

# M8 Inductive DC Proximity Switches AE1

- Ø 8 x 45mm
- Shielded and unshielded models
- IP67 nickel-plated brass housing
- Short-circuit protection
- Rear-mounted LED operation indicator
- Additional cable exit options available
- Nominal sensing range:     Shielded 1.5mm  
  Unshielded 2.5mm
- Long distance AE1:         Shielded 2mm  
  Unshielded 4mm
- LED status indicator 360° visible
- UL and cUL approved



## Options & Ordering Codes

|                    |   |           |          |                                   |
|--------------------|---|-----------|----------|-----------------------------------|
| <b>AE1</b>         | / | <b>AN</b> | -        | <b>1A</b>                         |
| Standard Proximity |   |           |          |                                   |
| <b>Output</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>  |          |                                   |
|                    |   |           |          | <b>1</b> Shielded                 |
|                    |   |           |          | <b>2</b> Unshielded               |
|                    |   |           |          | <b>3</b> Long distance shielded   |
|                    |   |           |          | <b>4</b> Long distance unshielded |
|                    |   |           | <b>A</b> | Standard cable exit               |
|                    |   |           | <b>H</b> | M12 plug                          |
|                    |   |           | <b>F</b> | M8 plug                           |

## Specification

| Model                        | AE1                     |
|------------------------------|-------------------------|
| Hysteresis                   | 10% max.                |
| Repeatability                | 5%                      |
| Supply Voltage               | 10-30VDC                |
| Ripple                       | 10% max.                |
| Max. Consumption             | 20mA                    |
| Switching Frequency          | 3kHz                    |
| Output Type                  | NPN or PNP              |
| Output State                 | NO or NC                |
| Load Current                 | 200mA                   |
| Residual Output Voltage      | 1.2V max. IL=100mA      |
| Leakage Current              | <10µA                   |
| Time Before Switch Operation | 200ms                   |
| Output Current Limit         | 250-300mA               |
| Short Circuit Protection     | Autoreset               |
| Polarity Reversal Protection | Yes                     |
| Inductive Loads Protection   | Yes                     |
| LED Status Indicator         | Yes (at rear)           |
| Insulation Resistance        | > 1000m to 1000VDC      |
| Dielectric Strength          | 1500VAC 50Hz for 1 min. |
| Protection Degree            | IP67                    |
| Temperature Range            | -25°C to +70°C          |
| Temperature Drift            | 10% Sn                  |
| Housing Material             | Nickel-plated brass     |
| Front Material               | PBT                     |
| Tightening Torque            | 10Nm max.               |
| Ambient Humidity             | 35%-85% r.h.            |
| Weight (approx.)             | cable: 45g, plug: 25g   |

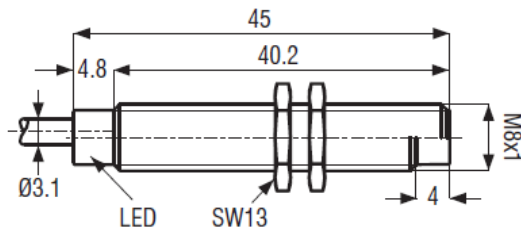
UL approved models  
**Other cable options:**  
 Right angle cable  
 Customised cables  
 Please contact IMO for price and availability

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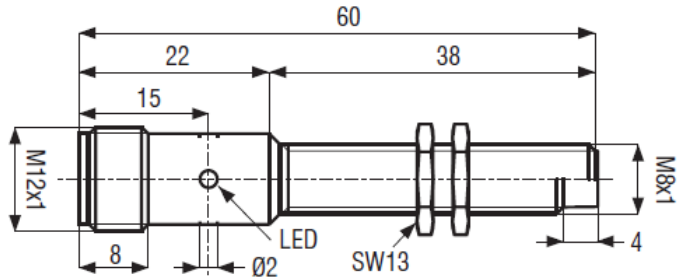
## Dimensions (mm)

### AE1/\*\*-A standard cable exit

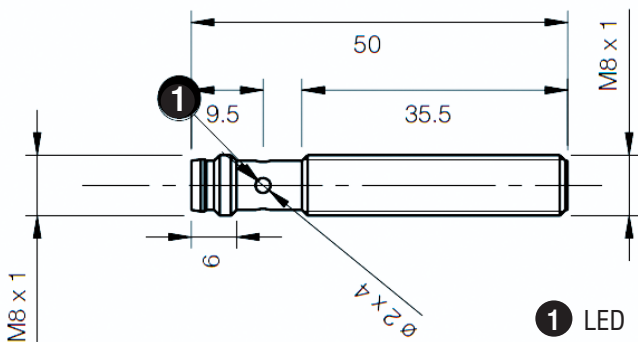
Cable: Ø 3.1mm, 2m length  
0.12mm<sup>2</sup> conductor selection, PVC material



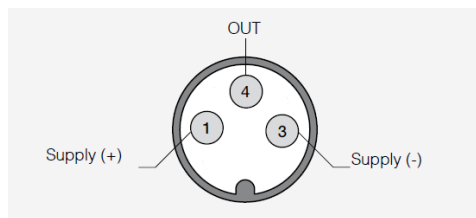
### AE1/\*\*-H M12 plug cable exit



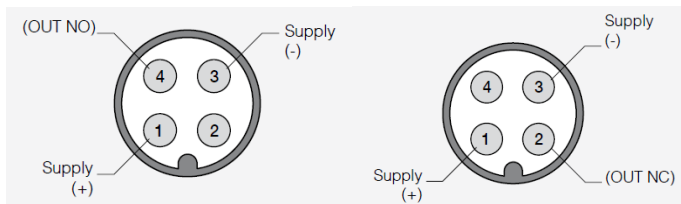
### AE1/\*\*-F M8 plug cable exit



## M8 plug - pin connections (Cable exit option F)



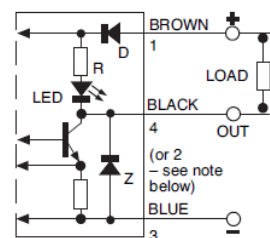
## M12 plug - pin connections (Cable exit option H)



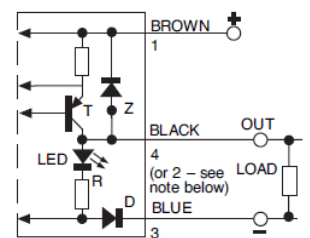
**NOTE:** (pin connections): At present, all plug exit sensors have the output on pin 4. According to EEC Directives, the output of NC plug exit models will be changing to pin 2 (NO will remain on pin 4). A plug cable to match these NC sensors **MUST** be a 4-wire type as 3-wire cables are connected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

## 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 0.05µF for maximum output voltage and current.