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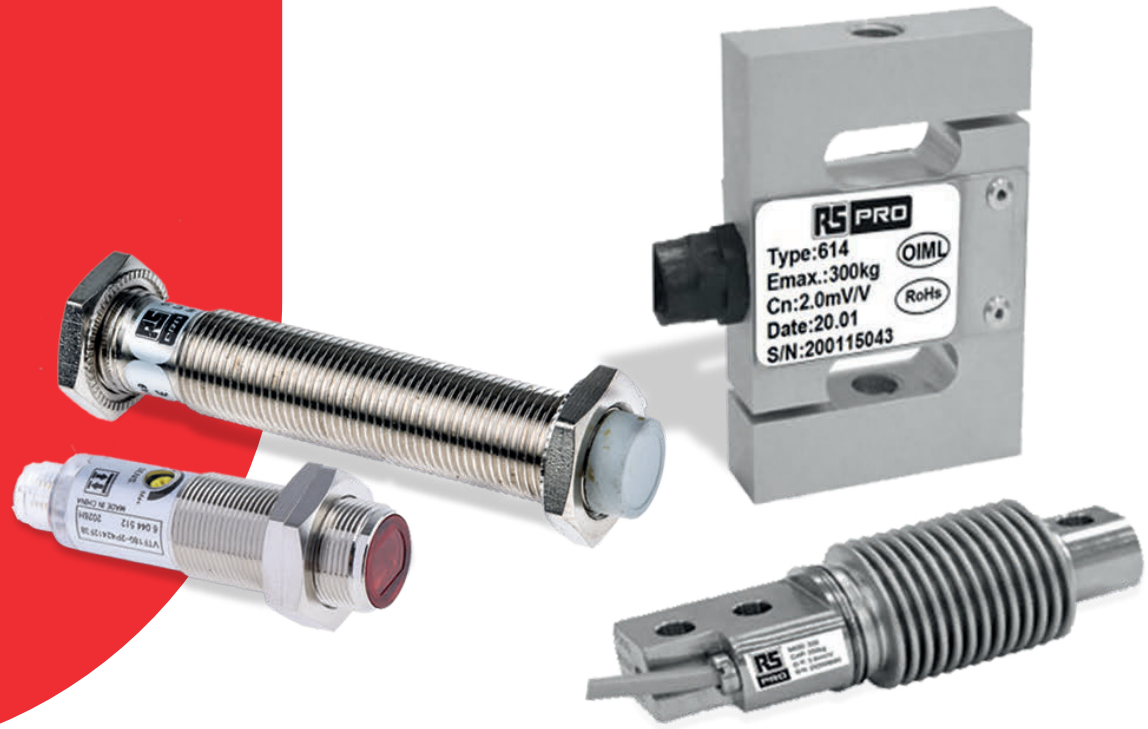
FACTORY AUTOMATION SENSORS

SELECTION GUIDE



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Photoelectric Sensors

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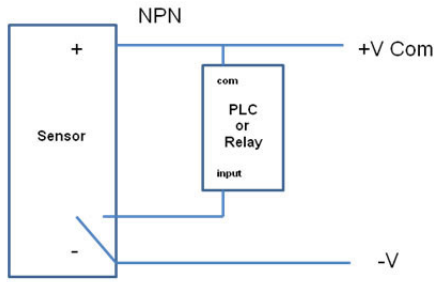
INDUCTIVE SENSOR: NPN OR PNP?

If your application requires a inductive sensor, you will need to decide what output type you require, NPN or PNP?

NPN Output:

NPN are sinking sensors, these allow current to flow into the sensor and to V-.

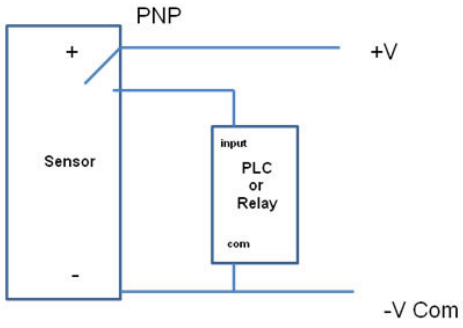
With an NPN sensor the switching occurs on the –V rail. The +V rail forms the common between the device and the sensor. A permanent +V supply will be connected to the device that is to be activated, for instance a PLC or relay. When the sensor turns on, it switches the –V rail and completes the circuit. Current travels through the sensor transistor into the device, thus turning it on or changing its state.



PNP Output:

PNP are sourcing sensors and allow current to flow out from the sensor, from V+.

With a PNP sensor the switching occurs on the +V rail. The -V rail forms the common between the device and the sensor. A permanent -V supply will be connected to the device that is to be activated, for instance a PLC or relay. When the sensor turns on, it switches the +V rail and completes the circuit. Current travels through the sensor transistor into the device, thus turning it on or changing its state.



INDUCTIVE SENSOR: NPN OR PNP?

Remember

- If the DC voltage has a V+ common, an NPN output sensor is needed. If the DC voltage has a V- common, a PNP output sensor is needed.
- NPN or PNP output does not have correlation to whether the sensor is NO (normally open) or NC (normally closed) as both NPN and PNP can be either NO or NC.

CHOOSING THE RIGHT CONNECTOR

Sensor Connector (M8/M12)

Used universally within many industrial control systems, M8 and M12 sensor connectors are an ideal choice for handling the rugged demands found within industrial applications such as food and beverage, research and development and machine and building.

