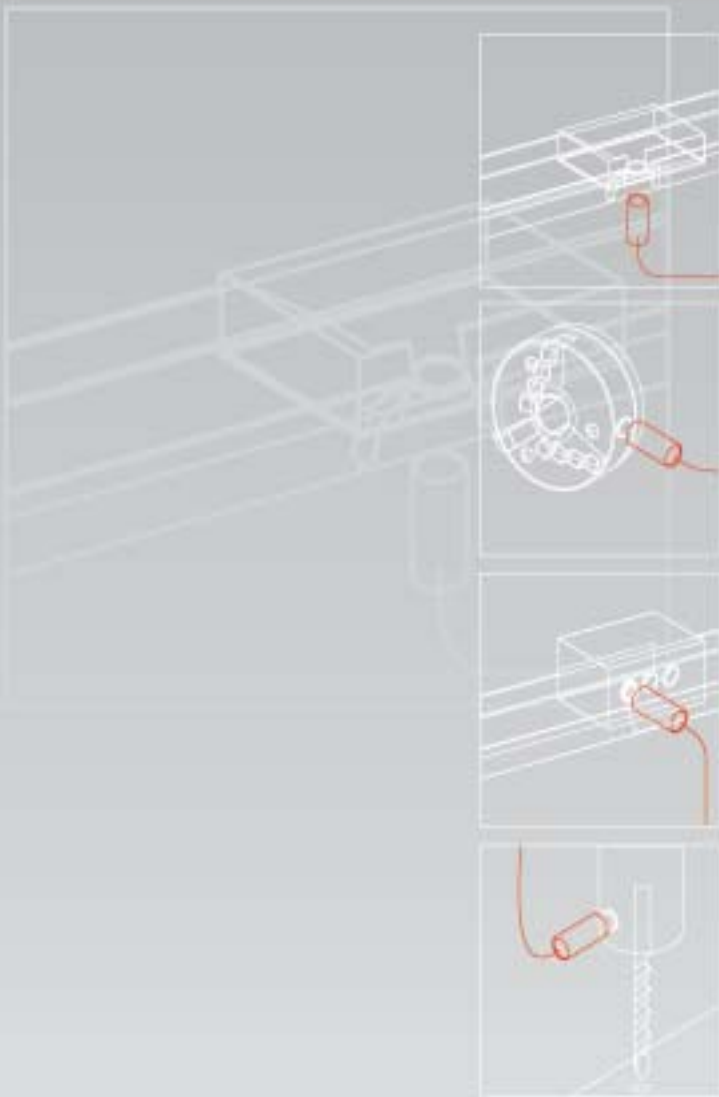


Magnetic Field Sensors

Magnetic field sensors are used mainly for position sensing, even through walls of non-magnetizable materials (aluminum, brass and non-magnetic stainless steels). Very long switching distances in a small package can be achieved through proper selection of the magnets.

- 3.2.2** BMF 07M (Ø 6.5 mm),
BMF 08M (M8),
BMF 12M (M12)

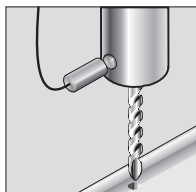
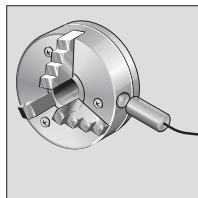
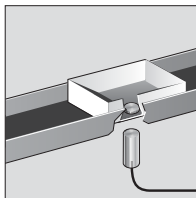
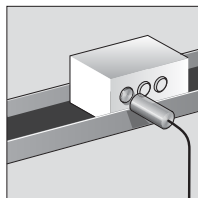




Magnetic field sensors in the classic tubular housings of an inductive sensor offer several application advantages.

- Significantly longer switching distances compared with inductive sensors of the same size
- Senses through alloy or aluminum walls with no switching distance reduction
- Front or side actuation possible

- Magnet can be flush mounted in steel
- Responds to north or south pole
- Solid state, wear-free
- Insensitive to vibration
- Output protected against inductive spikes



Series
Type



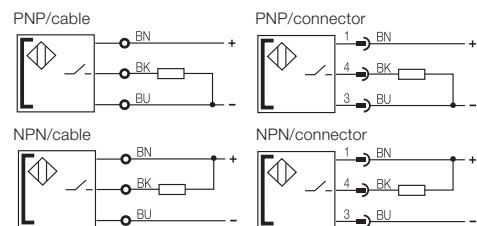
PNP	NO	
NPN	NO	
Rated operating field strength $ H_n $		
Assured operating field strength $ H_a $		
Hysteresis of $ H_n $		
Temperature drift of turn-on point of $ H_n $		
Turn-on delay		
Turn-off delay		
Supply voltage U_B		
Voltage drop U_d		
Rated insulation voltage U_i		
Rated operational current I_o		
No-load supply current I_o max.		
Polarity reversal protected		
Short circuit protected		
Ambient temperature range T_a		
Utilization category		
Degree of protection per IEC 60529		
Housing material		
Connection		

