

High Precision Magnetic Sensors

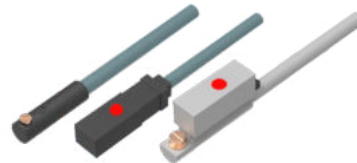


HOT

Magnetic Sensors

- Detection, Small size, long life, high sensitivity and long sensing distance .
- Response Time at 5 μ s—leading response time.
- S-pole (standard magnet pole).

P.G-04



High Precision Positioning with Reliable Performance

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

P.G-08



NEW!

Economic Cylinder Sensor

- High positioning accuracy, reliable performance
- Maximum switching frequency up to Hz 1000

P.G-11



NEW!

Environmental Resistance Cylinder Sensors

- All metal material, reliable performance
- Vibration and heat resistance
- Maximum switching frequency up to 1000HZ

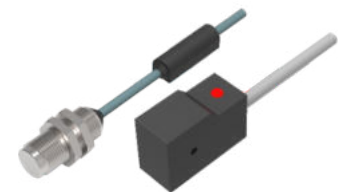
P.G-14



Combined Cylinder Sensors

- With different brackets to fit almost all cylinder sensors 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-15



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.

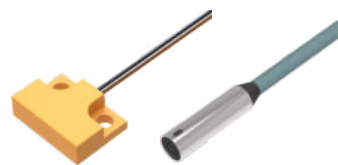
P.G-17



Door Sensors

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

P.G-19

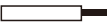
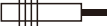
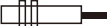








Linear Sensors

- Output voltage varies linearly with magnetic force
- Output voltage changes linearly according to the movements of magnets
- It can be used from low to high temperature








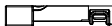
P.G-21

Magnetic Sensors

Appearance	Size	Sensing distance*	Detected poles	Model number	Pages
	φ 4.9X16mm	MR-M10L: 4mm MR-M9K: 8mm	S-pole	Top surface detection	MR-P10-H
				Side surface detection	MR-P10-X (HOT)
	φ 6.2X21mm	MR-M10L: 8mm MR-M9K: 10mm	N-pole, S-pole optional	S-pole detection	MR-P13-S
				N-pole detection	MR-P13-N
	M9X25mm	MR-M10L: 8mm MR-M9K: 11mm	N-pole, S-pole optional	S-pole detection	MR-P24-S
				N-pole detection	MR-P24-N
	M9X25mm	MR-M10L: 13mm MR-M9K: 20mm	N-pole & S-pole detection	N-pole & S-pole detection	MR-P25 (HOT)
	M6X15mm	MR-M10L: 6mm MR-M9K: 8mm	S-pole	S-pole detection	MR-P26
	7X5.8X20.5mm	MR-M10L: 5mm MR-M9K: 8mm	N-pole, S-pole optional	S-pole detection	MR-P12-S
				N-pole detection	MR-P12-N
	9X9.6X30mm	MR-M10L: 8mm MR-M9K: 11mm	N-pole, S-pole optional	S-pole detection	MR-PH5-S
				N-pole detection	MR-PH5-N
	12X7.8X4.2mm	MR-M10L: 8mm MR-M9K: 12mm	S-pole	Top surface detection	MR-P4-H
				Side surface detection	MR-P4-X
	17.6X18.6X4.6mm	MR-M10L: 8mm MR-M9K: 12mm	N-pole, S-pole optional	S-pole detection	MR-P9-S
				N-pole detection	MR-P9-N

*: Different magnets have different sensing distances

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	
	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
- Vibration
- Temperature
- Cables
- Tester

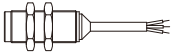
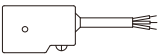
Guidance

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







Economical/Magnetic Proximity Sensors

Appearance	Size	Sensing distance		Model number	Pages
	31.4*6.2*4.3mm	Normally Open	200Hz/ 1000Hz	MR-30/30G/30N/P	G-11
	15.1*4*5mm	Normally Open	1000Hz	MR-C80/80N/80P	
				MR-C81/81N/81P	
				MR-C86/86N/86P	
	14.3*4*4.7mm	Normally Open	1000Hz	MR-70/70N/70P	G-14



Magnetic Proximity Sensors

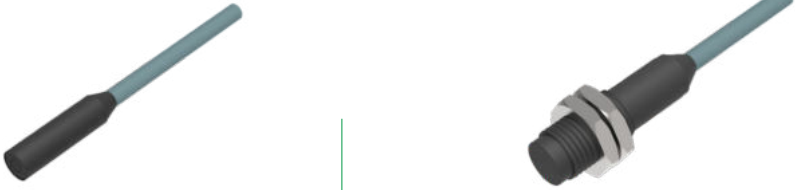
Appearance	Size	Sensing distance		Model number	Pages
	M10X22.8mm	1mm(Iron wire ϕ 1)	Normally open, without LED indicator	MR-F11	G-17
		2mm(High-speed steel drill ϕ 2)	Normally open, with LED indicator	MR-F11-LED	
		2mm(Square iron20Xt1)	Normally closed, without LED indicator	MR-F11-B	
			Normally closed, 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-19
	14X14X34mm	Upward detection	MR-D2P	
	14X14X34mm	Upward detection	MR-DM2	
	14X14X34mm	Sideway detection	MR-D2X	
	14X14X34mm	Sideway detection	MR-D2XP	
	14X14X34mm	Sideway detection	MR-DM2X	

Linear Sensors

Appearance	Size	Detected poles	Model Number	Pages
	8.6X12X3.5mm	Detect N-pole and S-pole simultaneously	Frontal Detection	G-21
	7.8X12X4.2mm	Detect N-pole and S-pole simultaneously	Sideway Detection	
	ϕ 4.9X16mm	Detect N-pole and S-pole simultaneously	Sideway Detection	

Appearance	
Feature	Can execute detection in Fe, perfect for molds and fixtures
Sensing distance*	MR-M10L: 4mm; MR-M9K: 8mm
Operating voltage	5~24V DC
Detected magnetic poles	S-pole
Magnetic sensitivity	5~7mT
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 condensation
Material	SUS303
Mounting	M3 screws, tightening torque ≤0.2N · m
Degree of protection	IP65
Connection	3 core cable (Length: 1m)
Model NO.	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Top surface detection: MR-P10-H</p> <p>Side surface detection: MR-P10-X HOT</p> </div> <div style="width: 45%;"> <p>S-pole detection: MR-P13-S</p> <p>N-pole detection: MR-P13-N</p> </div> </div>
Wiring diagram	See figure 1 and figure 2 on page G-07