Utilised in conjunction with sensor and switch cables, M8 and M12 sensor connectors are designed to work seamlessly with control systems and are available in right-angle and straight body orientations, as well as 3-, 4-, 5-, 6-, 8- and 12-pin variants.

PHOTOELECTRIC SENSORS

Photoelectric sensors detect and measure physical objects or quantities by emitting a field or beam of electromagnetic radiation. An object is detected by measuring alterations in the return signal.

Through-beam sensors rely on two separate housings, one for the transmitter and one for the receiver. Retro-reflective photoelectric sensors have both the transmitter and receiver contained within the same housing but require a reflector opposite to the sensor. Diffuse sensors are easier to install as only one device has to be mounted. This is because the transmitter and receiver are contained within one housing.

WHERE

Where would it be used?

- Industrial Factories
- Distribution Warehouses
- Food and Beverage
- Automation
- Building Maintenance

WHY

Why would you use this product?

The basic function is to detect the presence or absence of objects or measure the distance to the object, there are 3 main types of photoelectric sensors which provide reliable detection, these are through-beam, retro-reflective and diffuse.

WHO

Who would use it?

- Electrical Engineer
- Maintenance Engineer
- Test Engineer
- Research & Development

Background Suppression

Image for illustrative purposes only

DETECTION TYPE	DETECTION RANGE (MM)	OUTPUT TYPE	TERMINAL TYPE	STOCK NO
Background Suppression	100	NPN NO/NC	2m Cable	202-4467
Background Suppression	100	NPN NO/NC	M12	202-4469
Background Suppression	100	PNP NO/NC	2m Cable	202-4470
Background Suppression	100	PNP NO/NC	M12	202-4471
Background Suppression	350	NPN NO/NC	2m Cable	202-4448
Background Suppression	350	NPN NO/NC	M8	202-4449
Background Suppression	350	PNP NO/NC	2m Cable	202-4450
Background Suppression	350	PNP NO/NC	M8	202-4451
Background Suppression	2000	PNP+NPN	2m Cable	202-5446
Background Suppression	2000	PNP+NPN	M12	202-5447

Diffuse

Image for illustrative purposes only

DETECTION TYPE	DETECTION RANGE (MM)	OUTPUT TYPE	STOCK NO
Diffuse	800	Relay	202-5452
Diffuse	2000	NO+NC, NPN	202-5448
Diffuse	2000	NO+NC, PNP	202-5450
Diffuse	2000	Relay	202-5451

Diffuse Reflection

Image for illustrative purposes only

DETECTION TYPE	DETECTION RANGE (MM)	TERMINAL TYPE	OUTPUT TYPE	THREAD SIZE	STOCK NO
Diffuse Reflection	100	2m Cable	NPN	-	202-4428
Diffuse Reflection	100	M8	NPN	-	202-4429
Diffuse Reflection	100	2m Cable	PNP	-	202-4431
Diffuse Reflection	100	M8	PNP	-	202-4432
Diffuse Reflection	300	2m Cable	NPN NO/NC	-	202-4433
Diffuse Reflection	300	M8	NPN NO/NC	-	202-4434
Diffuse Reflection	300	2m Cable	PNP NO/NC	-	202-4435
Diffuse Reflection	300	M8	PNP NO/NC	-	202-4436
Diffuse Reflection	300	2m Cable	NPN NO/NC	M18×1	202-4453
Diffuse Reflection	300	M12	NPN NO/NC	M18×1	202-4454
Diffuse Reflection	300	2m Cable	PNP NO/NC	M18×1	202-4455
Diffuse Reflection	300	M12	PNP NO/NC	M18×1	202-4456
Diffuse Reflection	300	2m Cable	Relay NO/NC	-	202-4476
Diffuse Reflection	1000	2m Cable	NPN	-	202-4424
Diffuse Reflection	1000	M8	NPN	-	202-4425
Diffuse Reflection	1000	2m Cable	PNP	-	202-4426
Diffuse Reflection	1000	M8	PNP	-	202-4427
Diffuse Reflection	2000	2m Cable	PNP+NPN	-	202-4472
Diffuse Reflection	2000	M12	PNP+NPN	-	202-4473
Diffuse Reflection	2000	2m Cable	Relay NO/NC	-	202-4475

Polarised Reflection

Image for illustrative purposes only

DETECTION TYPE	DETECTION RANGE (MM)	TERMINAL TYPE	OUTPUT TYPE	STOCK NO
Polarised Reflection	3000	2m Cable	NPN NO/NC	201-8160
Polarised Reflection	3000	M8	NPN NO/NC	201-8161
Polarised Reflection	3000	2m Cable	PNP NO/NC	201-8162
Polarised Reflection	3000	M8	PNP NO/NC	201-8163

Polarised Reflection

Image for illustrative purposes only

DETECTION TYPE	DETECTION RANGE (MM)	TERMINAL TYPE	OUTPUT TYPE	STOCK NO
Polarised Reflection	3000	2m Cable	NPN NO/NC	202-4457
Polarised Reflection	3000	M12	NPN NO/NC	202-4458
Polarised Reflection	3000	2m Cable	PNP NO/NC	202-4459
Polarised Reflection	3000	M12	PNP NO/NC	202-4460
Polarised Reflection	4000	M8	NPN NO/NC	202-4437
Polarised Reflection	4000	2m Cable	NPN NO/NC	202-4438
Polarised Reflection	4000	2m Cable	PNP NO/NC	202-4439
Polarised Reflection	5000	M12	PNP+NPN	202-4478
Polarised Reflection	5000	M12	Relay NO/NC	202-4481
Polarised Reflection	12000	Terminal	NPN NO/NC	202-5457
Polarised Reflection	12000	Terminal	PNP NO/NC	202-5458
Polarised Reflection	12000	Terminal	Relay NO/NC	202-5459

