

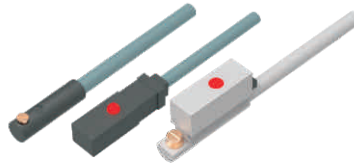
Magnetic Sensors



Magnetic sensors

- Non-contact detection, Small size, long life, high sensitivity and long sensing distance .
- 5 μ m ultra fast industry-leading response time.
- S-pole (standard magnet pole).

P.G-04



High precision cylinder sensors

- High positioning precision, reliable performance
- Vibration and heat resistant
- Response time less than 5 μ s (3-wire type)

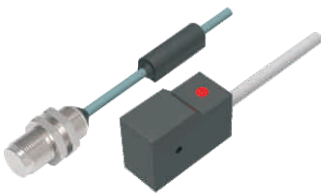
P.G-08



Combined cylinder sensors

- With different brackets, it can adapt to almost all cylinders on the market
- Ideal for replacing contact cylinder sensors
- Suitable for C-slot, T-slot, hoop, guide rail, tie rod and other installation environments

P.G-11



Magnetic proximity sensors

- Proximity sensors that detect ferromagnetism materials, such as iron
- No reaction to aluminum and non-ferromagnetic stainless steel
- Can be applied to CNC machines, refrigerating equipments, on-standard positioning equipments, etc.

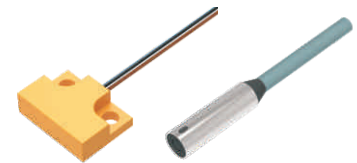
P.G-13



Door sensors

- Small size, excellent sensitivity
- Non-contact, highly reliable, long service life
- With magnetic hole (ϕ 12), it still can have good performance even inside iron doors

P.G-15

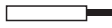


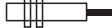


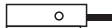




Linear sensors



- Output voltage varies with magnetic force linearly
- Output voltage changes linearly according to the movements of magnets
- Suitable for low temperature to high temperature environments

P.G-17

Magnetic sensors

Appearance	Size	Detected poles		Model number	Pages	
	φ 4.9X16mm	S-pole	Top surface detection	MR-P10-H	G-04	
			Side surface detection	MR-P10-X HOT		
	φ 6.2X21mm	N-pole, S-pole optional	S-pole detection	MR-P13-S		
			N-pole detection	MR-P13-N		
	M9X25mm	N-pole, S-pole optional	S-pole detection	MR-P24-S		
			N-pole detection	MR-P24-N		
	M9X25mm	N-pole & S-pole detection	N-pole & S-pole detection	MR-P25 HOT		G-05
	M6X15mm	S-pole	S-pole detection	MR-P26		
	7X5.8X20.5mm	N-pole, S-pole optional	S-pole detection	MR-P12-S		
			N-pole detection	MR-P12-N		
	9X9.6X30mm	N-pole, S-pole optional	S-pole detection	MR-PH5-S	G-06	
			N-pole detection	MR-PH5-N		
	12X7.8X4.2mm	S-pole	Top surface detection	MR-P4-H		
			Side surface detection	MR-P4-X		
	17.6X18.6X4.6mm	N-pole, S-pole optional	S-pole detection	MR-P9-S		
			N-pole detection	MR-P9-N		

High precision combined cylinder sensors

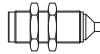

Appearance	Size	Detected poles	Suitable applications	Model number	Pages	
	6.1X5.1X20mm	N-pole and S-pole, optional	T shaped slot	MR-C6	G-08	
	5.8X7X20.5mm	N-pole and S-pole, optional	T shaped slot	MR-C12		
	φ 4X14.5mm	N-pole and S-pole, optional	C shaped slot	MR-C7		
	4X5.5X24.5mm	N-pole and S-pole, optional	C shaped slot	MR-C8-C		
	4X5.5X24.5mm	N-pole and S-pole, optional	U shaped slot	MR-C8-U		
	5X10X22.2mm	N-pole and S-pole, optional	C shaped slot	MR-C13-C		
	5X10X22.2mm	N-pole and S-pole, optional	U shaped slot	MR-C13-U		
	17.6X18.6X5.1mm	N-pole and S-pole, optional	External usage	MR-C92		G-09
	17.6X18.6X5.1mm	N-pole and S-pole, optional	External usage	MR-C9		
	17.6X18.6X4.6mm	N-pole and S-pole, optional	External usage	MR-C9-E		
	Straight	Default S pole	C type	MR-C1-H-C	G-11	
			T type	MR-C1-H-T		
			External usage	MR-C1-H-L		
	Bend	Default S pole	C type	MR-C1-V-C		
			T type	MR-C1-V-T		
			External usage	MR-C1-V-L		

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic
- Contact
- Area
- Ultrasonic
- Accelerometer
- Inclinometer
- Cables
- Tester







Guidance

- Magnetic
- Magnetic sensors
- High precision cylinder
- Combined cylinder
- Near iron sensor
- Door sensors
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories



Magnetic proximity sensors




Appearance	Size	Sensing distance	Model number	Pages	
	M10X22.8mm	1mm(Iron wire ϕ 1)	Normally open, without LED indicator	MR-F11	G-13
		2mm(High-speed steel drill ϕ 2)	Normally open, with LED indicator	MR-F11-LED	
			Normally closed, without LED indicator	MR-F11-B	
		2mm(Square iron20Xt1)	Normally closed, with LED indicator	MR-F11-B-LED	
	9X14X21mm	6mm(Square iron30Xt10)	Normally open	MR-F2	
		4mm(Square iron30Xt2)	Normally closed	MR-F2-B	


Door sensors

Appearance	Size	Detected poles	Model number	Pages
	14X14X34mm	Upward detection	MR-D2	G-15
	14X14X34mm	Upward detection	MR-D2P	
 Matching magnet	14X14X34mm	Upward detection	MR-DM2	
	14X14X34mm	Sideway detection	MR-D2X	
	14X14X34mm	Sideway detection	MR-D2XP	
 Matching magnet	14X14X34mm	Sideway detection	MR-DM2X	

Linear sensors

Appearance	Size	Detected poles	Model number	Pages	
	8.6X12X3.5mm	Detect N-pole and S-pole simultaneously	Upward detection	MR-L4	G-17
	7.8X12X4.2mm	Detect N-pole and S-pole simultaneously	Sideway detection	MR-L4-H	
	ϕ 4.9X16mm	Detect N-pole and S-pole simultaneously	Sideway detection	MR-L10X	

Appearance		
Feature	Can execute detection in Fe, perfect for molds and fixtures	Smallest size in same type of products
Operating voltage	5~24V DC	
Detected magnet poles	S-pole	N-pole, S-pole optional
Magnetic sensitivity	5~7mT	2.5~3.5mT
Response time	5 μs	
Active frequency	30Hz	
Output type	NPN (N.O) (When approaching, ON)	
Output current	≤15mA	
Current consumption	≤15mA	
Voltage withstand ability	AC1000V 1min	
Insulation resistance	250V DC ≥20MΩ	
Ambient temperature	-20°C~+85°C, No freezing	
Ambient humidity	20%~95%RH, No coagulating	
Material	SUS303	GF strengthened PBT: grey
Mounting	M3 screws, tightening torque ≤0.2N · m	M7 nuts, tightening torque ≤0.3N · m
Degree of protection	IP65	IP65
Connection	3 core cable (Length: 1m)	
Model NO.	Top surface detection: MR-P10-H Side surface detection: MR-P10-X 	S-pole detection: MR-P13-S N-pole detection: MR-P13-N
Wiring diagram	See figure 1 and figure 2 on page G-07	See figure 3 on page G-07

