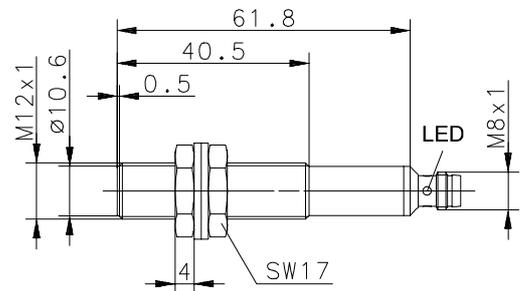
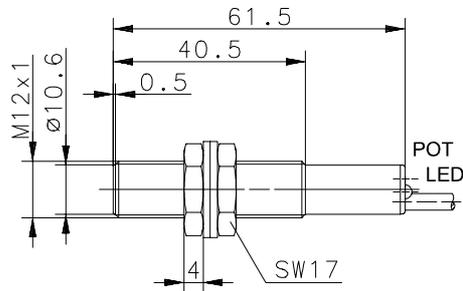


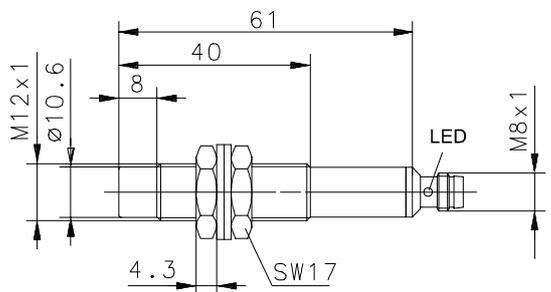
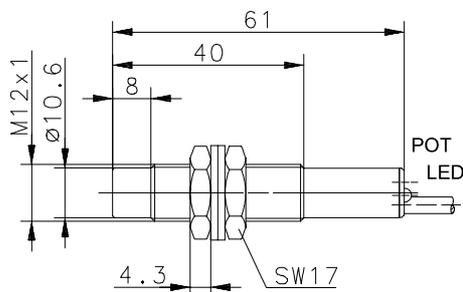
# Technical Data

## Capacitive Proximity Switch

### Series M12 flush and non flush - DC



Mounting flush	Type M12x1 Enclosure: Brass			
	2m cable		M8 male plug	
Sn	2mm			
Sr	0,4-2mm		1,8-2,2mm	
Output	N.O.	N.C.	N.O.	N.C.
NPN	6507303001	6507103001	6507303004	6507103004
PNP	6507903001	6507703001	6507903004	6507703004



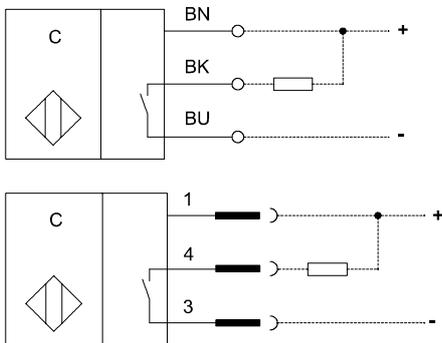
Mounting non flush	Type M12x1 Enclosure: Thermoplastic			
	2m cable		M8 male plug	
Sn	4mm			
Sr	1-4mm		3,6-4,4mm	
Output	N.O.	N.C.	N.O.	N.C.
NPN	6507319001	6507119001	6507319004	6507119004
PNP	6507919001	6507719001	6507919004	6507719004

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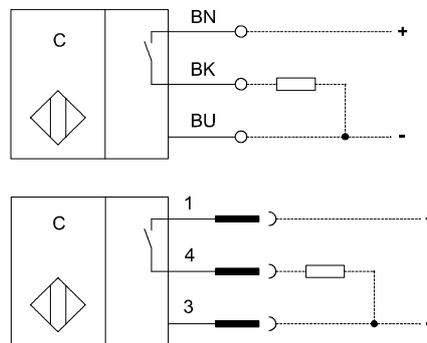
Date of issue: 07.06.2005 / Page 1 of 3  
 Document : 7100013\_en / Last update: 3 / 0308-05