Polarised Reflection Continued

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DETECTION TYPE	DETECTION RANGE (MM)	TERMINAL TYPE	OUTPUT TYPE	STOCK NO
Polarised Reflection	4000	M8	PNP NO/NC	202-4440
Polarised Reflection	5000	2m Cable	PNP+NPN	202-4477
Polarised Reflection	5000	2m Cable	Relay NO/NC	202-4479
Polarised Reflection (Emitter)	20000	M12	-	202-4462
Polarised Reflection (Receiver)	20000	M12	NPN NO/NC	202-4464
Polarised Reflection (Receiver)	20000	M12	PNP NO/NC	202-4466

Retro-reflection

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DETECTION TYPE	DETECTION RANGE (MM)	OUTPUT TYPE	STOCK NO
Retro-reflection	5000	NC, NPN	202-5453
Retro-reflection	5000	NC, PNP	202-5454
Retro-reflection	5000	Relay	202-5456

Through Beam Emitter / Receiver

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DETECTION TYPE	DETECTION RANGE (MM)	OUTPUT TYPE	STOCK NO
Through Beam (Emitter)	30000	Relay	202-5460
Through Beam (Receiver)	30000	Relay	202-5462

Through Beam

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DETECTION TYPE	DETECTION RANGE (MM)	TERMINAL TYPE	OUTPUT TYPE	STOCK NO
Through Beam (Receiver)	10000	2m Cable	NPN NO/NC	202-4441
Through Beam (Receiver)	10000	M8	NPN NO/NC	202-4442
Through Beam (Receiver)	10000	2m Cable	PNP NO/NC	202-4443
Through Beam (Receiver)	10000	M8	PNP NO/NC	202-4444
Through Beam (Emitter)	10000	2m Cable	-	202-4445
Through Beam (Emitter)	10000	M8	-	202-4447
Through Beam (Emitter)	20000	2m Cable	-	202-4461
Through Beam (Receiver)	20000	2m Cable	NPN NO/NC	202-4463
Through Beam (Receiver)	20000	2m Cable	PNP NO/NC	202-4465
Through Beam (Emitter)	20000	M12	-	202-4462
Through Beam (Receiver)	20000	M12	NPN NO/NC	202-4464
Through Beam (Receiver)	20000	M12	PNP NO/NC	202-4466
Through Beam (Emitter)	60000	2m Cable	-	202-4482
Through Beam (Receiver)	60000	2m Cable	Relay NO/NC	202-4483

Background Suppression M18×1

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DETECTION TYPE	HOUSING MATERIAL	DETECTION RANGE (MM)	TERMINAL TYPE	OUTPUT TYPE	STOCK NO
Background Suppression	Brass Nickel Plated	1000	2m Cable	PNP NO/NC	204-4013
Background Suppression	Brass Nickel Plated	1000	2m Cable	NPN NO/NC	204-4014
Background Suppression	Brass Nickel Plated	1000	M12	PNP NO/NC	204-4015
Background Suppression	Brass Nickel Plated	1000	M12	NPN NO/NC	204-4016

Diffuse

Image for illustrative purposes only

DETECTION TYPE	HOUSING MATERIAL	DETECTION RANGE (MM)	TERMINAL TYPE	OUTPUT TYPE	THREAD SIZE	STOCK NO
Diffuse Reflection	Brass Nickel Plated	150	2m Cable	NPN NO	M12×1	204-3961
Diffuse Reflection	Brass Nickel Plated	150	2m Cable	PNP NO	M12×1	204-3962
Diffuse Reflection	Brass Nickel Plated	150	M12	NPN NO	M12×1	204-3963
Diffuse Reflection	Brass Nickel Plated	150	M12	PNP NO	M12×1	204-3965
Diffuse Reflection	PBT	150	2m Cable	NPN NO	M12×1	204-3966
Diffuse Reflection	PBT	150	2m Cable	PNP NO	M12×1	204-3967
Diffuse Reflection	Brass Nickel Plated	400	2m Cable	NPN NO/NC	M18×1	204-3968
Diffuse Reflection	Brass Nickel Plated	400	M12	NPN NO/NC	M18×1	204-3970
Diffuse Reflection	Brass Nickel Plated	400	2m Cable	PNP NO/NC	M18×1	204-3969
Diffuse Reflection	Brass Nickel Plated	400	M12	PNP NO/NC	M18×1	204-3971

