### **DATASHEET - E57EAL4T111SP**



Proximity switch, E57 Miniatur Series, 1 N/O, 3-wire, 10 - 30 V DC, 4 mm, Sn=0.8 mm, Flush, PNP, Stainless steel, 2 m connection cable



Part no. E57EAL4T111SP

Catalog No. 136239

**Alternate Catalog** 

E57EAL4T111SP

No.

**EL-Nummer** 4315391

(Norway)

#### **Delivery program**

		Inductive Sensors
		E57 Miniatur Series
		3-wire
	mm	Ø 4
U <sub>e</sub>		10 - 30 V DC
$S_n$	mm	0.8
		Flush
		PNP
		2 m connection cable
		1 N/0
		Stainless steel
		IP67
		U <sub>e</sub>

### **Technical data**

#### General

Ambient temperature  Mechanical shock resistance  Degree of Protection Characteristics  Rated switching distance Rated switching distance Repetition accuracy of Sn  I 0 Switching hysteresis of Sn Rated operational voltage  Maximum load current  Maximum load current  Operating current in the switched state at 24 V DC  Ib mA  I0  Voltage drop at I <sub>a</sub> Switching Frequency Residual current through the load in the blocked state at 230 V AC and 24 V DC  Residual current through the load in the blocked state at 230 V AC and 24 V DC  Now lotting Sylte functions  NO = Normally open  Style  Design (outer dimensions)  mm  Ø 4  En connection cable	General			
Mechanical shock resistance  Degree of Protection  Characteristics  Rated switching distance  Rated switching state distance  Rated switching state distance  Rated switching state display  Rated switching state display  Rated switching frequency  Rated switching frequency  Rated switching frequency  Rated switching state display  Rated special state of Sn. 1  Rated switching state disp	Standards			IEC/EN 60947-5
Degree of Protection Characteristics Rated switching distance Rated switching distance Repetition accuracy of Sn Repetitio	Ambient temperature			-25 - +70
Characteristics  Rated switching distance  Rated switching distance  Repetition accuracy of S <sub>n</sub> Temperature drift of S <sub>n</sub> Switching hysteresis of S <sub>n</sub> Rated operational voltage  Maximum load current  Operating current in the switched state at 24 V DC  Voltage drop at I <sub>e</sub> Voltage	Mechanical shock resistance		g	
Rated switching distance  Rated switching distance  Repetition accuracy of Sn Repetition accuracy of Sn Temperature drift of Sn Switching hysteresis of Sn Rated operational voltage  Maximum load current  Ue Ug Voltage drop at I <sub>0</sub> Switching Frequency Residual current through the load in the blocked state at 230 V AC and 24 V DC  Witching state display Protective functions Connection  Connection  Connection  N/O = Normally open  Style Design (outer dimensions)  Rated switching distance  N = Normally open  Smitching frequency Residual current  N/O = Normally open  Style Design (outer dimensions)  N = Normaction calle  N = Normaction	Degree of Protection			IP67
Rated switching distance  Repetition accuracy of Sn  Temperature drift of Sn  Switching hysteresis of Sn  Rated operational voltage  Ue  To 30 V DC  Maximum load current  Ue  To 30 V DC  Maximum load current  Ue  To 4  To 5  Waitching Frequency  Residual current through the load in the blocked state at 230 V AC and 24 V DC  Voltage drop at Ig  Switching state display  Protective functions  Connection  Connection  Contacts  N/O = Normally open  Style  Design (outer dimensions)  Maximum load current in maximum load current  Maximum load current in the switched state at 230 V AC and 24 V DC  Maximum load current in the switched state at 230 V AC and 24 V DC  Ib  MA  10  10  10  10  10  10  10  10  10  1	Characteristics			
Repetition accuracy of S <sub>n</sub> Temperature drift of S <sub>n</sub> Switching hysteresis of S <sub>n</sub> Rated operational voltage  Maximum load current  Operating current in the switched state at 24 V DC  Uptage drop at I <sub>e</sub> Switching Frequency  Residual current through the load in the blocked state at 230 V AC and 24 V DC  Voltage drop at I <sub>e</sub> Switching state display  Protective functions  Connection  Contacts  N/O = Normally open  Style  Design (outer dimensions)  Maximum load current  Voltage drop at I <sub>e</sub> Switching state display  Protective dimensions)  Maximum load current  N/O = Normally open  Style  Design (outer dimensions)  Maximum load current  No = Normally open  Style  Design (outer dimensions)  No = Normally open  Maximum load current  No = Normally open  No	Rated switching distance			
Temperature drift of Sn Switching hysteresis of Sn Rated operational voltage Ue ID -30 V DC Maximum load current Ue Maximum load current Ue Maximum load current in the switched state at 24 V DC Ib Maximum load current in the switched state at 24 V DC Ib Maximum load current in the switched state at 24 V DC Ib Maximum load current in the switched state at 24 V DC Ib Maximum load current Ib	Rated switching distance	$S_n$	mm	0.8
Switching hysteresis of S <sub>n</sub> Rated operational voltage  U <sub>e</sub> U <sub>e</sub> ID - 30 V DC  Maximum load current  U <sub>e</sub> MA - 200  Operating current in the switched state at 24 V DC  I <sub>b</sub> MA - 10  Voltage drop at I <sub>e</sub> Voltage dr	Repetition accuracy of $S_n$		%	1
Rated operational voltage  Maximum load current  le mA <200  Operating current in the switched state at 24 V DC lb mA 10  Voltage drop at le Vd V 1.5  Switching Frequency Le Maximum through the load in the blocked state at 230 V AC and 24 V DC lr mA 0.01  Switching state display Le Med Nortective functions  Connection Connection N/O = Normally open  Design (outer dimensions)  Design (outer dimensions)  Ve mA 10  1.5  MA 2000  MA 20	Temperature drift of S <sub>n</sub>		%	10
Maximum load current  Derating current in the switched state at 24 V DC  Derating current in the switched state at 24 V DC  Ud  Voltage drop at I <sub>e</sub> Ud  V  1.5  Switching Frequency  Residual current through the load in the blocked state at 230 V AC and 24 V DC  Switching state display  LED  Red  Protective functions  Connection  Connection  Contacts  N/O = Normally open  Design (outer dimensions)  Max  V  2000  LED  Red  Short-circuit protective device  3-wire  1 N/O  1 N/O  1 N/O  2 m connection cable	Switching hysteresis of $S_n$		%	15
Operating current in the switched state at 24 V DC  Voltage drop at I <sub>e</sub> Vuld  Ned  Schort-circuit protective device  3-wire  3-wire  1 N/0  1 N/0  1 N/0  1 N/0  1 N/0  1 N/0  2 m connection cable	Rated operational voltage	U <sub>e</sub>		10 - 30 V DC
Voltage drop at I <sub>e</sub> Switching Frequency  Residual current through the load in the blocked state at 230 V AC and 24 V DC  Switching state display  Protective functions  Connection  Contacts  N/0 = Normally open  Design (outer dimensions)  For connection of:  V	Maximum load current	I <sub>e</sub>	mA	< 200
Switching Frequency Residual current through the load in the blocked state at 230 V AC and 24 V DC  Switching state display  Protective functions  Connection  Connection  N/0 = Normally open  New Total Current through the load in the blocked state at 230 V AC and 24 V DC  N/0 = Normally open  Short-circuit protective device  Short-circuit protective device  1 N/0  1 N/0  1 N/0  Style  Design (outer dimensions)  mm Ø 4  2 m connection cable	Operating current in the switched state at 24 V DC	I <sub>b</sub>	mA	10
Residual current through the load in the blocked state at 230 V AC and 24 V DC  Switching state display  Protective functions  Connection  N/O = Normally open  Design (outer dimensions)  For connection of:  MA  0.01  Red  Short-circuit protective device  3-wire  1 N/O  1 N/O  MA  0.01  Red  Short-circuit protective device  1 N/O  2	Voltage drop at I <sub>e</sub>	$U_{d}$	V	1.5
Switching state display  LED Red  Protective functions  Connection  Connection  N/O = Normally open  Negroin (outer dimensions)  Proconnection of:  LED Red  Red  Notrective device  3-wire  1 N/O  1 N/O  2 m connection cable	Switching Frequency		Hz	2000
Protective functions  Connection  Contacts  N/O = Normally open  Style  Design (outer dimensions)  mm  Ø 4  For connection of:  Short-circuit protective device  3-wire  1 N/O  1 N/O  4  2 m connection cable	Residual current through the load in the blocked state at 230 V AC and 24 V DC	I <sub>r</sub>	mA	0.01
Connection         3-wire           Contacts         5           N/0 = Normally open         1 N/0           Style         9           Design (outer dimensions)         mm         Ø 4           For connection of:         2 m connection cable	Switching state display		LED	Red
Contacts         IN/0 = Normally open         1 N/0           Style         Invalid = Normally open           Design (outer dimensions)         Invalid = Normally open           Image: Invalid = Normally open         Invalid = Normally open           Style         Invalid = Normally open           Image: Invalid = Normally open         Invalid = Normally open           Invalid = Normally	Protective functions			Short-circuit protective device
N/0 = Normally open  Style Design (outer dimensions)  mm Ø 4  For connection of: 2 m connection cable	Connection			3-wire
Style mm Ø 4  For connection of: 2 m connection cable	Contacts			
Design (outer dimensions) mm Ø 4 For connection of: 2 m connection cable	N/O = Normally open			1 N/0
For connection of: 2 m connection cable	Style			
	Design (outer dimensions)		mm	Ø 4
Material Stainless steel	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
Operating ambient temperature max.	°C	70

