

## PRODUCT-DETAILS

# CM-ESS.MS

## CM-ESS.MS Voltage monitoring relay 2c/o, B-C=3-600VRMS, 24-240VAC/DC



### General Information

|                       |                                                                      |
|-----------------------|----------------------------------------------------------------------|
| Extended Product Type | CM-ESS.MS                                                            |
| Product ID            | 1SVR730830R0500                                                      |
| EAN                   | 4016779852173                                                        |
| Catalog Description   | CM-ESS.MS Voltage monitoring relay 2c/o, B-C=3-600VRMS, 24-240VAC/DC |

#### Long Description

The CM-ESS.MS is a multifunctional voltage monitoring relay from the CM single-phase monitors range. This monitoring relay operates with a rated control supply voltage of 24 - 240 V AC / DC and has a 2 c/o (SPDT) output with contacts rated at 250 V / 4 A. It provides a RMS measuring principle for DC and AC voltages with 4 measuring ranges: 3-30 V, 6-60 V, 30-300 V and 60-600 V. The CM-ESS.MS offers selection of over- or undervoltage monitoring, open- or closed-circuit operating principle, with or without latching function. The hysteresis is adjustable within a range of 3 to 30 % of the threshold value. The tripping delay and the start-up delay are adjustable over a range of instantaneous to 30 s (0, 0.1-30 s). A sealable transparent cover for protection against unauthorized changes is available as accessory. The device offers screw connection technology with double-chamber cage connection terminals.

### Ordering

|                        |               |
|------------------------|---------------|
| EAN                    | 4016779852173 |
| Minimum Order Quantity | 1 piece       |
| Customs Tariff Number  | 85364900      |

### Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 2CDC112173D0201 |
|-----------------------------------|-----------------|

## Dimensions

|                               |          |
|-------------------------------|----------|
| Product Net Width             | 22.5 mm  |
| Product Net Depth /<br>Length | 103.7 mm |
| Product Net Height            | 85.6 mm  |
| Product Net Weight            | 0.154 kg |

## Technical

|                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function                                               | Over- or undervoltage monitoring                                                                                                                                                                                                                                                                                                                                                                                     |
| Measuring Range                                        | 3 ... 30 V<br>6 ... 60 V<br>30 ... 300 V<br>60 ... 600 V                                                                                                                                                                                                                                                                                                                                                             |
| Rated Control Supply<br>Voltage (U <sub>s</sub> )      | 24 ... 240 V AC/DC                                                                                                                                                                                                                                                                                                                                                                                                   |
| Output                                                 | 2 c/o (SPDT) contact; operating principle selectable                                                                                                                                                                                                                                                                                                                                                                 |
| Time Range                                             | 0 s or 0.1 ... 30 s tripping delay (ON)                                                                                                                                                                                                                                                                                                                                                                              |
| Terminal Type                                          | Screw Terminals                                                                                                                                                                                                                                                                                                                                                                                                      |
| Rated Operational<br>Current AC-12 (I <sub>e</sub> )   | (230 V) 4 A                                                                                                                                                                                                                                                                                                                                                                                                          |
| Rated Operational<br>Current AC-15 (I <sub>e</sub> )   | (230 V) 3 A                                                                                                                                                                                                                                                                                                                                                                                                          |
| Rated Operational<br>Current DC-12 (I <sub>e</sub> )   | (24 V) 4 A                                                                                                                                                                                                                                                                                                                                                                                                           |
| Rated Operational<br>Current DC-13 (I <sub>e</sub> )   | (24 V) 2 A                                                                                                                                                                                                                                                                                                                                                                                                           |
| Minimum Switching<br>Capacity                          | 24 V<br>10 mA                                                                                                                                                                                                                                                                                                                                                                                                        |
| Rated Insulation Voltage<br>(U <sub>i</sub> )          | Measuring Circuit / Output Circuit 600 V<br>Output Circuit 1 / Output Circuit 2 250 V<br>Supply Circuit / Measuring Circuit 600 V<br>Supply Circuit / Output Circuit 250 V                                                                                                                                                                                                                                           |
| Rated Impulse<br>Withstand Voltage (U <sub>imp</sub> ) | Measuring Circuit / Output Circuit 6 kV<br>Output Circuit 1 / Output Circuit 2 4 kV<br>Supply Circuit / Measuring Circuit 6 kV<br>Supply Circuit / Output Circuit 4 kV                                                                                                                                                                                                                                               |
| Degree of Protection                                   | Housing IP50<br>Terminals IP20                                                                                                                                                                                                                                                                                                                                                                                       |
| Overvoltage Category                                   | III                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Pollution Degree                                       | 3                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Short-Circuit Protective<br>Devices                    | Output Circuit NC - F Type Fuses 10 A<br>Output Circuit NO - F Type Fuses 10 A                                                                                                                                                                                                                                                                                                                                       |
| Electrical Durability                                  | AC-12 100000 cycle                                                                                                                                                                                                                                                                                                                                                                                                   |
| Mechanical Durability                                  | 30000000 cycle                                                                                                                                                                                                                                                                                                                                                                                                       |
| Connecting Capacity                                    | Flexible with Ferrule 1x 0.5 ... 2.5 mm <sup>2</sup><br>Flexible with Ferrule 2x 0.5 ... 1.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.5 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.5 ... 1.5 mm <sup>2</sup><br>Flexible 1x 0.5 ... 2.5 mm <sup>2</sup><br>Flexible 2x 0.5 ... 1.5 mm <sup>2</sup><br>Rigid 1x 0.5 ... 4 mm <sup>2</sup><br>Rigid 2x 0.5 ... 2.5 mm <sup>2</sup> |
| Tightening Torque                                      | 0.6 ... 0.8 N·m                                                                                                                                                                                                                                                                                                                                                                                                      |
| Wire Stripping Length                                  | 8 mm                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Mounting Position                                      | Any                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Mounting on DIN Rail                                   | TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715<br>TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715                                                                                                                                                                                                                                                                                                       |
| Standards                                              | CAN/CSA C22.2 No.14                                                                                                                                                                                                                                                                                                                                                                                                  |

