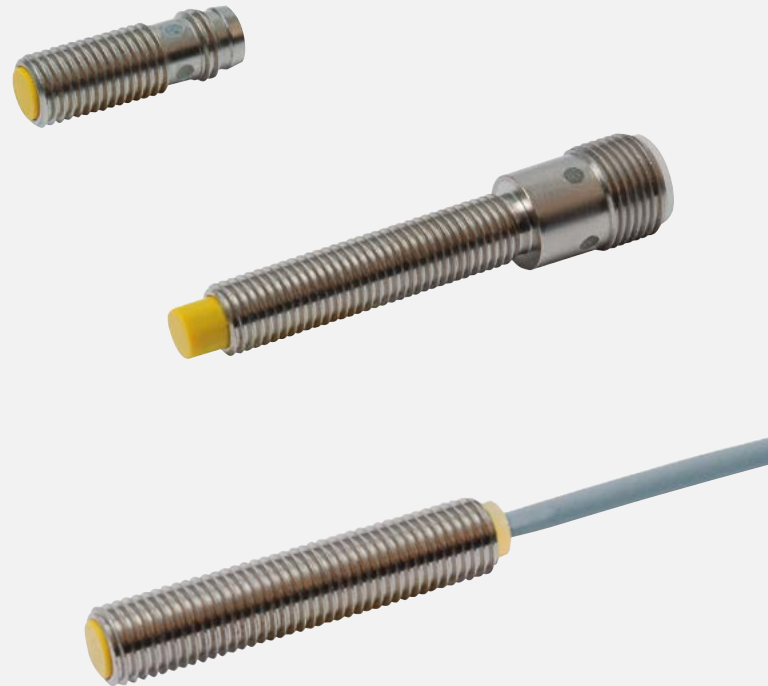


Your Global Automation Partner

**TURCK**

# M08 Series Inductive Sensors



# M08 Series – Inductive Sensors

Full range – the ideal M08 sensor for every application

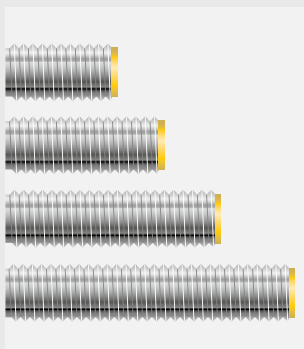
The Turck series of inductive proximity sensor in M08 housing is now more versatile and even more user-friendly. The modular design concept of the sensors enables an extensive portfolio with increased sensing ranges and models from 40 to 15 mm.

Sensors in M08 designs are typically used when space in the machine or plant is restricted, although a certain amount of freedom for adjustment is still required. Turck's M08 series offers the usual Turck precision to fit perfectly in the narrowest of spaces. The fully re-developed sensor electronics and supplied lengths of 15, 22, 30 and 40 millimeters ensure that you will always find a model in the right size. The portfolio even includes an ultra-short 15-millimeter version for the first time.

On the connection side, M12 or M08 connectors, and devices with cable output are available for all typical connection variants. The electrical variant – available with 3 or 4-wire connection as a NO contact or changeover contact in PNP or NPN – also ensures the perfect electrical connection for your application.

For the M08 series, Turck has fully revised the ferrite core technology, which increases sensing ranges up to 50 percent. The flush versions now offer an extended sensing range of 3 millimeters alongside the existing 2 mm version, and the non-flush sensors are now available in 3 or 5 millimeter versions.

The devices with cable output also offer a cable suitable for E-chain use and a semi-transparent LED ring at the end of the sensor to make the switching status clearly visible from all angles.



## Comprehensive Portfolio

The M08 series includes versions for every application, from 40 mm length (M08E), 30 mm (M08) and 22 mm (M08K), through to the ultra-compact 15-mm version (M08KK) for the smallest of spaces. All devices offer long sensing distances and protection against short-circuit and reverse polarity.



## LEDs with excellent visibility

New, brighter LEDs in connector devices and a 360° LED in cable models enable clearly visible identification of the switching status.

