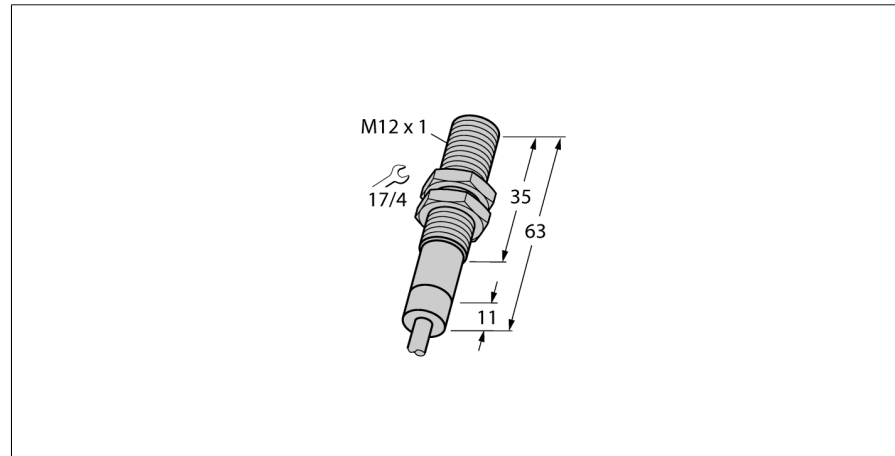


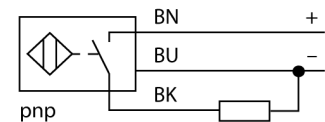
**Inductive sensor  
for rough environments and temperatures up to +120°C  
BI2-EM12D-AP6/S120**



- Threaded barrel, M12 x 1
- Stainless steel, 1.4571
- Viton sealing ring
- Protection classes IP68 - IP69K
- For temperatures up to +120°C
- PTFE front cap
- Climate-proof
- Resistant to cooling lubricants, cutting and grinding oils
- For the food industry
- 3-wire DC, 10...30 VDC
- NO contact, PNP output
- Cable connection

<b>Type code</b>	BI2-EM12D-AP6/S120
Ident no.	4614512
<b>Rated operating distance Sn</b>	2 mm
Mounting condition	flush
Assured sensing range	≤ (0,81 x Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 2 % of full scale
Temperature drift	10 %
	≤ ± 20 %, ≥ +70 °C
Hysteresis	3...15 %
Ambient temperature	-25...+120 °C
<b>Operating voltage</b>	10...30VDC
Residual ripple	≤ 10 % U <sub>sn</sub>
DC rated operational current	≤ 200 mA
Rated operational current	see derating curve
No-load current I <sub>0</sub>	≤ 15 mA
Residual current	≤ 0.1 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes/ cyclic
Voltage drop at I <sub>e</sub>	≤ 1.8 V
Wire breakage / Reverse polarity protection	yes/ complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.1 kHz
<b>Design</b>	threaded barrel, M12 x 1
Dimensions	63 mm
Housing material	stainless steel, V4A (1.4571)
Material active area	Plastic, PTFE
End cap	Plastic, PTFE
Admissible pressure on front cap	≤ 10 bar
Max. tightening torque housing nut	10 Nm
Connection	cable
Cable quality	3.7 mm, PTFE, FEP, 2 m
Cable cross section	3 x 0.34 mm <sup>2</sup>
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 / IP69K

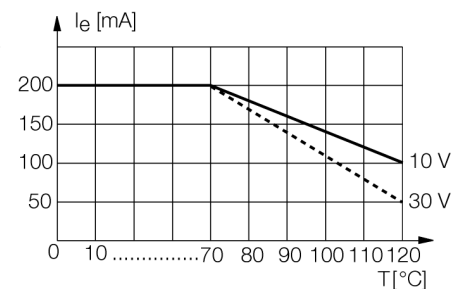
**Wiring diagram**



**Functional principle**

TURCK offers leak-proof sensors for the food industry and machine engineering that are resistant to cleaning agents, cooling lubricants, cutting and grinding oils. They are made for rough environmental conditions and not only meet but even exceed the requirements of the protection classes IP68 and IP69. Special versions are available for ambient temperatures between -60°C and +250°C.

**derating curve**



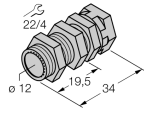
**Inductive sensor  
for rough environments and temperatures up to +120°C  
BI2-EM12D-AP6/S120**

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
<hr/>	
Diameter of the active area B	Ø 12 mm



**Inductive sensor  
for rough environments and temperatures up to +120°C  
BI2-EM12D-AP6/S120**

**Accessories**

Type code	Ident no.	Description	Dimension drawing
QM-12	6945101	Quick-mount bracket 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-mount brackets.	
MW-12	6945003	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	