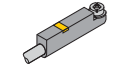


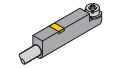


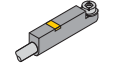



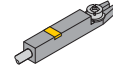


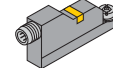




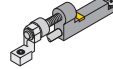

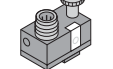



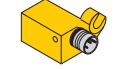




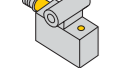


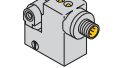


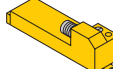

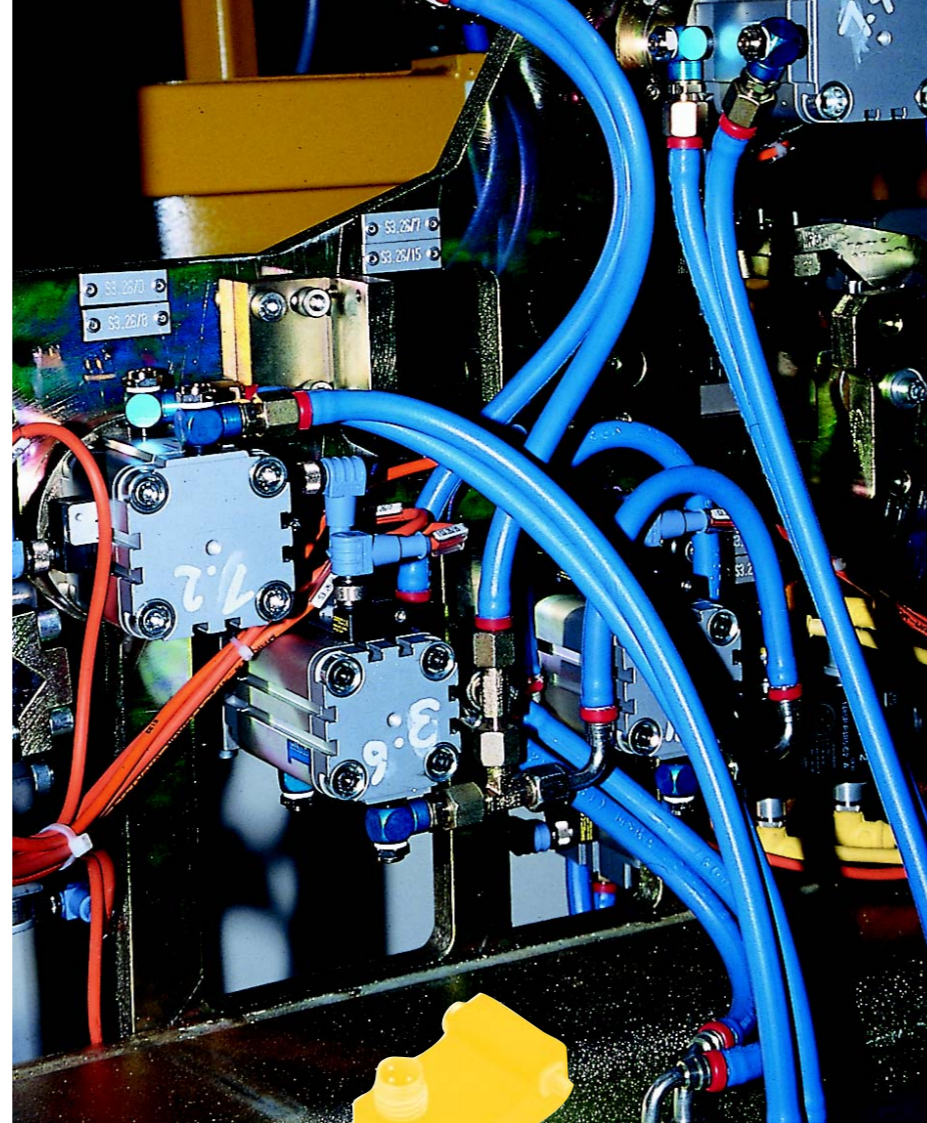


WHICH SENSOR SUITS WHICH PNEUMATIC CYLINDER?

Cylinder		Round	C groove	T groove	Dovetail-groove	Tie-rod	Output
...INR... 		●	✗	●	●	●	DC  , Reed DC 
...INTK... 	short construction type	●	-	✗	●	●	DC  , Reed DC 
...INT... 		●	-	✗	●	●	DC  , DC  , Reed  , NAMUR
...INTC... 	exchange without loss of switching point	-	-	✗	-	●	DC  , DC 
...INTS... 		-	-	✗	-	●	DC  , Reed DC 
...NST... 	optional magnetic field immune with fine adjustment	-	-	●	●	●	DC  , Namur
...INTF... 	with fine adjustment	-	-	✗	-	-	DC 
...TNST... 	with fine adjustment	-	-	✗	●	●	DC 
...PST... 		✗	-	-	-	-	DC  , NAMUR
...QST... 		-	-	-	-	●	DC  , NAMUR
...AKT... 		-	-	-	-	●	DC  , DC  , NAMUR
...IKT... 		-	-	-	-	●	DC  , DC  , NAMUR
...IKM... 	optional magnetic field immune	-	-	-	-	●	DC  , NAMUR, AC 
...NTL68... ...STL68... 	analogue	-	-	✗	-	-	DC  analogue (U, I)