*: Different magnets have different sensing distances

Appearance	
Feature	Built-in indicator (high sensitivity)
Sensing distance*	MR-M10L: 8mm; MR-M9K: 11mm
Operating voltage	5~24V DC
Detected magnetic 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 condensation
Material	GF strengthened PBT: black; MR-P24-S cable: grey; MR-P24-N cable: black
Mounting	M9 screws, tightening torque ≤0.5N · m (with screws)
Indicator	Red
Degree of protection	IP67
Connection	1M 3 core cable
Model NO.	<p>S-pole detection: MR-P24-S</p> <p>N-pole detection: MR-P24-N</p>
Wiring diagram	See figure 4 on page G-07

*: Different magnets have different sensing distances

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic
- Contact
- Area
- Ultrasonic
- Vibration
- Temperature
- 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
Sensing distance*	MR-M10L: 13mm; MR-M9K: 20mm	MR-M10L: 6mm; MR-M9K: 8mm
Operating voltage	12~24V DC	5~24V DC
Detected magnetic 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 condensation	
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

*: Different magnets have different sensing distances



Appearance		
Feature	Built-in indicator, 2-wires output	
Sensing distance*	MR-M10L: 5mm; MR-M9K: 8mm	
Operating voltage	12~24V DC	
Detected magnetic 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 condensation	
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	

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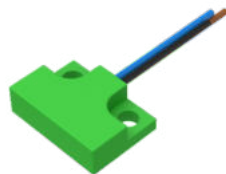
Guidance

- 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)
Sensing distance*	MR-M10L: 8mm; MR-M9K: 11mm
Operating voltage	5~24V DC
Detected magnetic 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°C~+85°C, No freezing
Ambient humidity	20%~95%RH, No condensation
Material	GF strengthened PBT: black
Mounting	M3 screws, 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

*:Different magnets have different sensing distances



Appearance	Small size, thickness 3.5mm only	Metal housing, water-proof and oil resistant
Feature		
Sensing distance*	MR-M10L: 8mm; MR-M9K: 12mm	
Operating voltage	5~24V DC	12~24V DC
Detected magnetic 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°C~+85°C, No freezing	
Ambient humidity	20%~95%RH, No condensation	
Material	GF strengthened PBT: Green	Die-casing Zinc alloy
Mounting	M2 screws, tightening torque 0.15N · m	M3 screws, 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

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Guidance

Magnetic

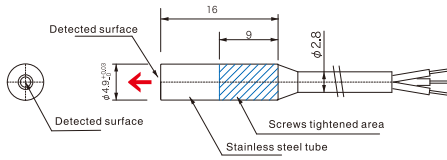
- Magnetic sensors**
- High precision cylinder
- Combined cylinder
- Near iron sensor
- Door sensors
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

Magnetic Sensors

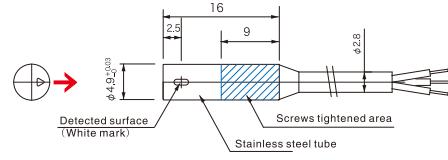
Dimensions(Unit:mm)

Magnetic

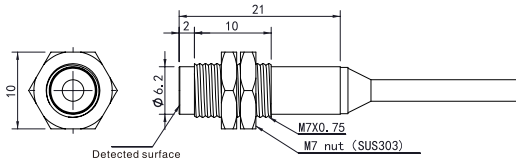
MR-P10-H



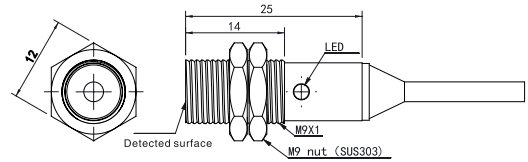
MR-P10-X



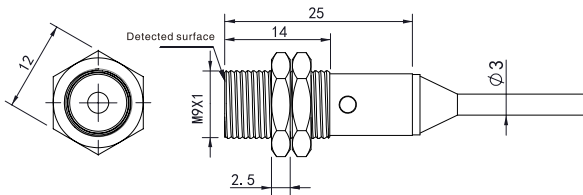
MR-P13-S(N)



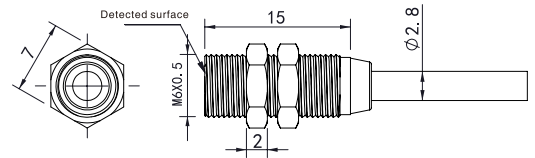
MR-P24-S(N)



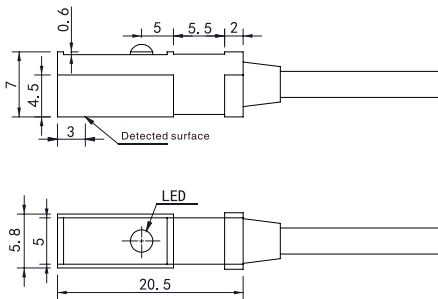
MR-P25



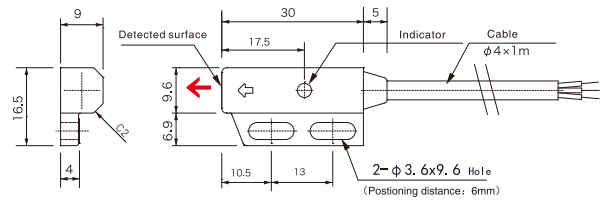
MR-P26



MR-P12-S(N)

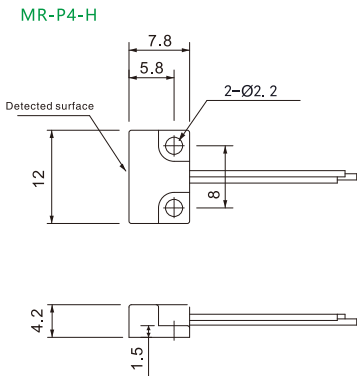


MR-PH5-S(N)

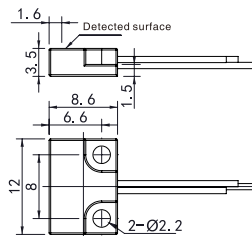


Mounting accessories: HP12-0/HP12-3/HP12-6.2/HP12-t

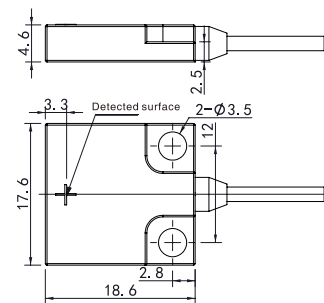
MR-P4-H(X)



MR-P4-X



MR-P9-S(N)

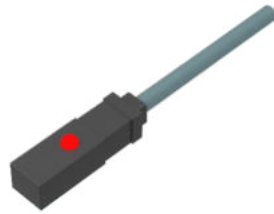


Mounting accessories: -BT: cable protective tube/
-BD: belt shaped mounting accessories