# Customer Benefits

Large range of variants enables creativity in design

- The portfolio has been extended with additional threaded barrel lengths: In addition to the existing designs M08K (22 mm) and M08E (40 mm), the offering now also includes the models M08 (30 mm) and M08KK (15 mm).

Maximum mechanical stability guarantees long service life

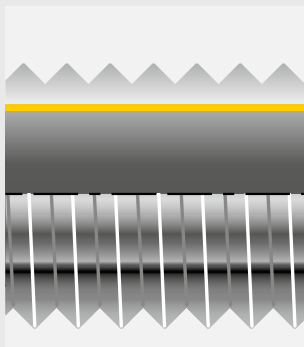
- Brass threaded barrel with increased wall thickness offers best protection of sensor electronics
- Highly flexible cable reduces cable failures in mobile use, e.g. when used on E-Chain
- One-piece metal housing prevents damage at joints

Bright LEDs enable rapid commissioning and troubleshooting

- Clear switching status display, even in poor conditions
- Cable devices with 360° LED display clearly visible from all angles, and translucent end cap
- New, brighter LEDs for plug connection devices

Long sensing distances in an M08 package

- Long switching distance for inductive ferrite core sensors in M08 design. Enables realization of a wide range of applications even without the use of larger M12 sensors
- Extremely short variants with a minimum sensor length of 15 mm



## Maximum mechanical stability

The design of the sensors in a single-piece metal threaded barrel with increased wall thickness guarantees maximum mechanical stability.



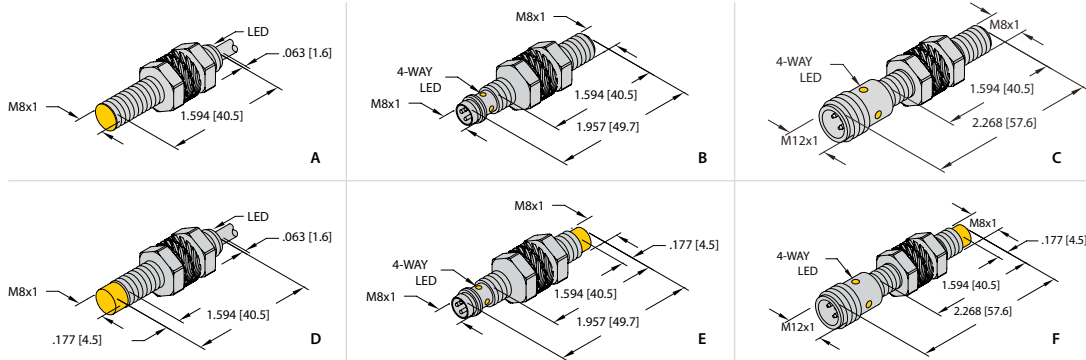
## Highly flexible Ø3-mm cable

In versions with cable output, the halogen-free cable with TPE outer sheath is highly flexible and suitable for use with an E-Chain. This enables use in a wide range of applications.