EN 50178  
 EN 50581  
 IEC/EN 60255-27  
 IEC/EN 61000-6-2  
 IEC/EN 61000-6-3  
 UL 508

## Technical UL/CSA

|                                  |                                                                                            |
|----------------------------------|--------------------------------------------------------------------------------------------|
| Maximum Operating Voltage UL/CSA | Output Circuit 300 V AC                                                                    |
| Contact Rating UL/CSA            | B300                                                                                       |
| Connecting Capacity UL/CSA       | Flexible 1x 18-14 AWG<br>Flexible 2x 18-16 AWG<br>Rigid 1x 20-12 AWG<br>Rigid 2x 20-14 AWG |
| Tightening Torque UL/CSA         | 7.08 in-lb                                                                                 |

## Environmental

|                         |                                                    |
|-------------------------|----------------------------------------------------|
| Ambient Air Temperature | Operation -20 ... +60 °C<br>Storage -40 ... +85 °C |
| RoHS Status             | Following EU Directive 2011/65/EU                  |

## Certificates and Declarations (Document Number)

|                                   |                           |
|-----------------------------------|---------------------------|
| CB Certificate                    | CB_DK-28255-UL            |
| CCC Certificate                   | CCC_2007010303243843.pdf  |
| CQC Certificate                   | CQC2007010303243843       |
| cULus Certificate                 | cULus508_20120203-E140448 |
| Data Sheet, Technical Information | 2CDC112173D0201           |
| Declaration of Conformity - CCC   | 2020980303000196          |
| Declaration of Conformity - CE    | 1SVD981013                |
| DNV GL Certificate                | DVN_GL_TAA0000292         |
| EAC Certificate                   | EAC_RU_C-DE.ME77.B.03424  |
| Environmental Information         | 1SAA981019-2401           |
| Instructions and Manuals          | 1SVC730600M0000           |
| RMRS Certificate                  | RMRS_1740020250           |
| RoHS Information                  | 1SVD981013                |

## Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 97 mm         |
| Package Level 1 Height         | 109 mm        |
| Package Level 1 Depth / Length | 30 mm         |
| Package Level 1 Gross Weight   | 0.176 kg      |
| Package Level 1 EAN            | 4016779852173 |

## Classifications

|                            |                                     |
|----------------------------|-------------------------------------|
| Object Classification Code | B                                   |
| ETIM 4                     | EC001438 - Voltage monitoring relay |
| ETIM 5                     | EC001438 - Voltage monitoring relay |
| ETIM 6                     | EC001438 - Voltage monitoring relay |
| ETIM 7                     | EC001438 - Voltage monitoring relay |
| eClass                     | V11.0 : 27371801                    |
| UNSPSC                     | 39121514                            |
| E-Number (Finland)         | 2712254                             |
| E-Number (Sweden)          | 3860620                             |

Categories

Low Voltage Products and Systems → Control Products → Electronic Relays and Controls → Single Phase Monitors