High Precision Cylinder Sensors

Magnetic

3-wire



2-wire

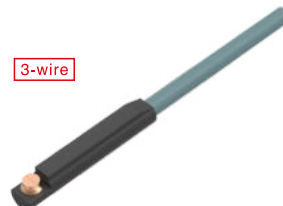


Appearance		
Suitable applications	T shaped slot	T shaped slot
Features	Built-in LED indicators	Can replace 2-wire feed switches for cylinders, and suits to use in cylinders with small range, such as pneumatic fingers.
Operating voltage	5~24V DC	12~24V DC
Detected magnetic poles	N-pole and S-pole, optional	
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 condensation	
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

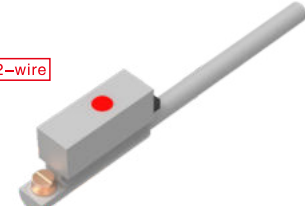
3-wire



3-wire



2-wire



Appearance					
Suitable applications	C shaped slot	C+U shaped slot	C+U shaped slot		
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 magnetic 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 condensation				
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
	Detected N-pole	MR-C7-N	MR-C8-C-N	MR-C8-U-S	MR-C8-U-N
Model NO.	Detected S-pole	MR-C13-S	C shaped slot	MR-C13-C-S	U shaped slot
	Detected N-pole	MR-C13-N	MR-C13-C-N	MR-C13-U-S	MR-C13-U-N

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Vibration
- Temperature
- 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



2-wire



3-wire

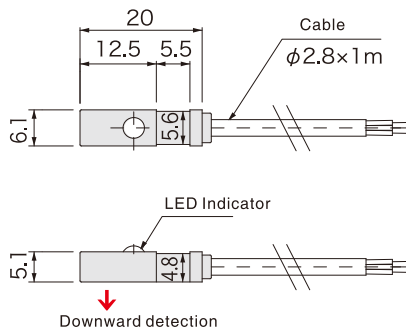


3-wire

Appearance		(High current output)	(Economical type without indicators)
Suitable applications	External usage		External usage
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 magnetic 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°C~+85°C, No freezing		
Ambient humidity	20%~95%RH, No condensation		
Material	Cast zinc alloy		
Mounting	With screws, tightening torque 1.5N · m		M3(SUS), tightening torque 1.5N · 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
	Detected N-pole	MR-C92-N	MR-C9-N
			MR-C9-E-S
			MR-C9-E-N

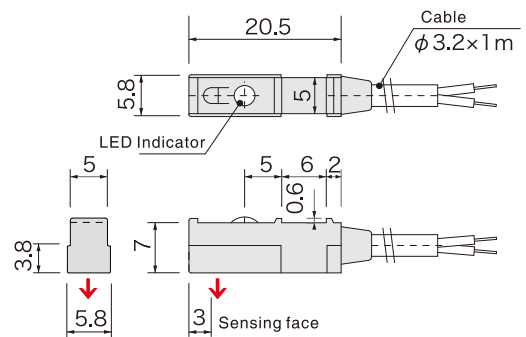
Dimensions(Unit:mm)

MR-C6



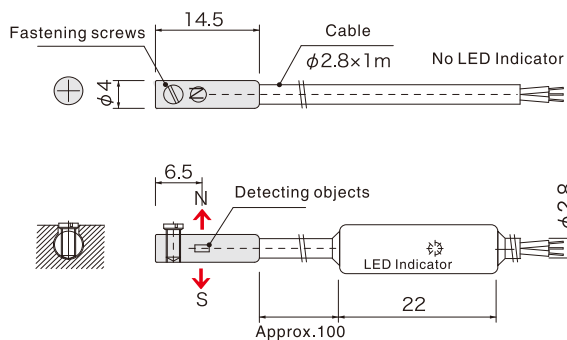
Mounting accessories: HP3-1/HP3-2/HP3-3/HP3-4

MR-C12



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

MR-C7

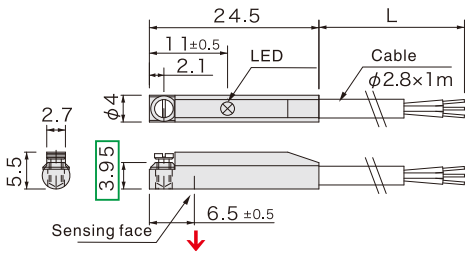


High Precision Cylinder Sensors

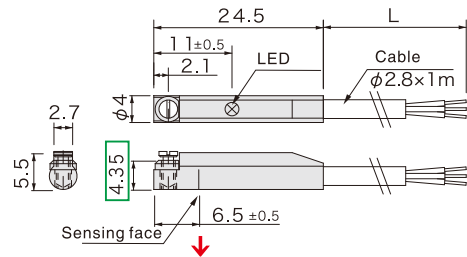
Dimensions(Unit:mm)

Magnetic

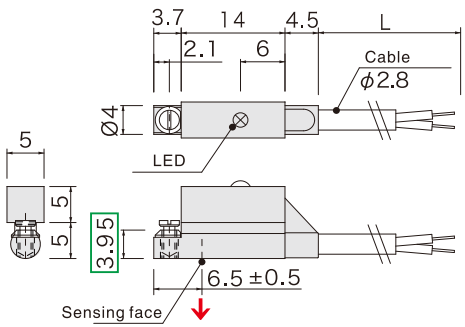
MR-C8(C shaped slot)



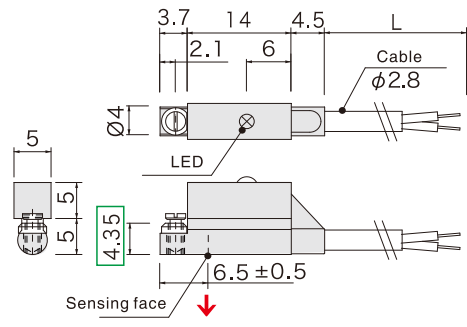
MR-C8(U shaped slot)



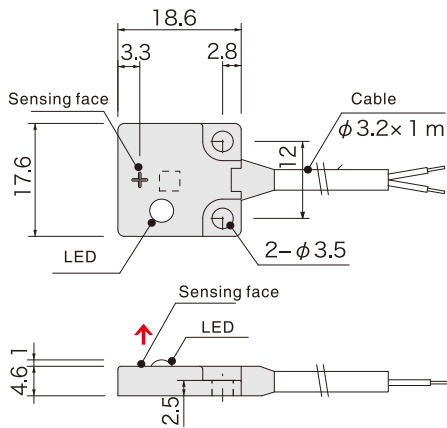
MR-C13(C shaped slot)



