#### **DATASHEET - LS-11S-CC**



Position switch, Rounded plunger, Basic device, expandable, 1 N/O, 1 NC, Cage Clamp, Yellow, Insulated material, -40 - +70 °C, EN 50047 Form B



Catalog No. 176881 **Alternate Catalog** LS-11S-CC

LS-11S-CC Part no.

## **Delivery program** Basic function

Part group reference	
Product range	
Degree of Protection	

Features

Ambient temperature Design

Snap-action contact

### **Contacts**

N/O = Normally open N/C = Normally closed

Notes

Contact sequence



 $\textbf{Contact travel} \blacksquare = \textbf{Contact closed} \square = \textbf{Contact open}$ 

Positive opening (ZW)

#### Colour

Enclosure covers Enclosure covers

Housing

Connection type

Notes

Position switches	
Safaty position switches	

LS(M)-...

Rounded plunger

IP65

Basic device, expandable

-40 - +70

°C

EN 50047 Form B

Yes

1 N/0

1 NC →



e safety function, by positive opening to IEC/EN 60947-5-1





yes

Yellow



Insulated material

Cage Clamp

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

delicital		
Standards		IEC/EN 60947
Climatic proofing		Damp heat, constant, to IEC 60068-2-78; damp heat, cyclical, to IEC 60068-2-30
Ambient temperature	°C	-40 - +70
Mounting position		As required
Degree of Protection		IP65

Terminal capacities		mm <sup>2</sup>	
Solid		mm <sup>2</sup>	1 x (0.5 - 2.5)
Flexible with ferrule		mm <sup>2</sup>	1 x (0.5 - 1.5)
Repetition accuracy		mm	0.15
Contacts/switching capacity			
Rated impulse withstand voltage	$U_{imp}$	V AC	4000
Rated insulation voltage	Ui	V	400
Overvoltage category/pollution degree			III/3
Rated operational current	le	Α	
AC-15			
24 V	l <sub>e</sub>	Α	6
220 V 230 V 240 V	I <sub>e</sub>	Α	6
380 V 400 V 415 V	I <sub>e</sub>	Α	4
DC-13			
24 V	I <sub>e</sub>	Α	3
110 V	Ie	Α	0.6
220 V	I <sub>e</sub>	Α	0.3
Control circuit reliability			
at 24 V DC/5 mA	H <sub>F</sub>	Fault probabili	$< 10^{-7}$ , $< 1$ fault in $10^7$ operations
at 5 V DC/1 mA	H <sub>F</sub>	Fault probabili	$< 5 \times 10^{-6}$ , $< 1$ failure at $5 \times 10^{6}$ operations ty
Supply frequency		Hz	max. 400
Short-circuit rating to IEC/EN 60947-5-1			
max. fuse		A gG/gL	6
Rated conditional short-circuit current		kA	1
Mechanical variables			
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	8
Contact temperature of roller head		°C	≦ 100
Mechanical shock resistance (half-sinusoidal shock, 20 ms)			
Standard-action contact		g	25
Operating frequency	Operations/h		≦ 6000
Actuation			
Mechanical			
Actuating force at beginning/end of stroke		N	1.0/8.0
Actuating torque of rotary drives		Nm	0.2
Max. operating speed with DIN cam		m/s	1/0.5

# Design verification as per IEC/EN 61439

Notes

In	Α	6
$P_{vid}$	W	0.17
$P_{\text{vid}}$	W	0
$P_{vs}$	W	0
P <sub>diss</sub>	W	0
	°C	-40
	°C	70
		Meets the product standard's requirements.
		Meets the product standard's requirements.
		Meets the product standard's requirements.
t		Meets the product standard's requirements.
	P <sub>vid</sub> P <sub>vid</sub> P <sub>vs</sub>	P <sub>vid</sub> W P <sub>vid</sub> W P <sub>vs</sub> W P <sub>diss</sub> W °C °C

for angle of actuation  $\alpha$  = 0°/30°

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 7.0**

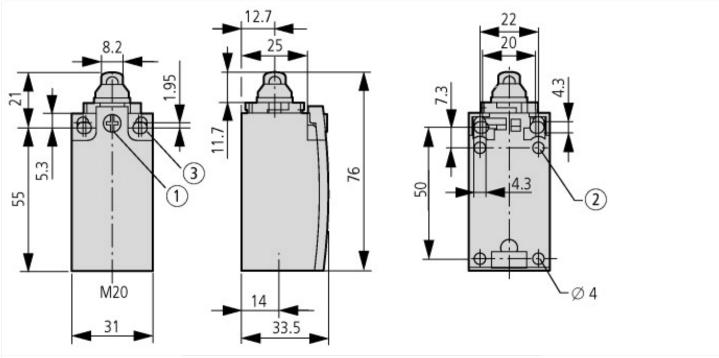
Sensors (EG000026) / End switch (EC000030)

Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Position switch / Position switch (Type 1) (ecl@ss10.0.1-27-27-06-01 [AGZ382015])

Width sensor         Imm         13           Diemater sensor         10         mm         13           Height of sensor         10         mm         35           Read operation current leat AC-15,24V         10         3           Rated operation current leat AC-15,25V         20         3           Rated operation current leat AC-15,25V         3         6           Rated operation current leat AC-15,25V         3         8           Rated operation current leat AC-15,25V         3         8           Rated operation current leat DC-13,25V         3         8           Rated operation current leat DC-13,25V         3         8           Rated operation current leat DC-13,25V         4         8           Rated operation current leat DC-13,25V         5         9           Switching function betraction         1         9         9         9           Rated operation current leat DC-13,25V         3         9         9           Switching function betraction         1         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9         9	(ecl@ss10.0.1-27-27-06-01 [AGZ382015])			
Height of sensor	Width sensor		mm	31
Length of sensor         nmm         33.5           Rated operation current le at AC-15,24 V         A         6           Rated operation current le at AC-15,125 V         A         6           Rated operation current le at AC-15,230 V         A         3           Rated operation current le at DC-13,24 V         A         0.8           Rated operation current le at DC-13,250 V         A         0.8           Rated operation current le at DC-13,230 V         A         0.3           Switching function         No         No           Switching function latching         No         No           Output electronic         No         No           Forced opening         No         No           Number of safety auxiliary contacts         1         1           Number of contacts as normally closed contact         1         1           Number of contacts as normally closed contact         1         1           Number of contacts as change-over contact         0         No           Type of interface for safety communication         0         No           Construction type housing         0         Plastic           Coating housing         0         Plastic           Coating housing         0         Plun	Diameter sensor		mm	0
Rated operation current le at AC-15, 24 V         A         6           Rated operation current le at AC-15, 230 V         A         6           Rated operation current le at AC-15, 230 V         A         6           Rated operation current le at DC-13, 24 V         A         0.8           Rated operation current le at DC-13, 125 V         A         0.8           Rated operation current le at DC-13, 230 V         A         0.3           Switching function         Quick-break switch           Switching function         No         No           Output electronic         No         No           Forced opening         Yes         Number of safety auxiliary contacts         1         1           Number of contacts as normally closed contact         1         1         1           Number of contacts as normally closed contact         1         1         1           Number of contacts as normally closed contact         1         1         1           Number of contacts as onemally closed contact         1         None           Type of interface for safety communication         1         None           Construction type housing         1         None           Coating housing         1         Ditter           Coating housing<	Height of sensor		mm	61
Rated operation current le at AC-15, 125 V         A         6           Rated operation current le at AC-15, 230 V         A         6           Rated operation current le at DC-13, 24 V         A         3           Rated operation current le at DC-13, 125 V         A         0.3           Rated operation current le at DC-13, 230 V         A         0.3           Switching function         Moulet-break switch           Switching function         No         No           Output electronic         No         No           Forced opening         Yes         No           Number of safety auxiliary contacts         1         1           Number of contacts as normally closed contact         Yes         1           Number of contacts as normally closed contact         P         1           Number of contacts as normally closed contact         P         1           Number of contacts as normally closed contact         P         1           Number of contacts as normally closed contact         P         0           Number of contacts as normally closed contact         P         1           Number of contacts as normally closed contact         P         1           Number of contacts as normally closed contact         P         1	Length of sensor		mm	33.5
Rated operation current le at AC-15, 230 V         A         6           Rated operation current le at DC-13, 24 V         A         3           Rated operation current le at DC-13, 25 V         A         0.8           Rated operation current le at DC-13, 230 V         A         0.3           Switching function         Cuick-break switch         Cuick-break switch           Switching function latching         No         No           Output electronic         Yes         No           Forced opening         Yes         No           Number of safety auxiliary contacts         1         1           Number of contacts as normally closed contact         1         1           Number of contacts as change-over contact         1         1           Type of interface for safety communication         None         None           Construction type housing         None         Cuick-break switch           Material housing         Policy         Cuick-break switch           Coating housing         Policy         Other           Chair full counter for safety communication         Policy         Plastic           Coating housing         Policy         Plunger           Alignment of the control element         Policy         Other	Rated operation current le at AC-15, 24 V	,	Α	6