Appearance	
Feature	Built-in indicator (high sensitivity)
Operating voltage	5~24V DC
Detected magnet poles	N-pole, S-pole optional
Magnetic sensitivity	MR-P24-S: 2.5~3.5mT, MR-P24-N: 0.9 ± 0.2mT
Active frequency	30Hz
Response time	5 μs
Output type	NPN (N.O) (When approaching, ON)
Output current	≤12mA
Current consumption	≤12mA
Voltage withstand ability	AC1000V 1min
Insulation resistance	250V DC ≥20MΩ
Ambient temperature	-20°C~+85°C, No freezing
Ambient humidity	20%~95%RH, No coagulating
Material	GF strengthened PBT: black
Mounting	M9 screws, tightening torque ≤0.5N · m (with screws)
Indicator	Red
Degree of protection	IP67
Connection	1M 3 core cable
Model NO.	S-pole detection: MR-P24-S N-pole detection: MR-P24-N
Wiring diagram	See figure 4 on page G-07

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Accelerometer
- Inclinometer
- Cables
- Tester

Guidance

Magnetic

- Magnetic sensors**
- High precision cylinder
- Combined cylinder
- Near iron sensor
- Door sensors
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

Magnetic sensors

Magnetic



Appearance		
Feature	High sensitivity, realize N-pole and S-pole detection at the same time	IP67/protection degree, stainless steel threaded housing
Operating voltage	12~24V DC	5~24V DC
Detected magnet poles	N-pole & S-pole detection	S-pole
Magnetic sensitivity	S-pole: 0.5 ± 0.1mT N-pole: 0.45 ± 0.1mT	3~4mT
Response time	< 16 μs	5 μs
Active frequency	40Hz	
Output type	NPN (N.O) (When approaching, ON)	
Output current	≤ 12mA	
Current consumption	On: ≤ 30mA (off ≤ 10mA)	≤ 4mA
Voltage withstand ability	AC1000V 1min	
Insulation resistance	250V DC ≥ 20MΩ	
Ambient temperature	-20°C~+85°C, No freezing	
Ambient humidity	20%~95%RH, No coagulating	
Material	SUS303	
Degree of protection	IP65	IP67
Mounting	M9 screws, tightening torque 5N · m	M6 screws, tightening torque 2N · m
Indicator	S-pole: Red N-pole: Green	Red
Connection	1M 4core cable	1M 3core cable
Model NO.	MR-P25 HOT	MR-P26
Wiring diagram	See figure 5 on page G-07	See figure 6 on page G-07



Appearance	
Feature	Built-in indicator, 2-wires output
Operating voltage	12~24V DC
Detected magnet poles	N-pole, S-pole optional
Magnetic sensitivity	2.5~3.5mT
Response time	50 μs
Active frequency	30Hz
Output current	≤ 50mA
Leakage current	OFF, ≤ 0.5mA
Voltage withstand ability	AC1000V 1min
Insulation resistance	250V DC ≥ 20MΩ
Ambient temperature	-20°C~+85°C, No freezing
Ambient humidity	20%~95%RH, No coagulating
Material	GF strengthened PBT
Indicator	Red
Degree of protection	IP67
Connection	1M 2core cable
Model NO.	S-pole detection: MR-P12-S N-pole detection: MR-P12-N
Wiring diagram	See figure 7 on page G-07

Guidance

Magnetic

Magnetic sensors

High precision cylinder

Combined cylinder

Near iron sensor

Door sensors

Linear sensors

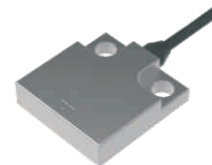
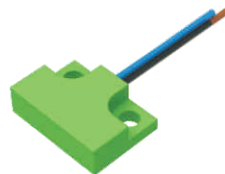
Ordinary magnets

High precision composite magnets

Mounting accessories



Appearance	
Feature	High sensitivity (can be used outdoors)
Operating voltage	5~24V DC
Detected magnet poles	N-pole, S-pole optional
Magnetic sensitivity	0.9±0.2mT
Response time	5 μs
Active frequency	30Hz
Output type	NPN (N.O) (When approaching, ON)
Output current	≤12mA
Current consumption	≤12mA
Voltage withstand ability	AC1000V 1min
Insulation resistance	250V DC≥20MΩ
Ambient temperature	-20℃~+85℃, No freezing
Ambient humidity	20%~95%RH, No coagulating
Material	GF strengthened PBT: black
Mounting	M3screws, tightening torque 0.3N · m
Indicator	Red
Degree of protection	IP67
Connection	1M 3core cable
Model NO.	S-pole detection: MR-PH5-S N-pole detection: MR-PH5-N
Wiring diagram	See figure 8 on page G-07



Appearance		
Feature	Small size, thickness 3.5mm only	Metal housing, water-proof and oil resistant
Operating voltage	5~24V DC	12~24V DC
Detected magnet poles	S-pole	N-pole, S-pole optional
Magnetic sensitivity		2.5~3.5mT
Response time		5 μs
Active frequency		30Hz
Output type		NPN (N.O) (When approaching, ON)
Output current	≤15mA	≤80mA
Current consumption	≤15mA	≤12mA
Voltage withstandability		AC1000V 1min
Insulation resistance		250V DC≥20MΩ
Ambient temperature		-20℃~+85℃, No freezing
Ambient humidity		20%~95%RH, No coagulating
Material	GF strengthened PBT: Green	Die-casing Zinc alloy
Mounting	M2screws, tightening torque 0.15N · m	M3screws, tightening torque 1.5N · m
Degree of protection	IP65	IP67
Connection	3M 3core cable (Length:0.3m)	1M 3core cable
Model NO.	Top surface detection: MR-P4-H Size surface detection: MR-P4-X	S-pole detection: MR-P9-S N-pole detection: MR-P9-N
Wiring diagram	See figure 9 on page G-07	See figure 10 on page G-07

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Accelerometer
- Inclinometer
- Cables
- Tester

Guidance

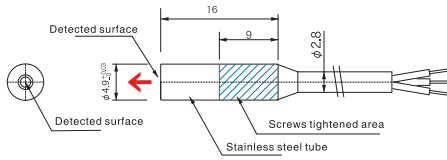
Magnetic

- Magnetic sensors**
- High precision cylinder
- Combined cylinder
- Near iron sensor
- Door sensors
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

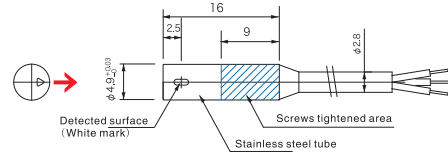
Magnetic sensors

Dimensions(Unit:mm)

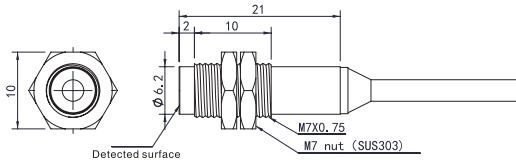
MR-P10-M



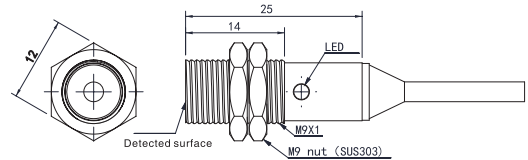
MR-P10-X



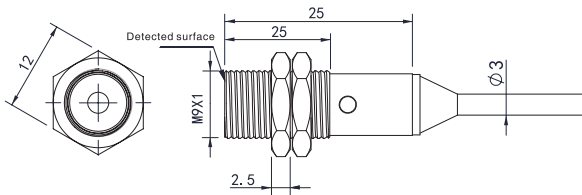
MR-P13-S(N)



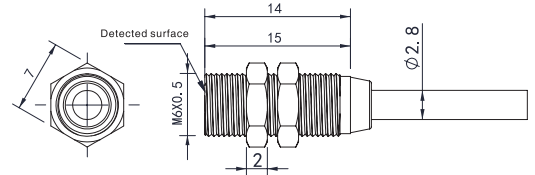
MR-P24-S(N)