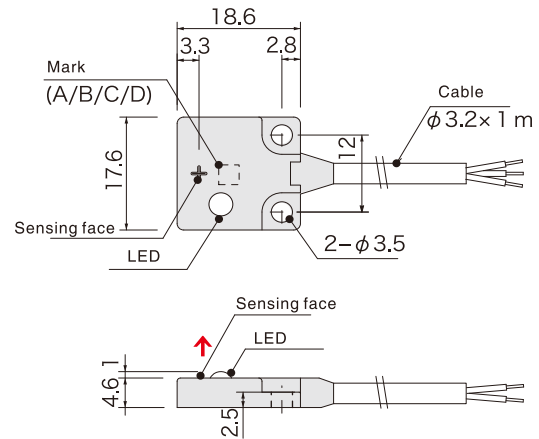
MR-C13(U shaped slot)



MR-C92



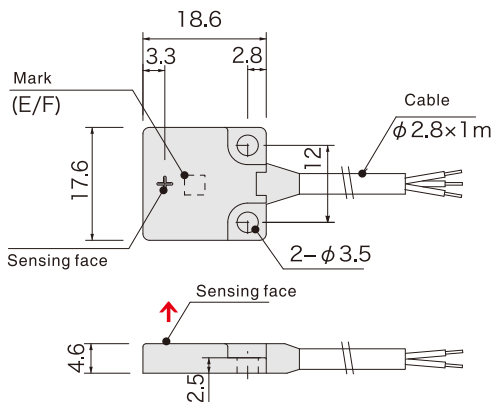
MR-C9



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
- Vibration
- Temperature
- 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

Economic Cylinder Sensor

Magnetic



Economical Type

NEW!

Appearance

Switch logic	SPST open type	Electronic: regular	Electronic contactless; open type	
Switch type	Contact type magnetic spring tube	Two-wire contactless crystal type	Contactless Electrocrystal NPN Type	Contactless Electrocrystal PNP Type
Working voltage	5~24V DC	10~28V DC	5~30V DC	
Maximum switching current	100mA Max	50mA Max	200mA Max	
Maximum switching capacity	10W Max	1.4W Max	6W Max	
Internal consumption current	-	40 μ A Max.@24V	14mA Max@24V(Switch Active)	
Residual pressure	2.5V Max@100mA DC	2.65V Max@50mA DC	0.5V Max@200mA DC	
Leakage current	-	90 μ A Max.@28v	0.01mA Max	
Indicator	Red LED		Green LED	
Cable cable	2.9 ϕ ,2C,gre oil-resistant PVC	2.9 ϕ ,2C,gre oil-resistant TPU	2.9 ϕ ,3C,gre oil-resistant TPU	
Sensitivity	40G	25~1000G		
Maximum switching frequency	200Hz	1000Hz		
Use of temperature range	-10~70° C			
Impact resistance	30G	50G		
Vibration resistance	9G			
Protection level	IP67 (EN6052)			
Protection circuit	-	Protection of sudden wave absorption	Power polarity reverse protection; sudden wave absorption protection; short circuit protection	
Model	MR-30	MR-30G	MR-30N	MR-30P



Economical Type

NEW!

Appearance

Switch logic	Electronic: regular
Switch type	Two-wire contactless crystal type
Suitable load	DC24V relay, PLC
Working voltage	10~30V DC
Maximum switching current	100mA Max
Maximum switching capacity	3W Max
Internal consumption current	6 μ A Max.@24V
Residual pressure	2,65V Max@50mA
Leakage current	40 μ A Max.@28v
Indicator	Red LED
Cable cable	2.8 ϕ ,2C,gre oil-resistant TPU
Sensitivity	25~1000G
Maximum switching frequency	1000Hz
Use of temperature range	-10~70° C
Impact resistance	50G
Vibration resistance	9G
Protection level	IP67 (EN6052)
Protection circuit	Protection of sudden wave absorption
Model	MR-C80

Economical Type

NEW!



Appearance

Switch logic	Electronic: regular
Switch type	Two-wire contactless crystal type
Suitable load	DC24V relay, PLC
Working voltage	10~30V DC
Maximum switching current	100mA Max
Maximum switching capacity	3W Max
Internal consumption current	6 μ A Max.@24V
Residual pressure	2.65V Max@50mA
Leakage current	40 μ A Max.@28v
Indicator	Red LED
Cable cable	2.8 φ ,2C, grey oil-resistant TPU
Sensitivity	25~1000G
Maximum switching frequency	1000Hz
Use of temperature range	-10~70° C
Impact resistance	50G
Vibration resistance	9G
Protection level	IP67 (EN6052)
Protection circuit	Protection of sudden wave absorption
Model	MR-C81

Economical Type

NEW!



Appearance

Switch logic	Electronic: regular
Switch type	Two-wire contactless crystal type
Suitable load	DC24V relay, PLC
Working voltage	10~30V DC
Maximum switching current	100mA Max
Maximum switching capacity	3W Max
Internal consumption current	6 μ A Max.@24V
Residual pressure	2.65V Max@50mA
Leakage current	40 μ A Max.@28v
Indicator	Red LED
Cable cable	2.8 φ ,2C, grey oil-resistant TPU
Sensitivity	25~1000G
Maximum switching frequency	1000Hz
Use of temperature range	-10~70° C
Impact resistance	50G
Vibration resistance	9G
Protection level	IP67 (EN6052)
Protection circuit	Protection of sudden wave absorption
Model	MR-C86

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

Guidance

Magnetic

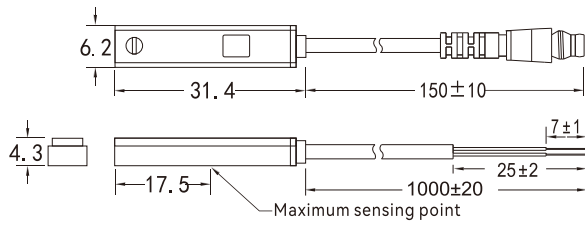
- Magnetic sensors
- High precision cylinder**
- Combined cylinder
- Near iron sensor
- Door sensors
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

Economical Cylinder Sensor

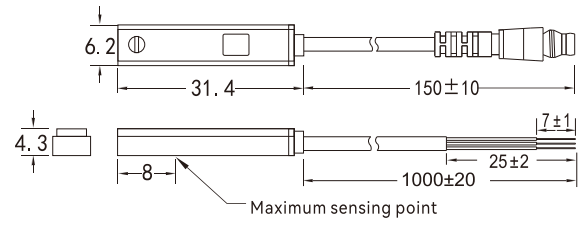
Dimensions(Unit:mm)

