DATASHEET - E57LAL12T110



Proximity switch, inductive, 1N/O, Sn=2mm, 3L, 6-48VDC, NPN, M12, metal, line 2m



Part no. E57LAL12T110
Catalog No. 135999
Eaton Catalog No. E57LAL12T110

Delivery program

1 P - 3 -			
Basic function			Inductive Sensors
Product range			E57 Premium+ 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	2
Type of mounting			Flush
Switching type			NPN
For connection of:			2 m connection cable
Contacts			
N/O = Normally open			1 N/O
Material			Stainless steel
Degree of Protection			IP67

IEC/EN 60947-5-2

Technical data

General Standards

Ambient temperature			-25 - +70
Mechanical shock resistance		g	30 Shock duration 11 ms
Degree of Protection			IP67
Characteristics			
Rated switching distance			
Rated switching distance	S_n	mm	2
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
Operating current in the switched state at 24 V DC	I _b	mA	10
Maximum load current	le	mA	< 500 (6 - 30 V DC)
Voltage drop at I _e	U_{d}	V	2.5
Switching Frequency		Hz	800
Min. load current	l _e	mA	1
Residual current through the load in the blocked state at 230 V AC and 24 V DC $$	Ir	mA	0.1
Switching state display		LED	Red
Connection			3-wire
Contacts			
N/O = Normally open			1 N/0
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	-25

Technical data ETIM 7.0

Sensors (EG000026) / Inductive proximity switch (EC002714)

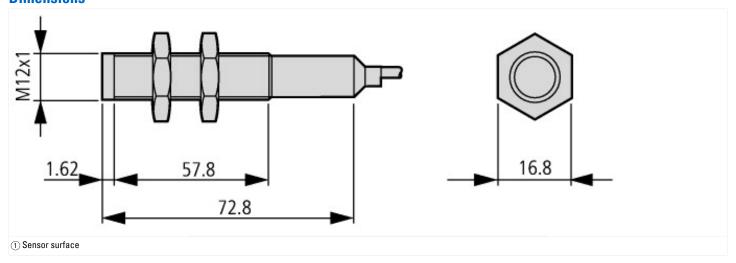
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Proximity switch / Inductive proximity switch (ec/@ss10.01-27-27-01-01 [AG7376015])

