

AM1 Series / Inductive Proximity Switches

Switching Sensors



- Construction type: M12x1
- Switching distance: 2 mm / 4 mm / 8 mm
- Connection type: Cable and M12 connector
- Housing material: Brass nickel-plated
- IP67 Ingress protection
- Power supply: 10 - 30 V DC

	AM1/xx-xA	AM1/xx-xH
GENERAL DATA		
Series	AM1	
Measurement method	Induction	
Sensorfunction	Switch	
Construction type	M12x1	
Display elements	LED - output status	
MEASUREMENT DATA		
Repeat accuracy	5 %	
Temperature drift	10 %	
OUTPUTS		
Output current	≤ 200 mA	
Time delay before availability	50 ms	
Switching hysteresis	1 - 20 %	
Switching frequency	2000 Hz	
POWER SUPPLY		
Power supply	10 - 30 V DC	
No-load current	10 mA	
Short circuit protection	Yes	
Reverse polarity protection	Yes	
Induction protection	Yes	
Ripple max.	≤ 10 %	
Voltage drop	≤ 1.8 V @ 200 mA	
Leakage current	10 µA	
PHYSICAL CHARACTERISTICS		
Housing material	Brass nickel-plated	
Ingress protection	IP67	
Dimensions (ø x L)	12 x 54 mm	12 x 65 mm
Cable length	2000 mm	-
Weight	70 g	30 g
Sensing face	PBT (polybutylene terephthalate)	
ENVIRONMENTAL		
Operating temperature range	-25 - +70 °C	
APPROVALS		
Shock	EN 60947-5-2 / § 7.4	
Vibration	EN 60947-5-2 / § 7.4	
EMC	EN 60947-5-2 / EN 60255-5 / EN61000-4-2,3,4 Level 3	

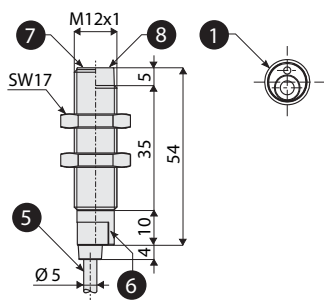
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Versions

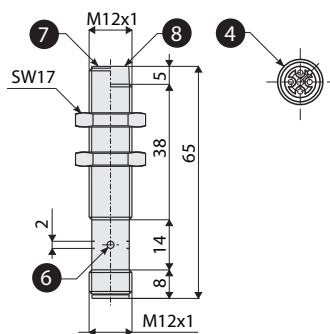
CONSTRUCTION TYPE	TYPE OF INSTALLATION	CONNECTION TYPE	SWITCHING DISTANCE	DIGITAL NPN NO	DIGITAL PNP NO	DIGITAL NPN NC	DIGITAL PNP NC
M12x1	Shielded	Cable 4-core (3 of them used)	2 mm	AM1/AN-1A	AM1/AP-1A	AM1/CN-1A	AM1/CP-1A
		M12 Connector, 4-pin	2 mm	AM1/AN-1H	AM1/AP-1H	AM1/CN-1H	AM1/CP-1H
	Unshielded	Cable 4-core (3 of them used)	4 mm	AM1/AN-2A	AM1/AP-2A	AM1/CN-2A	AM1/CP-2A
		M12 Connector, 4-pin	4 mm	AM1/AN-2H	AM1/AP-2H	AM1/CN-2H	AM1/CP-2H
	Shielded	Cable 4-core (3 of them used)	4 mm	AM1/AN-3A	AM1/AP-3A	AM1/CN-3A	AM1/CP-3A
		M12 Connector, 4-pin	4 mm	AM1/AN-3H	AM1/AP-3H	AM1/CN-3H	AM1/CP-3H
	Unshielded	Cable 4-core (3 of them used)	8 mm	AM1/AN-4A	AM1/AP-4A	AM1/CN-4A	AM1/CP-4A
		M12 Connector, 4-pin	8 mm	AM1/AN-4H	AM1/AP-4H	AM1/CN-4H	AM1/CP-4H

Dimensions (mm)

AM1/xx-xA



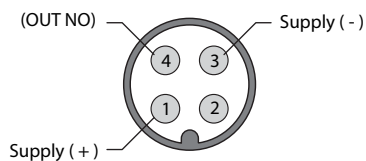
AM1/xx-xH



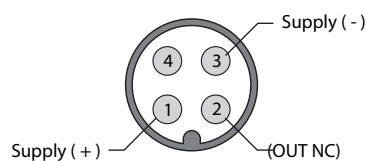
- 1: Cable 4-core (3 of them used)
- 4: M12 Connector, 4-pin
- 5: Cable, Ø 3.75 mm, PVC, 2000 mm
- 6: LED - Output status
- 7: Shielded version
- 8: Unshielded version

Connector

M12 NO



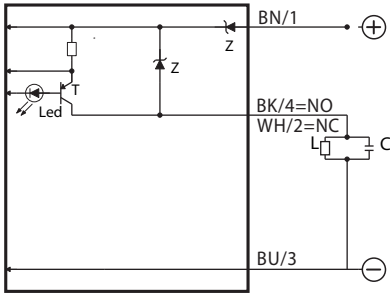
M12 NC



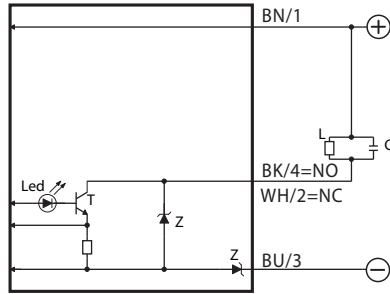
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Electrical diagrams

PNP



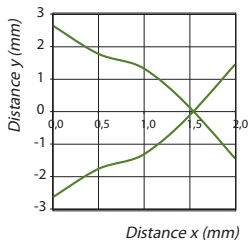
NPN



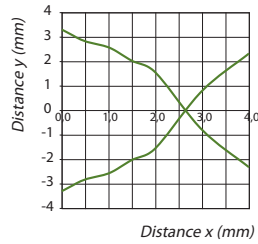
BN: brown
BK: black
BU: blue
WH: white

Sensing area

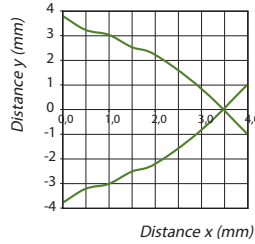
AM1/xx-1x



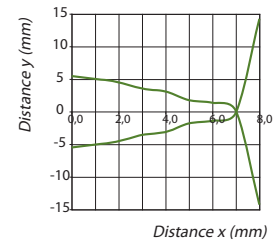
AM1/xx-2x



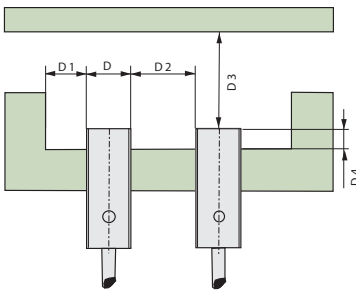
AM1/xx-3x



AM1/xx-4x



Mounting



	D4	D1	D2	D3
AM1/xx-1x	≥ 0 mm	≥ 6 mm	≥ 12 mm	≥ 6 mm
AM1/xx-2x	≥ 1.2 mm	≥ 12 mm	≥ 24 mm	≥ 12 mm
AM1/xx-3x	≥ 12 mm ⁽¹⁾	≥ 6 mm	≥ 12 mm	≥ 12 mm
AM1/xx-4x	≥ 8 mm	≥ 12 mm	≥ 24 mm	≥ 24 mm

(1) ≥ 2 mm for non-magnetic materials