

# M12 Inductive DC Proximity Switches AM1/AM6



Compact inductive proximity switches for DC operation

- $\varnothing 12 \times 50\text{mm}$  and  $\varnothing 12 \times 43.5\text{mm}$
- Shielded and unshielded models
- IP67 nickel-plated brass housing
- Short-circuit protection
- LED status indicator 360° visible
- 2 wire DC (AM1)
- Additional cable exit options available
- Nominal sensing range: Shielded 2mm  
Unshielded 4mm
- Long distance AM1: Shielded 4mm  
Unshielded 8mm
- UL and CUL approved



## Options and ordering codes

	<b>AM1</b>	/	<b>AN</b>	-	<b>1A</b>
Standard proximity	<b>AM1</b>				
$\varnothing 12\text{mm}$ short version	<b>AM6</b>				
NO output state			<b>A</b>		
NC output state			<b>C</b>		
NPN output type			<b>N</b>		
PNP output type			<b>P</b>		
2 wire AM1 only			<b>O</b>		
Shielded					<b>1</b>
Unshielded					<b>2</b>
Long distance shielded					<b>3</b>
Long distance unshielded					<b>4</b>
Standard cable exit					<b>A</b>
M12 plug cable exit					<b>H</b>

## Specification

Model	AM1/AM6
Hysteresis	10% maximum
Repeatability	5%
Supply voltage	10-30 VDC
Ripple	10% maximum
Maximum consumption	20mA
Switching frequency	AM1:2kHz, AM6:1kHz*
Output type	NPN or PNP
Output state	NO or NC
Load current	$\leq 200\text{mA}$
Residual output voltage	1.2V max. $I_L = 100\text{mA}$
Leakage current	$< 10\mu\text{A}$
Time delay before availability	100ms
Output current limit	250-300mA†
Short circuit protection	autoreset
Polarity reversal protection	yes
Inductive loads protection	yes
LED status indicator	yes (at the rear)
Insulation resistance	$> 1000\text{m}\Omega$ to 1000VDC
Dielectric strength	1500VAC 50Hz for 1 min
Protection degree	IP67
Temperature range	$-25^\circ + 70^\circ\text{C}$
Temperature drift	10% Sn
Housing material	nickel-plated brass
Front material	PBT
Tightening torque	15 Nm max
Ambient humidity	35%-85% r.h.
Weight (approx.)	65g

# M12 Inductive DC Proximity Switches

## AM1/AM6 continued

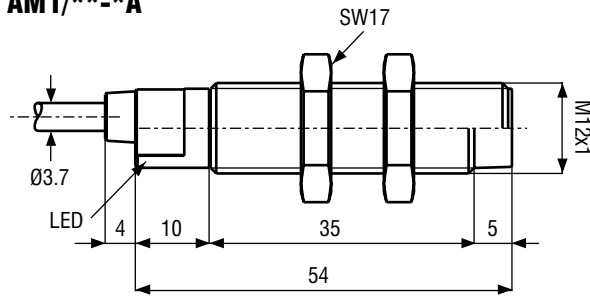


### Dimensions (mm)

#### Standard cable exit

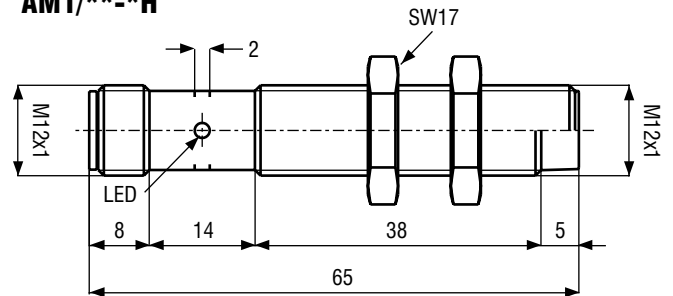
Cable:  $\varnothing 3.75\text{mm}$ , 2m length,  $0.34\text{mm}^2$  conductor section, PVC material

#### AM1/\*\*-A

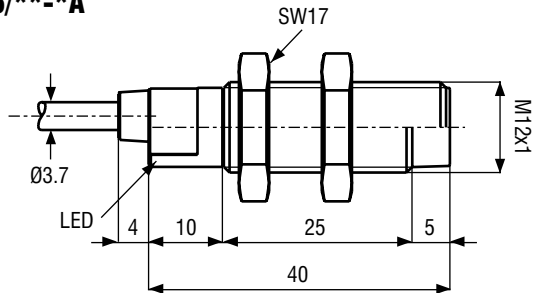


#### M12 plug cable exit

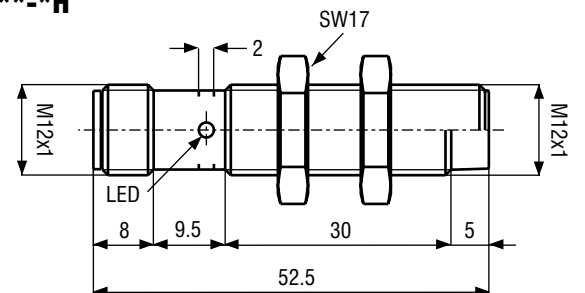
#### AM1/\*\*-H



#### AM6/\*\*-A

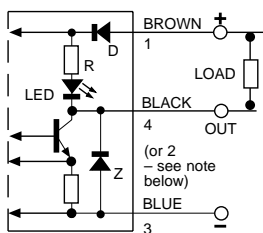


#### AM6/\*\*-H

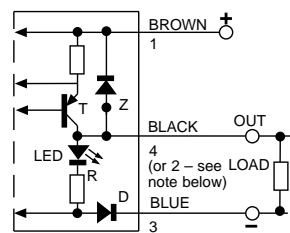


### Output circuit - wiring connections

#### NPN output



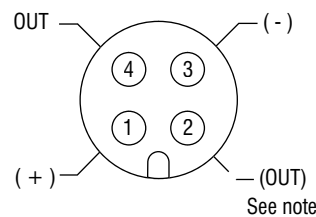
#### PNP output



NOTE: in case of combined load, i.e. resistive and capacitive, the maximum admissible capacity (C) is  $0.05\mu\text{F}$  for maximum output voltage and current.

### M12 plug - pin connections

Cable exit option H



**Other cable options:**  
 Right angle cable  
 M8 Plug cable exit  
 Customised cables  
 Please contact IMO for price and availability

NOTE: (pin connections): At present, all plug exit sensors have the output on pin 4. According to EEC Directives, the output of NC plug exit models will be changing to pin 2 (NO will remain on pin 4). A plug cable to match these NC sensors MUST be a 4-wire type as 3-wire cables are connected to pins 1, 3 and 4 – contact IMO to check stock types.