Magnetic

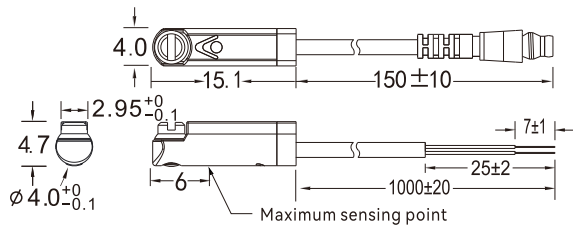
MR-30R/G



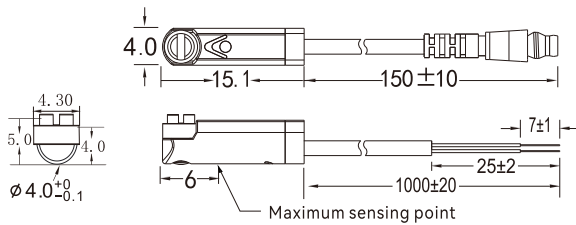
MR-30N/P



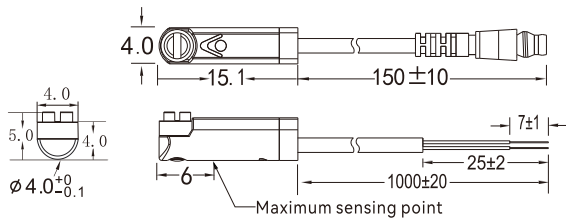
MR-C80



MR-C81



MR-C86



Environmentally Resistant Type

NEW!



Appearance

Switch logic	Electronic: regular
Switch type	Two-wire contactless crystal type
Suitable load	DC24V relay, PLC
Working voltage	10~30V DC
Maximum switching current	100mA Max
Maximum switching capacity	3W Max
Internal consumption current	6 μ A Max.@24V
Residual pressure	2.65V Max@50mA
Leakage current	40 μ A Max.@28v
Indicator	Red LED
Cable cable	2.8 f ,2C, grey oil-resistant TPU
Sensitivity	25-1000G
Maximum switching frequency	1000Hz
Use of temperature range	-10~70° C
Impact resistance	50G
Vibration resistance	9G
Protection level	IP67 (EN6052)
Protection circuit	Protection of sudden wave absorption
Model	MR-70

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

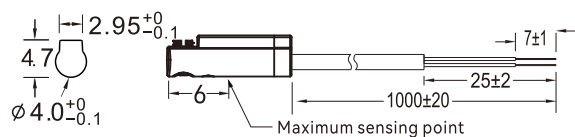
Guidance

Magnetic

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

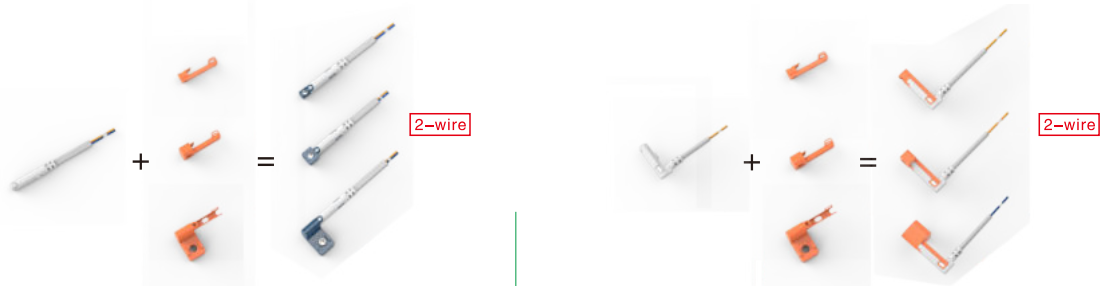
Dimensions(Unit:mm)

MR-70



Combined Cylinder Sensor

Magnetic



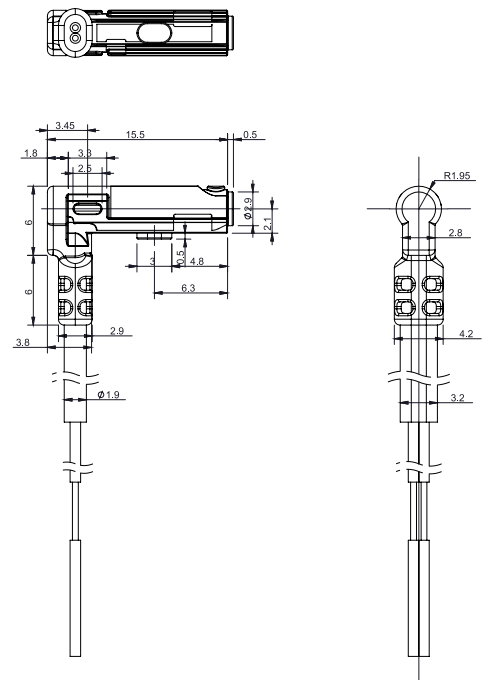
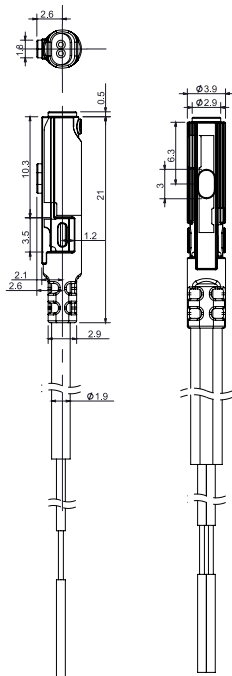
Appearance		
Type	Straight	Bend
Suitable applications	C type/ T type/ External	
Connection	2 wire	
Lead removal method	Horizontal, vertical, retaining ring	
Applicable load	24V DC Relay PLC	
Supply voltage	24V DC (10~28V DC)	
Current consumption	<40mA	
Internal pressure drop	<4V	
Leakage current	<10mA	
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)

Nomenclature:

MR-C1-H

MR-C1-V

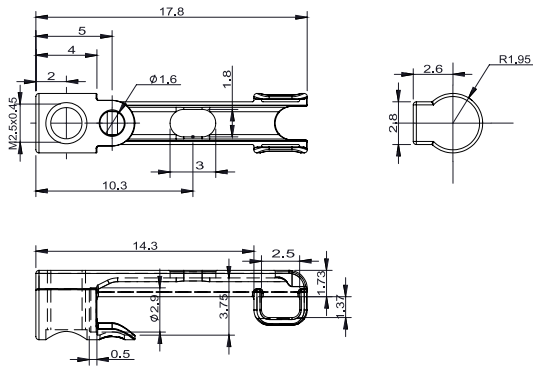


Combined Cylinder Sensor

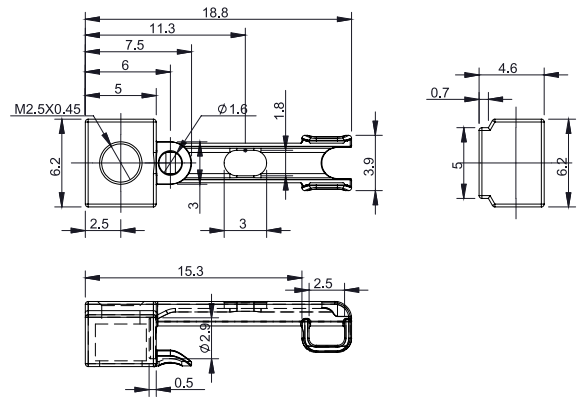
Dimensions(Unit:mm)

Accessories:

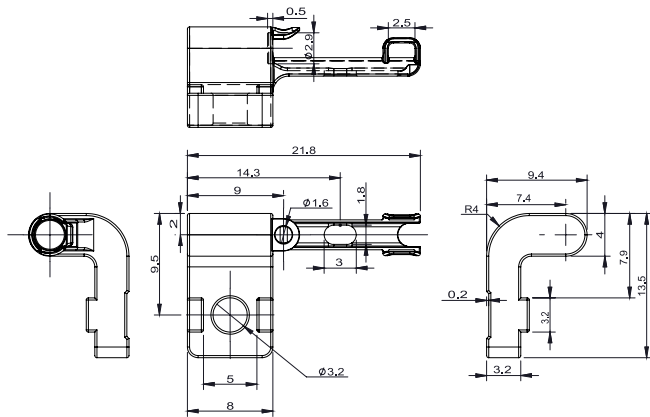
C shaped slot



T shaped slot

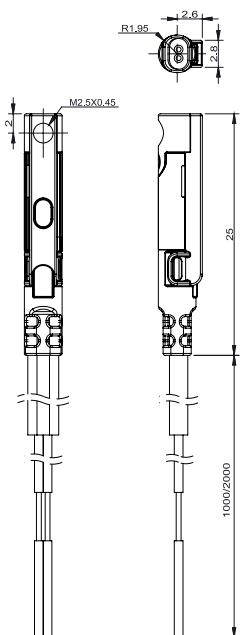


External usage

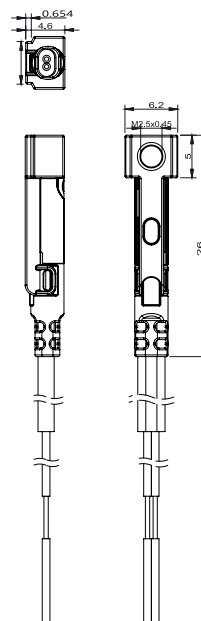


Straight combination:

MR-C1-H-C



MR-C1-H-T



Magnetic

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Vibration
- Temperature
- 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

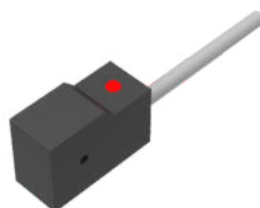
- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Vibration
- Temperature
- Cables
- Tester

Guidance

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

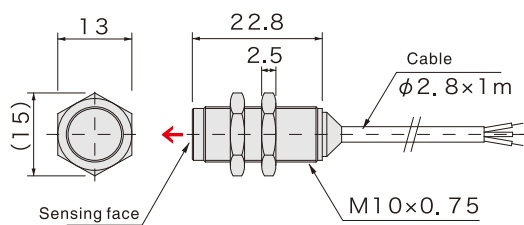


Appearance		
Features	Threaded metal case, water-tolerant	
Operating voltage	5~24V DC	
Max. Sensing distance	Iron wire ϕ 1	1.0
	High-speed steel drill ϕ 2	2.0
	Square iron 20X11	2.4
Output type	NPN (N.O.) (when approaching On) model number that ends with a "B " (when approaching OFF)	
Output current	\leq 15mA	
Current consumption	\leq 15mA	
Voltage resistance	AC 1000V 1min	
Insulation resistance	250V DC \geq 20M Ω	
Ambient temperature	-20~+85°C, No freezing	
Ambient humidity	20~95%RH, No condensation	
Motion indicator	Approx 100mm away from the main body	
Material	SUS303	
Mounting	M10 screw, tightening torque 12N · 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

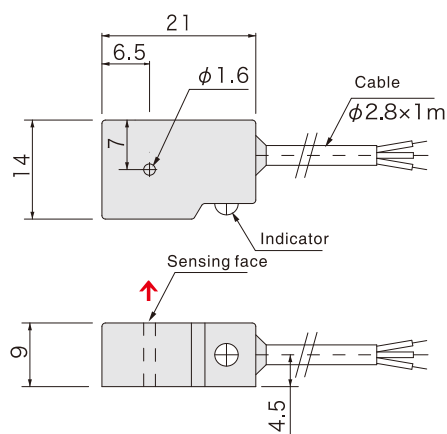


Appearance		
Features	Both sensing faces on the top and bottom is useful	
Operating voltage	5~24V DC	
Max. Sensing distance	Square iron 30X110	6.0
	Square iron 30X12	4.0
Output type	NPN (N.O.) (when approaching ON), model number that ends with a "B "	
Output current	\leq 15mA	
Current consumption	\leq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

MR-F1



MR-F2



- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Vibration
- Temperature
- 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 freezing	
Ambient humidity	20~95%RH, No condensation	
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 freezing	
Ambient humidity	20~95%RH, No condensation	
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

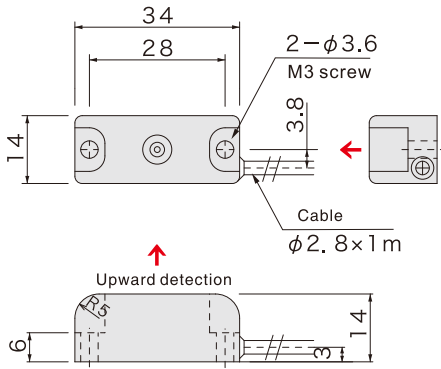
- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic**
- Contact
- Area
- Ultrasonic
- Vibration
- Temperature
- Cables
- Tester