Interplace of sensor	(ecl@ss10.0.1-27-27-01-01 [AGZ376015])	yy, sarety-relateu se	ensor technology / Froximity switch / inductive proximity switch
Length of sensor mm 22 Diameter sensors mm 12 Whech shir all mounting condiction for sensor mm 2 Switching distance mm 2 Suitable for sarlery functions mm 2 Synch ching distance mm Nonally open contact Type of switch function mm Nonally open contact Type of electric connection mp Cable Type of electric connection mp Cade Number of semiconductor outputs with signalling function mm Q Number of protected contact energized outputs with signalling function mm Q Number of protected contact energized outputs with signalling function mm Q Number of protected contact energized outputs mo Q Number of protected contact energized outputs mo Q Number of protected contact energized outputs mo Q Type of interface for safety communication mm Q Q Construction type of interface for safety communication mm Q Q	Width sensor	mm	0
Diameter sensor nm 2 Concise Mechanical mounting condition for sensor mm 2 Concise Switching distance mm 2 Concise Switching distance mm 2 Concept System of switch functions mm Nonmally open contact Type of switching output Cable Cable Type of electric connection Cable Card Number of protected contract with signalling function Card Card Number of protected semiconductor outputs with signalling function Card Card Number of protected semiconductor outputs with signalling function Card Card Number of protected contract energized outputs with signalling function Card Card Number of protected contract energized outputs Card Metallic Target Type of interface Mone Mone Construction type housing Card Card Catalogue Card Card Sill according to EN 984-1 Card Card Sill according to EN 984-1 Card None Supply voltage	Height of sensor	mm	0
Mochanical mounting condition for sensor mm 2 Switching distance mm 2 Suitable for safety functions No No Type of switch function Prope of switch function No No Type of switch function Prope of switching output NP Number of sended connection Number of sended connection Cade Number of protected semiconductor outputs with signalling function Cade Cade Number of protected semiconductor outputs Quality Cade Number of protected contact energized outputs with signalling function Cade Quality Number of protected contact energized outputs Quality Metallic Target Type of interface for safety communication Cade (accessed outputs) Quality Metallic Target Type of interface for safety communication Cade (accessed outputs) Quality Quality Quality Cassadable Description of the St-1 Secondary Quality Quality Quality Quality Castagony according to EN 85-1 85-1 Quality Quality Quality Quality Qualit	Length of sensor	mm	62
Switching distance mm 2 Suitable for safety functions No Type of switch function Nemally open contact Type of switch function NPN Type of electric connection Cable Type of electric connection Cord Number of semiconductor outputs with signalling function 1 Number of protected contact energized outputs with signalling function 0 Number of protected contact energized outputs with signalling function 0 Number of protected contact energized outputs None Censtruction type housing 0 None Cascadable 0 None Catacoming to El 954-1 None None Sit according to El 91	Diameter sensor	mm	12
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Type of switch function Normally open contact Type of switching output NPN Type of electric connection Code Number of semiconductor outputs with signalling function 1 Number of protected semiconductor outputs with signalling function 0 Number of protected semiconductor outputs 0 Number of protected contact energized outputs 0 Number of protected contact energized outputs 0 Type of interface None Type of interface None Costage of interface for safety communication When Costage Shall Obe Costage Shall Obe Catageny according to EN 954-1 8 SIL according to EN 954-1 None SIL according to EN 954-1 None Supply voltage upon turnet at protected output None Read control supply voltage Us at AC 9HZ V	Switching distance	mm	2
Type of switching output MPN Type of electric connection Cable Type of electric connection Cord Number of contact energized outputs with signalling function I Number of protected semiconductor outputs 0 Costance of safety communication 0 Cost protected semiconductor outputs 0 Costance of safety communication 0 Caseagony according to EN 954-1 8 Stall according to EN 954-1 8 Stall according to EN 954-1 8 Stall according to EN 954-1 9 Max. output current at protected output nA Supply voltage Us at AC 90HZ V	Suitable for safety functions		No
Type of electric connection Cable Type of electric connection Cord Number of semiconductor outputs with signalling function 1 Number of protected semiconductor outputs 0 Number of protected semiconductor outputs 0 Number of protected semiconductor outputs Metallic Target Number of protected contact energized outputs Metallic Target Type of actuation None Type of interface None Construction type housing Oberand Construction type housing Other Category according to EN 954-1 B Sil. according to EN 954-1 None Sil. according to EN 954-1 None Max. output current at protected output None Supply voltage V 6-48 Rated control supply voltage Us at AC 60HZ V 0-0 Rated control supply voltage Us at AC 60HZ V 6-48 Rated control supply voltage Us at AC 60HZ V 6-48 Rated control supply voltage Us at AC 60HZ V 6-48 Voltage type DC 6-48	Type of switch function		Normally open contact
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Number of protected contact energized outputs 6 Metallic Target Type of actuation None None Type of interface None None Construction type housing Cype of interface Winder, screw-thread Coating housing Other None Cascadable None None Cascadable None None SLI according to EN 954-1 B None SLI according to ELC 61508 None None Performance level acc. EN ISO 13849-1 None 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 Voltage type DC C Voltage type DC C Switching frequency HZ 80 With monitoring function downstream switching devices HZ None Material housing HZ None C	Number of contact energized outputs with signalling function		0
