

**Position switch, Rotary lever, Complete unit, 1 N/O, 1 NC, Snap-action contact - Yes, Cage Clamp, Yellow, Insulated material, -25 - +70 °C, EN 50047 Form A**

**Part no.** LS-11S/RL  
**Catalog No.** 266117  
**Alternate Catalog No.** LS-11S/RL  
**EL-Nummer (Norway)** 4356126

## Delivery program

|                                                                                                               |  |    |                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------|--|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Basic function                                                                                                |  |    | Position switches<br>Safety position switches                                                                                                                                         |
| Part group reference                                                                                          |  |    | LS(M)-...                                                                                                                                                                             |
| Product range                                                                                                 |  |    | Rotary lever                                                                                                                                                                          |
| Degree of Protection                                                                                          |  |    | IP66, IP67                                                                                                                                                                            |
| Features                                                                                                      |  |    | Complete unit                                                                                                                                                                         |
| Ambient temperature                                                                                           |  | °C | -25 - +70                                                                                                                                                                             |
| Design                                                                                                        |  |    | EN 50047 Form A                                                                                                                                                                       |
| Snap-action contact                                                                                           |  |    | Yes                                                                                                                                                                                   |
| <b>Contacts</b>                                                                                               |  |    |                                                                                                                                                                                       |
| N/O = Normally open                                                                                           |  |    | 1 N/O                                                                                                                                                                                 |
| N/C = Normally closed                                                                                         |  |    | 1 NC                                                                                                 |
| Notes                                                                                                         |  |    |  = safety function, by positive opening to IEC/EN 60947-5-1                                          |
| Positive opening (ZW)                                                                                         |  |    | yes                                                                                                                                                                                   |
| <b>Colour</b>                                                                                                 |  |    |                                                                                                                                                                                       |
| Enclosure covers                                                                                              |  |    | Yellow                                                                                                                                                                                |
| Housing                                                                                                       |  |    | Insulated material                                                                                                                                                                    |
| Connection type                                                                                               |  |    | Cage Clamp                                                                                                                                                                            |
| Notes                                                                                                         |  |    | Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany.<br>Accessories for the Cage-Clamp terminals from Wago: power comb, gray, Wago Article No. 264-402 |
| <b>Notes</b> The operating head can be rotated at 90° intervals to adapt to the specified approach direction. |  |    |                                                                                                                                                                                       |

## Technical data

### General

|                       |  |                 |                                                                                |
|-----------------------|--|-----------------|--------------------------------------------------------------------------------|
| 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 - +70                                                                      |
| Mounting position     |  |                 | As required                                                                    |
| Degree of Protection  |  |                 | IP66, IP67                                                                     |
| 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 <sub>imp</sub> | V AC | 4000  |
| Rated insulation voltage              | U <sub>i</sub>   | V    | 400   |
| Overvoltage category/pollution degree |                  |      | III/3 |
| Rated operational current             | I <sub>e</sub>   | A    |       |
| AC-15                                 |                  |      |       |
| 24 V                                  | I <sub>e</sub>   | A    | 6     |
| 220 V 230 V 240 V                     | I <sub>e</sub>   | A    | 6     |
| 380 V 400 V 415 V                     | I <sub>e</sub>   | A    | 4     |

|                                          |                |                   |                                                                        |
|------------------------------------------|----------------|-------------------|------------------------------------------------------------------------|
| DC-13                                    |                |                   |                                                                        |
| 24 V                                     | I <sub>e</sub> | A                 | 3                                                                      |
| 110 V                                    | I <sub>e</sub> | A                 | 0.6                                                                    |
| 220 V                                    | I <sub>e</sub> | A                 | 0.3                                                                    |
| Control circuit reliability              |                |                   |                                                                        |
| at 24 V DC/5 mA                          | H <sub>F</sub> | Fault probability | < 10 <sup>-7</sup> , < 1 fault in 10 <sup>7</sup> operations           |
| at 5 V DC/1 mA                           | H <sub>F</sub> | Fault probability | < 5 x 10 <sup>-6</sup> , < 1 failure at 5 x 10 <sup>6</sup> operations |
| Supply frequency                         |                | Hz                | max. 400                                                               |
| Short-circuit rating to IEC/EN 60947-5-1 |                |                   |                                                                        |
| max. fuse                                |                | A gG/gL           | 6                                                                      |

### Mechanical variables

|                                                            |              |                   |        |
|------------------------------------------------------------|--------------|-------------------|--------|
| Lifespan, mechanical                                       | Operations   | x 10 <sup>6</sup> | 8      |
| 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 | 1.5                           |
| <b>Notes</b>                               |  |     | for angle of actuation α = 0° |

## Design verification as per IEC/EN 61439

|                                                                                                                        |                   |    |                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------|-------------------|----|----------------------------------------------------------------------------------------------------------------------------------|
| Technical data for design verification                                                                                 |                   |    |                                                                                                                                  |
| Rated operational current for specified heat dissipation                                                               | I <sub>n</sub>    | A  | 6                                                                                                                                |
| Heat dissipation per pole, current-dependent                                                                           | P <sub>vid</sub>  | W  | 0.17                                                                                                                             |
| Equipment heat dissipation, current-dependent                                                                          | P <sub>vid</sub>  | W  | 0                                                                                                                                |
| Static heat dissipation, non-current-dependent                                                                         | P <sub>vs</sub>   | W  | 0                                                                                                                                |
| Heat dissipation capacity                                                                                              | P <sub>diss</sub> | 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 <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                                                                                                                                                                                                                   |    | Quick-break 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                                                                                                                                                                                                              |    | Rotary lever         |
| Alignment of the control element                                                                                                                                                                                                     |    | Roller cam crossed   |
| 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)                                                                                                                                                                                                            |    | IP66/IP67            |
| Degree of protection (NEMA)                                                                                                                                                                                                          |    | Other                |