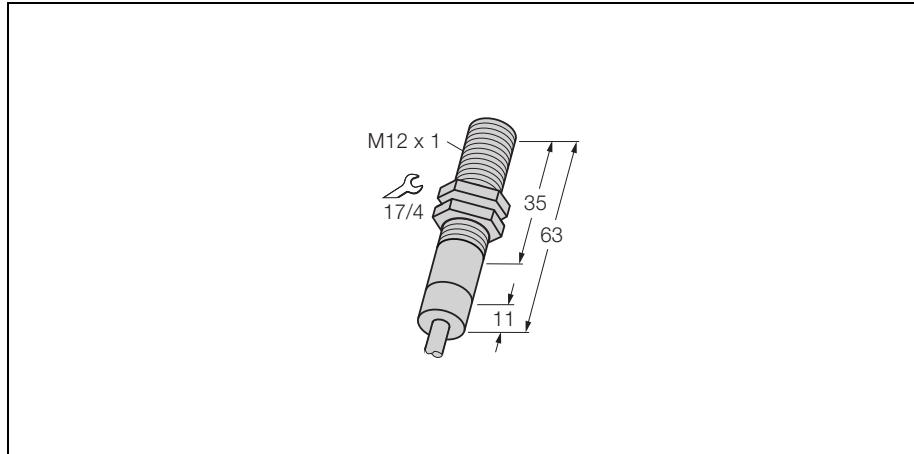


**Inductive sensor
for harsh environmental conditions and temperatures down
to 120°C**

Bi2-EM12D-AP6/S120



- threaded barrel, M12 x 1
- stainless steel, 1.4571
- Viton sealing ring
- degree of protection IP68 - IP69K
- for temperatures up to +120°C
- front cap made of PTFE
- climate-proof
- resistant to cooling lubricants, cutting and grinding oils
- suited for applications in the food industry
- 3-wire DC, 10...30 VDC
- normally open, pnp output
- cable connection

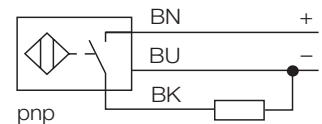
Type	Bi2-EM12D-AP6/S120
Ident-No.	4614512

Rated operating distance Sn	2 mm
Mounting condition	flush
Assured sensing range	(0,81 x Sn) mm
Correction factors	St37 = 1, V2A ~ 0.7, Ms ~ 0.4, Al ~ 0.3
Repeatability	2 %
Temperature drift	± 10 % ± 20 %, ≥ +70 °C
Hysteresis	3... 15 %
Ambient temperature	-25...+ 120 °C

Operating voltage	10... 30VDC
Residual ripple	10 % U _{SS}
DC rated operational current	200 mA
Rated operational current	see derating curve
No-load current I ₀	15 mA
Residual current	0.1 mA
Rated insulation voltage	0.5 kV
Short-circuit protection	yes / cyclic
Voltage drop at I _e	1.8V
Wire breakage / Reverse polarity protection	yes / complete
Output function	3-wire, normally open, pnp
Switching frequency	0.1 kHz

Housing	threaded barrel, M12 x 1
Dimensions	63 mm
Housing material	metal, AISI 316Ti
Material active face	plastic, PTFE
End cap	plastic, PTFE
Admissible pressure on front cap	10 bar
Tightening torque of housing nut	10 Nm
Connection	cable
Cable quality	Ø 3.7, PTFE, Teflon FEP, 2 m
Cable cross section:	3 x 0.34mm ²
Vibration resistance	55 Hz (1 mm)
Shock resistance	30g (11 ms)
Degree of protection	IP68 / IP69K

Wiring diagram

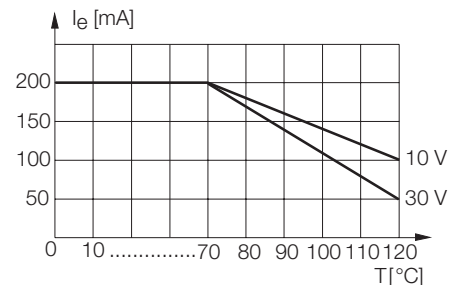


Functional principle

TURCK offers fully impermeable sensors with resistance to cleaning agents, cooling lubricants and cutting and grinding oils for application in the food industry and machine engineering. TURCK's inductive sensors for extremely hostile industrial environments not only meet, but even exceed the requirements of protection degree IP68 and IP69.

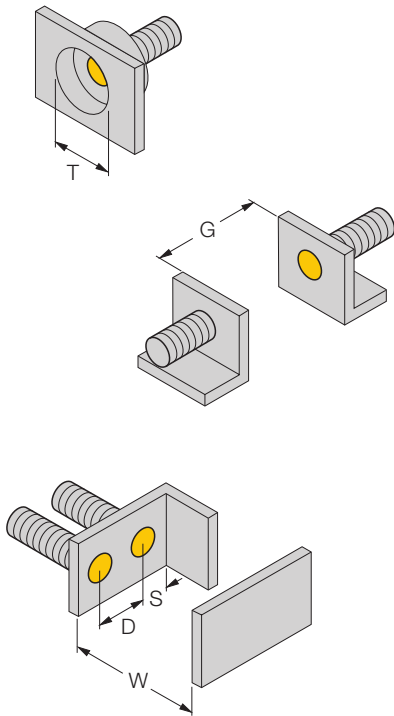
Special inductive sensors versions can be used at temperatures of -60°C up to +250°C.

derating curve




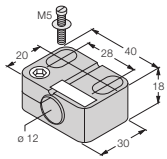
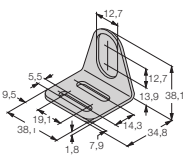
**Inductive sensor
for harsh environmental conditions and temperatures down
to 120°C
Bi2-EM12D-AP6/S120**

Mounting instructions	minimum distances
Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1,5 x B
Distance G	6 x Sn
Diameter of the active area B	Ø 12 mm



**Inductive sensor
for harsh environmental conditions and temperatures down
to 120°C
Bi2-EM12D-AP6/S120**

Accessories

Type code	Ident-No.	Short text	Dimension drawing
QM-12	6945101	quick-mount fixing clamp with dead-stop; material: chrome-plated brass male thread M16 x 1. Note: The switching distance of proximity switches can be reduced by the use of quick mounting brackets.	
BST-12B	6947212	fixing clamp with dead-stop; material: PA6	
MW-12	6945003	mounting bracket; material: stainless steel A2 1.4301 (AISI 304)	
BSS-12	6901321	fixing clamp; material: polypropylene	