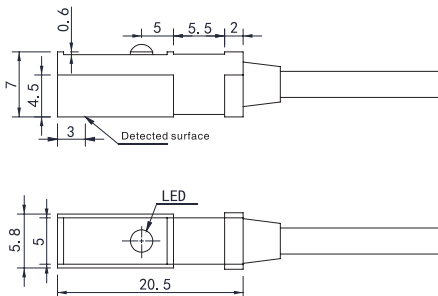
MR-P25



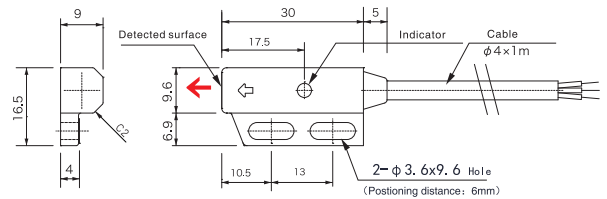
MR-P26



MR-P12-S(N)

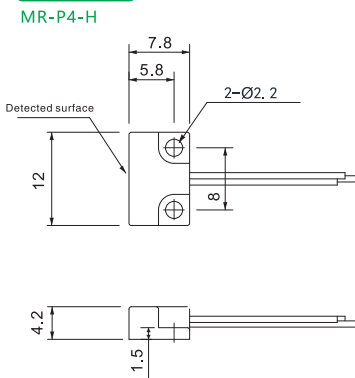


MR-PH5-S(N)

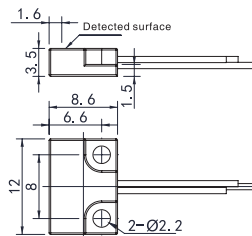


Mounting accessories: HP12-0/HP12-3/HP12-6.2/HP12-t

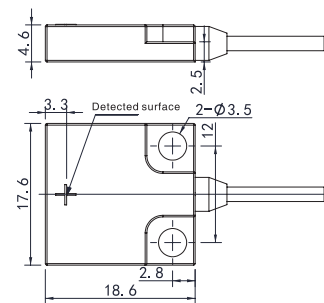
MR-P4-H(X)



MR-P4-X



MR-P9-S(N)

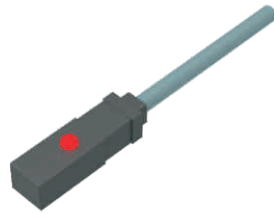


Mounting accessories: -BT: cable protective tube/
-BD: belt shaped mounting accessories

High precision cylinder sensors

Magnetic

3-wire



2-wire

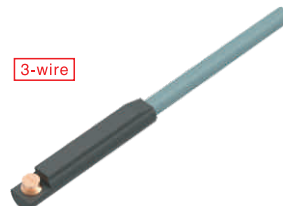


Appearance		
Suitable applications	T shaped slot	T shaped slot
Features	Built-in LED indicators	Can replace 2-wire feed switches for cylinders, and suits to use in cylinders with small range, such as pneumatic fingers.
Operating voltage	5~24V DC	12~24V DC
Detected magnet poles	N-pole and S-pole, optional	
Magnetic sensitivity	2.5~3.5mT	
Response time	5 μs	50 μs
Output type	NPN (N.O) (When approaching, on)	...
Output current	≤12mA	≤50mA
Current consumption	≤12mA	...
Current leakage	...	OFF States, 0.5mA MAX
Voltage withstand ability	AC1000V 1min	
Insulation resistance	250V DC ≥20MΩ	
Ambient temperature	-20°C~+85°C, no freezing	
Ambient humidity	20%~95%RH, no coagulating	
Material	GF reinforced PBT, in black	GF reinforced PBT; in grey
LED Indicator	Red	
Degree of protection	IP67	
Connection	1M 3core cable	1M 2core cable
Model NO.	Detected S-pole	MR-C6-S
	Detected N-pole	MR-C6-N
Model NO.	Detected S-pole	MR-C12-S
	Detected N-pole	MR-C12-N

3-wire



3-wire



2-wire



Appearance										
Suitable applications	C shaped slot	C+U shaped slot	C+U shaped slot	C+U shaped slot	C+U shaped slot					
Features	Suitable for C-shaped slot (φ4); detect both S-pole and N-pole	Can apply to C-shaped slot (φ4), built-in LED indicators, suitable for U-shaped slots that manufactured by other factories								
Operating voltage	5~24V DC			12~24V DC						
Detected magnet poles	N-pole and S-pole, optional									
Magnetic sensitivity	4.5~6mT			2.5~3.5mT						
Response time	5 μs			50 μs						
Output type	NPN (N.O) (When approaching, on)			...						
Output current	≤12mA			≤50mA						
Current consumption	≤12mA			...						
Current leakage	...			OFF States, 0.5mA MAX						
Voltage withstand ability	AC1000V 1min									
Insulation resistance	250V DC ≥20MΩ									
Ambient temperature	-20°C~+85°C, no freezing									
Ambient humidity	20%~95%RH, no coagulating									
Material	GF reinforced PBT, in black			GF reinforced PBT; in grey						
Mounting	With screws, tightening torque 0.06N·m									
LED Indicator	Approx.100mm distance from main body			Red						
Degree of protection	IP67									
Connection	1M 3core cable			1M 2core cable						
Model NO.	Detected S-pole	MR-C7-S	C shaped slot	MR-C8-C-S	U shaped slot	MR-C8-U-S	C shaped slot	MR-C13-C-S	U shaped slot	MR-C13-U-S
	Detected N-pole	MR-C7-N	MR-C8-C-N	MR-C8-U-N	MR-C13-C-N	MR-C13-U-N				

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Accelerometer
- Inclinometer
- Cables
- Tester

Guidance

Magnetic

- Magnetic sensors
- High precision cylinder**
- Combined cylinder
- Near iron sensor
- Door sensors
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

High precision cylinder sensors

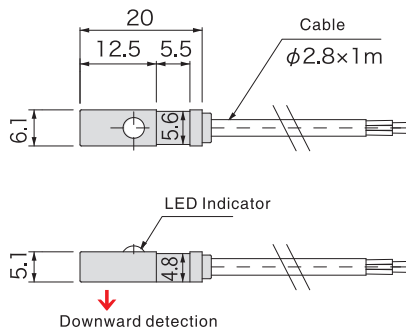
Magnetic



Appearance		2-wire	3-wire	3-wire
Suitable applications	External usage		(High current output)	(Economical type without indicators)
Features	With belt shaped mounting accessories, can install in $\phi 32 \sim \phi 10$ cylinders; metal housing, watertight, and oil-proof			
Operating voltage	12~24V DC		5~24V DC	
Detected magnet poles	N-pole and S-pole, optional			
Magnetic sensitivity	2.5~3.5mT			
Response time	50 μ s		5 μ s	
Output type	...		NPN (N.O) (When approaching, on)	
Output current	50mA MAX		≤ 12 mA	
Current consumption	...		≤ 12 mA	
Current leakage	OFF States, 0.5mA MAX		...	
Voltage withstand ability	AC1000V 1min			
Insulation resistance	250V DC ≥ 20 M Ω			
Ambient temperature	-20 $^{\circ}$ C~+85 $^{\circ}$ C, no freezing			
Ambient humidity	20%~95%RH, no coagulating			
Material	Cast zinc alloy			
Mounting	With screws, tightening torque 1.5N \cdot m		M3(SUS), tightening torque 1.5N \cdot m	
LED Indicator			Red	None
Degree of protection	IP67			
Connection	1M 2core cable		1M 3core cable	
Model NO.	Detected S-pole	MR-C92-S	MR-C9-S	MR-C9-E-S
	Detected N-pole	MR-C92-N	MR-C9-N	MR-C9-E-N

