DATASHEET - LS-02-CC-ZB



Position switches, 2N/C, rounded plunger, +actuator ZB, Cold Climate -40°C

LS-02-CC-ZB Part no. Catalog No. 177186 Alternate Catalog LS-02-CC-ZB Powering Business Worldwide

Delivery program

| Safety position switches LS(4)ZB Safety position switches LS(4)ZB Safety position switches LS(4)ZB Safety position switches LS(4)ZB Safety position switches P65 Complete unit Complete unit With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. Solution Notes Notes Notes October 1 | Delivery program | | |
|--|-----------------------|----|---|
| Safety position switches Degree of Protection Peatures Complete unit Ambient temperature °C -4070 With the actuator inserted, the N/O contact is open and the NC contact is closed. Approval Contacts N/C = Normally closed Notes Notes Contact sequence Notes Contact sequence Insulated material Connection type Cage Clamp Cage-Clamp is a registared trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage-Clamp terminals from Wago-power comb, gray, Wago Notes Cage, Clamp is a registared trademark of Wago Kontakttechnik, 32432 Minden, Germany. Cage-Clamp is a registared trademark of Wago Kontakttechnik, 32432 Minden, Germany. Cacessories for the Cage-Clamp terminals from Wago-power comb, gray, Wago | Basic function | | |
| Degree of Protection Features Complete unit Ambient temperature CC 40 - 470 With the actuator inserted, the N/O contact is open and the NC contact is closed. Approval Contacts N/C = Normally closed Notes Contact sequence Above a safety function, by positive opening to IEC/EN 60947-5-1 Contact sequence Contact sequence Insulated material Connection type Cage Clamp Cage Clamp Cage-Clamp is a registared trademark of Wago Kontakttechnik, 32432 Minden, Germany. Care, Wago Combact of the Cage-Clamp terminals from Wago-power comb, gray, Wago | Part group reference | | LS(4)ZB |
| Complete unit Ambient temperature C 40 - 770 With the actuator inserted, the N/O contact is open and the NC contact is closed. Approval Contacts N/C = Normally closed Notes Notes Sometimes Notes Sometimes Notes Sometimes Sometimes Notes Sometimes | Product range | | Safety position switches |
| Ambient temperature Description Approval Description Approval Description Approval Description Approval Description Descripti | Degree of Protection | | IP65 |
| Description Approval Approval Contacts N/C = Normally closed Notes Contact sequence Contact sequence Contact sequence Contact sequence Insulated material Connection type Cage Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany, Accessories for the Cage-Clamp terminals from Wago, power comb, gray, Wago | Features | | Complete unit |
| Approval Contacts N/C = Normally closed Notes Outside Sequence Notes Insulated material Connection type 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 | Ambient temperature | °C | -40 - +70 |
| Contacts N/C = Normally closed Notes Contact sequence Advantage Contact sequence Contact sequen | Description | | With the actuator inserted, the N/O contact is open and the NC contact is closed. |
| Notes Notes Ontact sequence Housing Connection type Notes 2 NC ■ = safety function, by positive opening to IEC/EN 60947-5-1 □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ | Approval | | Sicherheit geprüft tested safety |
| Notes Description Notes Description Notes Description Description Description Notes Description De | Contacts | | |
| Contact sequence The contact sequence Th | N/C = Normally closed | | 2 NC → |
| Housing Insulated material Connection type 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 | Notes | | e safety function, by positive opening to IEC/EN 60947-5-1 |
| Connection type 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 | Contact sequence | | 1 7 7 7 T |
| Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago | Housing | | Insulated material |
| Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago | Connection type | | Cage Clamp |
| | Notes | | Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago |

Notes Switch must never be used as a mechanical stop!

Actuator can be repositioned for horizontal or vertical mounting.

The operating heads can be turned manually in 90° steps 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.

