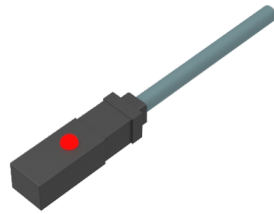


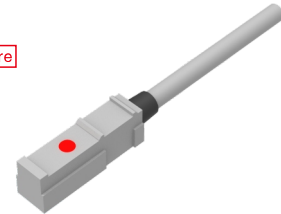
# High Precision Cylinder Sensors

## Magnetic

3-wire



2-wire

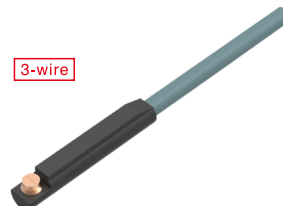


Appearance		
Suitable applications	T shaped slot	T shaped slot
Features	Built-in LED indicators	Can replace 2-wire feed switches for cylinders, and suits to use in cylinders with small range, such as pneumatic fingers.
Operating voltage	5~24V DC	12~24V DC
Detected magnetic poles	N-pole and S-pole, optional	
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	<b>MR-C6-S</b>
	Detected N-pole	<b>MR-C6-N</b>
Model NO.	Detected S-pole	<b>MR-C12-S</b>
	Detected N-pole	<b>MR-C12-N</b>

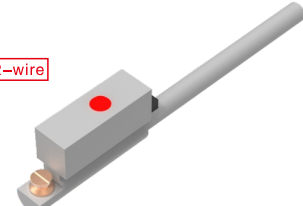
3-wire



3-wire



2-wire



Appearance					
Suitable applications	C shaped slot	C+U shaped slot	C+U shaped slot	C shaped slot	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	<b>MR-C7-S</b>	<b>MR-C8-C-S</b>	<b>MR-C8-U-S</b>	<b>MR-C13-C-S</b>
	Detected N-pole	<b>MR-C7-N</b>	<b>MR-C8-C-N</b>	<b>MR-C8-U-N</b>	<b>MR-C13-C-N</b>
Model NO.	Detected S-pole				<b>MR-C13-U-S</b>
	Detected N-pole				<b>MR-C13-U-N</b>

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

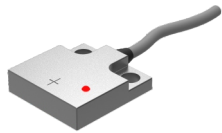
### Guidance

### Magnetic

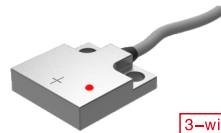
- Magnetic sensors
- High precision cylinder**
- Combined cylinder
- Near iron sensor
- Door sensors
- Linear sensors
- Ordinary magnets
- High precision composite magnets
- Mounting accessories

# High Precision Cylinder Sensors

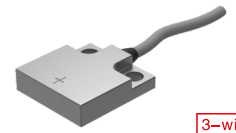
Magnetic



2-wire



3-wire

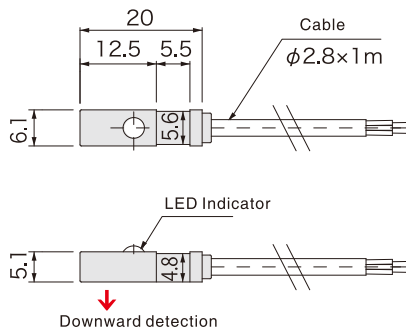


3-wire

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 $\mu$ s		5 $\mu$ s
Output type	...		NPN (N.O) (When approaching, on)
Output current	50mA MAX		$\leq 12$ mA
Current consumption	...		$\leq 12$ mA
Current leakage	OFF States, 0.5mA MAX		...
Voltage withstand ability	AC1000V 1min		
Insulation resistance	250V DC $\geq 20$ M $\Omega$		
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	<b>MR-C92-S</b>	<b>MR-C9-S</b>
	Detected N-pole	<b>MR-C92-N</b>	<b>MR-C9-N</b>
			<b>MR-C9-E-S</b>
			<b>MR-C9-E-N</b>

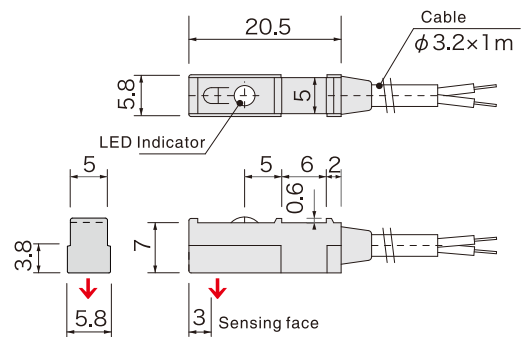
## Dimensions(Unit:mm)