Diffuse Continued

Image for illustrative purposes only

DETECTION TYPE	HOUSING MATERIAL	DETECTION RANGE (MM)	TERMINAL TYPE	OUTPUT TYPE	THREAD SIZE	STOCK NO
Diffuse Reflection	PBT	400	2m Cable	NPN NO/NC	M18×1	204-3972
Diffuse Reflection	PBT	400	2m Cable	PNP NO/NC	M18×1	204-3973
Diffuse Reflection	PBT	400	M12	NPN NO/NC	M18×1	204-3974
Diffuse Reflection	PBT	400	M12	PNP NO/NC	M18×1	204-3975
Diffuse Reflection	Brass Nickel Plated	1000	2m Cable	NPN NO/NC	M30×1.5	204-3976
Diffuse Reflection	Brass Nickel Plated	1000	2m Cable	PNP NO/NC	M30×1.5	204-3977
Diffuse Reflection	PBT	1000	2m Cable	NPN NO/NC	M30×1.5	204-3978
Diffuse Reflection	PBT	1000	2m Cable	PNP NO/NC	M30×1.5	204-3979

Polarised Reflection M18×1

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DETECTION TYPE	DETECTION RANGE (MM)	OUTPUT TYPE	TERMINAL TYPE	STOCK NO
Polarised Reflection	3000	NPN NO/NC	2m Cable	204-4017
Polarised Reflection	3000	PNP NO/NC	2m Cable	204-4019
Polarised Reflection	3000	NPN NO/NC	M12	204-4020
Polarised Reflection	3000	PNP NO/NC	M12	204-4021

Retro-reflective M18×1

Image for illustrative purposes only

DETECTION TYPE	HOUSING MATERIAL	DETECTION RANGE (MM)	TERMINAL TYPE	OUTPUT	STOCK NO
Retro Reflection	Brass Nickel Plated	3000	2m Cable	NPN NO/NC	204-3980
Retro Reflection	Brass Nickel Plated	3000	2m Cable	PNP NO/NC	204-3981
Retro Reflection	Brass Nickel Plated	3000	M12	PNP NO/NC	204-3982
Retro Reflection	Brass Nickel Plated	3000	M12	PNP NO	204-3983
Retro Reflection	PBT	3000	2m Cable	NPN NO/NC	204-3984
Retro Reflection	PBT	3000	2m Cable	PNP NO/NC	204-3985
Retro Reflection	PBT	3000	M12	PNP NO/NC	204-3987
Retro Reflection	PBT	3000	M12	PNP NO	204-3988
Retro Reflection	PBT	3000	M12	NPN NO/NC	204-3989

Through Beam Emitter / Reciever

Image for illustrative purposes only

DETECTION TYPE	HOUSING MATERIAL	DETECTION RANGE (MM)	OUTPUT TYPE	TERMINAL TYPE	THREAD SIZE	STOCK NO
Through Beam (Emitter)	Brass Nickel Plated	5000	-	2m Cable	M12×1	204-3990
Through Beam (Receiver)	Brass Nickel Plated	5000	NPN NO	2m Cable	M12×1	204-3991
Through Beam (Receiver)	Brass Nickel Plated	5000	PNP NO	2m Cable	M12×1	204-3993
Through Beam (Emitter)	Brass Nickel Plated	10000	-	2m Cable	M18×1	204-3994
Through Beam (Receiver)	Brass Nickel Plated	10000	NPN NO/NC	2m Cable	M18×1	204-3995
Through Beam (Emitter)	PBT	10000	-	2m Cable	M18×1	204-4000
Through Beam (Receiver)	PBT	10000	NPN NO/NC	2m Cable	M18×1	204-4001

Through Beam Continued

Image for illustrative purposes only

DETECTION TYPE	HOUSING MATERIAL	DETECTION RANGE (MM)	OUTPUT TYPE	TERMINAL TYPE	THREAD SIZE	STOCK NO
Through Beam (Receiver)	Brass Nickel Plated	10000	PNP NO/NC	2m Cable	M18×1	204-3996
Through Beam (Emitter)	Brass Nickel Plated	20000	-	2m Cable	M18×1	204-3997
Through Beam (Receiver)	Brass Nickel Plated	20000	NPN NO/NC	2m Cable	M18×1	204-3998
Through Beam (Receiver)	Brass Nickel Plated	20000	PNP NO/NC	2m Cable	M18×1	204-3999
Through Beam (Receiver)	PBT	10000	PNP NO/NC	2m Cable	M18×1	204-4003
Through Beam (Emitter)	PBT	20000	-	2m Cable	M18×1	204-4004
Through Beam (Receiver)	PBT	20000	NPN NO/NC	2m Cable	M18×1	204-4005
Through Beam (Receiver)	PBT	20000	PNP NO/NC	2m Cable	M18×1	204-4006
Through Beam (Emitter)	Brass Nickel Plated	20000	-	2m Cable	M30×1.5	204-4007
Through Beam (Receiver)	Brass Nickel Plated	20000	NPN NO/NC	2m Cable	M30×1.5	204-4008
Through Beam (Receiver)	Brass Nickel Plated	20000	PNP NO/NC	2m Cable	M30×1.5	204-4009
Through Beam (Emitter)	PBT	20000	-	2m Cable	M30×1.5	204-4010
Through Beam (Receiver)	PBT	20000	NPN NO/NC	2m Cable	M30×1.5	204-4011
Through Beam (Receiver)	PBT	20000	PNP NO/NC	2m Cable	M30×1.5	204-4012

PROXIMITY INDUCTIVE SENSORS

An inductive sensor provides non-contact detection of metallic objects, with some sensors being able to target both ferrous and non-ferrous metals, while others specialise in sensing only one type. Inductive proximity sensors are suitable for use in virtually any industry with some types also able to be used in hazardous environments.

Inductive sensors can also be affected by interaction with other sensors and ambient environmental influences. Careful installation will be required to ensure the sensor is effective and is not adversely affected by any surrounding sensors or metallic objects.

