

Position switch, 1N/O+1N/C, basic, magnet-powered interlock



**Part no.** LS-S11-24DMT-ZBZ/X  
**106830**  
**EL Number** 4356176  
**(Norway)**

| General specifications                 |  |
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| Product name                           | Eaton Moeller® series LS Position switch   |
| Part no.                               | LS-S11-24DMT-ZBZ/X   |
| EAN                                    | 4015081065905  |
| Product Length/Depth                   | 55 millimetre  |
| Product height                         | 170 millimetre   |
| Product width                          | 37 millimetre  |
| Product weight                         | 0.43 kilogram  |
| Certifications                         | UL<br>UL 508<br>IEC/EN 60947-5<br>CSA File No.: 012528<br>CSA Class No.: 3211-03<br>CSA<br>CSA-C22.2 No. 14<br>UL Category Control No.: NKCR<br>IEC/EN 60947<br>UL File No.: E29184<br>CE  |
| Product Tradename                      | LS   |
| Product Type                           | Position switch  |
| Product Sub Type                       | None   |
| Catalog Notes                          | Contacts with safety function, by positive opening to IEC/EN 60947-5-1<br>For degree of protection IP65, use V-M20 (206910) cable glands with connecting thread of max. 9 mm length.<br>Monitoring of door position: continuous<br>The operating head can be rotated manually in 90° steps without tools to suit the specified level of actuation.<br>Time control of the release operation possible using ESR5-NV3-30<br>With the actuator inserted, the N/O contact is open and the N/C contact is closed. |
| Features & Functions                   |  |
| Electric connection type               | Cable entry metrical   |
| Enclosure material                     | Plastic<br>Insulated material  |
| Features                               | Forced opening<br>Expandable   |
| Fitted with:                           | Interlock monitoring   |
| Switch function type                   | Slow-action switch   |
| General information                    |  |
| Connection type                        | Screw terminal   |
| Degree of protection                   | IP65<br>NEMA Other   |
| Duty factor                            | 100 % (Magnet)   |
| Lifespan                               | 1,000,000 mechanical Operations  |
| Operating frequency                    | 800 Operations/h   |
| Overvoltage category                   | III  |
| Pollution degree                       | 3  |
| Product category                       | Basic devices with magnet-powered interlock (open-circuit principle)   |
| Rated impulse withstand voltage (Uimp) | 4000 V AC  |
| Repetition accuracy                    | 0.02 mm (Contacts/switching capacity)  |
| Suitable for                           | Safety functions   |
| Type                                   | Position switch<br>Safety position switch  |
| Ambient conditions, mechanical         |  |
| Mounting position                      | As required  |
| Shock resistance                       | 10 g, Standard-action contact, Mechanical, Half-Sinusoidal shock 20 ms   |

