



Proximity switch, inductive, 1N/O,  $S_n=4\text{mm}$ , 4L, 6-48VDC, NPN, PNP, M12, metal

**Part no.** E59-M12A105C02-D1  
**Catalog No.** 136205  
**Alternate Catalog No.** E59-M12A105C02-D1

### Delivery program

Basic function			Inductive Sensors
Product range			iProx Series
Connection			3-wire
Design (outer dimensions)		mm	M12 x 1
Rated operational voltage	$U_e$		6 - 48 V DC
Rated switching distance	$S_n$	mm	4
Type of mounting			Flush
Switching type			NPN PNP
For connection of:			2 m connection cable
<b>Contacts</b>			
N/O = Normally open			1 N/O
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 Shock duration 11 ms
Degree of Protection			IP67, IP69

#### Characteristics

Rated switching distance			
Rated switching distance	$S_n$	mm	4
Repetition accuracy of $S_n$		%	1
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	580
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 Protection against polarity reversal Protection against wire breakage
Connection			3-wire
Contacts			
N/O = Normally open			1 N/O
Style			
Design (outer dimensions)		mm	M12 x 1
For connection of:			2 m connection cable

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

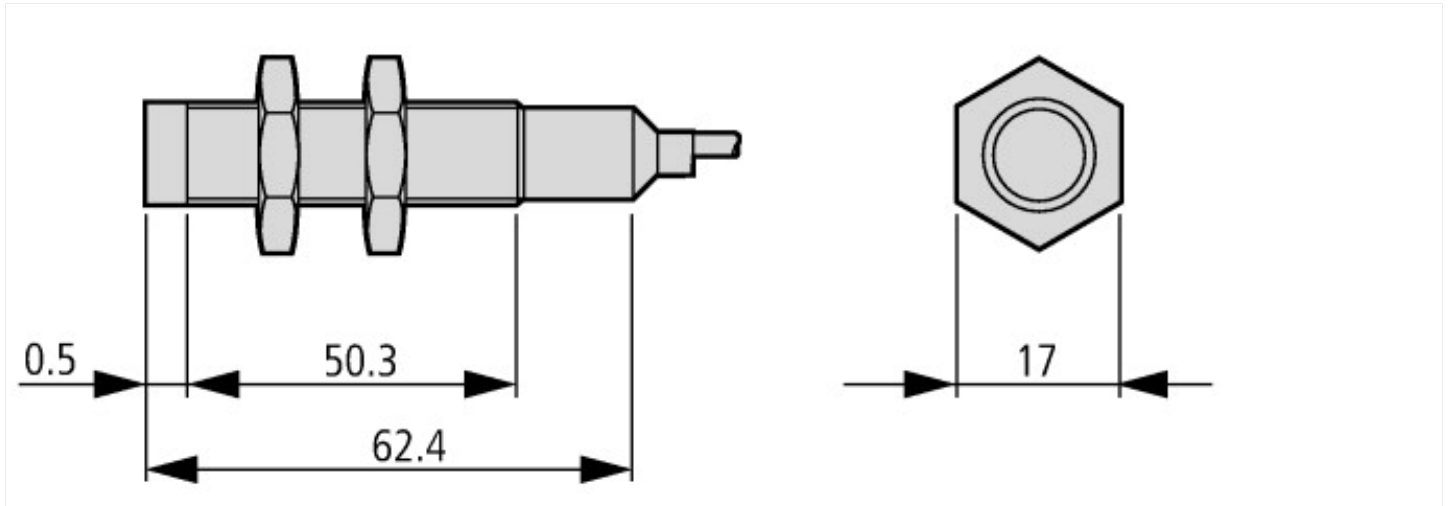
Sensors (EG000026) / Inductive proximity switch (EC002714)		
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Proximity switch / Inductive proximity switch (ecl@ss10.0.1-27-27-01-01 [AGZ376015])		
Width sensor	mm	0
Height of sensor	mm	0
Length of sensor	mm	62
Diameter sensor	mm	12
Mechanical mounting condition for sensor		Concise
Switching distance	mm	4
Suitable for safety functions		No
Type of switch function		Normally open contact
Type of switching output		PNP/NPN
Type of electric connection		Cable
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	580
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)