WHERE

Where would it be used?

Inductive proximity sensors are suitable for use in virtually any industry. Common applications include the food and beverage industry, robotics, machine tools, packaging and materials handling livestock breeding etc. Any close range detection of ferrous (iron) material.

WHY

Why would you use this product?

An advantage with these sensors is that they are capable of detecting both metallic and non-metallic targets, inductive are non contact sensors- capable of withstanding build-up of contaminants as they have no moving parts to wear proper set up produces long life.

WHO

Who would use it?

- Test Engineer
- Research & Development
- Design Engineer
- Electrical Engineer
- Maintenance Engineer
- Mechanic

Inductive Sensor

Image for illustrative purposes only

DETECTION RANGE (MM)	OUTPUT TYPE	HOUSING MATERIAL	TERMINAL TYPE	THREAD SIZE	IO LINK	STOCK NO
0.6	PNP NO	Stainless Steel	2m Cable	M4×0.5	N	206-6124
0.8	PNP NO	Stainless Steel	M8	M5×0.5	N	206-6126
0.8	PNP NO	Stainless Steel	2m Cable	M5×0.5	N	206-6127
1.5	PNP NO	Stainless Steel	M8	M5×0.5	N	206-6128
1.5	PNP NO	Stainless Steel	2m Cable	M5×0.5	N	206-6129
2	PNP NO	Stainless Steel	M12	M8×1	Y	206-6130
2	PNP NO	Stainless Steel	M8	M8×1	Y	206-6132
2	PNP NO	Stainless Steel	M8	M8×1	Y	206-6133
2	PNP NO	Stainless Steel	2m Cable	M8×1	Y	206-6134
2	PNP NO	Stainless Steel	2m Cable	M8×1	Y	206-6135
4	PNP NO	Stainless Steel	2m Cable	M8×1	Y	206-6136
4	PNP NO	Stainless Steel	M12	M12×1	Y	206-6137
4	PNP NO	Stainless Steel	M12	M12×1	Y	206-6138
4	PNP NO	Stainless Steel	2m Cable	M12×1	Y	206-6139
4	PNP NO	Stainless Steel	2m Cable	M12×1	Y	206-6140
8	PNP NO	Stainless Steel	M12	M18×1	Y	206-6141
8	PNP NO	Stainless Steel	M12	M18×1	Y	206-6142
8	PNP NO	Stainless Steel	2m Cable	M18×1	Y	206-6143
8	PNP NO	Stainless Steel	2m Cable	M18×1	Y	206-6144

Inductive Sensor Continued

Image for illustrative purposes only

DETECTION RANGE (MM)	OUTPUT TYPE	HOUSING MATERIAL	TERMINAL TYPE	THREAD SIZE	IO LINK	STOCK NO
15	PNP NO	Stainless Steel	M12	M30×1.5	Y	206-6145
15	PNP NO	Stainless Steel	M12	M30×1.5	Y	206-6146
15	PNP NO	Stainless Steel	2m Cable	M30×1.5	Y	206-6148
15	PNP NO	Stainless Steel	2m Cable	M30×1.5	Y	206-6149
2	PNP NO	Brass Nickel Plated	M8	M8×1	N	206-6150
2	PNP NO	Brass Nickel Plated	M8	M8×1	N	206-6151
2	PNP NO	Brass Nickel Plated	2m Cable	M8×1	N	206-6152
2	PNP NO	Brass Nickel Plated	2m Cable	M8×1	N	206-6154
4	PNP NO	Brass Nickel Plated	M12	M12×1	N	206-6155
4	PNP NO	Brass Nickel Plated	M12	M12×1	N	206-6156
4	PNP NO	Brass Nickel Plated	2m Cable	M12×1	N	206-6157
8	PNP NO	Brass Nickel Plated	M12	M18×1	N	206-6162
8	NPN NO	Brass Nickel Plated	2m Cable	M12×1	N	206-6158
8	PNP NO	Brass Nickel Plated	M12	M12×1	N	206-6159
8	PNP NO	Brass Nickel Plated	2m Cable	M12×1	N	206-6160
8	PNP NO	Brass Nickel Plated	M12	M18×1	N	206-6161
8	PNP NO	Brass Nickel Plated	2m Cable	M18×1	N	206-6163
10	PNP NC	Brass Nickel Plated	2m Cable	M30×1.5	N	206-6165
20	PNP NO	Brass Nickel Plated	M12	M18×1	N	206-6164

Inductive Sensor Continued

Image for illustrative purposes only

DETECTION RANGE (MM)	OUTPUT TYPE	HOUSING MATERIAL	TERMINAL TYPE	THREAD SIZE	IO LINK	STOCK NO
38	PNP NO	Brass Nickel Plated	M12	M30×1.5	N	206-6166
38	PNP NO	Brass Nickel Plated	2m Cable	M30×1.5	N	206-6167
2	PNP NO	Plastic Vistal®	M8	-	N	206-6168
2	PNP NO	Plastic Vistal®	2m Cable	-	N	206-6170
3	PNP NO	Plastic Vistal®	M8	-	N	206-6171
3	PNP NO	Plastic Vistal®	2m Cable	-	N	206-6172
4	PNP NO	Plastic Vistal®	M8	-	N	206-6173
4	PNP NO	Plastic Vistal®	2m Cable	-	N	206-6174
20	PNP NO/NC	Plastic PA 66	M12	-	N	206-6176
20	PNP NO/NC	Plastic PA 66	Terminal	-	N	206-6177
20	PNP NO	Plastic PA 66	M12	-	N	206-6178
20	PNP NO	Plastic PA 66	Terminal	-	N	206-6179
40	PNP NO/NC	Plastic PA 66	M12	-	N	206-6180
40	PNP NO/NC	Plastic PA 66	Terminal	-	N	206-6181
40	PNP NO	Plastic PA 66	M12	-	N	206-6182
40	PNP NO	Plastic PA 66	Terminal	-	N	206-6183