Rated operation current le at DC-13, 24 V         A         3           Rated operation current le at DC-13, 125 V         A         0.8           Rated operation current le at DC-13, 230 V         A         0.3           Switching function         Mo         0.1           Switching function latching         No         No           Output electronic         No         Yes           Forced opening         Yes         1           Number of safety auxiliary contacts         1         1           Number of contacts as normally closed contact         1         1           Number of contacts as change-over contact         1         1           Number of contacts as change-over contact         1         None           Type of interface         None         None           Type of interface for safety communication         1         None           Construction type housing         1         Plastic           Material housing         1         Plunger           Cotation dousing         1         Plunger           Alignment of the control element         1         Plunger           Alignment of the control element         0         Other           With status indication         1         No	Rated operation current le at AC-15, 125 V		Α	6
Rated operation current le at DC-13, 125 V         A         0.8           Rated operation current le at DC-13, 230 V         A         0.3           Switching function         Cuick-break switch           Switching function latching         No           Output electronic         No           Forced opening         Yes           Number of safety awillary contacts         1           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         0           Construction type housing         Plastic           Material housing         Plastic           Couting housing         1           Type of control element         1         1           Alignment of the control element         1         1           Type of electric connection         0         0         0           With status indication         0         0         0           Suitable for safety functions         0         0         0           Explosion safety category for gas         0         None	Rated operation current le at AC-15, 230 V		Α	6
Rated operation current le at DC-13, 230 V         A         0.3           Switching function         Cuick-break switch         Cuick-break switch           Switching function latching         No         No           Output electronic         No         Yes           Forced opening         Yes         1           Number of safety auxiliary contacts         1         1           Number of contacts as normally closed contact         1         1           Number of contacts as normally open contact         1         1           Number of contacts as change-over contact         1         1           Type of interface         1         None           Type of interface for safety communication         1         None           Construction type housing         2         Plastic           Cotating housing         1         Plunger           Cotating housing         1         Plunger           Type of control element         2         Plunger           Alignment of the control element         0         Other           Type of electric connection         0         Other           With status indication         0         No           Suitable for safety functions         0         No      <	Rated operation current le at DC-13, 24 V		Α	3
Switching functionCuick-break switchSwitching function latchingNoOutput electronicNoForced openingYesNumber of safety auxiliary contacts1Number of contacts as normally closed contact1Number of contacts as normally open contact1Number of contacts as change-over contact0Type of interfaceNoneType of interface for safety communicationNoneConstruction type housingNoneMaterial housingPlasticCoating housingOtherType of control elementPlungerAlignment of the control elementOtherType of electric connectionOtherWith status indicationOtherSuitable for safety functionsNoSuitable for safety functionsNo<	Rated operation current le  at DC-13, 125 V		Α	0.8
Switching function latchingNoOutput electronicNoForced openingYesNumber of safety auxiliary contacts1Number of contacts as normally closed contact1Number of contacts as normally open contact1Number of contacts as change-over contact0Type of interfaceNoneType of interface for safety communicationNoneConstruction type housingCuboidMaterial housingPlasticCoating housingOtherType of control elementPlungerAlignment of the control elementOtherType of electric connectionOtherWith status indicationOtherSuitable for safety functionsNoSuitable for safety functionsYesExplosion safety category for gasNone	Rated operation current le  at DC-13, 230 V		Α	0.3
Output electronic       No         Forced opening       Yes         Number of safety auxiliary contacts       1         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       Other         Type of electric connection       Other         With status indication       No         Suitable for safety functions       Yes         Explosion safety category for gas       None	Switching function			Quick-break switch
