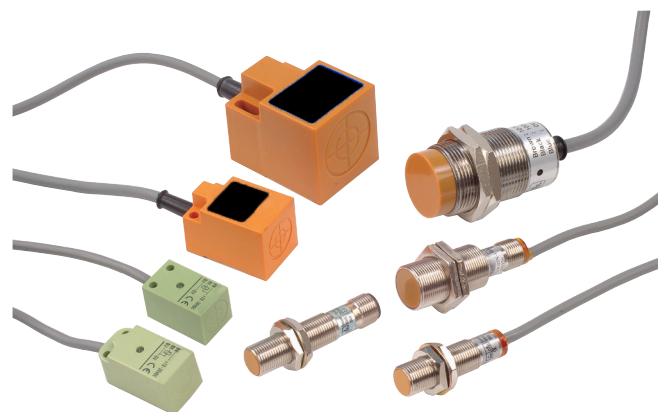


RJS ELECTRONICS LTD PROXIMITY SWITCH

Description

The sensors provide excellent results even with difficult-to-detect objects, e.g. small or thin parts, wires or bright metals. A variety of types cover a wide range of individual requirements and installation situations. Thus, devices are available with N.C. or N.O. functions, with NPN or PNP switching outputs, and cable or plug connection. The enclosure rating is IP66.



Features

- Easy-to-use and tough
- Wide range of models
- Wide operating voltage range
- Short circuit protected
- Ideal for a variety of applications
- With a metal connector that can be tightened securely and a cord protector
- Enclosure rating of IP66, water-proof and oil-drip proof
- Fast response

Specifications

Item	Standard
Differential travel	10% max. of sensing distance
Target	Ferrous metal (The sensing distance decreases with non-ferrous metal.)
Power supply voltage (operating voltage range)	12 ~ 24 VDC. Ripple (p~p): 10% max. (10 ~ 30 VDC)
Current consumption (DC 3-wire)	10 mA max.
Output type	See Product selection
Control Load current output (See note 1.)	200 mA max. (32 VDC max.)
Residual voltage	1 V max. (under load current of 200 mA with cable length of 2 m)
Operation mode (with sensing object approaching)	See Product selection
Protection circuit	Output reverse polarity protection, Power source circuit reverse polarity protection, Surge suppressor, Short-circuit protection
Ambient air temperature	Operating: -40°C to 70°C, Storage: -40°C to 85°C (with no icing or condensation)
Temperature influence (See note 1.)	±10% max. of sensing distance at 23°C within temperature range of -25°C to 70°C ±15% max. of sensing distance at 23°C within temperature range of -40°C to 70°C
Ambient humidity	Operating: 35% to 95%, Storage: 35% to 95%
Voltage influence	±1% max. of sensing distance in rated voltage range ±15%
Insulation resistance	50 MΩ min. (at 500 VDC) between current carry parts and case
Dielectric strength	1,000 VAC at 50/60 Hz for 1 min between current carry parts and case
Vibration resistance	10 to 55 Hz, 1.5mm double amplitude for 2 hours each in X, Y and Z directions
Shock resistance	1,000 m/s ² , 10 times each in x, Y and Z directions
Standards and listings	IEC60529: IP67, Degree of protection EN60947-5-2: EMC

Note 1. When using any model at an ambient temperature between -40°C and -25°C and a power voltage between 30 and 32 VDC, use a load current of 100 mA max.,

PROXIMITY SWITCH

Product selection

RJST □ - □ □ - □
 1 2 3 4 5

1. Housing outline

- T: Inductive thread round
- S: Inductive square
- C: Inductive thread round connector

2. Dimension of sensing face

RJST RJSC type series

- 12: diameter 12mm
- 18: diameter 18mm
- 30: diameter 30mm

RJSS type series

- 17: square 17mm x 17mm
- 18: square 18mm x 18mm
- 18L: square 18mm x 18mm
- 25: square 25mm x 25mm
- 30: square 30mm x 30mm
- 40: square 40mm x 40mm

3. Sensing distance

Numeral: Sensing distance:
 E.g. 02=2 mm, 16=16mm

4. Output stage

- N: NPN open collector DC mode
- P: PNP open collector DC mode

5. Output function

- 1: N.O. normally open
- 2: N.C. normally close

Example:

RJST12-05N-1 Inductive thread round housing, M12, Sn=5mm, NPN-DC, normally open,

RJSS18-05N-1 Inductive square 18x18 mm, Sn=5mm, NPN-DC, normally open.