PROXIMITY CAPACITIVE SENSORS

Capacitive proximity sensors feature a pair of parallel plates, similar to a standard capacitor. They work when an object produces changes in capacitance, triggering the sensor. Capacitive sensors are designed for use with non-ferrous materials and are ideal for close-range applications such as level detection and monitoring.

Capacitive sensors can be affected by their environment and possible interaction with other sensors. This could include anything from the ambient temperature to other objects in the vicinity. As a result of this, precautions should be taken when installing these sensors to avoid interference from other objects or sensors.

WHERE

Where would it be used?

Applications including flow control for detection of liquids, grains and powders. Common applications include the food and beverage industry, robotics, machine tools, packaging and materials handling.

WHY

Why would you use this product?

Proximity capacitive sensor can detect both metal and non-metal materials, especially suitable for detecting materials such as plastics, tank liquid level detection, hopper powders and particles. Ideal for sight glass monitoring.

WHO

Who would use it?

- Test Engineer
- Research & Development
- Design Engineer
- Electrical Engineer
- Maintenance Engineer
- Mechanics
- Laboratories

Flush Mount

Image for illustrative purposes only

THREAD SIZE	DETECTION RANGE (MM)	TERMINAL TYPE	OUTPUT TYPE	IP RATING	STOCK NO
M12×1	2	2m Cable	NPN-NO	IP67	184-5578
M12×1	2	2m Cable	NPN-NO	IP67	184-5582
M12×1	2	2m Cable	PNP-NO	IP67	184-5584
M12×1	2	M12	NPN-NO	IP67	184-5579
M12×1	2	M12	NPN-NO	IP67	184-5583
M12×1	2	M12	PNP-NO	IP67	184-5585
-	5	2m Cable	NPN-NO	IP67	184-5569
-	5	2m Cable	PNP-NO	IP67	184-5570
M18×1	5	2m Cable	NPN-NO/NC	IP67	184-5593
M18×1	5	2m Cable	NPN-NO/NC	IP67	184-5604
M18×1	5	2m Cable	PNP-NO/NC	IP67	184-5596
M18×1	5	2m Cable	PNP-NO/NC	IP67	184-5606
M18×1	5	2m Cable	NO	IP67	184-5591
M18×1	5	M12	NPN-NO/NC	IP67	184-5594
M18×1	5	M12	NPN-NO/NC	IP67	184-5605
M18×1	5	M12	PNP-NO/NC	IP67	184-5607
M18×1	5	M12	NO	IP67	184-5592
M18×1	5	M12	NO	IP67	184-5603
M30×1,5	10	2m Cable	NPN-NO/NC	IP67	184-5615

Flush Mount Continued

Image for illustrative purposes only

THREAD SIZE	DETECTION RANGE (MM)	TERMINAL TYPE	OUTPUT TYPE	IP RATING	STOCK NO
M30×1,5	10	2m Cable	PNP-NO/NC	IP67	184-5617
M30×1,5	10	2m Cable	PNP-NO/NC	IP67	184-5632
M30×1,5	10	2m Cable	NO	IP67	184-5613
M30×1,5	10	2m Cable	NO	IP67	184-5627
M30×1,5	10	2m Cable	NO	IP67	184-5634
M30×1,5	10	M12	NPN-NO/NC	IP67	184-5616
M30×1,5	10	M12	NPN-NO/NC	IP67	184-5631
M30×1,5	10	M12	PNP-NO	IP67	184-5633
M30×1,5	10	M12	PNP-NO/NC	IP67	184-5619
M30×1,5	10	M12	NO	IP67	184-5614
M30×1,5	10	M12	NO	IP67	184-5628
M30×1,5	10	M12	NO	IP67	184-5635
M30×1,5	15	2m Cable	NPN-NO/NC	IP67	184-5629

Non-flush Mount

Image for illustrative purposes only

THREAD SIZE	DETECTION RANGE (MM)	TERMINAL TYPE	OUTPUT TYPE	IP RATING	STOCK NO
M12×1	4	2m Cable	NPN-NO	IP67	184-5580
M12×1	4	2m Cable	NPN-NO	IP67	184-5586
M12×1	4	2m Cable	PNP-NO	IP67	184-5588
M12×1	4	M12	NPN-NO	IP67	184-5581
M12×1	4	M12	NPN-NO	IP67	184-5587
M12×1	4	M12	PNP-NO	IP67	184-5590
-	8	M12	NPN-NO	IP67	184-5571
M18×1	8	2m Cable	NPN-NO/NC	IP67	184-5599
M18×1	8	2m Cable	NPN-NO/NC	IP67	184-5609
M18×1	8	2m Cable	PNP-NO/NC	IP67	184-5611
M18×1	8	2m Cable	NO	IP67	184-5597
M18×1	8	M12	NPN-NO/NC	IP67	184-5600
M18×1	8	M12	NPN-NO/NC	IP67	184-5610
M18×1	8	M12	PNP-NO/NC	IP67	184-5601
M18×1	8	M12	PNP-NO/NC	IP67	184-5612
M18×1	8	M12	NO	IP67	184-5598
M18×1	8	M12	NO	IP67	184-5608
-	10	2m Cable	NPN-NO	IP67	184-5577
M30×1,5	15	2m Cable	NPN-NO/NC	IP67	184-5622