MR-C6



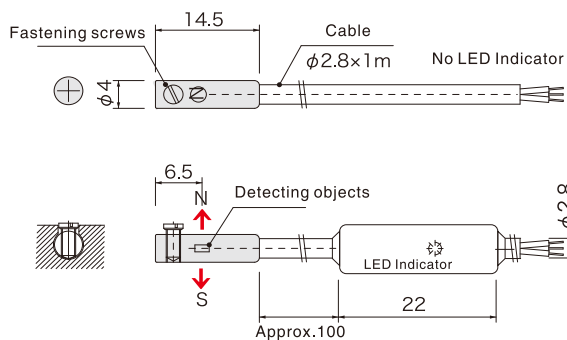
Mounting accessories: HP3-1/HP3-2/HP3-3/HP3-4

MR-C12



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

MR-C7

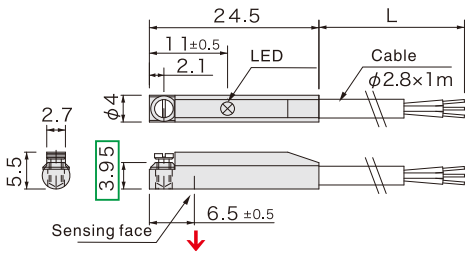


# High Precision Cylinder Sensors

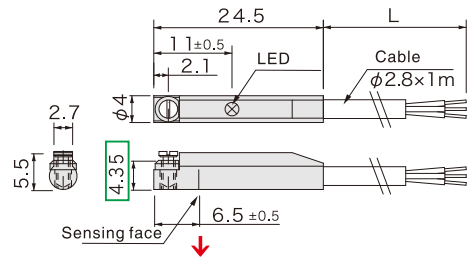
Dimensions(Unit:mm)

Magnetic

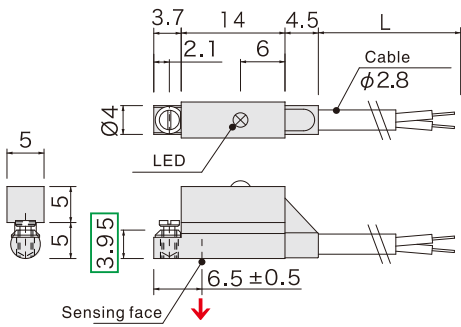
MR-C8(C shaped slot)



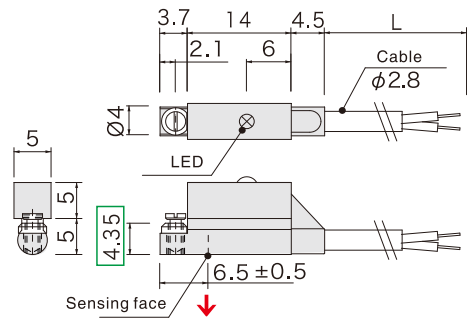
MR-C8(U shaped slot)



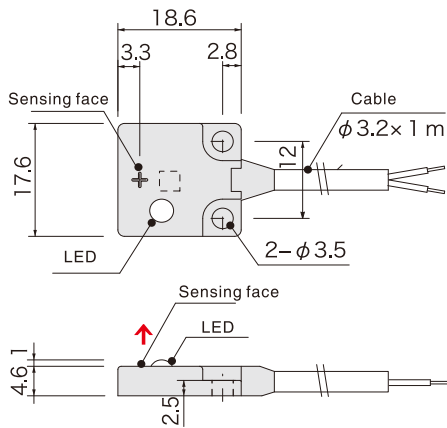
MR-C13(C shaped slot)



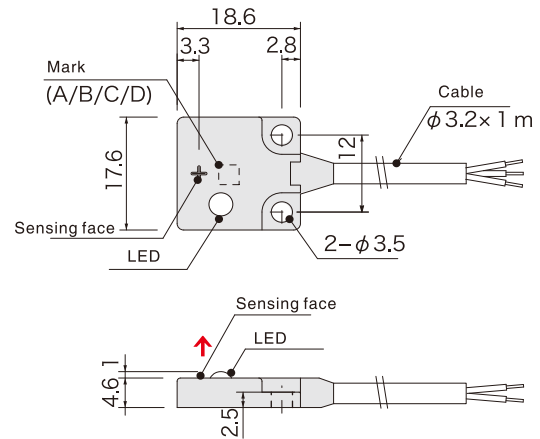
MR-C13(U shaped slot)