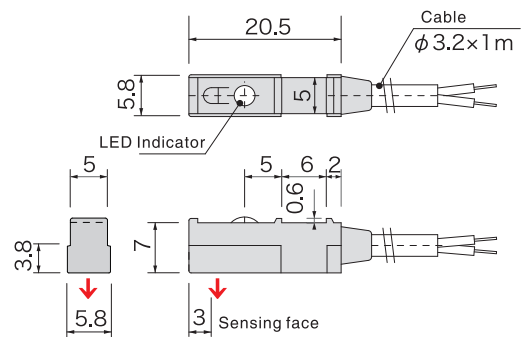
Dimensions(Unit:mm)

MR-C6



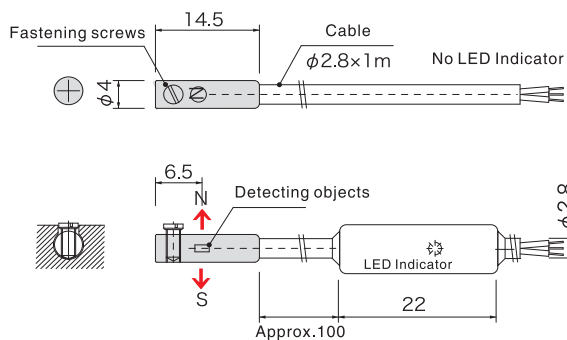
Mounting accessories: HP3-1/HP3-2/HP3-3/HP3-4

MR-C12

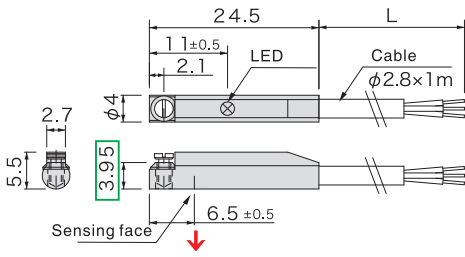


Mounting accessories: HP12-0/HP12-3/HP12-6.2/HP12-t

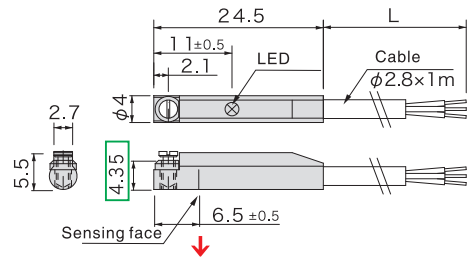
MR-C7



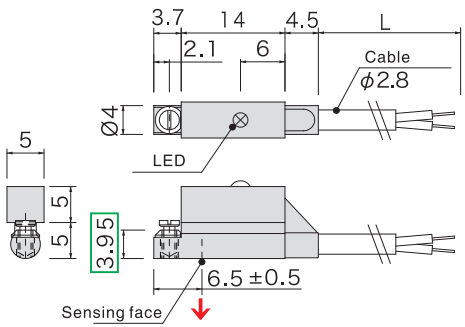
MR-C8(C shaped slot)



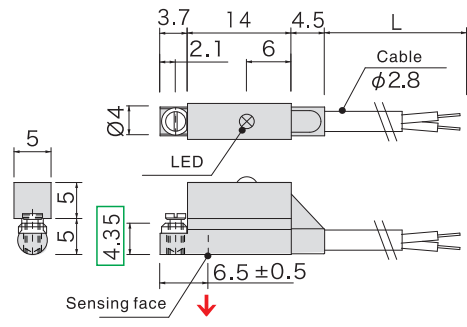
MR-C8(U shaped slot)



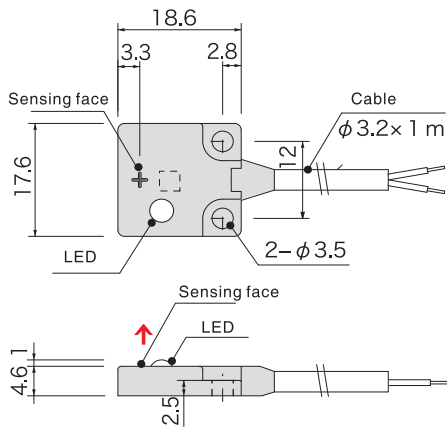
MR-C13(C shaped slot)



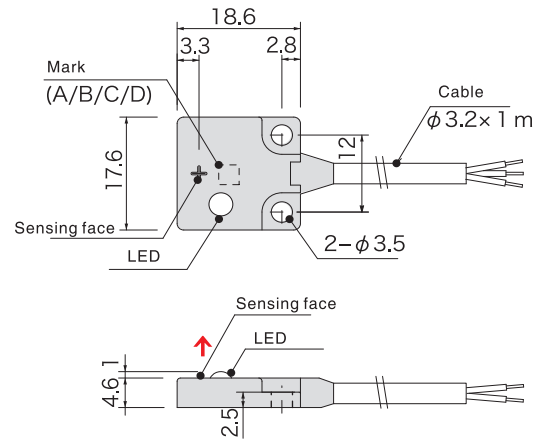
MR-C13(U shaped slot)



MR-C92



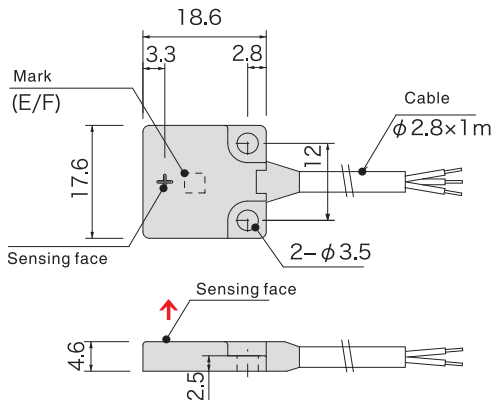
MR-C9



Mounting accessories: -BT: cable protective tube/
-BD: belt shaped mounting accessories

Mounting accessories: -BT: cable protective tube/
-BD: belt shaped mounting accessories

MR-C9-E(No LED)



Mounting accessories: -BT: cable protective tube/
-BD: belt shaped mounting accessories

Fiber Optic
Slot Sensors
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Area
Ultrasonic
Accelerometer
Inclinometer
Cables
Tester

Guidance

Magnetic

Magnetic sensors
High precision cylinder
Combined cylinder
Near iron sensor
Door sensors
Linear sensors
Ordinary magnets
High precision composite magnets
Mounting accessories

Combined cylinder sensor

Magnetic



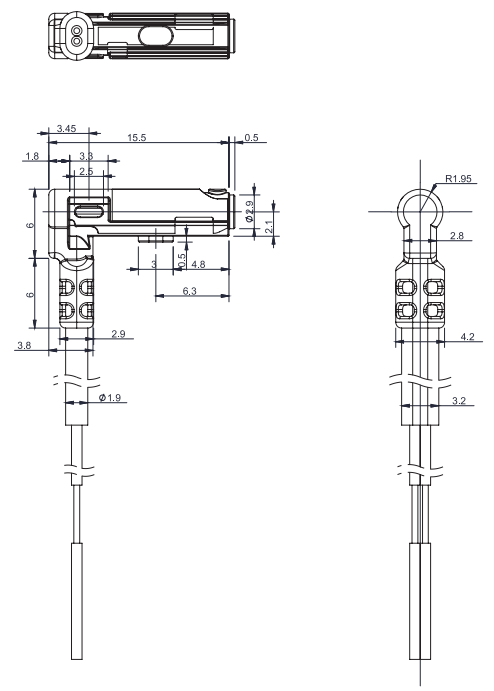
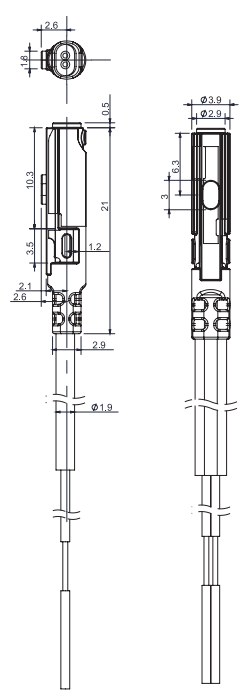
Appearance		
Type	Straight	Bend
Suitable applications	C type/ T type/ External	
Connection	2 wire	
Lead removal method	Horizontal, vertical, retaining ring	
Applicable load	24V DC Relay PLC	
Supply voltage	24V DC (10~28V DC)	
Current consumption	<40mA	
Internal pressure drop	<4V	
Leakage current	<10mA	
Responding speed	< 1ms	
Indicator	Red LED	
Leading line	Oil-resistant insulating rubber	
Shock resistance	1000m/s ²	
Insulation resistance	500V DC ≥ 50M Ω	
Withstand voltage	AC 1000V 1min	
Ambient temperature	-10°C~+60°C	
Degree of protection	IEC60529 IP65 JISC0920 anti-condensation structure	
Best sensing position	3.5mm	
C type slot	MR-C1-H-C	MR-C1-V-C
T type slot	MR-C1-H-T	MR-C1-V-T
External	MR-C1-H-L	MR-C1-V-L

