DATASHEET - LS-S02-230AFT-ZBZ/X



Position switch, 2 N/C, basic, spring-powered interlock

Part no. LS-S02-230AFT-ZBZ/X

Catalog No. 106821

Eaton Catalog No. LS-S02-230AFT-ZBZ/X

EL-Nummer 4356175

(Norway)



Delivery program

Delivery program			
Basic function			Position switches Safety position switches
Part group reference			LSZBZ/X
Product range			Basic units with spring-powered interlock (closed-circuit principle)
Degree of Protection			IP65
Features			Basic device, expandable
Ambient temperature		°C	-25 - +40
Description			With interlock monitoring with auxiliary release mechanism Monitoring of door position: continuous
Approval			ET 18060 Sicherheit geprüft tested safety
Contacts			
N/C = Normally closed			2 NC →
Notes			= safety function, by positive opening to IEC/EN 60947-5-1
Contact sequence			$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
Rated control voltage for magnetic drive	U_s	V	230 V 50/60 Hz
Housing			Insulated material
Connection type			Screw terminal
Natas Cuitab must navar ba yand as a mashanisal stant			

Notes Switch must never be used as a mechanical stop!

The operating head can be rotated manually in 90° steps without tools to suit the specified level of actuation.

With the actuator inserted, the N/O contact is open and the N/C contact is closed.

For degree of protection IP65, use V-M20 (206910) cable glands with connecting thread of max. 9 mm length.

In the event of power failure (e.g., during commissioning), the device can be released with a screwdriver. The auxiliary release mechanism must be sealed!

In the event of power failure (e.g., during commissioning), the device can be released with a screwdriver. The auxiliary release mechanism must be sealed!

Technical data

General

delleral		
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	-25 - +40
Mounting position		As required
Degree of Protection		IP65
Terminal capacities	mm^2	
Solid	mm^2	1 x (0.75 - 2.5) 2 x (0.75 - 1.5)
Flexible with ferrule	mm ²	1 x (0.5 - 1.5)