✗ without mounting accessories/● with mounting accessories



perma prox®

TURCK

Industrial Automation

MAGNETIC FIELD SENSORS FOR PNEUMATIC CYLINDERS

Bitte senden Sie mir Unterlagen:

Sensortechnik

- Induktive Sensoren
- Induktive Sensoren für Schwenkantriebe
- uprox*® induktive Sensoren
- Kapazitive Sensoren
- Magnetfeldsensoren
- Opto-Sensoren
- Geräte für den Personenschutz
- Ultraschall-Sensoren
- levelprox*®-Füllstandssensoren
- Strömungssensoren
- Drucksensoren
- Temperatursensoren
- Identifikations-Systeme
- Linearweg-Sensoren
- Drehweg-Sensoren
- Steckverbinder
- CD-ROM Sensortechnik

Interfacetechnik

- Interfacetechnik im Aufbaugehäuse für Hutschienen- (DIN 50022), Platten- oder Bodenmontage
- Interfacetechnik auf 19"-Karte für Baugruppenträger (DIN 41494)
- Miniaturrelais, Industrirelais, Zeitwürfel, Sockel
- Zeit- und Überwachungsrelais
- Ex-Schutz – Grundlagen für die Praxis (Übersichtsposter)
- CD-ROM Interfacetechnik

Feldbusstechnik

- busstop*®-Feldbuskomponenten
- Bussystem *sensoplex*®2
- Bussystem *sensoplex*®2Ex
- Bussystem *sensoplex*®MC
- Bussystem AS-Interface®
- Bussystem DeviceNet™
- Ethernet Netzwerkkomponenten
- BL20 I/O-Busklemmensystem
- BL67 – modulares Feldbus-I/O-System in IP67
- Bussystem FOUNDATION™ fieldbus
- Bussystem PROFIBUS-DP
- Bussystem PROFIBUS-PA
- Bussystem *piconet*®
- Remote I/O *excom*®
-

Please send me more information:

Sensors

- inductive sensors
- inductive sensors for rotary actuators
- uprox*® inductive sensors
- capacitive sensors
- magnetic-field sensors
- photoelectric sensors
- machine safety equipment
- ultrasonic sensors
- levelprox*® level sensors
- flow sensors
- pressure sensors
- temperature sensors
- identification systems
- linear position sensors
- rotary position sensors
- connectors
- CD-ROM Sensors

Interface technology

- devices in modular housings for top-hat rail (DIN 50022) or panel mounting
- devices on 19" card for DIN-rail mounting (DIN 41494)
- miniature relays, industrial relays, time cubes, sockets
- programmable relays and timers
- explosion protection – basics for practical application (overview poster)
- CD-ROM Interface technology

Fieldbus technology

- busstop*® fieldbus components
- bus system *sensoplex*®2
- bus system *sensoplex*®2Ex
- bus system *sensoplex*®MC
- bus system AS-Interface®
- bus system DeviceNet™
- Ethernet network components
- BL20 I/O bus terminal system
- BL67 – modular fieldbus I/O-system in IP67
- bus system FOUNDATION™ fieldbus
- bus system PROFIBUS-DP
- bus system PROFIBUS-PA
- bus system *piconet*®
- Remote I/O *excom*®
-

FAX-ANTWORT/FAX REPLY

Absender/Sender:

Name:

Firma/Company:

Abt./Position:

Adresse/Address:

Tel./Phone:

Fax:

E-Mail:

TURCK

Industrial Automation



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D101141 0304

MAGNET-INDUCTIVE *permaprox* SENSORS SWITCH-POINT STABLE AND FLEXIBLE - FOR ALL PNEUMATIC CYLINDERS

Magnetic field sensors are actuated by magnetic fields and particularly suited for position detection of the pneumatic cylinder's piston. Based on the fact that magnetic fields can permeate non-magnetisable metals, the sensor is capable of detecting a permanent magnet attached to the piston even through the aluminium wall of a cylinder.

The following function principles can be applied in this context:

1. Fully electronic and non-contact detection (magnet-inductive *permaprox* sensors)
2. Mechanical reed contacts



permaprox sensors come in a large variety of housing styles with perfectly matching fixing clamps and mounting accessories, so that they can be mounted on almost all pneumatic cylinder types offered by renowned manufacturers:

- round cylinders
- tie rod cylinders
- profile cylinders
- slot cylinders (T groove, C groove, dovetail groove ...)

Weld-field immune *permaprox* sensors

Weld-field *permaprox* sensors "freeze" the switching output when detecting a magnetic AC field (50...60 Hz), thus preventing faulty switching operations during the welding process. As soon as the field disappears, the sensors resume normal operation.