Dimensions(Unit:mm)

Noumenon:

MR-C1-H

MR-C1-V



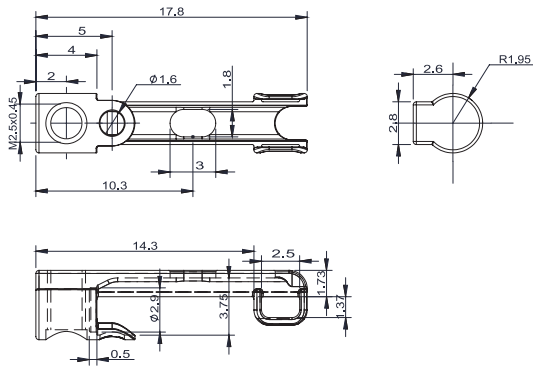
- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Accelerometer
- Inclinometer
- Cables
- Tester

Guidance

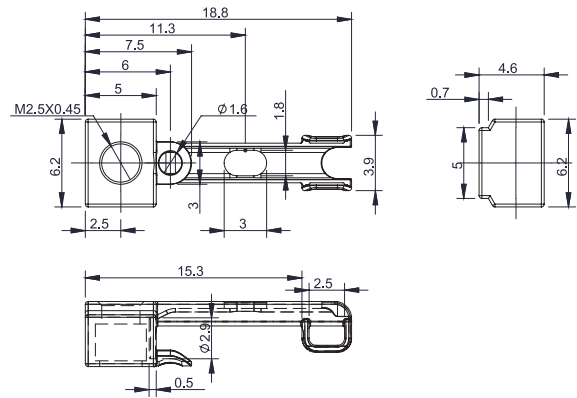
- Magnetic**
- Magnetic sensors
- High precision cylinder
- Combined cylinder**
- Near iron sensor
- Door sensors
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

Accessories:

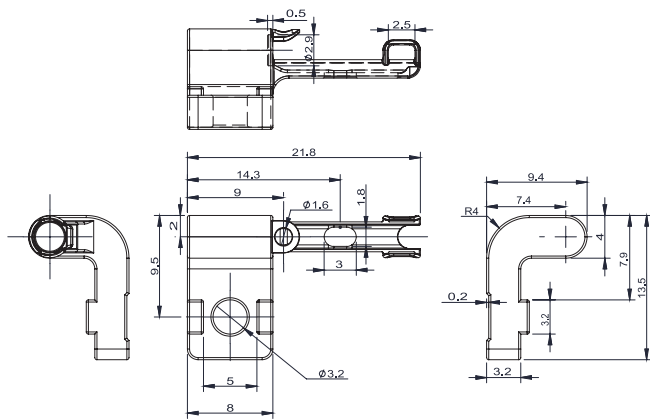
C shaped slot



T shaped slot

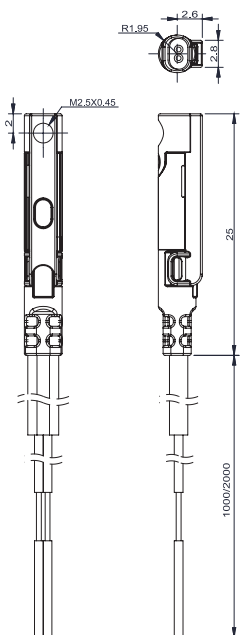


External usage

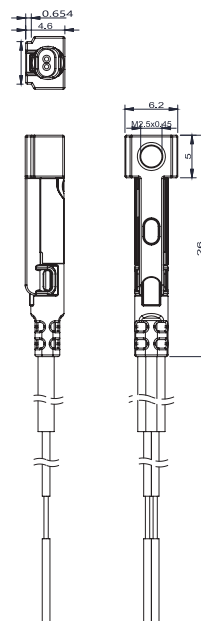


Straight combination:

MR-C1-H-C



MR-C1-H-T



- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Accelerometer
- Inclinometer
- Cables
- Tester

Guidance

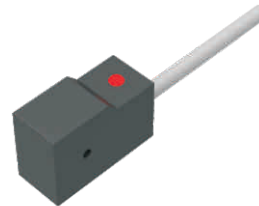
Magnetic

- Magnetic sensors
- High precision cylinder
- Combined cylinder**
- Near iron sensor
- Door sensors
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

Magnetic proximity sensors



Appearance		
Features	Threaded metal case, water-tolerant	
Operating voltage	5~24V DC	
Max. Sensing distance	Iron wire ϕ 1	1.0
	High-speed steel drill ϕ 2	2.0
	Square iron 20X11	2.4
Output type	NPN (N.O.) (when approaching On) model number that ends with a "B " (when approaching OFF)	
Output current	\leq 15mA	
Current consumption	\leq 15mA	
Voltage resistance	AC 1000V 1min	
Insulation resistance	250V DC \geq 20M Ω	
Ambient temperature	-20~+85 $^{\circ}$ C (Non condensing)	
Ambient humidity	20~95%RH	
Motion indicator	Approx 100mm away from the main body	
Material	SUS303	
Mounting	M10 screw, tightening torque 12N \cdot m	
Degree of protection	IP67	
Model NO.	Normally open, no LED indicator	MR-F11
	Normally open, with LED indicator	MR-F11-LED
	Normally closed, no LED indicator	MR-F11-B
	Normally closed, with LED indicator	MR-F11-B-LED



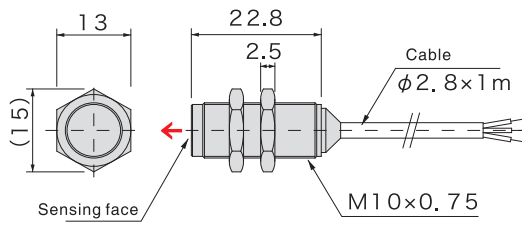
Appearance		
Features	Both sensing faces on the top and bottom is useful	
Operating voltage	5~24V DC	
Max. Sensing distance	Square iron 30X110	6.0
	Square iron 30X12	4.0
Output type	NPN (N.O.) (when approaching ON) model number that ends with a "B " (when approaching OFF)	
Output current	\leq 15mA	
Current consumption	\leq 15mA	
Withstand voltage	AC 1000V 1min	
Insulation resistance	250V DC \geq 20M Ω	
Ambient temperature	-20~+85 $^{\circ}$ C (No coagulating)	
Ambient humidity	20~80%RH	
Motion indicator	Approx. 100mm distance from main body	
Material	GF reinforced PBT	
Mounting	M3 screw, tightening torque 0.3N \cdot m	
Degree of protection	IP65	
Model NO.	Normally open	MR-F2
	Normally closed	MR-F2-B

