

## PRODUCT-DETAILS

# E16DU-18.9

## E16DU-18.9 Electronic Overload Relay 5.7 ... 18.9 A



### General Information

|                       |                                                     |
|-----------------------|-----------------------------------------------------|
| Extended Product Type | E16DU-18.9                                          |
| Product ID            | 1SAX111001R1105                                     |
| EAN                   | 4013614395260                                       |
| Catalog Description   | E16DU-18.9 Electronic Overload Relay 5.7 ... 18.9 A |

#### Long Description

The E16DU-18.9 is an self-supplied electronic overload relay, which means no extra external supply is needed. It offers reliable and fast protection for motors in the event of overload or phase failure. Easy to use like a thermal overload relay and compatible with standard motor applications, the electronic overload relay is convincing, above all, due to its wide setting range, high accuracy, high operational temperature range and the possibility to select a trip class (10E, 20E, 30E). Further features are the temperature compensation, trip contact (NC), signal contact (NO), automatic- or manual reset selectable, trip-free mechanism, STOP- and Test function and a trip indication. The overload relays are connected directly to the contactors. Single mounting kits are available as accessory.

### Ordering

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

### Popular Downloads

|                          |                 |
|--------------------------|-----------------|
| Instructions and Manuals | 2CDC107019M5502 |
|--------------------------|-----------------|

|                                   |                                    |
|-----------------------------------|------------------------------------|
| Instructions and Manuals (Part 2) | 1SAC200017M0002                    |
| Time-Current Characteristic Curve | 1SAX100502F0002<br>1SAX100508F0001 |
| CAD Dimensional Drawing           | 2CDC001079B0201                    |
| Dimension Diagram                 | 1SAX100402F0001<br>1SAX100401F0001 |

## Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Width          | 44.4 mm |
| Product Net Height         | 74.6 mm |
| Product Net Depth / Length | 57 mm   |
| Product Net Weight         | 0.15 kg |

## Technical

|                                                    |                                                                                                                                                                                                                  |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Setting Range                                      | 5.7 ... 18.9 A                                                                                                                                                                                                   |
| Rated Operational Voltage                          | Auxiliary Circuit 600 V AC/DC<br>Main Circuit 690 V AC                                                                                                                                                           |
| Rated Operational Current ( $I_e$ )                | 18.9 A                                                                                                                                                                                                           |
| Rated Frequency (f)                                | Auxiliary Circuit 50 Hz<br>Auxiliary Circuit 60 Hz<br>Auxiliary Circuit DC<br>Main Circuit 50 Hz<br>Main Circuit 60 Hz                                                                                           |
| Rated Impulse Withstand Voltage ( $U_{imp}$ )      | Auxiliary Circuit 6 kV<br>Main Circuit 6 kV                                                                                                                                                                      |
| Rated Insulation Voltage ( $U_i$ )                 | 690 V                                                                                                                                                                                                            |
| Number of Poles                                    | 3                                                                                                                                                                                                                |
| Number of Auxiliary Contacts NC                    | 1                                                                                                                                                                                                                |
| Number of Auxiliary Contacts NO                    | 1                                                                                                                                                                                                                |
| Number of Protected Poles                          | 3                                                                                                                                                                                                                |
| Conventional Free-air Thermal Current ( $I_{th}$ ) | Auxiliary Circuit NC 6 A<br>Auxiliary Circuit NO 6 A                                                                                                                                                             |
| Rated Operational Current AC-15 ( $I_e$ )          | (240 V) NC 3 A<br>(240 V) NO 3 A<br>(400 V) NC 1.1 A<br>(400 V) NO 1.1 A<br>(500 V) NC 0.72 A<br>(500 V) NO 0.72 A                                                                                               |
| Rated Operational Current DC-13 ( $I_e$ )          | (125 V) NC 0.55 A<br>(125 V) NO 0.5 A<br>(24 V) NC 1.5 A<br>(24 V) NO 1.5 A<br>(250 V) NC 0.27 A<br>(250 V) NO 0.27 A<br>(60 V) NC 0.55 A<br>(60 V) NO 0.55 A                                                    |
| Degree of Protection                               | IP20                                                                                                                                                                                                             |
| Pollution Degree                                   | 3                                                                                                                                                                                                                |
| Connecting Capacity Auxiliary Circuit              | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Rigid 1/2x 1 ... 4 mm <sup>2</sup> |