Type of actuation Type of interface Type of interface Type of interface Type of interface for safety communication Type of interface for safety category for dust Type of interface for safety category for dus	Number of protected semiconductor outputs		0
Type of interface None Type of interface for safety communication None Construction type housing Cylinder, screw-thread Castadable Other Cascadable No Category according to EN 954-1 B Stl. 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 6-48 Rated control supply voltage Us at AC 60HZ V 6-48 Voltage type C C Voltage type DC C Voltage type DC C Voltage type DC DC Voltage type ME ME Voltage type ME ME Voltage type ME ME Voltage type ME ME With monitoring function downstream switching devices	Number of protected contact energized outputs		0
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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 0C Voltage type DC 0C Switching frequency Hz 800 With monitoring function downstream switching devices No Metal Compression-resistant No No Explosion safety category for gas None None Explosion safety category for dust None None	Coating housing		Other
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Performance level acc. EN ISO 13849-1 Max. output current at protected output Max. output current at protected output Supply voltage Rated control supply voltage Us at AC 50HZ Rated control supply voltage Us at AC 60HZ Voltage type Voltage type Voltage type Voltage type Voltage type Voltage type With monitoring function downstream switching devices Material housing Compression-resistant Explosion safety category for dust None None None None None	Category according to EN 954-1		В
Max. output current at protected output Supply voltage Rated control supply voltage Us at AC 50HZ Rated control supply voltage Us at AC 60HZ Rated control supply voltage Us at AC 60HZ Rated control supply voltage Us at AC 60HZ V O-0 Rated control supply voltage Us at DC Voltage type Vo	SIL according to IEC 61508		None
Supply voltage Rated control supply voltage Us at AC 50HZ Rated control supply voltage Us at AC 60HZ Rated control supply voltage Us at AC 60HZ Rated control supply voltage Us at AC 60HZ Rotage type Voltage type Voltage type Voltage type DC Voltage type Voltage type Bytching frequency With monitoring function downstream switching devices Material housing Compression-resistant Explosion safety category for gas Explosion safety category for dust V	Performance level acc. EN ISO 13849-1		None
Rated control supply voltage Us at AC 50HZ Rated control supply voltage Us at AC 60HZ V 0 - 0 Rated control supply voltage Us at AC 60HZ V 6 - 48 Voltage type DC Voltage type DC Switching frequency With monitoring function downstream switching devices Material housing Compression-resistant Explosion safety category for gas Explosion safety category for dust V 0 - 0 0 - 48 DC DC Switching frequency No Metal No Explosion safety category for gas Explosion safety category for dust None	Max. output current at protected output	mA	0
Rated control supply voltage Us at AC 60HZ Rated control supply voltage Us at DC V 6 - 48 Voltage type DC Voltage type Voltage type With monitoring function downstream switching devices Material housing Compression-resistant Explosion safety category for dust V 0 - 0 0	Supply voltage	V	6 - 48
Rated control supply voltage Us at DC Voltage type Voltage type Voltage type DC Voltage type DC Switching frequency With monitoring function downstream switching devices Material housing Compression-resistant Explosion safety category for gas Explosion safety category for dust V 6 - 48 DC NO Metal No Metal No No No Noe None	Rated control supply voltage Us at AC 50HZ	V	0 - 0
Voltage type Voltage type Voltage type DC Switching frequency With monitoring function downstream switching devices Material housing Compression-resistant Explosion safety category for gas Explosion safety category for dust DC DC Material housing No Metal No Noe None None	Rated control supply voltage Us at AC 60HZ	V	0 - 0
Voltage type Switching frequency With monitoring function downstream switching devices Material housing Compression-resistant Compression safety category for gas Explosion safety category for dust DC Matable No Metal No No No Noe Noe None	Rated control supply voltage Us at DC	V	6 - 48
Switching frequency With monitoring function downstream switching devices Material housing Compression-resistant Explosion safety category for dust Hz 800 No Metal No Metal No No None None	Voltage type		DC
With monitoring function downstream switching devices Material housing Compression-resistant Compression safety category for gas Explosion safety category for dust No Noe	Voltage type		DC
Material housing Compression-resistant Explosion safety category for dust Metal No No No None None	Switching frequency	Hz	800
Compression-resistant No Explosion safety category for gas None Explosion safety category for dust None	With monitoring function downstream switching devices		No
Explosion safety category for gas Explosion safety category for dust None	Material housing		Metal
Explosion safety category for dust None	Compression-resistant		No
	Explosion safety category for gas		None
Interference resistance to magnetic fields -	Explosion safety category for dust		None
	Interference resistance to magnetic fields		

Approvals

- ipprovate	
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.	50513
CSA Class No.	3211-03
North America Certification	UL listed, CSA certified
Max. Voltage Rating	48 V DC
Degree of Protection	IEC: IP67, IP69K; UL/CSA Type: 4, 4x, 6, 6P, 12, 13

Dimensions



Additional product information (links)

IL05301003Z Premium Plus Series Inductive Sensors +Short, +Miniature

IL05301003Z Premium Plus Series Inductive Sensors +Short, +Miniature ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05301003Z2018_05.pdf