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| <b>Climatic environmental conditions</b>   |  |  |
| Ambient operating temperature - min  |  | -25 °C   |
| Ambient operating temperature - max  |  | 70 °C  |
| Climatic proofing  |  | Damp heat, cyclic, to IEC 60068-2-30<br>Damp heat, constant, to IEC 60068-2-78   |
| <b>Terminal capacities</b>   |  |  |
| Terminal capacity (flexible with ferrule)  |  | 2 x (0.5 - 1.5) mm <sup>2</sup><br>1 x (0.5 - 1.5) mm <sup>2</sup>   |
| Terminal capacity (solid)  |  | 1 x (0.75 - 2.5) mm <sup>2</sup><br>2 x (0.75 - 1.5) mm <sup>2</sup>   |
| <b>Electrical rating</b>   |  |  |
| Power consumption  |  | 11 VA at 230 V AC (electromechanical actuation)<br>8 VA at 120 V AC (electromechanical actuation)<br>8 W at 24 V DC (electromechanical actuation)                |
| Rated conditional short-circuit current (I <sub>q</sub> )                        |  | 1 kA   |
| Rated control supply voltage   |  | 24 V DC (Us, for magnet drive)   |
| Rated insulation voltage (Ui)  |  | 400 V  |
| Rated operational current (I <sub>e</sub> ) at AC-15, 220 V, 230 V, 240 V        |  | 6 A  |
| Rated operational current (I <sub>e</sub> ) at AC-15, 24 V                       |  | 6 A  |
| Rated operational current (I <sub>e</sub> ) at AC-15, 380 V, 400 V, 415 V        |  | 4 A  |
| Rated operational current (I <sub>e</sub> ) at DC-13, 110 V                      |  | 0.8 A  |
| Rated operational current (I <sub>e</sub> ) at DC-13, 125 V                      |  | 0.8 A  |
| Rated operational current (I <sub>e</sub> ) at DC-13, 220 V, 230 V               |  | 0.3 A  |
| Rated operational current (I <sub>e</sub> ) at DC-13, 24 V                       |  | 3 A  |
| Short-circuit protection rating  |  | Max. 6 A gG/gL, Fuse, Contacts   |
| Supply frequency   |  | Max. 400 Hz, Contacts  |
| Voltage tolerance  |  | 0.85 x Us, Pick-up and drop-out values<br>1.1 x Us, Pick-up and drop-out values  |
| <b>Actuator</b>  |  |  |
| Actuating force at beginning/end of stroke                                       |  | 25 N/15 N (plug-in/pull-out)   |
| Actuator type  |  | None   |
| Mechanical holding force   |  | 1700 N (according to GS-ET-19 (04/2004), XG, XW, XNG)<br>1200 N (according to GS-ET-19 (04/2004), XNW)<br>1600 N (according to GS-ET-19 (04/2004), XWA, XFG, XF) |
| <b>Contacts</b>  |  |  |
| Number of contacts (change-over contacts)  |  | 0  |
| Number of contacts (normally closed contacts)                                    |  | 1  |
| Number of contacts (normally open contacts)                                      |  | 1  |
| <b>Safety</b>  |  |  |
| Explosion safety category for gas  |  | None   |
| Explosion safety category for dust   |  | None   |
| <b>Design verification</b>   |  |  |
| Equipment heat dissipation, current-dependent P <sub>vid</sub>                   |  | 0 W  |
| Heat dissipation capacity P <sub>diss</sub>                                      |  | 0 W  |
| Heat dissipation per pole, current-dependent P <sub>vid</sub>                    |  | 0.13 W   |
| Rated operational current for specified heat dissipation (I <sub>n</sub> )       |  | 6 A  |
| Static heat dissipation, non-current-dependent P <sub>vs</sub>                   |  | 0 W  |
| 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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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.   |

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| 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.   |
| 10.9.2 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

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| 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)<br>(ec1@ss10.0.1-27-27-26-01 [AKE640013]) |    |  |                      |
| Width sensor  | mm |  | 60                   |
| Diameter sensor   | mm |  | 0                    |
| Height of sensor  | mm |  | 173                  |
| Length of sensor  | mm |  | 39                   |
| Rated operation current I <sub>e</sub> at AC-15, 24 V   | A  |  | 6                    |
| Rated operation current I <sub>e</sub> at AC-15, 125 V  | A  |  | 6                    |
| Rated operation current I <sub>e</sub> at AC-15, 230 V  | A  |  | 6                    |
| Rated operation current I <sub>e</sub> at DC-13, 24 V   | A  |  | 3                    |
| Rated operation current I <sub>e</sub> at DC-13, 125 V  | A  |  | 0.8                  |
| Rated operation current I <sub>e</sub> at DC-13, 230 V  | A  |  | 0.3                  |
| Switching function  |    |  | Slow-action switch   |
| Switching function latching   |    |  | No                   |
| 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   |    |  | None                 |
| Alignment of the control element  |    |  | Other                |
| Type of electric connection   |    |  | Cable entry metrical |
| 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)   |    |  | Other                |