Output stage diagram

	NO	NC
PNP	<p>M12 connector Pin Arrangement</p> <p>Terminal 2 of the M12 connector is not used.</p>	<p>M12 connector Pin Arrangement</p> <p>Terminal 4 of the M12 connector is not used.</p>
NPN	<p>M12 connector Pin Arrangement</p> <p>Terminal 2 of the M12 connector is not used.</p>	<p>M12 connector Pin Arrangement</p> <p>Terminal 4 of the M12 connector is not used.</p>

PROXIMITY SWITCH

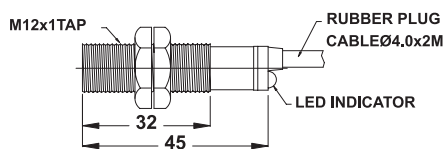
Ordering information

Inductive thread Round metal body type

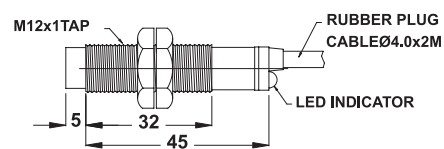
Appearance					
Item		Shield		Non-Shield	
		Cable type	Connector type	Cable type	Connector type
Output Function Output Stage	NPN NO-output	RJST12-02N-1	RJSC12-02N-1	RJST12-05N-1	RJSC12-05N-1
	NPN NC-output	RJST12-02N-2	RJSC12-02N-2	RJST12-05N-2	RJSC12-05N-2
	PNP NO-output	RJST12-02P-1	RJSC12-02P-1	RJST12-05P-1	RJSC12-05P-1
	PNP NC-output	RJST12-02P-2	RJSC12-02P-2	RJST12-05P-2	RJSC12-05P-2
Sensing Distance		2 mm ± 10%		5 mm ± 10%	
Setting distance		0 to 1.6 mm		0 to 4.0mm	
Response frequency		1.5KHz			
Standard target		12x12x1mm			
Body Material		Brass Nickel plated			
Circuit Protection		Yes			
Reverse polarity protection of supply voltage		Yes			
Cable length		2 m			
Enclosure Protection		IP 67			

DIMENSIONS

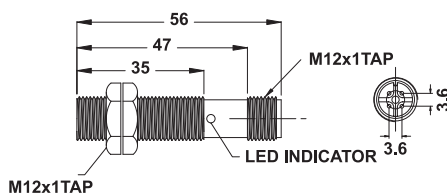
RJST12 Shield



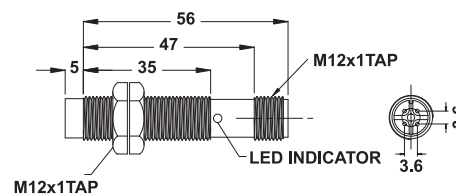
RJST12 Non-Shield



RJSC12 Shield





RJSC12 Non-Shield



PROXIMITY SWITCH

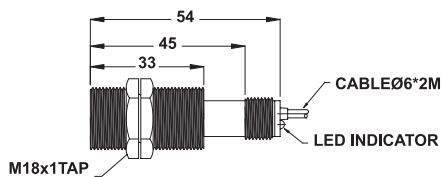
Ordering information

Inductive thread Round metal body type

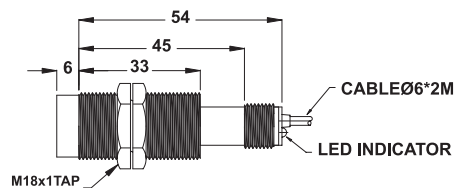
Appearance					
Item		Shield		Non-Shield	
		Cable type	Connector type	Cable type	Connector type
Output Function Output Stage	NPN NO-output	RJST18-05N-1	RJSC18-05N-1	RJST18-08N-1	RJSC18-08N-1
	NPN NC-output	RJST18-05N-2	RJSC18-05N-2	RJST18-08N-2	RJSC18-08N-2
	PNP NO-output	RJST18-05P-1	RJSC18-05P-1	RJST18-08P-1	RJSC18-08P-1
	PNP NC-output	RJST18-05P-2	RJSC18-05P-2	RJST18-08P-2	RJSC18-08P-2
Sensing Distance		5 mm ± 10%		8 mm ± 10%	
Setting distance		0 to 4.0 mm		0 to 6.4 mm	
Response frequency		1.5KHz			
Standard target		18x18x1mm			
Body Material		Brass Nickel plated			
Circuit Protection		Yes			
Reverse polarity protection of supply voltage		Yes			
Cable length		2 m			
Enclosure Protection		IP 67			