Non-flush Mount Continued

Image for illustrative purposes only

THREAD SIZE	DETECTION RANGE (MM)	TERMINAL TYPE	OUTPUT TYPE	IP RATING	STOCK NO
M30×1,5	15	2m Cable	NPN-NO/NC	IP67	184-5638
M30×1,5	15	2m Cable	PNP-NO/NC	IP67	184-5625
M30×1,5	15	2m Cable	PNP-NO/NC	IP67	184-5640
M30×1,5	15	2m Cable	NO	IP67	184-5620
M30×1,5	15	2m Cable	NO	IP67	184-5636
M30×1,5	15	M12	NPN-NO/NC	IP67	184-5623
M30×1,5	15	M12	NPN-NO/NC	IP67	184-5639
M30×1,5	15	M12	PNP-NO/NC	IP67	184-5626
M30×1,5	15	M12	PNP-NO/NC	IP67	184-5641
M30×1,5	15	M12	NO	IP67	184-5621
M30×1,5	15	M12	NO	IP67	184-5637
M30×1,5	15	M12	NO	IP67	184-5642

Pipeline Mount

Image for illustrative purposes only

PIPE	OD / WALL THICKNESS	TERMINAL TYPE	OUTPUT TYPE	IP RATING	STOCK NO
Non Metal	12-26mm / <1mm	2m Cable	NPN-NO	IP67	184-5575
Non Metal	12-26mm / <1mm	2m Cable	PNP-NO	IP67	184-5576
Non Metal	8-11mm / ≤1mm	2m Cable	NPN-NO	IP67	184-5572
Non Metal	8-11mm / ≤1mm	2m Cable	PNP-NO	IP67	184-5574

FIBRE OPTIC SENSORS

Fibre optic sensors are a type of proximity sensor that have an optical fibre connected to a light source to allow for detection in tight spaces or where a small profile is beneficial. The optical fibre is a transparent fibre made of glass (silica) or plastic with a diameter slightly thicker than a human hair, this fibre transmits light between the two ends to produce an electrical signal.

WHERE

Where would it be used?

Fibre optic sensors are used in a number of different applications such as semiconductor, electronic equipment, packaging and other industries.

WHY

Why would you use this product?

Fibre optic sensors allow for detection in tight spaces or where a small profile is beneficial. The optical fibre is a transparent fibre made of glass (silica) or plastic with a diameter slightly thicker than a human hair, perfect solution for areas where the direct mounting of sensors is not possible.

WHO

Who would use it?

- Test Engineer
- Research & Development
- Design Engineer
- Electrical Engineer
- Maintenance Engineer

Fibre Optic Sensors

Image for illustrative purposes only

FIBRE OPTIC TYPE	OUTPUT TYPE	SUPPLY VOLTAGE	IP RATING	POWER CONSUMPTION	DETECTION RANGE	STOCK NO
Plastic	NPN	24V DC	IP54	1.44W	with 896-7298 = 110 -290mm	204-0681
Plastic	PNP	24V DC	IP54	1.44W	with 896-7285 = 300 - 800mm	204-0682

Suitable Probes

FIBRE OPTIC SENSORS

110mm

FIBRE OPTIC SENSORS

500mm

Note: Fibre optic probes are not exchangeable across brands!

LOAD CELLS

Load cells, often called load cell transducers, are crucial components in most industrial weighing systems. They are available in many different configurations and standards, depending on the intended application and environment.

Among the various different types of load cells available, models and styles can be differentiated in two key ways:

1. By the specific method they use to detect weight (compression load cells, tension load cells and other measurement types).
2. By the type of output signal generated (hydraulic load cells, piezoelectric load cells and various other configurations).

WHERE

Where would it be used?

Electronic load cells are now broadly accepted as the modern standard in most of today's heavy industries, manufacturing plants, large-scale production floors and stringent quality control environments.

WHY

Why would you use this product?

Load cells are crucial components in most industrial weighing systems. The most basic definition of a load cell is that they measure weight - or, more accurately, directional force - usually via a combination of spring elements and strain gauges, converted into an electrical output.

WHO

Who would use it?

- Test Engineer
- Research & Development
- Design Engineer
- Electrical Engineer
- Maintenance Engineer
- Mechanics

Load Cell Sensors

Image for illustrative purposes only

FORCE MEASURED	MEASUREMENT RANGE MIN/MAX (KG)	OUTPUT TYPE	IP RATING	MAX VOLTAGE	STOCK NO
Compression	0.3 - 3	PNP	IP67	15V	204-2767
Compression	5 - 20	PNP	IP66	10V	204-2772
Compression	5 - 500	PNP	IP68	15V	204-2765
Compression	10 - 100	PNP	IP67	15V	204-2770
Compression	50 - 1000	PNP	IP66	15V	204-2768
Compression	50 - 1000	PNP	IP68	10V	204-2764
Compression	60 - 1200	PNP	IP67	15V	204-2771
Compression	500 - 3000	PNP	IP68	15V	204-2766
Compression & Tension	1 - 500	PNP	IP66	10V	204-2773

Barcode Reader

TYPE	STOCK NO
Barcode Reader	206-7501

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WHERE

Where would it be used?

