

TURCK

Industrial
Automation

**INDUCTIVE
FACTOR 1
SENSORS**

uprox+



Sense it! Connect it! Bus it! Solve it!

uprox⁺ Inductive Factor 1 sensors

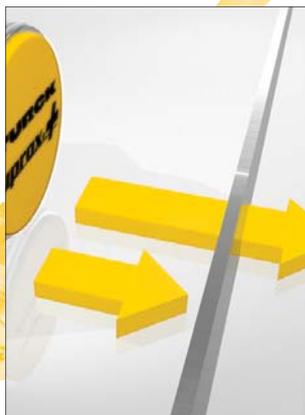
uprox⁺ sensors are a proof of TURCK's innovative strength. We have successfully optimized their performance range to meet the increasing demands of our customers. Profit from the unique plus points of the new generation sensors!

Efficient standardization

- The entire range of applications is effectively covered with only a few sensor types.
- Low average prices thanks to the elimination of special devices
- Reduced training period due to a lean product program



Maximum operating distance



Owing to their novel patented coil technology, uprox⁺ sensors feature a switching distance which is up to 250 % higher than that of conventional inductive sensors with a ferrite core. This means, that the sensors are superior to any standard equivalent of the same size. Make use of this outstanding performance to optimize your applications!

Factor 1



In terms of metal detection, the innovative uprox⁺ sensors set new benchmarks. They detect materials such as iron, stainless steel, copper, aluminium and brass at the same distance and with the highest precision.

Maximum freedom

- A multitude of solutions provided by a minimum number of sensor types
- Maximum freedom of construction
 - Avoidance of construction faults
 - Avoidance of unnecessary conflicts between mechanical and electrical systems
- Simple mounting with only a few accessories



Partial embedding of non-flush sensors

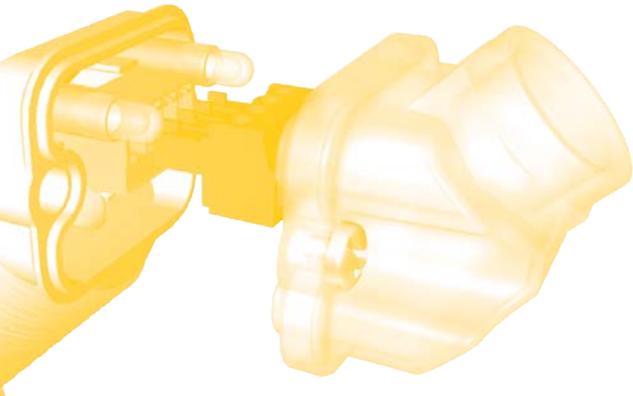


Unique mounting flexibility of *uprox*[®]+ sensors is achieved with embedded pre-damping protection. In contrast to conventional sensors with a ferrite core, free zones can be much smaller. Non-flush threaded barrel sensors can be mounted up to the edge of the thread with reduced switching distance.

Non-flush mounting of flush sensors



The new *uprox*[®]+ sensors only require small free zones for installation. Recessed mounting by half a thread turn provides even more mechanical protection – for absolute safety in all fitting positions!

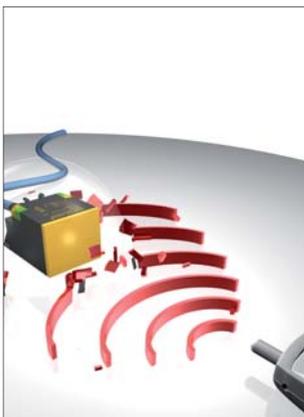


High system availability

- Less mechanical damage and increased safety due to recessed mounting.
- Less damage during the cleaning process. Effective protection against the ingress of cleaning liquids is achieved by a novel double sealing system between front cap, threaded barrel and connector insert. As a result, the system's fail-safety is enhanced
- Prevention of down-times due to the excellent resistance of the sensor materials to acid and alkaline cleaning agents and disinfectants
- Shorter down-times based on the high availability of spare parts at lowest costs
- Highly interference immune due to excellent EMC properties
- Material suitability for the food industry certified by an independent test laboratory (Henkel Ecolab)



Excellent EMC safety and magnetic field immunity



The *uprox*[®]+ sensors comply with the strict requirements of the currently valid product norm EN 60947-5-2 for proximity sensors. Even the high requirements of the norm EN 61000-4-6 (conducted interference) are easily fulfilled by the *uprox*[®]+ sensors. *uprox*[®]+ sensors do not incorporate a ferrite core and are thus not susceptible to strong magnetic fields.