Guidance

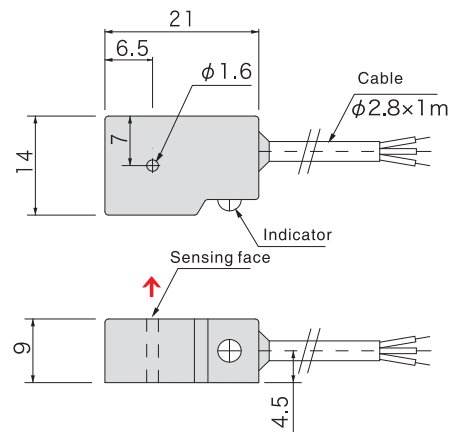
Magnetic

- Magnetic sensors
- High precision cylinder
- Combined cylinder
- Near iron sensor
- Door sensors
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

MR-F1



MR-F2



- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Accelerometer
- Inclinometer
- Cables
- Tester

Guidance

Magnetic

- Magnetic sensors
- High precision cylinder
- Combined cylinder
- Near iron sensor**
- Door sensors
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

Door sensors

Upward detection

Magnetic



Appearance		
Sensing distance	15mm	
Operating voltage	5~24V DC	
Output type	NPN (N.O.) (when approaching ON) model number that ends with a "B" (when approaching OFF)	
Output current	≤ 15mA	≤ 80mA
Current consumption	≤ 15mA	
Response time	5 μs	
Withstand voltage	AC 1000V 1min	
Insulation resistance	250V DC ≥ 20M Ω	
Ambient temperature	-20~+85°C (No coagulating)	
Ambient humidity	20~95% RH	
Material	GF reinforced PBT(black)	
Mounting	M3 screw tightening torque 0.8N · m	
Degree of protection	IP67	
Model NO.	Normally open	MR-D2 MR-D2P
	Normally closed	MR-D2PB

(Matching magnet)
MR-DM2

Sideway detection



Appearance		
Sensing distance	12mm	
Operating voltage	12~24V DC	
Output type	NPN (N.O.) (when approaching ON) model number that ends with a "B" (when approaching OFF)	
Output current	≤ 80mA	
Current consumption	≤ 15mA	≤ 80mA
Response time	5 μs	
Withstand voltage	AC 1000V 1min	
Insulation resistance	250V DC ≥ 20M Ω	
Ambient temperature	-20~+85°C (No coagulating)	
Ambient humidity	20~95% RH	
Material	GF reinforced PBT	
Cable specification	N.O.: Grey N.C.: Black	
Mounting	M3 screw tightening torque 0.8N · m	
Degree of protection	IP67	
Model NO.	Normally open	MR-D2X MR-D2XP
	Normally closed	MR-D2XPB

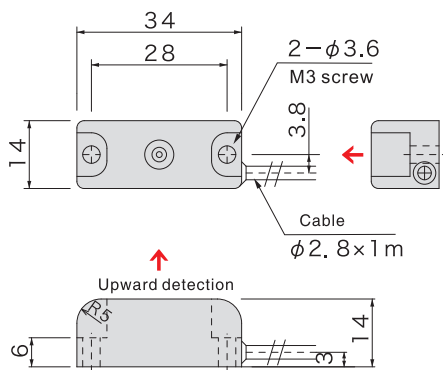
(Matching magnet)
MR-DM2X

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Accelerometer
- Inclinometer
- Cables
- Tester

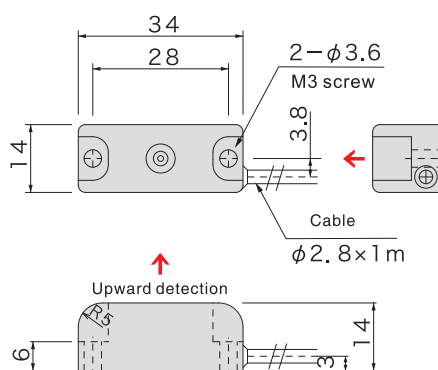
Guidance

- Magnetic**
- Magnetic sensors
- High precision cylinder
- Combined cylinder
- Near iron sensor
- Door sensors**
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

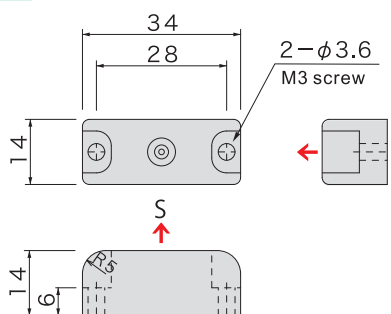
MR-D2



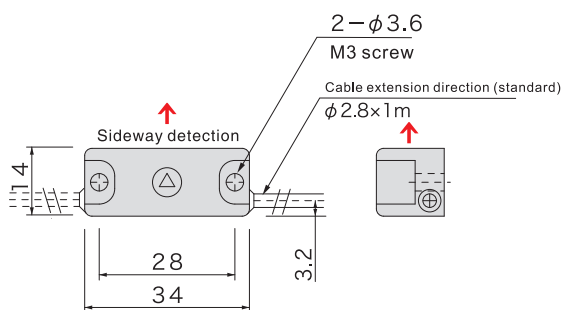
MR-D2P/D2PB



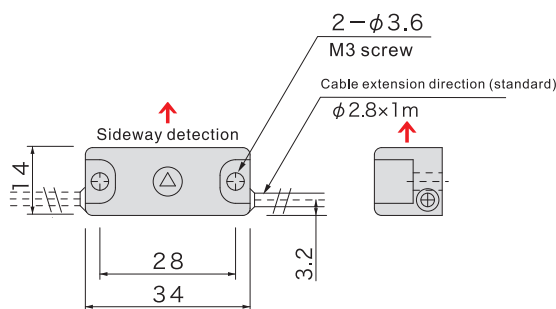
MR-DM2



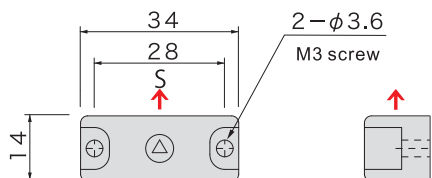
MR-D2X



MR-D2XP/D2XPB



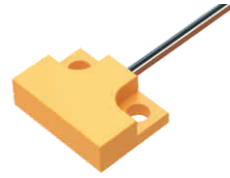
MR-DM2X



Fiber Optic
Slot Sensors
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Area
Ultrasonic
Accelerometer
Inclinometer
Cables
Tester

Guidance

Magnetic
Magnetic sensors
High precision cylinder
Combined cylinder
Near iron sensor
Door sensors
Linear sensors
Ordinary magnets
High precision composite magnets
Mounting accessories



Appearance	
Operating voltage	5V DC
Magnetic sensitivity	65mV/mT (Center value)
Output voltage	0.3→4.7V (-40→+40mT): (Center value)
Center voltage	2.5V ± 0.15V
Output current	≤ ± 12mA
Current consumption	12mA
Response time	5 μs (100kHz)
Magnetic sensitivity temperature coefficient	0 ± 0.04 %/°C
Center voltage temperature coefficient	0 ± 0.5mV/°C
Ambient temperature	-20°C ~ +85°C
Ambient humidity	20 ~ 95% RH
Cable length	0.3m
Material	GF reinforced PBT (Orange)
Mounting	M2 screw, tightening torque 0.15N · m
Cable specification	3pcs φ 0.9 core cable, 0.3m
Degree of protection	IP 65
Model NO.	Upward detection Sideway detection
	MR-L4 MR-L4-H



