



Proximity switch, inductive, 1 N/C,  $S_n=18\text{mm}$ , 4L, 6-48VDC, NPN, PNP, M18, metal

**Part no.** E59-M18C116D01-D2  
**Catalog No.** 136220  
**Alternate Catalog No.** E59-M18C116D01-D2

## Delivery program

|                           |       |    |                            |
|---------------------------|-------|----|----------------------------|
| Basic function            |       |    | Inductive Sensors          |
| Product range             |       |    | iProx Series               |
| Connection                |       |    | 3-wire                     |
| Design (outer dimensions) |       | mm | M18 x 1                    |
| Rated operational voltage | $U_e$ |    | 6 - 48 V DC                |
| Rated switching distance  | $S_n$ | mm | 18                         |
| Type of mounting          |       |    | Non-flush                  |
| Switching type            |       |    | NPN<br>PNP                 |
| For connection of:        |       |    | Plug-in connection M12 x 1 |
| <b>Contacts</b>           |       |    |                            |
| N/C = Normally closed     |       |    | 1 NC                       |
| Material                  |       |    | Stainless steel            |
| Degree of Protection      |       |    | IP67, IP69                 |

## Technical data

### General

|                             |  |   |                            |
|-----------------------------|--|---|----------------------------|
| Standards                   |  |   | IEC/EN 60947-5-2           |
| Ambient temperature         |  |   | -40 - +70                  |
| Mechanical shock resistance |  | g | 30<br>Shock duration 11 ms |
| Degree of Protection        |  |   | IP67, IP69                 |

### Characteristics

|  |       |     |   |
|--|-------|-----|---|
| Rated switching distance   |       |     |   |
| Rated switching distance   | $S_n$ | mm  | 18  |
| Repetition accuracy of $S_n$   |       | %   | 3   |
| Temperature drift of $S_n$   |       | %   | 10  |
| Switching hysteresis of $S_n$  |       | %   | 15  |
| Rated operational voltage  | $U_e$ |     | 6 - 48 V DC   |
| Maximum load current   | $I_e$ | mA  | < 300   |
| Operating current in the switched state at 24 V DC                             | $I_b$ | mA  | 15  |
| Voltage drop at $I_e$  | $U_d$ | V   | 2.5   |
| Switching Frequency  |       | Hz  | 150   |
| Min. load current  | $I_e$ | mA  | 1   |
| Residual current through the load in the blocked state at 230 V AC and 24 V DC | $I_r$ | mA  | 0.15  |
| Switching state display  |       | LED | Red   |
| Operating voltage display  |       | LED | Green   |
| Protective functions   |       |     | Short-circuit protective device<br>Protection against polarity reversal<br>Protection against wire breakage |
| Connection   |       |     | 3-wire  |
| Contacts   |       |     |   |
| N/C = Normally closed  |       |     | 1 NC  |
| Style  |       |     |   |
| Design (outer dimensions)  |       | mm  | M18 x 1   |
| For connection of:   |       |     | Plug-in connection M12 x 1  |

|          |  |                 |
|----------|--|-----------------|
| Material |  | Stainless steel |
|----------|--|-----------------|

## Design verification as per IEC/EN 61439

|  |    |     |
|--|----|-----|
| Technical data for design verification |    |     |
| Operating ambient temperature min.     | °C | -40 |
| Operating ambient temperature max.     | °C | 70  |