Terminal scrow PHI				
Tryitoming torque for terminal screw Controller Servician General Servician Controller Servician Controller Servician Controller Servician Controller Co				2 x (0.5 - 1.5)
Contacts / Switching capacity Vac Mono Vac Mono				PH1
Rated impulse withstand voltage			Nm	0.9
Rated insulation voltage Overvoltage category/pollution degree Rated greaterational current AC-15 24 V 10 A 20 V 230 V 240 V 10 A 30 V 400 V 415 V 10 B 20 V 230 V 240 V 10 A 30 V 400 V 415 V 10 B 24 V 10 A 30 A 30 A 40 B				
Overvioltage category/pollution degree In It is a comment of the parameter of the par				
AC-1- 24 V V V V V V V V V V V V V V V V V V		Ui	V	400
AC-15	Overvoltage category/pollution degree			111/3
24 V	Rated operational current	l _e	Α	
220 V 230 V 240 V 15 V	AC-15			
180 190	24 V	I _e	Α	6
DC-13 24 V	220 V 230 V 240 V	I _e	Α	6
DC-13 24 V	380 V 400 V 415 V	I _e	Α	4
24 V I I I I I I I I I	DC-13			
110 V		l _e	A	3
220 V I				
Name				
Short-circuit rating to IEC/EN 60947-5-1 A g G/gL 6 max. fuse A g G/gL 6 Repetition accuracy mm 0.02 Rated conditional short-circuit current kA 1 Mechanical variables Variables Variables Standard-action contact Operations x 10° 1 Mechanical shock resistance (half-sinusoidal shock, 20 ms) y 10° 1 Standard-action contact Operations/n 800 Actuation Sendard-action contact Powerations/n 25/15 (plug-in/pull-out) Actuating force at beginning/end of stroke N 25/15 (plug-in/pull-out) Mechanical holding force acc. to GS-ET-19 (04/2004) N 1700 XWA, XFG, XF N 1600 XNW N 1000 Electromechanical N 1200 For magnet V V 200 Power consumption VA 8 at 120 VAC VA 8 at 230 VAC VA 11		l _e		
Repetition accuracy Repetition accuracy Repetition accuracy Reted conditional short-circuit current Mechanical variables Lifespan, mechanical Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Operating frequency Operating frequency Actuation Mechanical Actuating force at beginning/end of stroke Mechanical holding force acc. to GS-ET-19 (04/2004) XG, XW, XNG XWA, XFG, XF XNW Lifestonechanical For magnet Power consumption at 120 V AC at 230 V AC at 230 V AC Mechanical Actuation Mechanical Actuation Actuation			Hz	max. 400
Repetition accuracy Rated conditional short-circuit current Mechanical variables Lifespan, mechanical Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Operating frequency Actuation Mechanical Actuating force at beginning/end of stroke Mechanical holding force acc. to GS-ET-19 (04/2004) XG, XW, XNG XNW XNG XNG XNW XNG XNG XNW XNG XNG XNG XNW XNG				
Rated conditional short-circuit current kA 1 Mechanical variables x 106 1 Mechanical shock resistance (half-sinusoidal shock, 20 ms) x 106 1 Standard-action contact 0 perations/h ≤ 800 Actuation Standard-action contact 0 perations/h ≤ 800 Actuation Standard-action contact Standard-action contact Standard-action contact Standard-action contact Actuations Coperations/h ≤ 800 Standard-action contact Standard-action c			A gG/gL	6
Mechanical variables Variables <td>Repetition accuracy</td> <td></td> <td>mm</td> <td>0.02</td>	Repetition accuracy		mm	0.02
Lifespan, mechanical Operations x 106 1 Mechanical shock resistance (half-sinusoidal shock, 20 ms) g 10 Standard-action contact Operations/h = 800 Actuation S 25/15 (plug-in/pull-out) Mechanical holding force at beginning/end of stroke N 25/15 (plug-in/pull-out) Mechanical holding force acc. to GS-ET-19 (04/2004) N 1700 XKG, XW, XNG N 1600 XNW N 1200 Electromechanical N 1200 For magnet Power consumption VA 8 at 120 V AC at 230 V AC VA 8	Rated conditional short-circuit current		kA	1
Standard-action contact Standard-action contact Operating frequency Actuation Mechanical Actuating force at beginning/end of stroke Mechanical holding force acc. to GS-ET-19 (04/2004) XG, XW, XNG XWA, XFG, XF XNW STANDARD XNW Electromechanical For magnet Power consumption at 120 V AC at 230 V AC VA B 10 10 10 10 10 10 10 10 10 1				
Standard-action contact g 10 Operating frequency Operations/h ≤ 800 Actuation Standard-action contact Mechanical N 25/15 (plug-in/pull-out) Actuating force at beginning/end of stroke N 25/15 (plug-in/pull-out) Mechanical holding force acc. to GS-ET-19 (04/2004) N 1700 XWA, XFG, XF N 1600 XNW N 1200 Electromechanical N 1200 For magnet VA 8 Power consumption VA 8 at 120 V AC VA 8 at 230 V AC VA 11	Lifespan, mechanical	Operations	x 10 ⁶	1
Operating frequency Operations/h ≦ 800 Actuation Section (Contains) Section (Contains) Mechanical N 25/15 (plug-in/pull-out) Mechanical holding force acc. to GS-ET-19 (04/2004) N 1700 XWA, XFG, XF N 1600 XNW N 1200 Electromechanical For magnet For magnet Power consumption VA 8 at 120 V AC VA 8 at 230 V AC VA 11	Mechanical shock resistance (half-sinusoidal shock, 20 ms)			
Actuation Mechanical N 25/15 (plug-in/pull-out) Mechanical holding force act. to GS-ET-19 (04/2004) N 1700 XWA, XNG N 1600 XNW N 1200 Electromechanical N 1200 For magnet Power consumption VA 8 at 120 V AC VA 8 at 230 V AC VA 11	Standard-action contact		g	10
Mechanical N 25/15 (plug-in/pull-out) Mechanical holding force acc. to GS-ET-19 (04/2004) N 1700 XWA, XFG, XF N 1600 XNW N 1200 Electromechanical N 1200 For magnet YA 8 Power consumption VA 8 at 120 V AC VA 11	Operating frequency	Operations/h		≦ 800
Actuating force at beginning/end of stroke Mechanical holding force acc. to GS-ET-19 (04/2004) XG, XW, XNG N 1700 XWA, XFG, XF N 1600 XNW N 1200 Electromechanical For magnet Power consumption at 120 V AC at 230 V AC VA 11	Actuation			
Mechanical holding force acc. to GS-ET-19 (04/2004) N 1700 XG, XW, XNG N 1600 XNW N 1200 Electromechanical To magnet To magnet Power consumption VA 8 at 120 V AC VA 8 at 230 V AC VA 11	Mechanical			
XG, XW, XNG N 1700 XWA, XFG, XF N 1600 XNW N 1200 Electromechanical Image: Consumption of at 120 V AC VA 8 at 230 V AC VA 8 VA 11			N	25/15 (plug-in/pull-out)
XWA, XFG, XF N 1600 XNW N 1200 Electromechanical Image: Consumption of at 120 V AC VA 8 at 230 V AC VA 11	Mechanical holding force acc. to GS-ET-19 (04/2004)			
XNW N 1200 Electromechanical Image: Consumption or at 120 V AC VA 8 at 230 V AC VA 11	XG, XW, XNG		N	1700
Electromechanical Image: Construction of the power consumption VA 8 at 120 V AC VA 8 at 230 V AC VA 11	XWA, XFG, XF		N	1600
For magnet VA 8 at 230 V AC VA 11	XNW		N	1200
Power consumption at 120 V AC VA 8 at 230 V AC VA 11	Electromechanical			
at 120 V AC VA 8 at 230 V AC VA 11	For magnet			
at 230 V AC VA 11	Power consumption			
	at 120 V AC		VA	8
at 24 V DC W 8	at 230 V AC		VA	11
	at 24 V DC		W	8

Design verification as per IEC/EN 61439

Pick-up and drop-out values

Magnet duty factor

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	6
Heat dissipation per pole, current-dependent	P _{vid}	W	0.13
Equipment heat dissipation, current-dependent	P _{vid}	W	0
Static heat dissipation, non-current-dependent	P _{vs}	W	0
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	40
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.