MR-C92



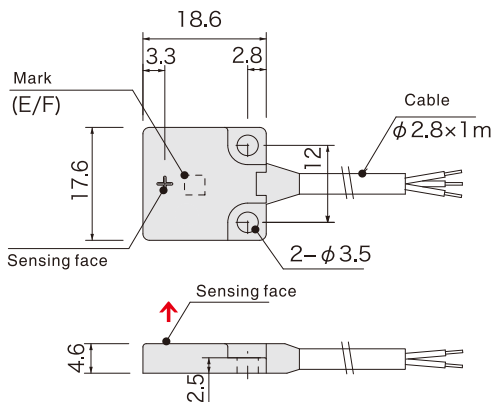
MR-C9



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

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

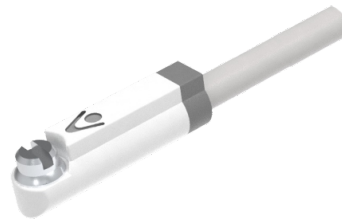


Economical Type

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	<b>MR-30</b>	<b>MR-30G</b>	<b>MR-30N</b>	<b>MR-30P</b>



Economical Type

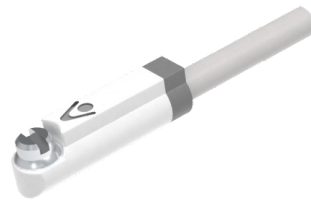
NEW!

## 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	<b>MR-C80</b>

Economical Type

NEW!

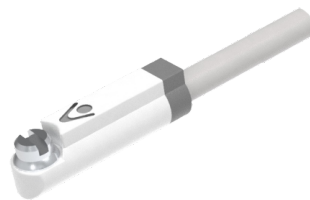


### Appearance

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	<b>MR-C81</b>

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	<b>MR-C86</b>

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

### Guidance

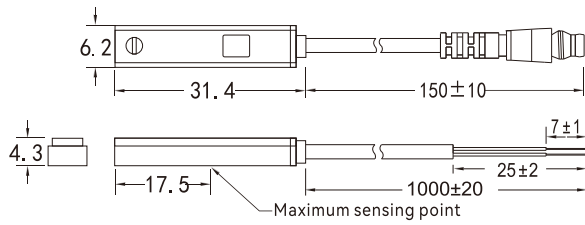
#### Magnetic

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

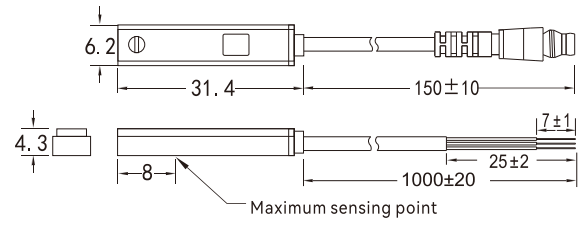
# Economical Cylinder Sensor

## Dimensions(Unit:mm)

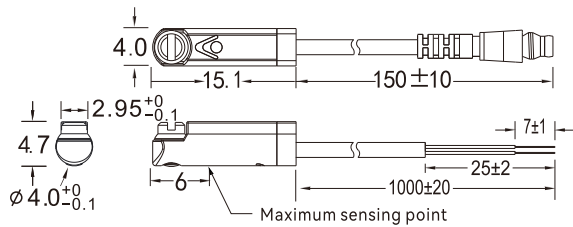
MR-30R/G



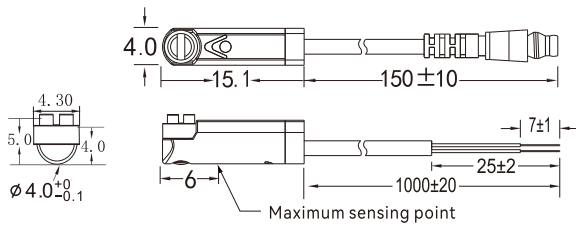
MR-30N/P



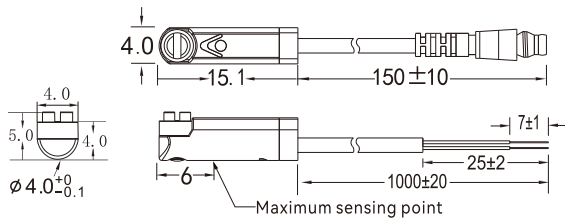
MR-C80



MR-C81

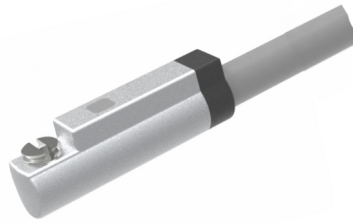


MR-C86



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 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	<b>MR-70</b>

- 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

