

# Specifications



Photo is representative



## Eaton 115999

Eaton Moeller® series M22 LED element, for combination with RMQ-Titan operating elements M22-..., Base fixing, green

### General specifications

|                                 |                                                                                                                                                       |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PRODUCT NAME</b>             | Eaton Moeller® series<br>M22 LED element                                                                                                              |
| <b>CATALOG NUMBER</b>           | 115999                                                                                                                                                |
| <b>MODEL CODE</b>               | M22-SWD-LEDC-G                                                                                                                                        |
| <b>EAN</b>                      | 4015081157396                                                                                                                                         |
| <b>PRODUCT<br/>LENGTH/DEPTH</b> | 45 mm                                                                                                                                                 |
| <b>PRODUCT HEIGHT</b>           | 42 mm                                                                                                                                                 |
| <b>PRODUCT WIDTH</b>            | 10 mm                                                                                                                                                 |
| <b>PRODUCT WEIGHT</b>           | 0.009 kg                                                                                                                                              |
| <b>CERTIFICATIONS</b>           | UL Category Control No.:<br>NKCR<br>CSA File No.: 2324643<br>UL<br>IEC/EN 61131-2<br>UL File No.: E29184<br>CSA<br>CSA Class No.: 3211-07<br>EN 50178 |



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## Climatic environmental conditions

|                                                |                                                       |
|------------------------------------------------|-------------------------------------------------------|
| <b>AMBIENT OPERATING<br/>TEMPERATURE - MAX</b> | 55 °C                                                 |
| <b>AMBIENT OPERATING<br/>TEMPERATURE - MIN</b> | -30 °C                                                |
| <b>ENVIRONMENTAL<br/>CONDITIONS</b>            | Condensation: prevent<br>with appropriate<br>measures |

## Communication

|                                       |     |
|---------------------------------------|-----|
| <b>CONNECTION TO<br/>SMARTWIRE-DT</b> | Yes |
|---------------------------------------|-----|

## Design verification

|                                                                                         |                                                                                                                                  |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>10.10 TEMPERATURE RISE</b>                                                           | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| <b>10.11 SHORT-CIRCUIT RATING</b>                                                       | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>                                              | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.13 MECHANICAL FUNCTION</b>                                                        | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |
| <b>10.2.2 CORROSION RESISTANCE</b>                                                      | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>                         | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>       | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b> | Meets the product standard's requirements.                                                                                       |
| <b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>                                 | Meets the product standard's requirements.                                                                                       |
| <b>10.2.5 LIFTING</b>                                                                   | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.2.6 MECHANICAL IMPACT</b>                                                         | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.2.7 INSCRIPTIONS</b>                                                              | Meets the product standard's requirements.                                                                                       |
| <b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>                                          | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>                                           | Meets the product standard's requirements.                                                                                       |
| <b>10.5 PROTECTION</b>                                                                  | Does not apply, since the                                                                                                        |

## Electrical rating

**RATED OPERATIONAL VOLTAGE (UE) AT DC - MAX** 30 V

**RATED OPERATIONAL VOLTAGE (UE) AT DC - MIN** 30 V

|                                                                      |                                                                    |
|----------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>AGAINST ELECTRIC SHOCK</b>                                        | entire switchgear needs to be evaluated.                           |
| <b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>        | Does not apply, since the entire switchgear needs to be evaluated. |
| <b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>             | Is the panel builder's responsibility.                             |
| <b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>                      | Is the panel builder's responsibility.                             |
| <b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>                      | Is the panel builder's responsibility.                             |
| <b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>                              | Is the panel builder's responsibility.                             |
| <b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>      | Is the panel builder's responsibility.                             |
| <b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>            | 0 W                                                                |
| <b>HEAT DISSIPATION CAPACITY PDISS</b>                               | 0 W                                                                |
| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>             | 0 W                                                                |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b> | 0 A                                                                |
| <b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>            | 0.3 W                                                              |

## Features & functions

|                     |                                                           |
|---------------------|-----------------------------------------------------------|
| <b>FITTED WITH:</b> | Light source                                              |
| <b>FUNCTIONS</b>    | For combination with RMQ-Titan operating elements M22-... |
| <b>LIGHT COLOR</b>  | Green                                                     |

## LED Details

|                      |                                                         |
|----------------------|---------------------------------------------------------|
| <b>LED INDICATOR</b> | Status indication of SmartWire-DT network:<br>Green LED |
| <b>LIGHT COLOR</b>   | Green                                                   |

## General information

|                             |                |
|-----------------------------|----------------|
| <b>DEGREE OF PROTECTION</b> | IP20           |
| <b>OVERVOLTAGE CATEGORY</b> | Not applicable |
| <b>POLLUTION DEGREE</b>     | 2              |
| <b>VOLTAGE TYPE</b>         | DC             |

## Mounting details

|                          |                                  |
|--------------------------|----------------------------------|
| <b>CONNECTION TYPE</b>   | SWD: Plug, 8-pole<br>Base fixing |
| <b>MOUNTING POSITION</b> | As required                      |

## Resources

|                            |                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CATALOGUES                 | <a href="#">eaton-pushbuttons-signal-towers-sensors-assortment-overview-catalog-ca047003en-en-us.pdf</a>                                                                                                  |
| DECLARATIONS OF CONFORMITY | <a href="#">eaton-function-element-declaration-of-conformity-uk260007en.pdf</a><br><a href="#">eaton-function-element-declaration-of-conformity-eu251562en.pdf</a>                                        |
| DRAWINGS                   | <a href="#">eaton-operating-function-m22-led-element-3d-drawing.eps</a><br><a href="#">eaton-operating-button-symbol-004.eps</a><br><a href="#">eaton-operating-m22-function-element-flow-diagram.eps</a> |
| ECAD MODEL                 | <a href="#">ETN.115999.edz</a>                                                                                                                                                                            |
| INSTALLATION INSTRUCTIONS  | <a href="#">IL04716004Z2021_10.pdf</a>                                                                                                                                                                    |
| MANUALS AND USER GUIDES    | <a href="#">MN05006001Z_EN</a><br><a href="#">MN05006002Z_EN</a>                                                                                                                                          |
| MCAD MODEL                 | <a href="#">DA-CS-funktionselement_led_boden</a><br><a href="#">eaton-lampblock-mcad-drawings-funktionselement-led-boden.dwg</a>                                                                          |
| SALES NOTES                | <a href="#">eaton-rmq-chemical-resistance-flyer-fl047011en-en-us.pdf</a>                                                                                                                                  |

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**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**DATE:**

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