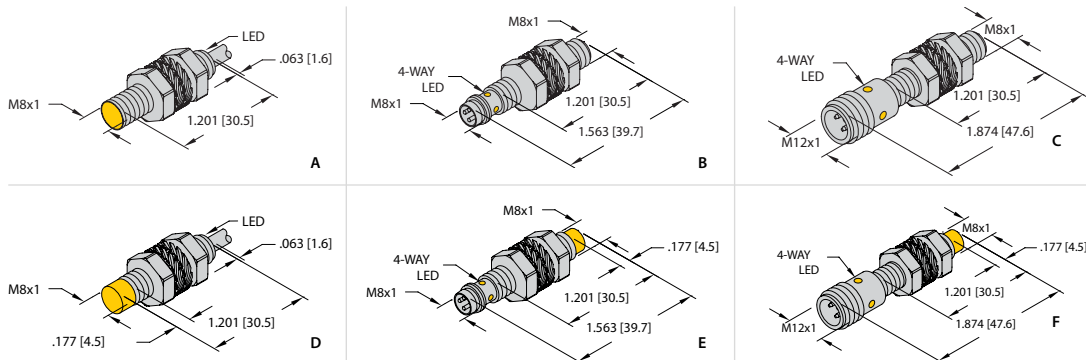
# Types and Features

<b>Rated sensing range</b>	<b>2 and 3 mm flush, 3 and 5 mm non-flush</b>
Assured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	$\leq 2\%$ of full scale
Temperature drift	$\leq \pm 10\%$
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
<b>Operating voltage</b>	<b>10... 30 VDC</b>
Residual ripple	$\leq 10\% U_{ss}$
DC rated operational current	$\leq 150$ mA
No-load current $I_0$	$\leq 15$ mA
Residual current	$\leq 0.1$ mA
Rated insulation voltage	$\leq 0.5$ kV
Short-circuit protection	Yes/cyclic
Voltage drop at $I_e$	$\leq 1.8$ V
Wire breakage/reverse polarity protection	Yes/complete
Output function	3-wire, NO contact, PNP/NPN, 4-wire, changeover contact, PNP/NPN (from 22-mm thread length)
Switching frequency	2.8 kHz
<b>Model</b>	<b>Threaded barrel, M8 x 1</b>
Dimensions	17.1 mm to 42.1 mm
Housing material	Metal, CuZn, nickel-plated brass
Material, active face	Plastic, PP-GF20
Max. tightening torque	7 Nm
Connector	Connector, M8 x 1, M12 x 1 or cable 2 m or 7 m
Cable quality	3 mm, gray, Lif9Y-11Y, PUR, 2 or 7 m, suitable for E-chain use acc. to manufacturer's declaration H1063M
Cable cross section	3x 0.14 mm <sup>2</sup>
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years according to SN 29500 (Ed. 99) 40°C