|                                     |                                                                                                                                                                                                                  |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connecting Capacity<br>Main Circuit | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Rigid 1/2x 1 ... 4 mm <sup>2</sup> |
| Tightening Torque                   | Auxiliary Circuit 0.8 ... 1.2 N·m<br>Main Circuit 0.8 ... 1.5 N·m                                                                                                                                                |
| Wire Stripping Length               | Auxiliary Circuit 9 mm<br>Main Circuit 9 mm                                                                                                                                                                      |
| Recommended Screw<br>Driver         | Auxiliary Circuit Pozidriv 2<br>Main Circuit Pozidriv 2                                                                                                                                                          |
| Mounting Position                   | 1 ... 6                                                                                                                                                                                                          |
| Power Loss                          | at Rated Operating Conditions per Pole 0.028 ... 0.304 W                                                                                                                                                         |
| Suitable For                        | B6<br>B7<br>BC6<br>BC7<br>A09<br>A12<br>A16<br>AL09<br>AL12<br>AL16<br>VB6<br>VB7<br>VBC6<br>VBC7                                                                                                                |
| Standards                           | IEC/EN 60947-1<br>IEC/EN 60947-4-1<br>IEC/EN 60947-5-1<br>UL 60947-1<br>UL 60947-4-1                                                                                                                             |

## Technical UL/CSA

|                                                 |                                                    |
|-------------------------------------------------|----------------------------------------------------|
| Maximum Operating<br>Voltage UL/CSA             | Main Circuit 600 V AC                              |
| Contact Rating UL/CSA                           | B600<br>Q300                                       |
| Connecting Capacity<br>Main Circuit UL/CSA      | Flexible 1/2x 16-10 AWG<br>Stranded 1/2x 16-10 AWG |
| Connecting Capacity<br>Auxiliary Circuit UL/CSA | Flexible 1/2x 16-10 AWG<br>Stranded 1/2x 16-10 AWG |
| Tightening Torque<br>UL/CSA                     | Auxiliary Circuit 7 in·lb<br>Main Circuit 7 in·lb  |

## Environmental

|                                                   |                                                                                            |
|---------------------------------------------------|--------------------------------------------------------------------------------------------|
| Ambient Air<br>Temperature                        | Operation -25 ... +70 °C<br>Operation Compensated -25 ... +70 °C<br>Storage -50 ... +85 °C |
| Ambient Air<br>Temperature<br>Compensation        | Yes                                                                                        |
| Maximum Operating<br>Altitude Permissible         | 2000 m                                                                                     |
| Resistance to Shock acc.<br>to IEC 60068-2-27     | 11 ms Pulse 15g                                                                            |
| Resistance to Vibrations<br>acc. to IEC 60068-2-6 | 5g / 3 ... 150 Hz                                                                          |
| RoHS Status                                       | Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019                     |

## Certificates and Declarations

|                                     |                     |
|-------------------------------------|---------------------|
| CB Certificate                      | 1SAA964002-2002     |
| CQC Certificate                     | CQC2008010309289447 |
| Declaration of<br>Conformity - CCC  | 2020980309000285    |
| Declaration of<br>Conformity - CE   | 1SAD101100-3602     |
| Declaration of<br>Conformity - UKCA | 1SAD201100-3602     |
| EAC Certificate                     | 1SAA941003-2701     |
| RMRS Certificate                    | 1SAA964000-0703     |
| UL Certificate                      | E48139-19990512     |

## Container Information

|                                   |               |
|-----------------------------------|---------------|
| Package Level 1 Units             | 1 piece       |
| Package Level 1 Width             | 65 mm         |
| Package Level 1 Height            | 46 mm         |
| Package Level 1 Depth /<br>Length | 76.5 mm       |
| Package Level 1 Gross<br>Weight   | 0.17 kg       |
| Package Level 1 EAN               | 4013614395260 |
| Package Level 2 Units             | 100 piece     |
| Package Level 2 Width             | 340 mm        |
| Package Level 2 Height            | 314 mm        |
| Package Level 2 Depth /<br>Length | 245 mm        |
| Package Level 2 Gross<br>Weight   | 17.563 kg     |
| Package Level 2 EAN               | 4013614483257 |

## Classifications

|                                       |                                      |
|---------------------------------------|--------------------------------------|
| Object Classification<br>Code         | F                                    |
| ETIM 4                                | EC001080 - Electronic overload relay |
| ETIM 5                                | EC001080 - Electronic overload relay |
| ETIM 6                                | EC001080 - Electronic overload relay |
| ETIM 7                                | EC001080 - Electronic overload relay |
| ETIM 8                                | EC001080 - Electronic overload relay |
| eClass                                | V11.0 : 27371502                     |
| UNSPSC                                | 39122330                             |
| IDEA Granular Category<br>Code (IGCC) | 5365 >> Electronic overload relay    |
| E-Number (Finland)                    | 3709394                              |
| E-Number (Sweden)                     | 3228764                              |

## Accessories

| Identifier      | Description                 | Type     | Quantity | Unit Of<br>Measure |
|-----------------|-----------------------------|----------|----------|--------------------|
| 1SAX101110R0001 | DB16E Single Mounting Kit   | DB16E    | 1        | piece              |
| 1SFA616162R1014 | KPR3-101L Reset push button | KPR-101L | 1        | piece              |

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## Categories

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Low Voltage Products and Systems → Control Products → Contactors → Electronic Overload Relays