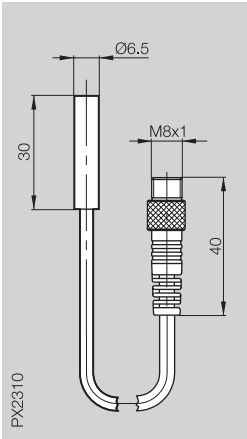
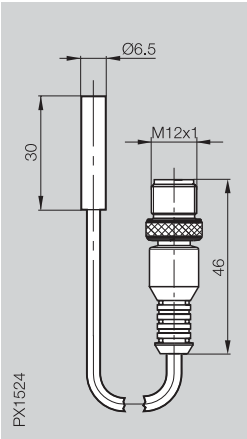
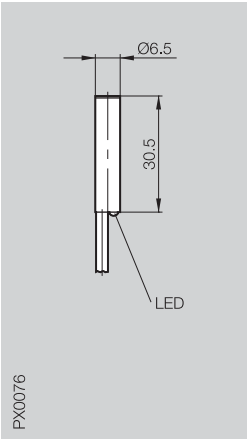
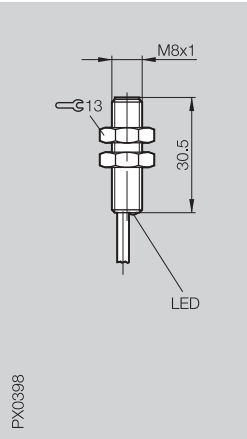
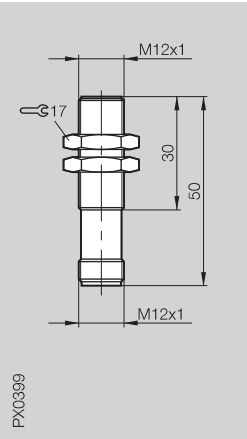
No. of wires x cross-section	
Approval	
Recommended connector	

*Temperature load curve see page 3.0.6




Other cable lengths on request.

Wiring diagrams



BMF 07M	BMF 07M	BMF 07M	BMF 08M	BMF 12M
Connector M8×1 with rotatable union nut	Connector M12×1 with rotatable union nut			
				
BMF 07M-PS-D-2-SA2-S49-00,3	BMF 07M-PS-D-2-S4-00,6	BMF 07M-PS-C-2-KPU -02	BMF 08M-PS-C-2-KPU -02	BMF 12M-PS-D-2-S4
BMF 07M-NS-D-2-SA2-S49-00,3		BMF 07M-NS-C-2-KPU -02	BMF 08M-NS-C-2-KPU -02	BMF 12M-NS-D-2-S4
1.2 kA/m	1.2 kA/m	1.2 kA/m	1.2 kA/m	1.2 kA/m
≥ 2 kA/m	≥ 2 kA/m	≥ 2 kA/m	≥ 2 kA/m	≥ 2 kA/m
≤ 45 %	≤ 45 %	≤ 45 %	≤ 45 %	≤ 45 %
≤ 0.3 %/°C	≤ 0.3 %/°C	≤ 0.3 %/°C	≤ 0.3 %/°C	≤ 0.3 %/°C
≤ 0.05 ms	≤ 0.05 ms	≤ 0.05 ms	≤ 0.05 ms	≤ 0.05 ms
≤ 0.05 ms	≤ 0.05 ms	≤ 0.05 ms	≤ 0.05 ms	≤ 0.05 ms
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
≤ 3.1 V	≤ 3.1 V	≤ 3.1 V	≤ 3.1 V	≤ 3.1 V
75 V DC	75 V DC	75 V DC	75 V DC	75 V DC
200 mA*	200 mA*	200 mA*	200 mA*	200 mA*
≤ 30 mA	≤ 30 mA	≤ 30 mA	≤ 30 mA	≤ 30 mA
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes
-25...+85 °C	-25...+85 °C	-25...+85 °C	-25...+85 °C	-25...+85 °C
DC 13	DC 13	DC 13	DC 13	DC 13
IP 67	IP 67	IP 67	IP 67	IP 67
CuZn coated	CuZn coated	CuZn coated	CuZn coated	CuZn coated
0.3 m cable (PUR) with connector	0.6 m cable (PUR) with connector	2 m Cable PUR	2 m Cable PUR	Connector
		3×0.14 mm ²	3×0.14 mm ²	
cULus	cULus	cULus	cULus	cULus
BKS- 48	BKS- 19			BKS- 19/BKS- 20

Operating distance magnet sensor

Magnet type	Samarium cobalt	Hard ferrite	Strontium ferrite
			
Ordering code	620260	620961	709084
Housing size	16×12 mm	Ø 10 mm	Ø 4 mm
Height	3 mm	10 mm	5 mm
Assured operating distance s_a	28 mm	15 mm	5 mm
Hysteresis	8 mm	2 mm	2 mm

Assured switching is given from 0 mm to the operating distance indicated in the table. The given switching distances are determined from series measurements and should be considered a starting point for selecting a suitable magnet.