

## DATASHEET - M22-LED-W

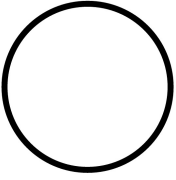


LED element, white, front mount, 12-30VAC/DC

**Part no.** M22-LED-W  
**Catalog No.** 216557  
**Alternate Catalog No.** M22-LED-WQ  
**EL-Nummer (Norway)** 4355367



## Delivery program

|                                               |                 |    |                                                                                      |
|-----------------------------------------------|-----------------|----|--------------------------------------------------------------------------------------|
| Basic function accessories                    |                 |    | LED elements                                                                         |
| Connection technique                          |                 |    | Screw terminals                                                                      |
| Fixing                                        |                 |    | Front fixing                                                                         |
| Rated operational voltage                     | $U_e$           | V  | 12 - 30 V AC/DC, 50/60 Hz                                                            |
| <b>Rated operational current</b>              | $I_e$           | mA | 8 - 15                                                                               |
| Power consumption                             | $P_{max.}$      | W  | 0.26                                                                                 |
| Lifespan to EN 60064 at $t_a = +25\text{ °C}$ | $t_{mean} (AC)$ | h  | 100000                                                                               |
| Degree of Protection                          |                 |    | IP20                                                                                 |
|                                               |                 |    | at 24 V                                                                              |
| <b>Colour</b>                                 |                 |    |                                                                                      |
|                                               |                 |    | White                                                                                |
|                                               |                 |    |   |
| Connection to SmartWire-DT                    |                 |    | no                                                                                   |
| Approval                                      |                 |    |  |
| Connection technique                          |                 |    | Screw terminals                                                                      |

## Notes

For indicator lights, illuminated pushbutton actuators, and illuminated selector switch actuators, the following applies:

M22...-R only in combination with M22-LED...-R

M22...-G only in combination with M22-LED...-G

M22...-W only in combination with M22-LED...-W

M22...-Y only in combination with M22-LED...-W

M22...-B in combination with M22-LED...-W or M22-LED...-B

## Technical data

## General

|                                    |  |    |                                                                                |
|------------------------------------|--|----|--------------------------------------------------------------------------------|
| Standards                          |  |    | IEC 60947-5-1                                                                  |
| Operating torque (screw terminals) |  | Nm | $\leq 0.8$                                                                     |
| Degree of Protection               |  |    | IP20                                                                           |
| Climatic proofing                  |  |    | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30 |
| Ambient temperature                |  |    |                                                                                |
| Open                               |  | °C | -25 - +70                                                                      |
| Storage                            |  | °C | -40 - +80                                                                      |
| Mounting position                  |  |    | As required                                                                    |

|                                                                                                  |  |                 |                                                                         |
|--------------------------------------------------------------------------------------------------|--|-----------------|-------------------------------------------------------------------------|
| Mechanical shock resistance according to IEC 60068-2-27<br>Shock duration 11 ms, half-sinusoidal |  | g               | > 30                                                                    |
| Mechanical shock resistance                                                                      |  | g               | 30<br>Shock duration 11 ms<br>Sinusoidal<br>according to IEC 60068-2-27 |
| Terminal capacities                                                                              |  | mm <sup>2</sup> |                                                                         |
| Solid                                                                                            |  | mm <sup>2</sup> | 0.75 - 2.5                                                              |
| Stranded                                                                                         |  | mm <sup>2</sup> | 0.5 - 2.5                                                               |

## Contacts

|                                           |                  |      |       |
|-------------------------------------------|------------------|------|-------|
| Rated impulse withstand voltage           | U <sub>imp</sub> | V AC | 6000  |
| Rated insulation voltage                  | U <sub>i</sub>   | V    | 500   |
| Overvoltage category/pollution degree     |                  |      | III/3 |
| Indoor and protected outdoor installation |                  |      |       |

## Design verification as per IEC/EN 61439

|                                                                                                                        |                   |    |                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------|-------------------|----|----------------------------------------------------------------------------------------------------------------------------------|
| Technical data for design verification                                                                                 |                   |    |                                                                                                                                  |
| Rated operational current for specified heat dissipation                                                               | I <sub>n</sub>    | A  | 0                                                                                                                                |
| Heat dissipation per pole, current-dependent                                                                           | P <sub>vid</sub>  | W  | 0                                                                                                                                |
| Equipment heat dissipation, current-dependent                                                                          | P <sub>vid</sub>  | W  | 0                                                                                                                                |
| Static heat dissipation, non-current-dependent                                                                         | P <sub>vs</sub>   | W  | 0.45                                                                                                                             |
| 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 7.0

