

## PRODUCT-DETAILS

# CM-ESS.1S

CM-ESS.1S Voltage monitoring relay 1c/o, B-C=3-600VRMS, 24-240VAC/DC



## General Information

|                       |                                                                      |
|-----------------------|----------------------------------------------------------------------|
| Extended Product Type | CM-ESS.1S                                                            |
| Product ID            | 1SVR730830R0300                                                      |
| EAN                   | 4016779852159                                                        |
| Catalog Description   | CM-ESS.1S Voltage monitoring relay 1c/o, B-C=3-600VRMS, 24-240VAC/DC |

### Long Description

The CM-ESS.1S is a single-functional 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 1 c/o (SPDT) output contact rated at 250 V / 4 A. It provides a RMS measuring principle for DC and AC voltages with 4 measuring ranges: 3-30 V, 3-60 A, 30-300 V and 60-600 V and works according to the open-circuit principle. The CM-ESS.1S is configurable for over- or undervoltage monitoring, the hysteresis is adjustable within a range of 3 to 30 % of the threshold value. 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                    | 4016779852159 |
| Minimum Order Quantity | 1 piece       |
| Customs Tariff Number  | 85364900      |

## Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 2CDC112171D0201 |
| Instructions and                  | 1SVC730590M0000 |

## Manuals

**Dimensions**

|                            |          |
|----------------------------|----------|
| Product Net Width          | 22.5 mm  |
| Product Net Depth / Length | 103.7 mm |
| Product Net Height         | 85.6 mm  |
| Product Net Weight         | 0.135 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 Voltage (U <sub>s</sub> )      | 24 ... 240 V AC/DC                                                                                                                                                                                                                                                                                                                                                                                                   |
| Output                                              | 1 c/o (SPDT) contact                                                                                                                                                                                                                                                                                                                                                                                                 |
| Terminal Type                                       | Screw Terminals                                                                                                                                                                                                                                                                                                                                                                                                      |
| Rated Operational Current AC-12 (I <sub>e</sub> )   | (230 V) 4 A                                                                                                                                                                                                                                                                                                                                                                                                          |
| Rated Operational Current AC-15 (I <sub>e</sub> )   | (230 V) 3 A                                                                                                                                                                                                                                                                                                                                                                                                          |
| Rated Operational Current DC-12 (I <sub>e</sub> )   | (24 V) 4 A                                                                                                                                                                                                                                                                                                                                                                                                           |
| Rated Operational Current DC-13 (I <sub>e</sub> )   | (24 V) 2 A                                                                                                                                                                                                                                                                                                                                                                                                           |
| Minimum Switching Capacity                          | 24 V<br>10 mA                                                                                                                                                                                                                                                                                                                                                                                                        |
| Rated Insulation Voltage (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 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 Devices                    | Output Circuit NC - F Type Fuses 6 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<br>EN 50178<br>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 | 2CDC112171D0201           |
| 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          | 1SVC730590M0000           |
| 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   | 0.157 kg      |
| Package Level 1 EAN            | 4016779852159 |

## 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) | 2712244                             |
| E-Number (Sweden)  | 3860618                             |

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## Categories

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