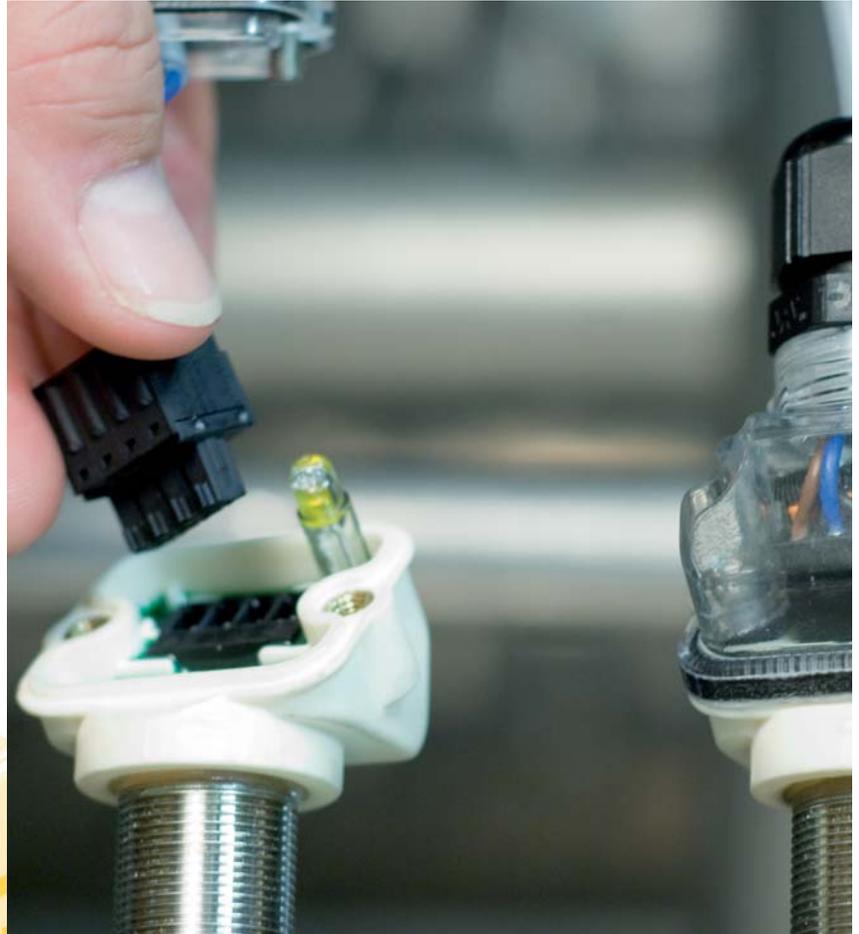
High protection degree



- IP68 including IP67:
 - 24 hrs. continuous storage at +70 °C
 - 24 hrs. continuous storage at -25 °C
 - 7 days submersion at a depth of 1 m
 - 10 temperature shock cycles from +70 °C to -25 °C, Dwell cycle per temperature: 1 hour
- IP69K:
 - suited for high pressure steam jet cleaning acc. to DIN 40050-9 following EN 60529

Extremely service-friendly

- Simple adjustment due to maximum operating distance
- Partial embedding or recessed mounting provide highest freedom for system set-up
- Minimum maintenance due to an intelligently streamlined product range



Sensor sealing



A special double-lip seal in the front cap and at the connector insert prevents the ingress of liquids, even during high pressure cleaning procedures. Hence, *uprox*[®]+ sensors even exceed the requirements of the protection ratings IP68 and IP69K by far!

