

Position switch, LSE, Position switch with electronically adjustable operating point, Basic device, expandable, 1 N/O, 1 NC, Yellow, Insulated material, Cage Clamp, -25 - +70 °C

Part no. LSE-11
Catalog No. 266121
Alternate Catalog No. LSE-11
EL-Nummer (Norway) 4356040

Delivery program

Basic function			Position switches Safety position switches
Part group reference			LSE
Product range			Position switch with electronically adjustable operating point
Degree of Protection			IP66, IP67
Features			Basic device, expandable
Ambient temperature		°C	-25 - +70
Description			Visual status indication comparable with positive opening function Device goes into safe state on high interference. Can be used in safety circuits partly short-circuit proof Restart after reset Individual operating point adjustment
Contacts			
N/O = Normally open			1 N/O
N/C = Normally closed			1 NC
Rated voltage	U _e	V DC	12 - 30
Colour			
Enclosure covers			Yellow
Housing			Insulated material
Connection type			Cage Clamp
Notes			Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage-Clamp terminals from Wago: power comb, gray, Wago Article No. 264-402

Technical data

General

Standards			IEC/EN 60947 EN 61000-4
Climatic proofing			Damp heat, constant, to IEC 60068-2-78; damp heat, cyclical, to IEC 60068-2-30
Ambient temperature		°C	-25 - +70
Mounting position			As required
Degree of Protection			IP66, IP67
Terminal capacities		mm ²	
Solid		mm ²	1 x (0.5 - 2.5)
Flexible with ferrule		mm ²	1 x (0.5 - 1.5)
Repetition accuracy		mm	0.02

Power supply

Rated voltage	U _e	V DC	12 - 30
Rated operational current	I _e	A	
12 V	I _e	A	0.015
24 V	I	mA	18
30 V	I	A	0.019

Contacts/switching capacity

Overvoltage category/pollution degree			III/3
Rated operational current	I _e	A	

DC-13			
24 V	I _e	A	0.2

Mechanical variables

Lifespan, mechanical	Operations	x 10 ⁶	3
Notes			(electronic)
Contact temperature of roller head		°C	≤ 100
Mechanical shock resistance (half-sinusoidal shock, 20 ms)			
Basic unit		g	30
Operating frequency	Operations/h		≤ 3000
Switching point			0.5 - 5.5 mm, freely adjustable
Hysteresis		mm	0.4
Contact sequence (contact closed open Zw = positive opening clearance)		mm	0.04

Actuation

Mechanical			
Actuating force at beginning/end of stroke		N	3.5/8.0
Actuating torque of rotary drives		Nm	0.2
Max. operating speed with DIN cam		m/s	1/0.5
Notes			for angle of actuation α = 0°/30°

Electromagnetic compatibility (EMC)

Electrostatic discharge (IEC/EN 61000-4-2, Level 3, ESD)		kV	
Air discharge		kV	8
Contact discharge		kV	4
Electromagnetic fields (RFI) to IEC EN 61000-4-3		V/m	10
Burst Impulse (IEC/EN 61000-4-4, Level 3)			
Supply cable		kV	2
Signal lines		kV	2
Power pulses (surge) (IEC/EN 61000-4-5)		kV	0.5
Immunity to line-conducted interference to (IEC/EN 61000-4-6)		V	10

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	A	0.2
Heat dissipation per pole, current-dependent	P _{vid}	W	0.15
Equipment heat dissipation, current-dependent	P _{vid}	W	0
Static heat dissipation, non-current-dependent	P _{vs}	W	0.4
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	70
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			

10.9.2 Power-frequency electric strength		Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage		Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material		Is the panel builder's responsibility.
10.10 Temperature rise		The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating		Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility		Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function		The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 8.0

Sensors (EG000026) / End switch (EC000030)		
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Safety-related position switch / Safety position switch (Type 1) (ecI@ss10.0.1-27-27-26-01 [AKE640013])		
Width sensor	mm	31
Diameter sensor	mm	0
Height of sensor	mm	61
Length of sensor	mm	33.5
Rated operation current I _e at AC-15, 24 V	A	0
Rated operation current I _e at AC-15, 125 V	A	0
Rated operation current I _e at AC-15, 230 V	A	0
Rated operation current I _e at DC-13, 24 V	A	0.2
Rated operation current I _e at DC-13, 125 V	A	0
Rated operation current I _e at DC-13, 230 V	A	0
Switching function		Slow-action switch
Switching function latching		No
Output electronic		Yes
Forced opening		No
Number of safety auxiliary contacts		0
Number of contacts as normally closed contact		1
Number of contacts as normally open contact		1
Number of contacts as change-over contact		0
Type of interface		None
Type of interface for safety communication		None
Construction type housing		Cuboid
Material housing		Plastic
Coating housing		Other
Type of control element		Plunger
Alignment of the control element		Roller cam straight
Type of electric connection		Cable entry metrical
With status indication		Yes
Suitable for safety functions		Yes
Explosion safety category for gas		None
Explosion safety category for dust		None
Ambient temperature during operating	°C	-25 - 70
Degree of protection (IP)		IP66/IP67
Degree of protection (NEMA)		Other