Mechanical reed contacts

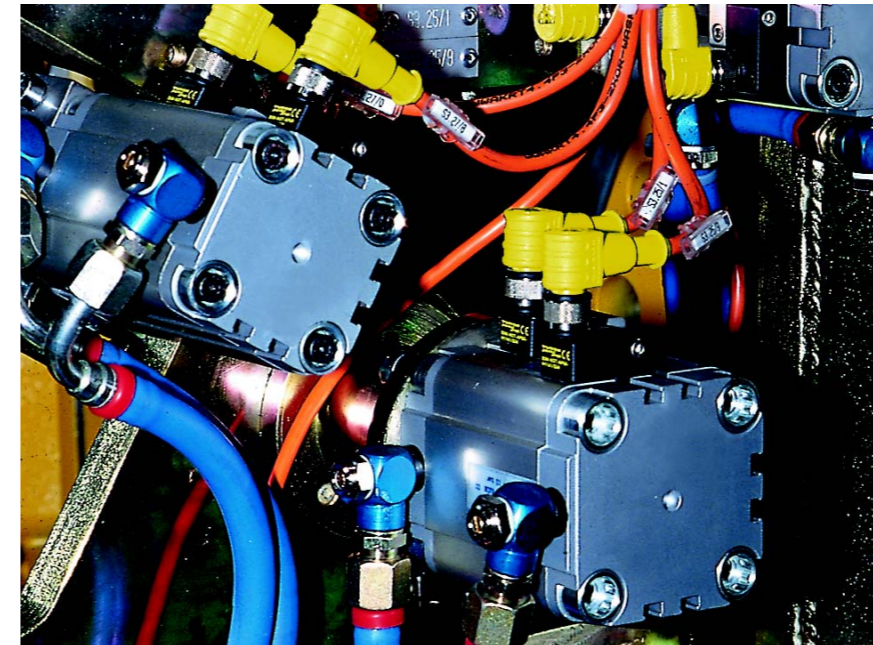
Mechanical reed contacts from TURCK feature a special design, ensuring reliable detection of permanent magnets of variable field strength. TURCK thus offers a technically sophisticated, yet inexpensive alternative to conventional reed contacts.



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Proximity sensors

Gate or "pig" (cleaning device in pipe systems) monitoring are typical applications of magnet-inductive proximity sensors. Since magnet-inductive sensors are actuated by external magnetic fields, even the smaller sensor types offer large operating distances. When used in combination with the actuation magnet DMR31-15-5, the M12 sensor series provides a nominal operating distance of 90 mm.



Sensors for the explosion hazardous area

TURCK offers a wide spectrum of magnet-inductive sensors for the explosion hazardous area, fulfilling the specific requirements of DIN EN 60947-5-6 (NAMUR) and featuring an ATEX approval.

MAGNET-INDUCTIVE LINEAR POSITION SENSORS FOR DIRECT MOUNTING ON PNEUMATIC CYLINDERS

Analogue TURCK sensors are used in many applications requiring more than simple digital positioning. Typical sensing tasks comprise:

- Position control
- Press-fit control
- Simple switch-point adjustment via the control system

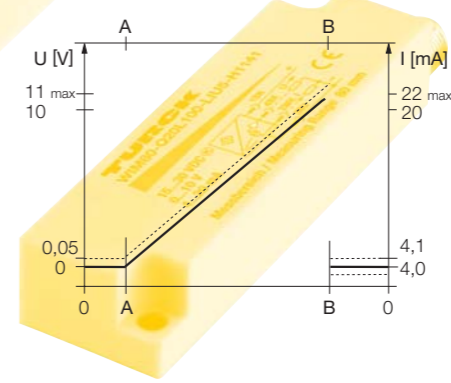
The measuring length of the analogue position sensors is 40 mm, with a mean accuracy of up to 0.2 mm and a repeat accuracy of 0.5%. Due to the strictly analogue measuring principle, the actual reproducibility is even better if the travel involved is short. The very small blind zones of only 11 mm on both sensor ends ensure precise detection of the pneumatic cylinder's end position.

This range of sensors additionally provides a measuring range indication, i.e. a so-called "in-range" function with an LED indication, continuously informing the user whether the magnet is within the measuring range or not.

Magnet-inductive sensors generate a current, voltage or an optional frequency signal that is proportional to the piston position and suited for simple control tasks.



- Measuring length 40 mm
- High repeat accuracy ($R \leq 0.5\%$)
- Current, voltage and frequency output (optional)
- Excellent EMC
- Short-circuit and reverse polarity protection
- In-range function
- Short blind zone



Magnet-inductive *permaprox* sensors

TURCK's magnet-inductive magnetic field *permaprox* sensors feature a patented function principle, ensuring their reliable function, i.e. detection of permanent magnets of various field strengths, in conjunction with all common cylinder types. The sensors are fully wear-free and short-circuit protected. A special magnetic field immune version for welding applications completes this popular and proven family.

permaprox sensors also meet all connection requirements, including types for 10...65 VDC and 20...250 VAC, as well as a specific version equipped with a NAMUR interface for explosion hazardous areas.