Resistance



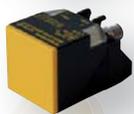
The materials of the WD-series, used in particular for the threaded barrel (V4A; 1.4404; 316L) and the front cap (LCP Vectra C130) guarantee resistance to all common acid and alkaline detergents and disinfectants.

uprox[®] Overview – Housing styles

Cylindrical versions:

	Housing style	Dimensions	Connection	Sensing range
	EH6,5	49 mm 42 mm	Connector M8 x 1 Cable PUR	 2 mm  6 mm
	EG08	49 mm 57 mm 42 mm	Connector M8 x 1 Connector M12 x 1 Cable PUR	 2 mm  6 mm
	M12	52 mm 52, 62, 80, 100 mm 52, 64 mm 80 mm	Connector M8 x 1 Connector M12 x 1 Cable PVC Terminal chamber	 4 mm  10 mm
	M18	52, 61.5, 72 mm 52, 54, 64 mm 81 mm	Connector M12 x 1 Cable PVC Terminal chamber	 8 mm  15 mm
	M30	62 mm 62, 64 mm 95 mm	Connector M12 x 1 Cable PVC Terminal chamber	 15 mm  30 mm

Rectangular versions:

	Housing style	Dimensions	Connection	Sensing range
	Q08	32 x 20 x 8 mm	Connector M8 x 1 Cable PUR	 8 mm
	QP08	32 x 20 x 8 mm	Connector M8 x 1 with cable Cable PUR	 10 mm
	Q8SE	40 x 8 x 8 mm	Connector M8 x 1 Cable PUR	 4 mm
	Q10S	27.8 x 16 x 10.2 mm	Connector M8 x 1 with cable Cable PUR	 5 mm
	Q12	40 x 26 x 12 mm	Connector M8 x 1 Connector M12 x 1 Cable PUR	 5 mm
	CK40	65 x 40 x 40 mm	Connector M12 x 1	 30 mm  50 mm
	QV40	65 x 40 x 40 mm	Connector M12 x 1	 20 mm  50 mm
	CP40	114 x 40 x 40 mm	Terminal chamber	 30 mm  50 mm
	Q42	67.7 x 42.5 x 42.5 mm	Connector M12 x 1	 50 mm
	Q80	92 x 80 x 40 mm	Connector M12 x 1	 50 mm  75 mm
	K90SR	130 x 75 x 60 mm	Terminal chamber Connector M12 x 1	 100 mm



tool-free
alignment



uprox®+ Advantages for all industrial applications!

TURCK

Industrial Automation



Automotive industry

The TF80i coated threaded barrel versions are the best choice for rough environments. They are optimally protected against weld-spatter and drillings and thus resist mechanical strain. The absence of a ferrite core makes the sensors immune to interferences caused by strong magnetic fields.



Food industry

Protected by a rugged stainless steel V4A housing with LCP front cap, the *uprox®+* sensors of the Wash-Down series are IP68/IP69K compliant and resist temperatures of -40 °C to +100 °C. Furthermore, the series is completed by the rectangular type Q42 made of special, detergent resistant PA12.

Assembly and handling industry

The smaller versions of the *uprox®+* TURCK sensors comply with the requirements of the assembly and handling industry. The rectangular versions Q8SE, Q10S, Q12, Q08 and CP08 can be integrated optimally in any system and ensure high switching distances on steel, stainless steel and aluminium.



Transport and handling

TURCK offers optimized sensors for materials handling. The rectangular versions CK40, QV40 and Q80 feature highest switching distances and can be integrated in any system thanks to the excellent mounting options.



www.turck.com



To get all product information, just scan the QR code with a smartphone or webcam.

Hans Turck GmbH & Co. KG
Witzlebenstraße 7
45472 Mülheim an der Ruhr
Germany
Tel. +49 (0) 208 4952-0
Fax +49 (0) 208 4952-264
E-Mail more@turck.com
Internet www.turck.com

D101772 2012/03