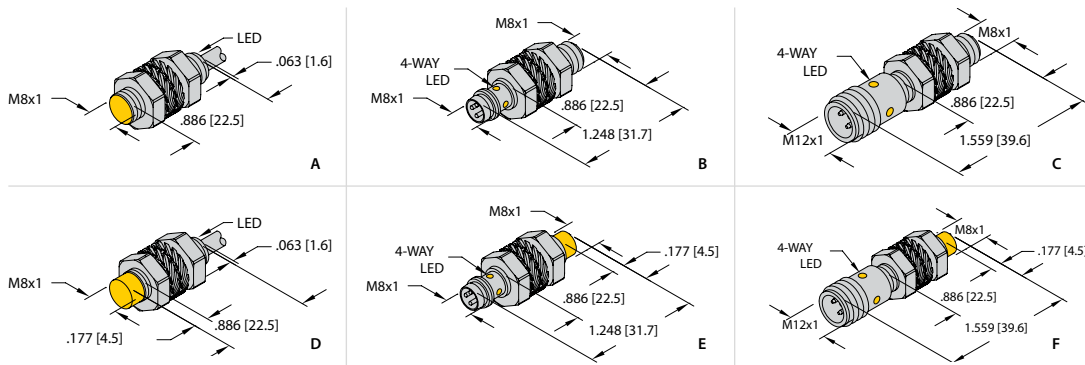
# Offerings



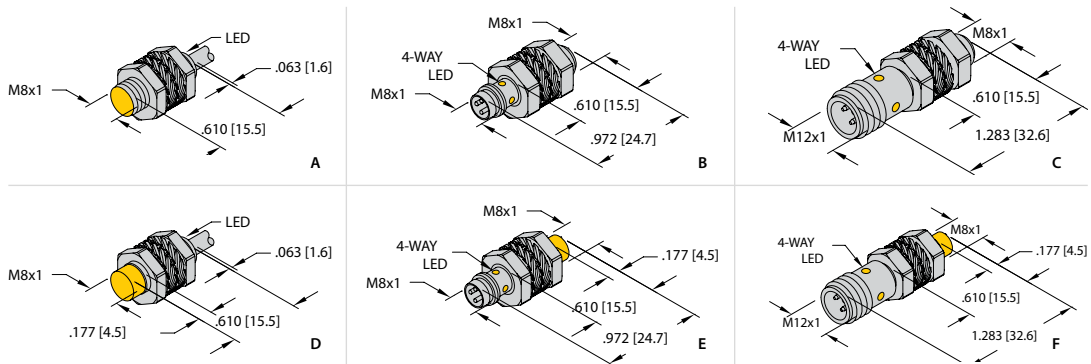
AP6X			AN6X		
Part Number	ID Number	Diagram	Part Number	ID Number	Diagram
BI2-M08E-AP6X	4602954	A	BI2-M08E-AN6X	4602951	A
BI2-M08E-AP6X-V1131	4602956	B	BI2-M08E-AN6X-V1131	4602953	B
BI2-M08E-AP6X-H1341	4602955	C	BI2-M08E-AN6X-H1341	4602952	C
NI3-M08E-AP6X	4602834	D	NI3-M08E-AN6X	4602831	D
NI3-M08E-AP6X-V1131	4602836	E	NI3-M08E-AN6X-V1131	4602833	E
NI3-M08E-AP6X-H1341	4602835	F	NI3-M08E-AN6X-H1341	4602832	F



AP6X			AN6X		
Part Number	ID Number	Diagram	Part Number	ID Number	Diagram
BI2-M08-AP6X	4602901	A	BI2-M08-AN6X	4602926	A
BI3-M08-AP6X	4602910	A	BI3-M08-AN6X	4602913	A
BI2-M08-AP6X-V1131	4602903	B	BI2-M08-AN6X-V1131	4602927	B
BI3-M08-AP6X-V1131	4602911	B	BI3-M08-AN6X-V1131	4602914	B
BI2-M08-AP6X-H1341	4602902	C	BI2-M08-AN6X-H1341	4602928	C
BI3-M08-AP6X-H1341	4602912	C	BI3-M08-AN6X-H1341	4602915	C
NI3-M08-AP6X	4602929	D	NI3-M08-AN6X	4602932	D
NI5-M08-AP6X	4602920	D	NI5-M08-AN6X	4602923	D
NI3-M08-AP6X-V1131	4602930	E	NI3-M08-AN6X-V1131	4602933	E
NI5-M08-AP6X-V1131	4602921	E	NI5-M08-AN6X-V1131	4602924	E
NI3-M08-AP6X-H1341	4602931	F	NI3-M08-AN6X-H1341	4602934	F
NI5-M08-AP6X-H1341	4602922	F	NI5-M08-AN6X-H1341	4602925	F



AP6X			AN6X		
Part Number	ID Number	Diagram	Part Number	ID Number	Diagram
BI2-M08K-AP6X	4602966	A	BI2-M08K-AN6X	4602963	A
BI2-M08K-AP6X-V1131	4602968	B	BI2-M08K-AN6X-V1131	4602965	B
BI2-M08K-AP6X-H1341	4602967	C	BI2-M08K-AN6X-H1341	4602964	C
NI3-M08K-AP6X	4602851	D	NI3-M08K-AN6X	4602847	D
NI3-M08K-AP6X-V1131	4602853	E	NI3-M08K-AN6X-V1131	4602849	E
NI3-M08K-AP6X-H1341	4602852	F	NI3-M08K-AN6X-H1341	4602848	F



AP6X			AN6X		
Part Number	ID Number	Diagram	Part Number	ID Number	Diagram
BI3-M08KK-AP6X	4602938	A	BI3-M08KK-AN6X	4602941	A
BI3-M08KK-AP6X-V1131	4602939	B	BI3-M08KK-AN6X-V1131	4602942	B
BI3-M08KK-AP6X-H1341	4602940	C	BI3-M08KK-AN6X-H1341	4602943	C
NI5-M08KK-AP6X	4602944	D	NI5-M08KK-AN6X	4602948	D
NI5-M08KK-AP6X-V1131	4602946	E	NI5-M08KK-AN6X-V1131	4602949	E
NI5-M08KK-AP6X-H1341	4602947	F	NI5-M08KK-AN6X-H1341	4602950	F

28 subsidiaries and over  
60 representations worldwide!

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