 $x\,U_{s}$

% ED

0.85 - 1.1

100

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 7.0

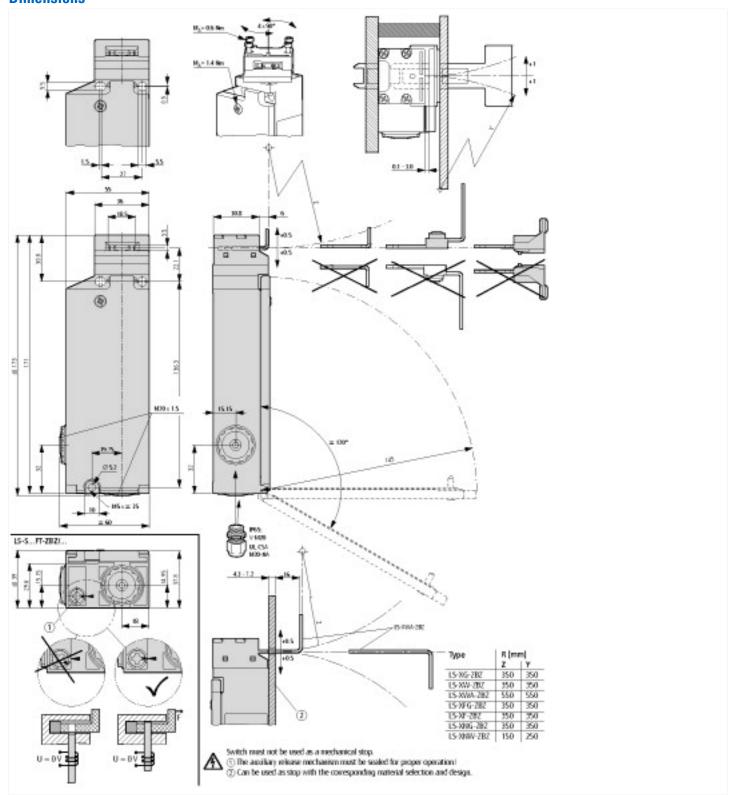
Technical data ETTIVI 7.0			
Sensors (EG000026) / End switch (EC000030) Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Position switch / Position switch (Type 1) (ecl@ss10.0.1-27-27-06-01 [AGZ382015])			
			Width sensor
Diameter sensor		mm	0
Height of sensor		mm	173
Length of sensor		mm	39
Rated operation current le at AC-15, 24 V		Α	6
Rated operation current le at AC-15, 125 V		Α	6
Rated operation current le at AC-15, 230 V		Α	6
Rated operation current le at DC-13, 24 V		Α	3
Rated operation current le at DC-13, 125 V		Α	0.8
Rated operation current le at DC-13, 230 V		Α	0.3
Switching function			Slow-action switch
Switching function latching			No
Output electronic			No
Forced opening			Yes
Number of safety auxiliary contacts			2
Number of contacts as normally closed contact			2
Number of contacts as normally open contact			0
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			Other
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
Explosion safety category for dust		None
Ambient temperature during operating	°C	25 - 70
Degree of protection (IP)		IP65
Degree of protection (NEMA)		13

Approvals

Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking
UL File No.	E29184
UL Category Control No.	NKCR
CSA File No.	12528
CSA Class No.	3211-03
North America Certification	UL listed, CSA certified
Degree of Protection	IEC: IP65, UL/CSA Type 3R, 4X (indoor use only), 12, 13

Dimensions



Additional product information (links)

IL05208005Z (AWA1310-2354) Safety position switch

IL05208005Z (AWA1310-2354) Safety position switch

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05208005Z2019_01.pdf

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Emergency Stop Switches / E-Stop Switches category:

Click to view products by Eaton manufacturer:

Other Similar products are found below:

84-5021.2B40 84-6830.0020 A01ESSP8 A22EL-M-24A-11B AVN302N-R A165E-S-01(STOP) AYLD2212602SN-R-TK962

AVLD39911N-R-24V A22Z-EG22 A165E-SY 3100.0110Y 3050.1302Y 3SE2243-0XX40 3SK1111-2AB30 3SK1211-1BB40 44-710 84-6841.2B20 84-6830.0040 H3141AAKAA A165E-R-24D-01 E3102AAAAB A22E-M-03 ZA2BV05 A22EL-M-T2-01 951FY000-WO

ER6022-022N 952+2000-00 ES3S51653 601+0000-OP E3101AAAAB 84-5130.0040 CS AR-05V024 CS AR-22V024 DS AE1VA DS

KB2A DS KB3A HE2G-21SHE-L-K HE6B-M211Y 774191 774316 777760 R1.100.0129.0 SMA0129- NO/NO R1.188.0640.0 SNV

4063KL-A R1.188.1810.0 SNA 4043K-A R1.188.1840.0 SNA 4043K-A SR BD40ALK-B02F AVLW39911D-R-120V AYD311NUG

AVLD32211DNUR 84-5040.0020.0049