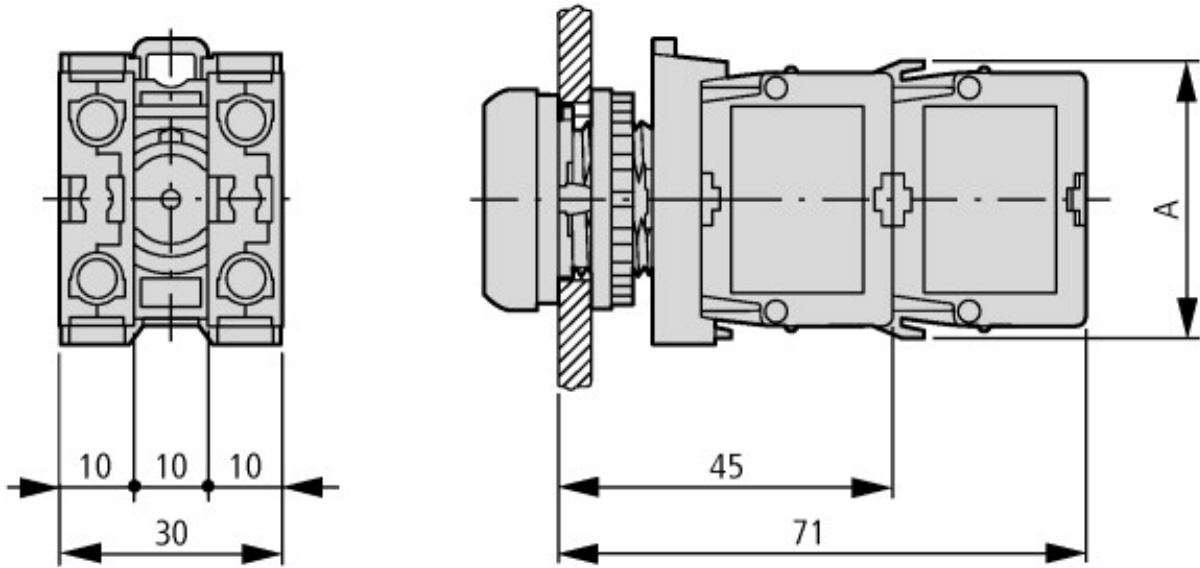
|                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Low-voltage industrial components (EG000017) / Lamp holder block for control circuit devices (EC000204)                                                                                                           |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Command and alarm device / Bulb socket block for command and alarm devices (ecI@ss10.0.1-27-37-12-09 [AKF027014]) |

|                                             |  |   |                  |
|---------------------------------------------|--|---|------------------|
| Transformer integrated                      |  |   | No               |
| With integrated voltage decreasing resistor |  |   | No               |
| With light source                           |  |   | Yes              |
| With integrated diode                       |  |   | Yes              |
| Lamp holder                                 |  |   | None             |
| Rated voltage Ue at AC 50 Hz                |  | V | 0 - 0            |
| Rated voltage Ue at AC 60 Hz                |  | V | 0 - 0            |
| Rated voltage Ue at DC                      |  | V | 30 - 30          |
| Voltage type for actuating                  |  |   | AC/DC            |
| Lamp type                                   |  |   | LED              |
| Connection type auxiliary circuit           |  |   | Screw connection |
| Colour lamp                                 |  |   | White            |
| Type of fastening                           |  |   | Front fastening  |

## Approvals

|                             |  |  |                                                                              |
|-----------------------------|--|--|------------------------------------------------------------------------------|
| Product Standards           |  |  | IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking |
| UL File No.                 |  |  | E29184                                                                       |
| UL Category Control No.     |  |  | NKCR                                                                         |
| CSA File No.                |  |  | 012528                                                                       |
| CSA Class No.               |  |  | 3211-03                                                                      |
| North America Certification |  |  | UL listed, CSA certified                                                     |
| Degree of Protection        |  |  | UL/CSA Type: -                                                               |

## Dimensions

|                                                                                    |  |                                                                                                        |  |
|------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------|--|
|  |  | <p>A = 37.2</p> <p>Pushbutton with M22-(C)K...</p> <p>Pushbutton with M22-(C) LED... + M22-XLED...</p> |  |
|------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------|--|



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