Technical data General

| delicial | | |
|----------------------|-----------------|--|
| 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^2 | |
| Solid | mm ² | 1 x (0.5 - 1.5) |

| | | | 2 x (0.5 - 1.5) |
|--|----------------|-----------------|------------------------------------|
| Flexible with ferrule | | mm ² | 1 x (0.5 - 1.5) 2 x (0.5 - 1.5) |
| Terminal screw | | | PH1 |
| 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 | l _e | Α | |
| AC-15 | | | |
| 24 V | I _e | Α | 6 |
| 220 V 230 V 240 V | I _e | Α | 6 |
| 380 V 400 V 415 V | I _e | Α | 4 |
| DC-13 | | | |
| 24 V | le | Α | 3 |
| 110 V | l _e | Α | 0.6 |
| 220 V | I _e | Α | 0.3 |
| Supply frequency | | Hz | max. 400 |
| Short-circuit rating to IEC/EN 60947-5-1 | | | |
| max. fuse | | A gG/gL | 6 |
| Mechanical variables | | | |
| Mechanical shock resistance (half-sinusoidal shock, 20 ms) | | | |
| Standard-action contact | | g | 25 |

Operations/h

≦ 1800

Design verification as per IEC/EN 61439

Operating frequency

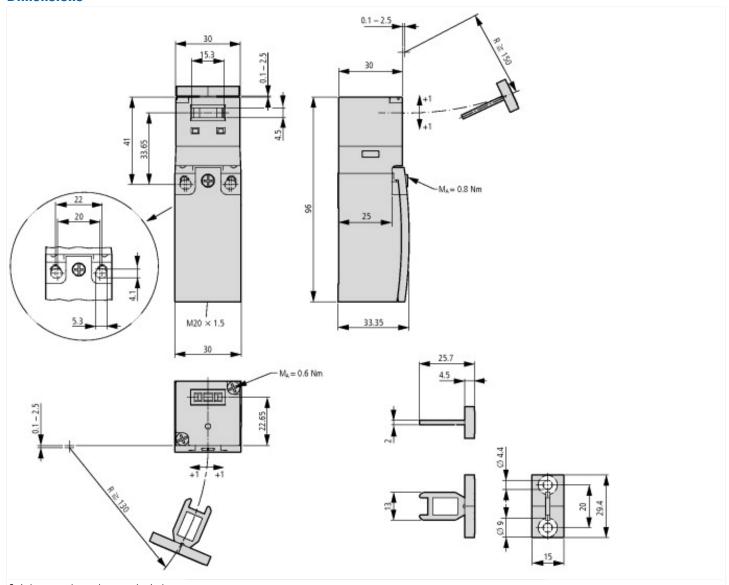
| echnical data for design verification | | | |
|---|-------------------|----|--|
| Rated operational current for specified heat dissipation | In | Α | 6 |
| Heat dissipation per pole, current-dependent | P_{vid} | W | 0.17 |
| Equipment heat dissipation, current-dependent | P _{vid} | W | 0 |
| Static heat dissipation, non-current-dependent | P_{vs} | W | 0 |
| Heat dissipation capacity | P _{diss} | W | 0 |
| Operating ambient temperature min. | | °C | -40 |
| Operating ambient temperature max. | | °C | 70 |
| C/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 7.0

| lechnical data ETIM 7.0 | | | |
|---|--------------------|----------|--|
| Sensors (EG000026) / End switch (EC000030) | | | |
| Electric engineering, automation, process control engineering / Binary sensor tech (ecl@ss10.0.1-27-27-06-01 [AGZ382015]) | nology, safety-rel | lated se | nsor technology / Position switch / Position switch (Type 1) |
| Width sensor | m | nm | 31 |
| Diameter sensor | m | nm | 0 |
| Height of sensor | m | nm | 96 |
| Length of sensor | m | nm | 33.5 |
| Rated operation current le at AC-15, 24 V | А | ١ | 6 |
| Rated operation current le at AC-15, 125 V | A | ١. | 6 |
| Rated operation current le at AC-15, 230 V | А | ١ | 6 |
| Rated operation current le at DC-13, 24 V | А | ١ | 3 |
| Rated operation current le at DC-13, 125 V | А | ١ | 0.8 |
| Rated operation current le at DC-13, 230 V | А | ١. | 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 | | | 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 |
| Explosion safety category for dust | | | None |
| Ambient temperature during operating | 0(| С | 40 - 70 |
| Degree of protection (IP) | | | IP65 |
| Degree of protection (NEMA) | | | 4X |
| | | | |

Dimensions



Switch must not be used as a mechanical stop Terminal marking according to EN 50 013

Travel [mm]

= Contact closed

= Contact open
Zw = Positive opening sequence

Assets (links)

Declaration of CE Conformity

00003156

Instruction Leaflets

IL05208003Z2018_06

Additional product information (links)

IL05208003Z (AWA1310-2374) Safety position switch

IL05208003Z (AWA1310-2374) Safety position switch

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05208003Z2019_01.pdf