### Wiring diagrams NPN and PNP normally open / N.O

NPN – Proximity Switch

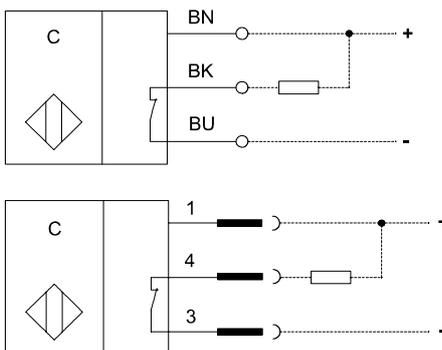


PNP - Proximity Switch

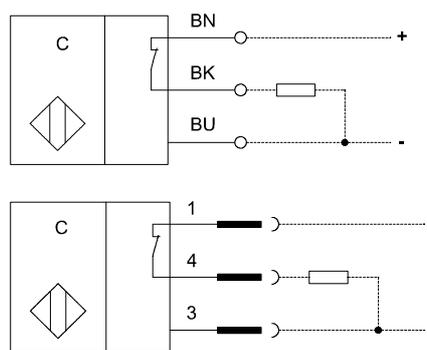


### Wiring diagrams NPN and PNP normally closed / N.C.

NPN – Proximity Switch

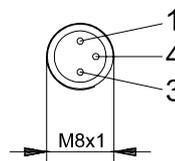


PNP - Proximity Switch



### Male plug M8x1 and corresponding colours

pin number	colour	code
1	brown	BN
4	black	BK
3	blue	BU



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### Identifying characteristics in accordance with EN 60947-5-2

Electrical data		
Rated operating distance	$S_n$	see overview
Mounting		see overview
Standard target		12x12x1mm; material: steel; connected to earth
Effective operating distance	$S_r$	see overview $S_r$ adjustable with potentiometer (POT; only cable version); turn right $\hat{=}$ high sensitivity, turn left $\hat{=}$ low sensitivity
Assured operating distance	$S_a$	$0 \leq S_a \leq 0,8 \cdot S_r$
Switching element function		see overview
Repeat accuracy	R	$\leq 0,1 \cdot S_r$
Differential travel (hysteresis)	H	$\leq 0,2 \cdot S_r$
Frequency of operating cycles	f	$\approx 25\text{Hz}$
Rate operational voltage	$U_e$	12 – 24V DC
Operational voltage range	$U_B$	10 – 36V DC
Rated insulation voltage	$U_i$	75V DC
Rated impulse withstand voltage	$U_{imp}$	500V
Voltage drop	$U_d$	$\leq 1,5\text{V DC}$
Utilization category		DC-13(Switching element)
Rated operational current	$I_e$	$\leq 200\text{mA DC}$
Minimum operational current	$I_m$	$\geq 1\text{mA DC}$
Off-state current	$I_r$	$\leq 0,5\text{mA DC}$
No-load supply current	$I_o$	$\leq 15\text{mA DC}$
Switching element		permanent overload and s.c.p.
Short-circuit protection		pulsed
Rated conditional short-circuit current		100A
Rated supply frequency		DC
False polarity protection		with permutation of +, -, output no damage occurs
Time delay before availability	$t_v$	$\leq 50\text{ms}$

Electromagnetic compatibility (EMC)		
Electromagnetic field test	IEC 61000-4-3	3V/m, 80...1000MHz
Electrostatic discharge test	IEC 61000-4-2	4kV CD / 8kV AD
Electrical fast transient immunity test (Burst)	IEC 61000-4-4	1kV coupling clamp
Impulse voltage withstand ability (Surge)	IEC 61000-4-5	500V, 1,2/50 $\mu\text{s}$ @ $R_i = 42\Omega$
Radiated disturbance field strength	EN 55011	$\leq 40\text{dB } (\mu\text{V/m})$

Mechanical Data	
Enclosure	flush = brass, nickel plated non flush = PBT black
Front cap	flush = PTFE
End cap	PA 6.6 black
Ambient air temperature	-25°C ... +70°C
Type of protection	Cable versions: IP65 Connector versions (M8x1 with plug-in-connector): IP65 Connector versions (M8x1 with screwed plug-in-connector): IP67
Pollution degree	3 (Pollution of the active zone can cause impairments of the operating distances.)
Indication	Output ON = LED yellow
Termination type	Cable 3x0,14mm <sup>2</sup> x 2m, PVC-outer jacket, black Plug socket M8x1, brass, nickel plated
For attachment	Hexagon nut; brass, nickel plated (with toothed washers A2) Hexagon nut; PA 6.6, black (with washers PEBUNAN)

EU Conformity	CE
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Date of issue: 07.06.2005 / Page 3 of 3  
Document : 7100013\_en / Last update: 3 / 0308-05