### **Technical data ETIM 7.0**

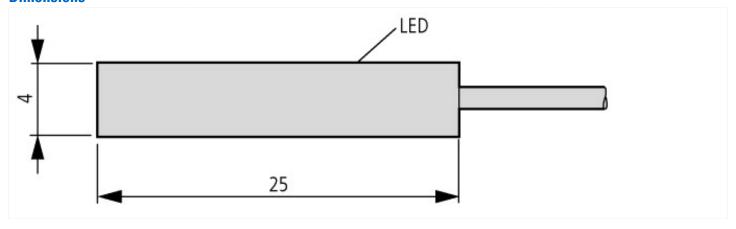
Sensors (EG000026) / Inductive proximity switch (EC002714)
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Proximity switch / Inductive proximity switch

Sensors (Labout20) / inductive proximity switch (Labou2714)		
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	25
Diameter sensor	mm	4
Mechanical mounting condition for sensor		Concise
Switching distance	mm	0.8
Suitable for safety functions		No
Type of switch function		Normally open contact
Type of switching output		PNP
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 plain
Coating housing		Other
Cascadable		No
Category according to EN 954-1		В
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	10 - 30
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	10 - 30
Voltage type		DC
Switching frequency	Hz	2000
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

## Approvals

Product Standards	CE marking
Max. Voltage Rating	30 V DC
Degree of Protection	IEC: IP67; UL/CSA Type: -

## **Dimensions**



## Assets (links)

**Declaration of CE Conformity** 00003158