## Technical data ETIM 7.0

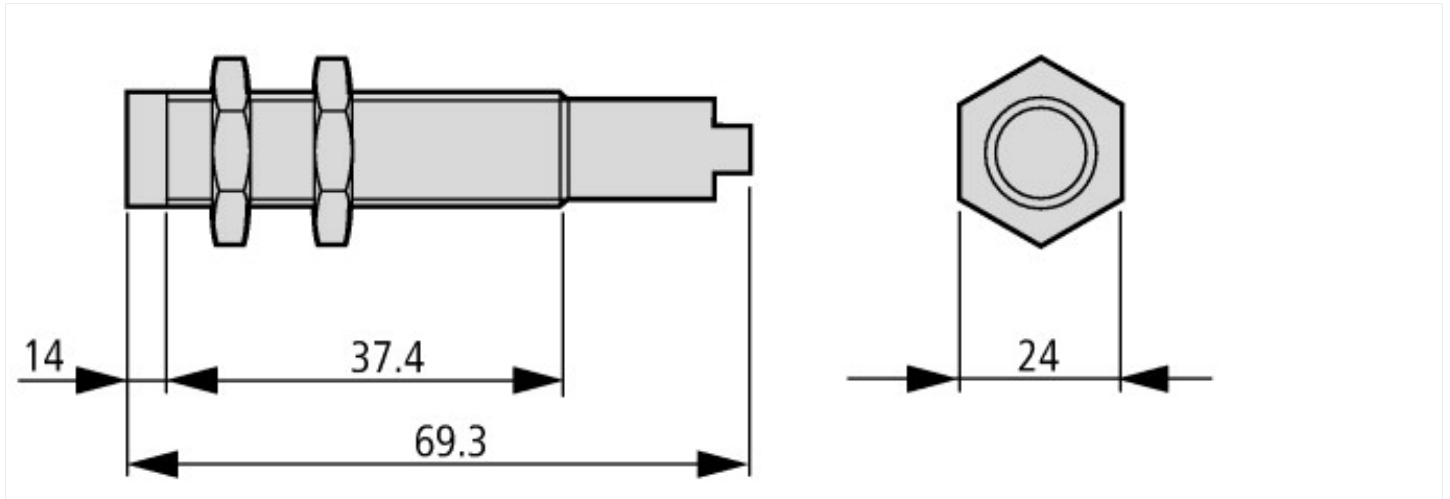
|   |    |                        |
|---|----|------------------------|
| Sensors (EG000026) / Inductive proximity switch (EC002714)  |    |                        |
| Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Proximity switch / Inductive proximity switch (ecl@ss10.0.1-27-27-01-01 [AGZ376015]) |    |                        |
| Width sensor  | mm | 0                      |
| Height of sensor  | mm | 0                      |
| Length of sensor  | mm | 69                     |
| Diameter sensor   | mm | 18                     |
| Mechanical mounting condition for sensor  |    | Not flat               |
| Switching distance  | mm | 18                     |
| Suitable for safety functions   |    | No                     |
| Type of switch function   |    | Breaker contact        |
| Type of switching output  |    | PNP/NPN                |
| Type of electric connection   |    | Connector M12          |
| Number of semiconductor outputs with signalling function  |    | 1                      |
| Number of contact energized outputs with signalling function  |    | 0                      |
| Number of protected semiconductor outputs   |    | 0                      |
| Number of protected contact energized outputs   |    | 0                      |
| Type of actuation   |    | Metallic Target        |
| Type of interface   |    | None                   |
| Type of interface for safety communication  |    | None                   |
| Construction type housing   |    | Cylinder, screw-thread |
| Coating housing   |    | Other                  |
| Cascadable  |    | No                     |
| Category according to EN 954-1  |    | B                      |
| SIL according to IEC 61508  |    | None                   |
| Performance level acc. EN ISO 13849-1   |    | None                   |
| Max. output current at protected output   | mA | 0                      |
| Supply voltage  | V  | 6 - 48                 |
| Rated control supply voltage Us at AC 50HZ  | V  | 0 - 0                  |
| Rated control supply voltage Us at AC 60HZ  | V  | 0 - 0                  |
| Rated control supply voltage Us at DC   | V  | 6 - 48                 |
| Voltage type  |    | DC                     |
| Switching frequency   | Hz | 150                    |
| With monitoring function downstream switching devices   |    | No                     |
| Material housing  |    | Metal                  |
| Compression-resistant   |    | No                     |
| Explosion safety category for gas   |    | None                   |
| Explosion safety category for dust  |    | None                   |
| Interference resistance to magnetic fields  |    |                        |

## Approvals

|                             |  |  |
|-----------------------------|--|--|
| Product Standards           |  | UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking |
| UL File No.                 |  | E166051  |
| UL Category Control No.     |  | NRKH, NRKH7  |
| CSA File No.                |  | UL report applies to both Canada and US            |
| CSA Class No.               |  | -  |
| North America Certification |  | UL listed, certified by UL for use in Canada       |

|                      |   |
|----------------------|---|
| Max. Voltage Rating  | 48 V DC   |
| Degree of Protection | IEC: IP67, IP69K; UL/CSA Type: 4, 4x, 6, 6P, 12, 13 |

## Dimensions



## Assets (links)

### Declaration of CE Conformity

00003158

### Instruction Leaflets

IL05301004Z2018\_05

## Additional product information (links)

### IL05301004Z iProx Series Inductive Sensors

IL05301004Z iProx Series Inductive Sensors [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL05301004Z2018\\_05.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05301004Z2018_05.pdf)