DIMENSIONS

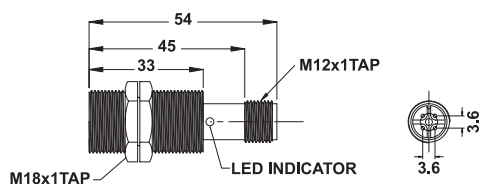
RJST18 Shield



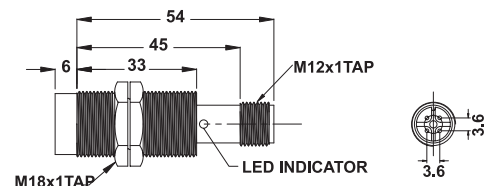
RJST18 Non-Shield



RJSC18 Shield



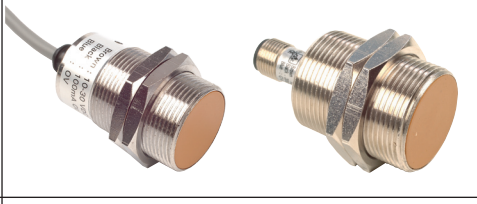
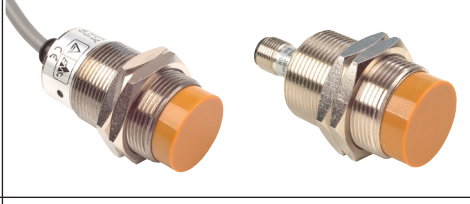
RJSC18 Non-Shield



PROXIMITY SWITCH

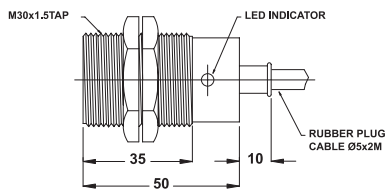
Ordering information

Inductive thread Round metal body type

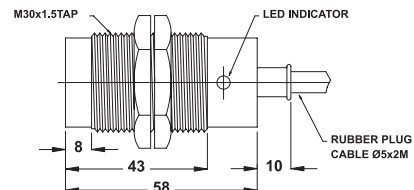
Appearance					
Item		Shield		Non-Shield	
		Cable type	Connector type	Cable type	Connector type
Output Function Output Stage	NPN NO-output	RJST30-10N-1	RJSC30-10N-1	RJST30-15N-1	RJSC30-15N-1
	NPN NC-output	RJST30-10N-2	RJSC30-10N-2	RJST30-15N-2	RJSC30-15N-2
	PNP NO-output	RJST30-10P-1	RJSC30-10P-1	RJST30-15P-1	RJSC30-15P-1
	PNP NC-output	RJST30-10P-2	RJSC30-10P-2	RJST30-15P-2	RJSC30-15P-2
Sensing Distance		10 mm ± 10%		15 mm ± 10%	
Setting distance		0 to 8.0 mm		0 to 12.0mm	
Response frequency		1.0KHz			
Standard target		30x30x1mm			
Body Material		Brass Nickel plated			
Circuit Protection		Yes			
Reverse polarity protection of supply voltage		Yes			
Cable length		2 m			
Enclosure Protection		IP 67			