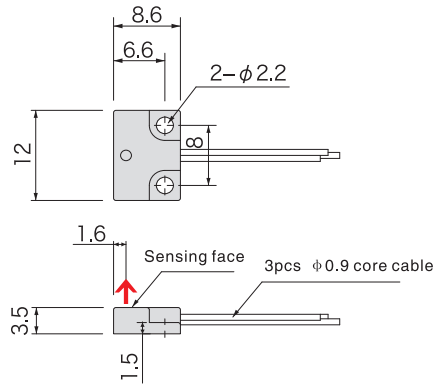
Appearance	
Operating voltage	5V DC
Magnetic sensitivity	65mV/mT (Center value)
Output voltage	0.3→4.7V (-40→+40mT): (Center value)
Center voltage	2.5V ± 0.15V
Output current	≤ ± 12mA
Current consumption	12mA
Response time	5 μs (100kHz)
Magnetic sensitivity temperature coefficient	0 ± 0.04 %/°C
Center voltage temperature coefficient	0 ± 0.5mV/°C
Ambient temperature	-20°C ~ +85°C
Ambient humidity	20 ~ 95% RH
Cable length	1m
Material	SUS303
Mounting	M3 screw, tightening torque 0.15N · m
Degree of protection	IP 65
Model NO.	
	MR-L10X

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Accelerometer
- Inclinometer
- Cables
- Tester

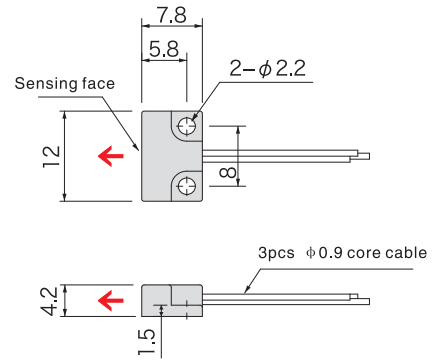
Guidance

- Magnetic**
- Magnetic sensors
- High precision cylinder
- Combined cylinder
- Near iron sensor
- Door sensors
- Linear sensors**
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

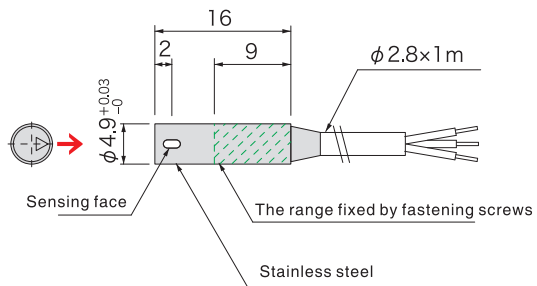
MR-L4



MR-L4-H



MR-L10X



- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Accelerometer
- Inclinometer
- Cables
- Tester

Guidance

Magnetic

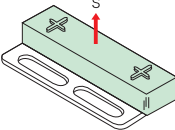
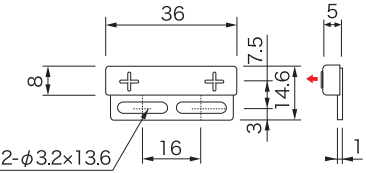
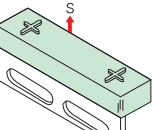
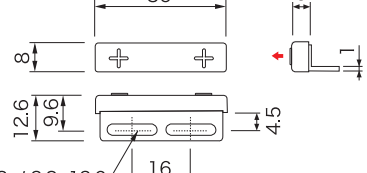
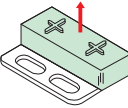
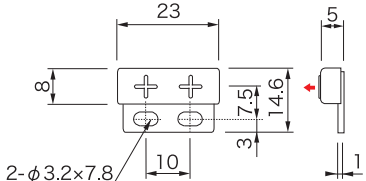
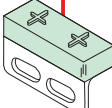
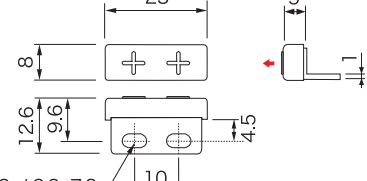
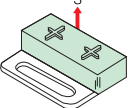
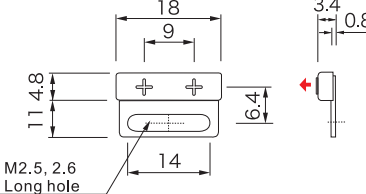
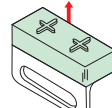
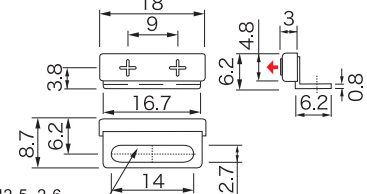
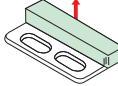
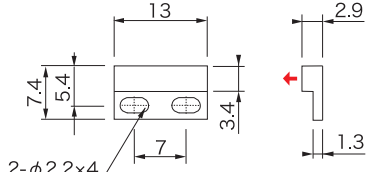

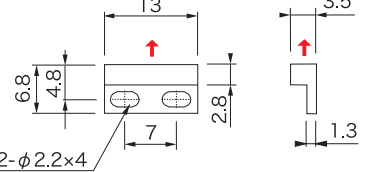

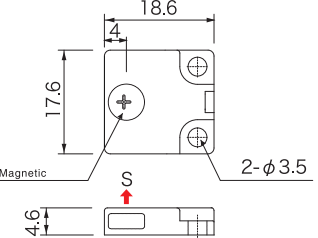

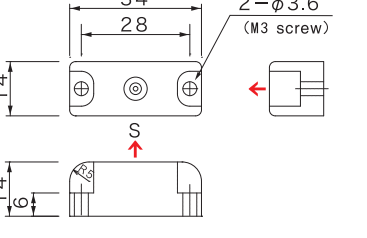
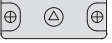
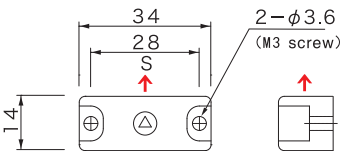

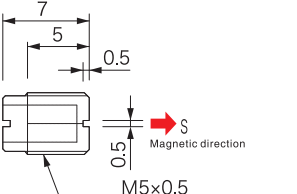
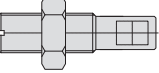
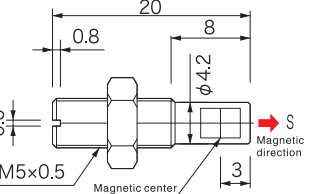

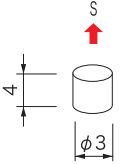

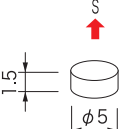
- Magnetic sensors
- High precision cylinder
- Combined cylinder
- Near iron sensor
- Door sensors
- Linear sensors**
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

Ordinary magnets

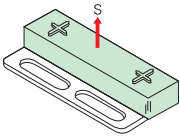
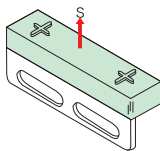
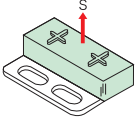
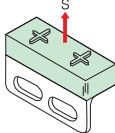
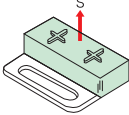
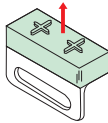
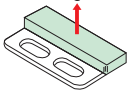
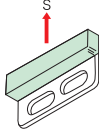
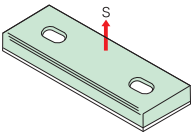
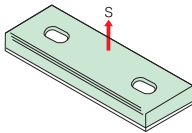
- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic
- Contact
- Area
- Ultrasonic
- Accelerometer
- Inclinometer
- Cables
- Tester

- Guidance

- Magnetic
- Magnetic sensors
- High precision cylinder
- Combined cylinder
- Near iron sensor
- Door sensors
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

