



**216564**  
**M22-LED230-R**

Overview

Specifications

Resources



Delivery program

Technical data

Design verification as  
per IEC/EN 61439

Technical data ETIM 7.0

Approvals

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## DELIVERY PROGRAM

Basic function accessories  
LED elements

Connection technique  
Screw terminals

Fixing  
Front fixing

Rated operational voltage [ $U_e$ ]  
85 - 264 V AC, 50/60 Hz V

**Rated operational current [ $I_e$  ]**  
5 - 15 mA

Power consumption [ $P_{max}$ ]  
0.33 W

Lifespan to EN 60064 at  $t_a = +25\text{ °C}$  [ $t_{mean}$  (AC)]  
100000 h

Degree of Protection  
IP20

At 230 V

## Colour

Red



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)  
□ 0.8 Nm

Degree of Protection  
IP20

Climatic proofing  
Damp heat, constant, to IEC 60068-2-78  
Damp heat, cyclic, to IEC 60068-2-30

Ambient temperature  
Open  
-25 - +70 °C

Ambient temperature  
Storage  
- 40 - + 80 °C

Mounting position  
As required

Mechanical shock resistance according to IEC  
60068-2-27

Shock duration 11 ms, half-sinusoidal  
> 30 g

Mechanical shock resistance  
30  
Shock duration 11 ms  
Sinusoidal  
according to IEC 60068-2-27 g

Terminal capacities  
Solid  
0.75 - 2.5 mm<sup>2</sup>

Terminal capacities  
Stranded  
0.5 - 2.5 mm<sup>2</sup>

**Contacts**

Rated impulse withstand voltage [ $U_{imp}$ ]  
6000 V AC

Rated insulation voltage [ $U_i$ ]  
500 V

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 [ $I_n$ ]  
0 A

Heat dissipation per pole, current-dependent [ $P_{vid}$ ]  
0 W

Equipment heat dissipation, current-dependent  
[ $P_{vid}$ ]  
0 W

Static heat dissipation, non-current-dependent [ $P_{vs}$ ]  
1 W

Heat dissipation capacity [ $P_{diss}$ ]  
0 W

Operating ambient temperature min.  
-25 °C

Operating ambient temperature max.  
+70 °C

### 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 Strength of materials and parts  
10.2.3.1 Verification of thermal stability of enclosures  
Meets the product standard's requirements.

10.2 Strength of materials and parts  
10.2.3.2 Verification of resistance of insulating materials to normal heat  
Meets the product standard's requirements.

10.2 Strength of materials and parts  
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 Strength of materials and parts  
10.2.4 Resistance to ultra-violet (UV) radiation  
Meets the product standard's requirements.

10.2 Strength of materials and parts  
10.2.5 Lifting  
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts  
10.2.6 Mechanical impact  
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts  
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 Insulation properties  
10.9.3 Impulse withstand voltage  
Is the panel builder's responsibility.

10.9 Insulation properties  
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.

Low-voltage industrial components (EG000017) / Lamp holder block for control circuit devices (E0000204)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Command and alarm device / Bulb socket block for command and alarm devices (ecl@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  $U_e$  at AC 50 Hz  
230 - 230 V

Rated voltage  $U_e$  at AC 60 Hz  
230 - 230 V

Rated voltage  $U_e$  at DC  
0 - 0 V

Voltage type for actuating  
AC

Lamp type  
LED

Connection type auxiliary circuit  
Screw 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

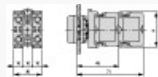
CSA File No.  
012528

CSA Class No.  
3211-03

North America Certification  
UL listed, CSA certified

Degree of Protection  
UL/CSA Type: -

## DIMENSIONS



A = 37.2

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