Forced opening  Number of safety auxiliary contacts  Number of contacts as normally closed contact  Number of contacts as normally open contact  Number of contacts as change-over contact  Type of interface  Type of interface  Type of interface for safety communication  None  Construction type housing  Material housing  Coating housing  Coating housing  Coating housing  Type of control element  Alignment of the control element  Type of electric connection  With status indication  No  Suitable for safety functions  Explosion safety category for gas  None	Switching function latching			No
Number of safety auxiliary contacts  Number of contacts as normally closed contact  Number of contacts as normally open contact  Number of contacts as change-over contact  Type of interface  None  Type of interface for safety communication  Construction type housing  Material housing  Coating housing  Coating housing  Type of control element  Alignment of the control element  Type of lectric connection  With status indication  Suitable for safety functions  Explosion safety category for gas  1  1  1  1  1  1  1  1  1  1  1  1  1	Output electronic			No
Number of contacts as normally closed contact  Number of contacts as normally open contact  Number of contacts as change-over contact  Type of interface  Type of interface for safety communication  Construction type housing  Material housing  Coating housing  Coating housing  Other  Type of control element  Alignment of the control element  Type of electric connection  With status indication  Suitable for safety functions  Explosion safety category for gas  I   1  O   O   O   O   O   O   O   O   O	Forced opening			Yes
Number of contacts as normally open contact1Number of contacts as change-over contact0Type of interfaceNoneType of interface for safety communicationNoneConstruction type housingCuboidMaterial housingPlasticCoating housingOtherType of control elementPlungerAlignment of the control elementOtherType of electric connectionOtherWith status indicationNoSuitable for safety functionsYesExplosion safety category for gasNone	Number of safety auxiliary contacts			1
Number of contacts as change-over contact  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  Type of electric connection With status indication  Suitable for safety functions Explosion safety category for gas  None	Number of contacts as normally closed contact			1
Type of interface 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 Other Type of electric connection With status indication No Suitable for safety functions Explosion safety category for gas None	Number of contacts as normally open contact			1
Type of interface for safety communication  Construction type housing  Material housing  Coating housing  Coating housing  Other  Type of control element  Alignment of the control element  Type of electric connection  With status indication  Suitable for safety functions  Explosion safety category for gas  None	Number of contacts as change-over contact			0
Construction type housing Cuboid Material housing Coating housing Coating housing Type of control element Alignment of the control element Type of electric connection With status indication Suitable for safety functions Explosion safety category for gas  Cuboid Cuboid Plastic Other Other Other Other Other Other Ves No	Type of interface			None
Material housing Coating housing Other Type of control element Alignment of the control element Type of electric connection With status indication Suitable for safety functions Explosion safety category for gas  Plastic Other Other Plunger Other Other Other No No No Suitable for safety functions Yes None	Type of interface for safety communication			None
Coating housing  Other  Type of control element  Alignment of the control element  Other  Type of electric connection  With status indication  Suitable for safety functions  Explosion safety category for gas  Other  No  No  Noe	Construction type housing			Cuboid
Type of control element Alignment of the control element Other Type of electric connection With status indication Suitable for safety functions Explosion safety category for gas Plunger Other Other Other No	Material housing			Plastic
Alignment of the control element  Type of electric connection  With status indication  No Suitable for safety functions  Explosion safety category for gas  Other  No No No	Coating housing			Other
Type of electric connection  With status indication  No  Suitable for safety functions  Explosion safety category for gas  Other  No  No  No  Yes  Explosion safety category for gas  None	Type of control element			Plunger
With status indication No Suitable for safety functions Yes Explosion safety category for gas None	Alignment of the control element			Other
Suitable for safety functions Yes Explosion safety category for gas None	Type of electric connection			Other
Explosion safety category for gas None	With status indication			No
	Suitable for safety functions			Yes
Explosion safety category for dust  None	Explosion safety category for gas			None
	Explosion safety category for dust			None

Ambient temperature during operating	°C	40 - 70
Degree of protection (IP)		IP65
Degree of protection (NEMA)		4X

### **Dimensions**



- 1) Tightening torque Cover screw: 0.8 Nm ±0.2 Nm
- ② only with LS (insulated version) ③ Fixing screw 2 x M4 ≧ 30 M<sub>A</sub> = 1.5 Nm

## **Assets (links)**

**Declaration of CE Conformity** 

00003068

**Instruction Leaflets** 

IL053001ZU2018\_06

### **Additional product information (links)**

IL053001ZU LS-Titan position switch: basic device

IL053001ZU LS-Titan position switch: basic device

ftp://ftp.moeller.net/DOCUMENTATION/AWA\_INSTRUCTIONS/IL053001ZU2018\_06.pdf