)	Related current (A)	Test voltage (V)	Work Voltage(V)
		Solder male contact 	Solder female contact 					
2P	02			2.0	3	30	1650	600
	03			1.6	4	17	1800	600
	04			1.3	5	15	1800	500
	05			1.3	5	14	1500	500
	06			1.3	5	12	1500	550
	07			1.3	6	11	1680	400
	08			0.9	6	10	1200	400
	10			0.9	7.5	8	1200	450
	12			0.7	7.5	7	1350	400
	16			0.7	7.5	6	1200	400
	18			0.7	7.5	6	1200	400
	19			0.7	7.5	6	1200	400
	26			0.5	8	5.5	1200	400