Guidance

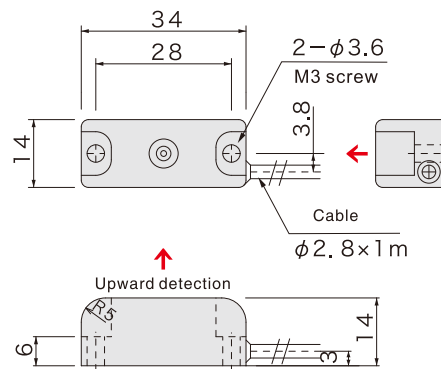
Magnetic

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

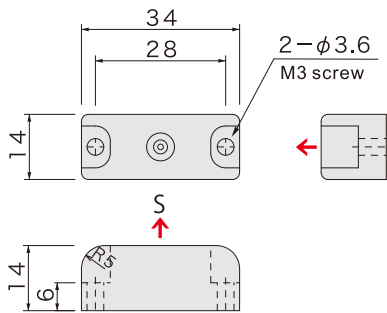
MR-D2



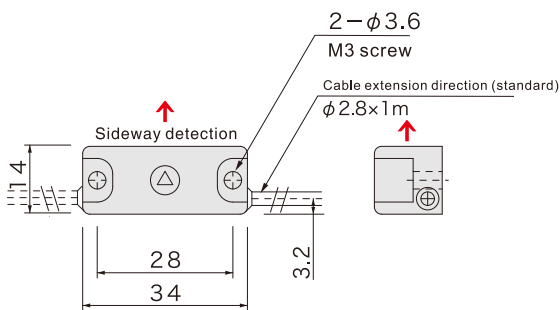
MR-D2P/D2PB



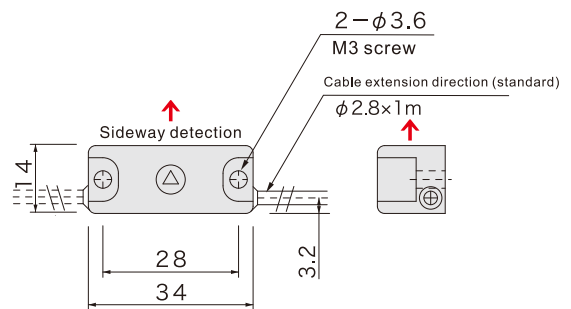
MR-DM2



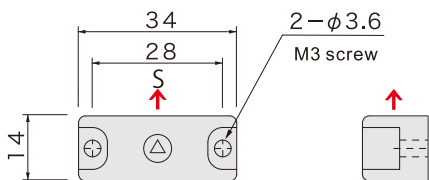
MR-D2X



MR-D2XP/D2XPB



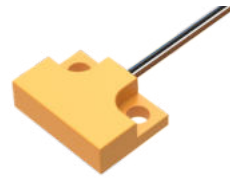
MR-DM2X



Fiber Optic
Slot Sensors
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Area
Ultrasonic
Vibration
Temperature
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



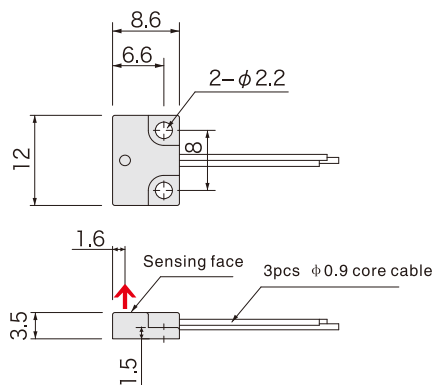
Appearance	
Operating voltage	5V DC
Magnetic sensitivity	65mV/mT (Center value)
Output voltage	0.3→4.7V (-40→+40mT): (Center value)
Center voltage	2.5V ± 0.15V
Output current	≤ ± 12mA
Current consumption	12mA
Response time	5 μs (100kHz)
Magnetic sensitivity temperature coefficient	0 ± 0.04 %/°C
Center 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
- Vibration
- Temperature
- Cables
- Tester

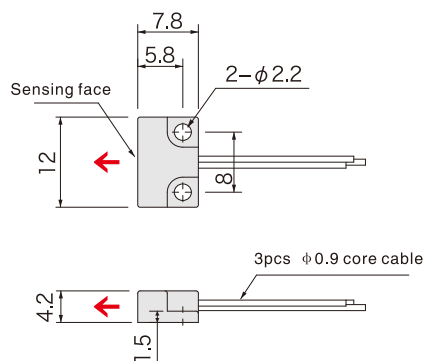
Guidance

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

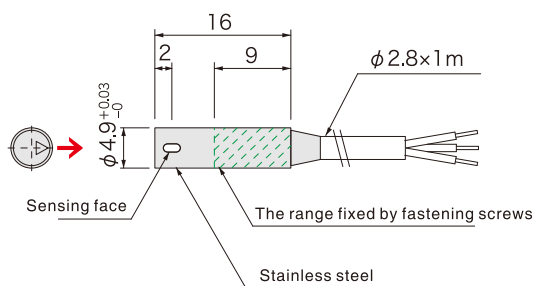
MR-L4



MR-L4-H



MR-L10X



- Fiber Optic
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- Vibration
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Guidance

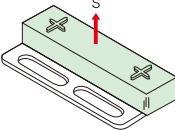
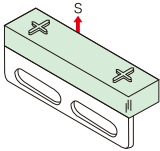
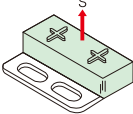
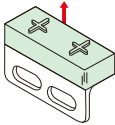
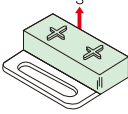
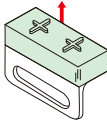
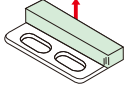
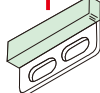




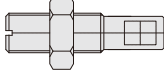


Magnetic

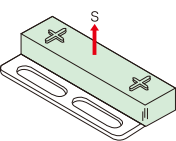
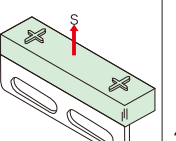
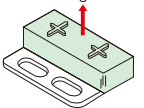
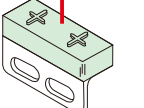
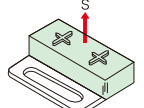
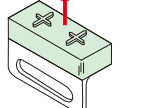
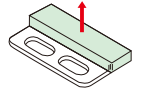
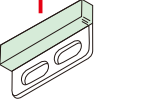
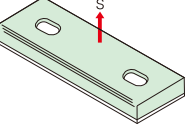
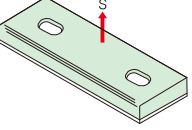
- Magnetic sensors
- High precision cylinder
- Combined cylinder
- Near iron sensor
- Door sensors
- Linear sensors**
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