Can be widely used in many kinds of application environments, whether it is a two-dimensional or one-dimensional bar code. Some typical locations include express logistics, retail, electronic ecommerce, office automation, and retail.

WHY

Why would you use this product?

Barcode scanner is a two-dimensional image scanner with excellent quality. It adopts the third generation image scanning technology to make scanning more sensitive and accurate. It can be used in many kinds of application environments, whether it is two-dimensional code or one-dimensional bar code, it can scan all directions, whether label bar code or screen display bar code can be sensitive to identify, even in scanning damaged or printing poor quality bar code.

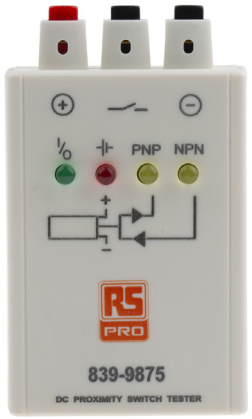
WHO

Who would use it?

- Distribution Centres
- Logistic Handlers
- Supermarkets

ACCESSORIES & RELATED PRODUCTS

Sensor Tester



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ACCESSORY TYPE	APPLICATION	POWER SOURCE	STATUS INDICATION TYPE	STOCK NO
Sensor Tester	Proximity Switch	2 × 9V batteries	LED and Audio	839-9875

Panel Mount Sensor Cables

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TYPE	GENDER	CONNECTION SIZE	NO OF CONTACTS	TERMINATION METHOD	MOUNTING TYPE	STOCK NO
Circular Connector	Female	M12	4	Screw	Cable Mount	205-5976
Circular Connector	Female	M12	5	Screw	Cable Mount	205-5974
Circular Connector	Male	M12	4	Screw	Cable Mount	205-5982
Circular Connector	Male	M12	4	Screw	Cable Mount	205-5991
Circular Connector	Male	M12	5	Screw	Cable Mount	205-5978

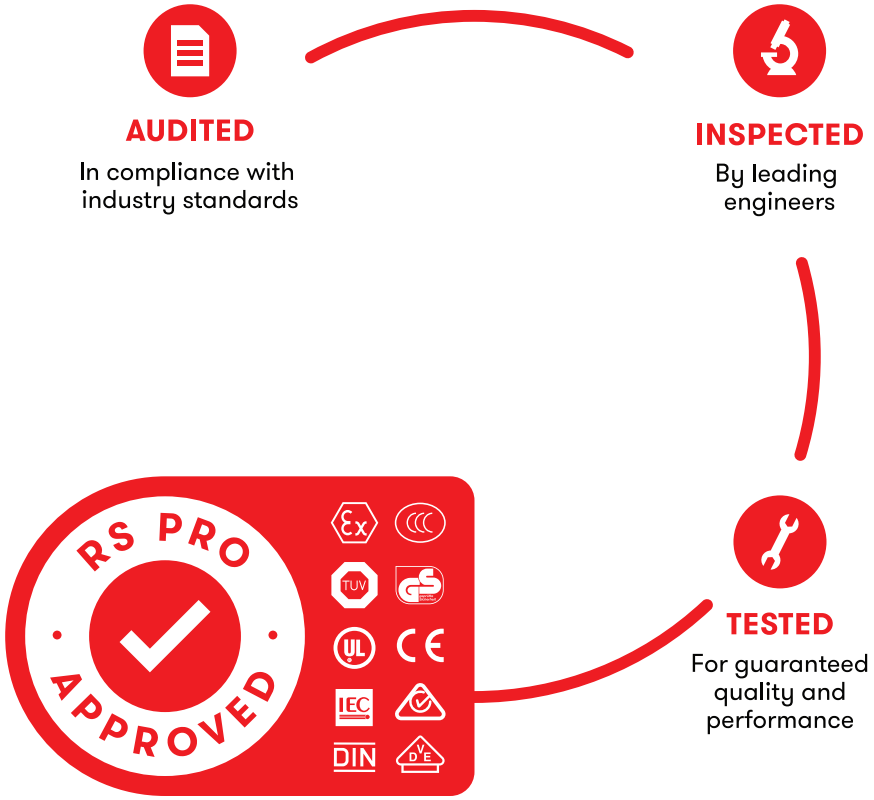
Open End Sensor Cables

Image for illustrative purposes only

	CONNECTION A			CONNECTION B			
TYPE	BODY ORIENTATION	GENDER	CONNECTION SIZE	GENDER	CONNECTION SIZE	CABLE LENGTH	STOCK NO
Connector	Angled	Female	M12	-	Open End	15m	205-5980
Connector	Angled	Female	M12	-	Open End	20m	205-5993
Connector	Straight	Female	M12	-	Open End	10m	205-5992
Connector	Straight	Male	M8	-	Open End	10m	205-5987

RS PRO products are audited against demanding international standards, inspected for durability and consistency and tested by leading engineers.

Only when products have been through this process are they awarded our seal of approval, quality that can be trusted. Confidence in this process is reflected in our long product warranties, proof that our products will consistently deliver the quality you expect for a long time to come.



WARRANTY 3 YEARS

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