DIMENSIONS

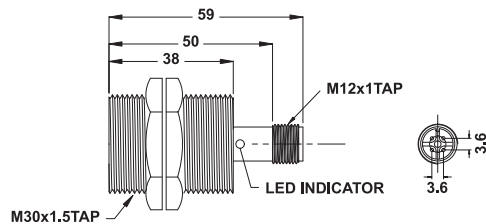
RJST30 Shield



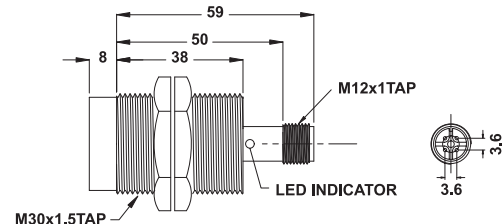
RJST30 Non-Shield



RJSC30 Shield




RJSC30 Non-Shield



PROXIMITY SWITCH

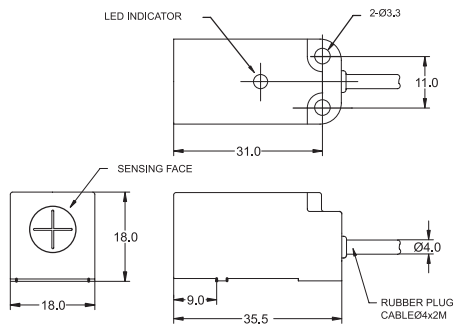
Ordering information

Inductive square

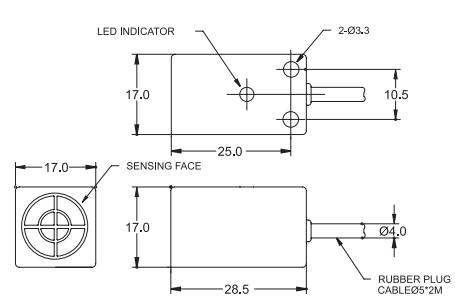
Appearance			
Item		RJSS17 series	RJSS18 series
Output Function Output Stage	NPN NO-output	RJSS17-05N-1	RJSS18-05N-1
	NPN NC-output	RJSS17-05N-2	RJSS18-05N-2
	PNP NO-output	RJSS17-05P-1	RJSS18-05P-1
	PNP NC-output	RJSS17-05P-2	RJSS18-05P-2
Sensing Distance		5 mm ± 10%	5 mm ± 10%
Setting distance		0 to 4.0 mm	0 to 4.0 mm
Response frequency		1.5KHz	
Standard target		17x17x1mm	18x18x1mm
Body Material		Plastic	
Circuit Protection		Yes	
Reverse polarity protection of supply voltage		Yes	
Cable length		2 m	
Enclosure Protection		IP 67	

DIMENSIONS

RJSS18



RJSS17



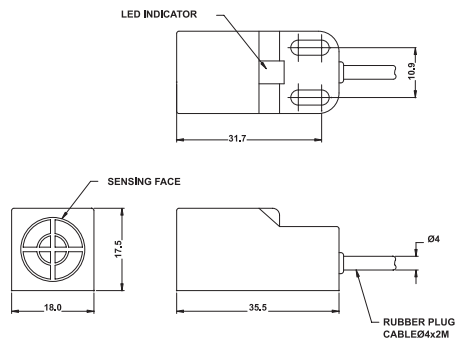
PROXIMITY SWITCH

Ordering information

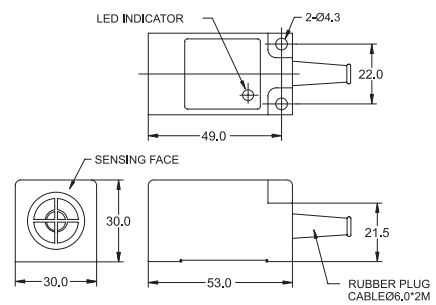
Inductive square

			
RJSSL18 series	RJSS25 series	RJSS30 series	RJSS40 series
RJSSL18-05N-1	RJSS25-07N-1	RJSS30-10N-1	RJSS40-20N-1
RJSSL18-05N-2	RJSS25-07N-2	RJSS30-10N-2	RJSS40-20N-2
RJSSL18-05P-1	RJSS25-07P-1	RJSS30-10P-1	RJSS40-20P-1
RJSSL18-05P-2	RJSS25-07P-2	RJSS30-10P-2	RJSS40-20P-2
5 mm ± 10%	7 mm ± 10%	10 mm ± 10%	20 mm ± 10%
0 to 4.0 mm	0 to 5.6 mm	0 to 8.0mm	0 to 16.0mm
1.5KHz	1.0KHz		600Hz
18x18x1mm	25x25x1mm	30x30x1mm	40x40x1mm
Plastic			
Yes			
Yes			
2 m			
IP 67			

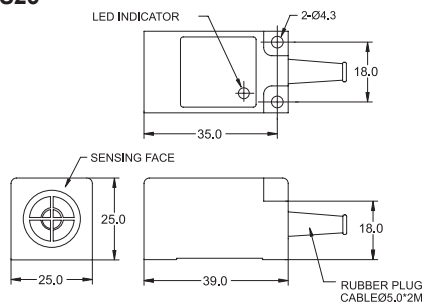
RJSSL18



RJSS30



RJSS25



RJSS40