Model No.	Dimensions (Unit:mm)	Model No.	Dimensions (Unit:mm)
MR-M1K	  <p>2-ϕ3.2x13.6</p>	MR-M1KH	  <p>2-ϕ3.2x13.6</p>
MR-M2K	  <p>2-ϕ3.2x7.8</p>	MR-M2KH	  <p>2-ϕ3.2x7.8</p>
MR-M3K	  <p>M2.5, 2.6 Long hole</p>	MR-M3KH	  <p>M2.5, 2.6 Long hole</p>
MR-M4K	  <p>2-ϕ2.2x4</p>	MR-M4KH	  <p>2-ϕ2.2x4</p>
MR-M9K	  <p>Magnetic</p> <p>2-ϕ3.5</p>	MR-M2	  <p>2-ϕ3.6 (M3 screw)</p>
MR-M2X	  <p>2-ϕ3.6 (M3 screw)</p>	MR-M10S	  <p>Magnetic direction</p> <p>M5x0.5</p>
MR-M10L	  <p>Magnetic center</p> <p>Magnetic direction</p> <p>M5x0.5</p>	MR-M304	  <p>Magnetic direction</p>
MR-M5015	 		

High precision composite magnets

Model No.	Dimensions (Unit:mm)	Model No.	Dimensions (Unit:mm)
MR-M1	 <p>36 8 2-ϕ3.2x13.6 16 3 7.5 14.6 5 1</p>	MR-M1H	 <p>36 8 2-ϕ3.2x13.6 16 12.6 9.6 4.5 5 1</p>
MR-M2	 <p>23 8 2-ϕ3.2x7.8 10 3 7.5 14.6 5 1</p>	MR-M2H	 <p>23 8 2-ϕ3.2x7.8 10 12.6 9.6 4.5 5 1</p>
MR-M3	 <p>18 9 11.48 2-M2.5, 2.6 Long hole 14 6.4 3.4 0.8 1</p>	MR-M3H	 <p>18 9 3.8 16.7 2-M2.5, 2.6 Long hole 14 8.7 6.2 2.7 6.2 4.8 1.3 0.8</p>
MR-M4	 <p>13 7.4 5.4 2-ϕ2.2x4 7 3.4 2.9 1.3</p>	MR-M4H	 <p>13 6.8 4.8 2-ϕ2.2x4 7 2.8 3.5 1.3</p>
MR-M11	 <p>90 56 30 Mounting hole for M4 3mm adjustment on the left and right</p>	MR-M11-K	 <p>90 56 30 Mounting hole for M4 3mm adjustment on the left and right</p>

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic
- Contact
- Area
- Ultrasonic
- Accelerometer
- Inclinometer
- Cables
- Tester

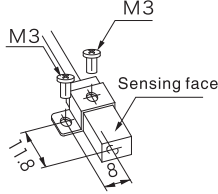
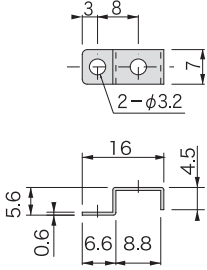
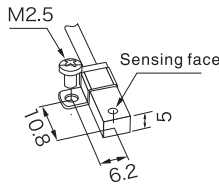
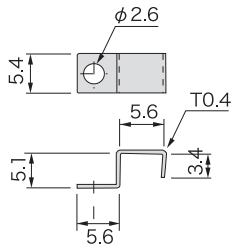
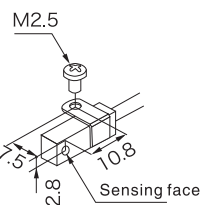
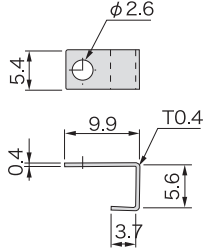
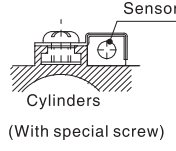
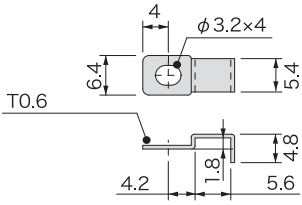
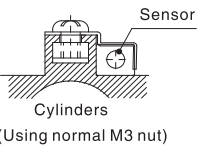
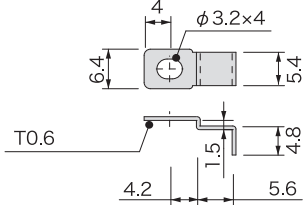
Guidance

Magnetic

- Magnetic sensors
- High precision cylinder
- Combined cylinder
- Near iron sensor
- Door sensors
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

Mounting accessories

Magnetic

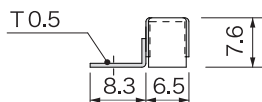
Model No.	Dimensions (Unit:mm)	Model No.	Dimensions (Unit:mm)
HP2-1 		HP3-1 	
HP3-2 		HP3-3 	
HP3-4 			

Fiber Optic
Slot Sensors
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Area
Ultrasonic
Accelerometer
Inclinometer
Cables
Tester
Guidance
Magnetic
Magnetic sensors
High precision cylinder
Combined cylinder
Near iron sensor
Door sensors
Linear sensors
Ordinary magnets
High precision composite magnets
Mounting accessories

Appearance and mounting

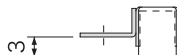
Dimensions(Unit:mm)

HP12-0



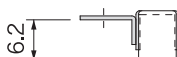
*Mounting deviation: None

HP12-3



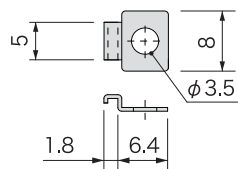
*Mounting deviation: 3mm

HP12-6.2

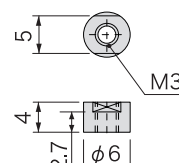


*Mounting deviation: 6.2mm

HP12-t

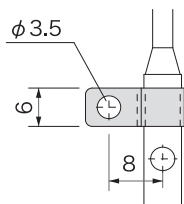


[Accessory]



[Nut]

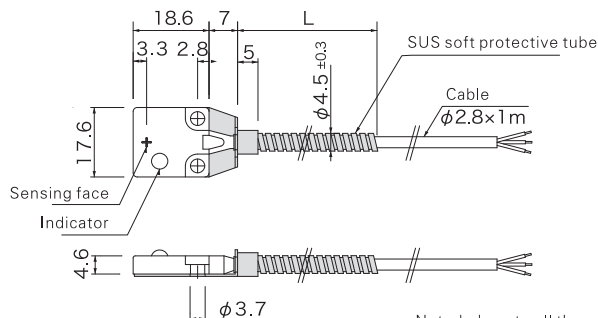
With special screw
*Used for Pneumatic fingers



Mounting accessories:
-BT: cable protective tube



- Extremely strong, even being stomped on the ground, SUS304 soft protective tube
- Can use in rough environments, such as dust, oil, water, and light, very robust

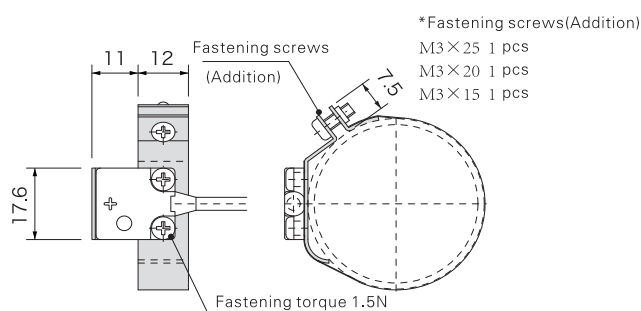


Noted: do not pull the cable with force more than 10N.

Mounting accessories:
-BD: belt shaped mounting accessories



- Fastening with stainless steel belt shaped accessories.
- Even with huge vibration or shock, it will stay fixed.
- Suitable for normal tube shaped cylinders with inner diameter $\phi 32-100$.



*Fastening screws(Addition)
M3×25 1 pcs
M3×20 1 pcs
M3×15 1 pcs

Fiber Optic
Slot Sensors
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Area
Ultrasonic
Accelerometer
Inclinometer
Cables
Tester

Guidance

Magnetic

Magnetic sensors
High precision cylinder
Combined cylinder
Near iron sensor
Door sensors
Linear sensors
Ordinary magnets
High precision composite magnets
Mounting accessories