

## PRODUCT-DETAILS

# CM-MSS.51S

CM-MSS.51S Therm. motor protec. relay  
2x1c/o, 24-240VAC/DC



## General Information

|                       |                                                            |
|-----------------------|------------------------------------------------------------|
| Extended Product Type | CM-MSS.51S                                                 |
| Product ID            | 1SVR730712R1300                                            |
| EAN                   | 4013614496660                                              |
| Catalog Description   | CM-MSS.51S Therm. motor protec. relay 2x1c/o, 24-240VAC/DC |

### Long Description

The CM-MSS.51S belongs to the CM thermistor motor protection relay range. It 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 features two sensor circuit to monitor PTC temperature sensors (single or accumulative evaluation, configurable) and works according to the closed-circuit principle. The sensor circuits of this CM-MSS.51S are short-circuit (configurable), as well as interrupted-wire monitored and can be reset automatically, manually or remotely after the failure has been removed. This protection relay is certified according to the ATEX directive 94/9/EC and is equipped with a reset / test button. The non-volatile fault storage, the short circuit detection and the accumulative evaluation can be enabled/disabled via DIP switches. 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                    | 4013614496660 |
| Minimum Order Quantity | 1 piece       |
| Customs Tariff Number  | 85364900      |

## Dimensions

|                            |          |
|----------------------------|----------|
| Product Net Width          | 22.5 mm  |
| Product Net Height         | 85.6 mm  |
| Product Net Depth / Length | 103.7 mm |
| Product Net Weight         | 0.145 kg |

## 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   | 0.172 kg      |
| Package Level 1 EAN            | 4013614496660 |

## Technical

|                                                     |                                                                                                                                                                                                                                                  |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function                                            | 2 sensor circuits<br>Short-circuit detection, configurable<br>Non-volatile fault storage, configurable<br>Single or accumulative evaluation, configurable<br>Dynamic interrupted wire detection<br>Auto, manual or remote reset<br>ATEX approved |
| Rated Control Supply Voltage (U <sub>s</sub> )      | 24 ... 240 V AC/DC                                                                                                                                                                                                                               |
| Output                                              | 2 x 1 c/o or 1 x 2 c/o contacts, configurable                                                                                                                                                                                                    |
| 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 300 V<br>Output Circuit 1 / Output Circuit 2 300 V<br>Supply Circuit / Measuring Circuit 300 V<br>Supply Circuit / Output Circuit 300 V                                                                       |
| Rated Impulse Withstand Voltage (U <sub>imp</sub> ) | Output Circuit 1 / Output Circuit 2 4 kV<br>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 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

TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715

## Standards

CAN/CSA C22.2 No.14

EN 50495

EN 50581

IEC/EN 60079-7

IEC/EN 60947-5-1

IEC/EN 60947-8

UL 508

**Environmental**Ambient Air  
Temperature

Operation -25 ... +60 °C

Storage -40 ... +85 °C

RoHS Status

Following EU Directive 2011/65/EU

**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

Flexible 2x 18-16 AWG

Rigid 1x 20-12 AWG

Rigid 2x 20-14 AWG

Tightening Torque  
UL/CSA

7.08 in-lb

**Certificates and Declarations (Document Number)**

ATEX Certificate

EU Type Examination Certificate\_TPS\_18\_ATEX\_044254\_0018\_X

CB Certificate

CB\_DK-40837-UL

CCC Certificate

CCC\_2005010303165479

CQC Certificate

CQC2005010303165479

cULus Certificate

cULus508\_20140912-E140448

Data Sheet, Technical  
Information

2CDC112214D0201

Declaration of  
Conformity - CCC

2020980303000194

Declaration of  
Conformity - CE

1SVD981007

DNV GL Certificate

DNVGL\_TAE00003W4

EAC Certificate

EAC\_RU\_C-DE.ME77.B.01825

Environmental  
Information

1SAA981024-2401

GL Certificate

GL\_13759-14HH

Instructions and  
Manuals

1SVC730670M0000

Instructions and  
Manuals (Part 2)

1SVC730640M9000

RMRS Certificate

RMRS\_1740020250

RoHS Information

1SVD981007

**Classifications**Object Classification  
Code

B

ETIM 5

EC002568 - Temperature monitor (motor protection)

ETIM 6

EC002568 - Relay for thermistor protection (PTC)

ETIM 7

EC002568 - Relay for thermistor protection (PTC)

|                    |                  |
|--------------------|------------------|
| eClass             | V11.0 : 27371503 |
| E-Number (Finland) | 2712514          |
| E-Number (Sweden)  | 3860777          |

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**Categories**

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Low Voltage Products and Systems → Control Products → Electronic Relays and Controls → Thermistor Motor Protection Relays