Ordinary Magnets

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic
- Contact
- Area
- Ultrasonic
- Vibration
- Temperature
- 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>36 8 7.5 14.6 3 16 5 1 2-φ3.2×13.6</p>	MR-M1KH	 <p>36 8 12.6 9.6 16 4.5 5 1 2-φ3.2×13.6</p>
MR-M2K	 <p>23 8 7.5 14.6 3 10 5 1 2-φ3.2×7.8</p>	MR-M2KH	 <p>23 8 12.6 9.6 10 4.5 5 1 2-φ3.2×7.8</p>
MR-M3K	 <p>18 9 11 4.8 6.4 14 M2.5, 2.6 Long hole 3.4 0.8</p>	MR-M3KH	 <p>18 9 3.8 16.7 6.2 4.8 1.3 0.8 8.7 6.2 14 2.7 M2.5, 2.6 Long hole</p>
MR-M4K	 <p>13 7.4 5.4 3.4 7 2.9 1.3 2-φ2.2×4</p>	MR-M4KH	 <p>13 6.8 4.8 7 2.8 3.5 1.3 2-φ2.2×4</p>
MR-M9K	 <p>18.6 17.6 4 2-φ3.5 4.6 Magnetic</p>	MR-M2	 <p>34 28 1.4 2-φ3.6 (M3 screw) 1.4 S Magnetic direction</p>
MR-M2X	 <p>34 28 1.4 2-φ3.6 (M3 screw)</p>	MR-M10S	 <p>7 5 0.5 0.5 M5×0.5 S Magnetic direction</p>
MR-M10L	 <p>20 0.8 0.6 φ4.2 3 M5×0.5 Magnetic center S Magnetic direction</p>	MR-M304	 <p>4 φ3 S</p>
MR-M5015	 <p>1.5 φ5 S</p>		

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 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
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- Photoelectric
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- Contact
- Area
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- Vibration
- Temperature
- Cables
- Tester

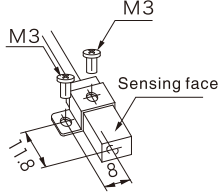
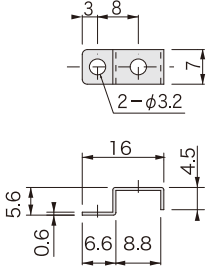
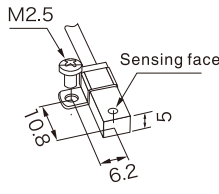
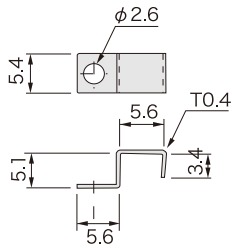
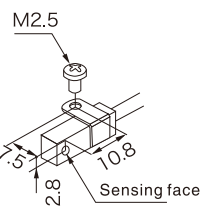
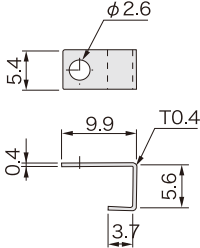
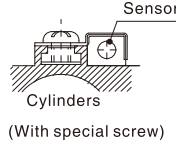
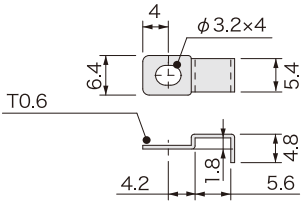
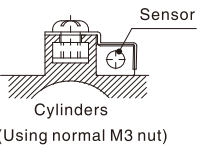
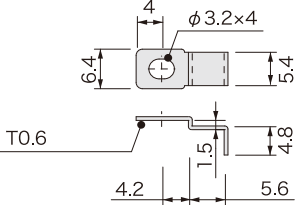
Guidance

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

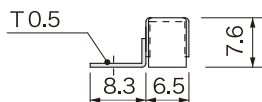
Model No.	Dimensions (Unit:mm)	Model No.	Dimensions (Unit:mm)
HP2-1 		HP3-1 	
HP3-2 		HP3-3 	
HP3-4 			

Fiber Optic
Slot Sensors
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Area
Ultrasonic
Vibration
Temperature
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

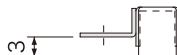
Dimensions(Unit:mm)

HP12-0



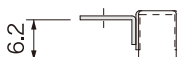
*Mounting deviation: None

HP12-3



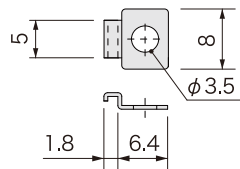
*Mounting deviation: 3mm

HP12-6.2

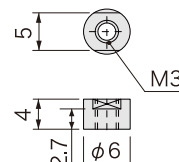


*Mounting deviation: 6.2mm

HP12-t

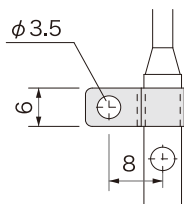


[Accessory]



[Nut]

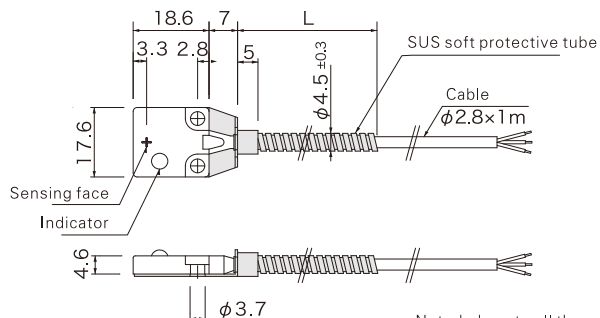
With special screw
*Used for Pneumatic fingers



Mounting accessories:
-BT: cable protective tube

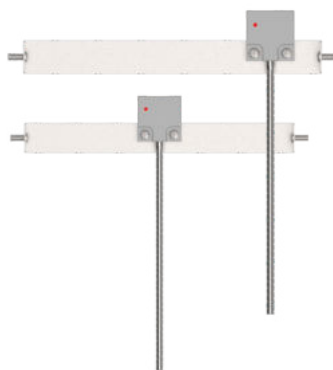


- Extremely strong, even being stomped on the ground, SUS304 soft protective tube
- Can use in rough environments, such as dust, oil, water, and light, very robust

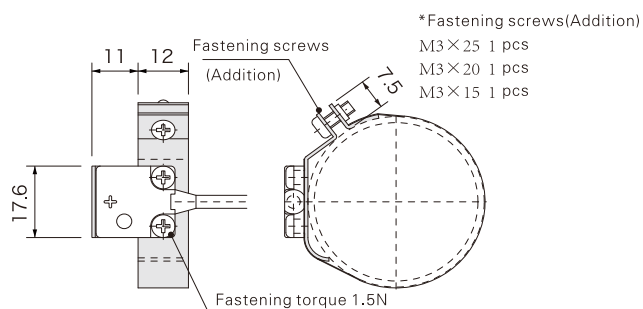


Noted: do not pull the cable with force more than 10N.

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 $\phi 32-100$.



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Magnetic

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