## **DATASHEET - M22-CLED230-R**



## LED element, red, front mount, cage clamp

Part no. M22-CLED230-R Catalog No. 216576

Alternate Catalog

No.

**EL-Nummer** (Norway)

M22-CLED230-RQ

4355781



Delivery program

| Delivery program                                |                        |    |  |
|---|------------------------|----|--|
| Basic function accessories                      |                        |    | LED elements   |
| Description                                     |                        |    | Cage Clamp is a registered trademark of Wago Kontakttechnik GmbH/Minden, Germany |
| Connection technique                            |                        |    | Cage Clamp   |
| Fixing  |                        |    | Front fixing   |
| Rated operational voltage                       | U <sub>e</sub>         | V  | 85 - 264 V AC, 50/60 Hz  |
| Rated operational current                       | l <sub>e</sub>         | mA | 5 - 15   |
| Power consumption                               | P <sub>max</sub> .     | W  | 0.33   |
| Lifespan to EN 60064 at t <sub>a</sub> = +25 °C | t <sub>mean</sub> (AC) | h  | 100000   |
| Degree of Protection                            |                        |    | IP20   |
|   |                        |    | At 230 V   |
| Colour  |                        |    |  |
|   |                        |    | Red  |
|   |                        |    |  |
| Connection to SmartWire-DT                      |                        |    | no   |
| Approval  |                        |    | LED  |
| Connection technique                            |                        |    | Cage Clamp   |
|   |                        |    |  |

### 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 | ≦ 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  |           | $\text{mm}^2$   |   |
| Solid  |           | $\mathrm{mm}^2$ | 0.75 - 2.5  |
| Stranded   |           | $\mathrm{mm}^2$ | 0.5 - 2.5   |
| Contacts   |           |                 |   |
| Rated impulse withstand voltage  | $U_{imp}$ | V AC            | 6000  |
| Rated insulation voltage   | Ui        | 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   | In                | 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  | 1  |
| Heat dissipation capacity  | P <sub>diss</sub> | W  | 0  |
| Operating ambient temperature min.   | · uiss            | °C | -25  |
| Operating ambient temperature max.   |                   | °C | 70   |
| IEC/EN 61439 design verification   |                   | U  |  |
| 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 switch<br>gear must be observed. $\label{eq:constraint}$       |
| 10.12 Electromagnetic compatibility  |                   |    | Is the panel builder's responsibility. The specifications for the switch<br>gear must be observed. $\label{eq:specification}$    |
| 10.13 Mechanical function  |                   |    | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |

## **Technical data ETIM 7.0**

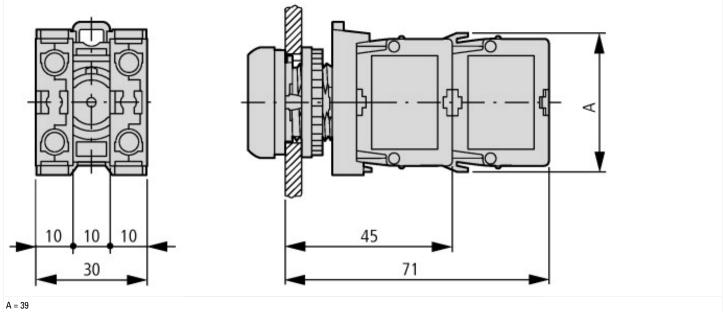
Low-voltage industrial components (EG000017) / Lamp holder block for control circuit devices (EC000204)

| Electric engineering, automation, process control engineering / Low-voltage switc (ecl@ss10.0.1-27-37-12-09 [AKF027014]) | h technology / Cor | d and alarm device / Bulb socket block | for command and alarm devices |
|--|--------------------|--|-------------------------------|
| 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                  | 85 - 264                               |                               |
| Rated voltage Ue at AC 60 Hz   | V                  | 85 - 264                               |                               |
| Rated voltage Ue at DC   | V                  | 0 - 0                                  |                               |
| Voltage type for actuating   |                    | AC                                     |                               |
| Lamp type  |                    | LED                                    |                               |
| Connection type auxiliary circuit  |                    | Spring clamp connection                |                               |
| Colour lamp  |                    | Red                                    |                               |
| 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**



Pushbutton with M22-(C)K... Pushbutton with M22-(C) LED... + M22-XLED...