



PRODUCT-DETAILS

# TF140DU-110

## TF140DU-110 Thermal Overload Relay 80 ... 110 A



| General Information   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | TF140DU-110                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Product ID            | 1SAZ431201R1002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| EAN                   | 4013614446825                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Catalog Description   | TF140DU-110 Thermal Overload Relay 80 ... 110 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Long Description      | The TF140DU-110 thermal overload relay is an economic electromechanical protection device for the main circuit. It offers reliable and fast protection for motors in the event of overload or phase failure. The device has trip class 10A. 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 block contactors. |

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

### Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 2CDC106061D0201 |
| Instructions and Manuals          | 2CDC106050M6802 |
| Instructions and Manuals (Part 2) | 1SAC200017M0002 |
| Time-Current Characteristic Curve | 1SAZ400503F0002 |
| CAD Dimensional Drawing           | 2CDC001079B0201 |
| Dimension Diagram                 | 1SAZ400404F0001 |

## Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Width          | 89 mm   |
| Product Net Height         | 140 mm  |
| Product Net Depth / Length | 126 mm  |
| Product Net Weight         | 0.82 kg |

## Technical

|                                                    |                                                                                                                                                                                                       |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Setting Range                                      | 80 ... 110 A                                                                                                                                                                                          |
| Rated Operational Voltage                          | Auxiliary Circuit 440 V DC<br>Auxiliary Circuit 500 V AC<br>Main Circuit 690 V AC<br>Main Circuit 440 V DC                                                                                            |
| Rated Operational Current ( $I_e$ )                | 110 A                                                                                                                                                                                                 |
| Rated Frequency (f)                                | Auxiliary Circuit 50 Hz<br>Auxiliary Circuit 60 Hz<br>Auxiliary Circuit DC<br>Main Circuit 60 Hz<br>Main Circuit 50 Hz<br>Main Circuit DC                                                             |
| Rated Impulse Withstand Voltage ( $U_{imp}$ )      | Auxiliary Circuit 6 kV<br>Main Circuit 8 kV                                                                                                                                                           |
| Rated Insulation Voltage ( $U_i$ )                 | 690 V                                                                                                                                                                                                 |
| Number of Poles                                    | 3P                                                                                                                                                                                                    |
| 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 10 A<br>Auxiliary Circuit NO 6 A                                                                                                                                                 |
| Rated Operational Current AC-15 ( $I_e$ )          | (120 V) NC 3 A<br>(120 V) NO 1.5 A<br>(240 V) NC 3 A<br>(240 V) NO 1.2 A<br>(400 V) NC 0.75 A<br>(400 V) NO 0.37 A<br>(440 V) NC 0.75 A<br>(440 V) NO 0.37 A<br>(500 V) NC 0.3 A<br>(500 V) NO 0.25 A |
| Rated Operational Current DC-13 ( $I_e$ )          | (125 V) NC 0.25 A<br>(125 V) NO 0.25 A                                                                                                                                                                |

|                                          |                                                                                                                                                                                                           |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          | (24 V) NC 1.25 A<br>(24 V) NO 1.25 A<br>(250 V) NC 0.12 A<br>(250 V) NO 0.04 A<br>(60 V) NC 0.25 A<br>(60 V) NO 0.25 A                                                                                    |
| Degree of Protection                     | IP20<br>Housing IP20<br>Main Circuit Terminals IP10                                                                                                                                                       |
| Pollution Degree                         | 3                                                                                                                                                                                                         |
| Connecting Capacity<br>Auxiliary Circuit | Flexible with 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 0.75 ... 4 mm <sup>2</sup>                                                            |
| Connecting Capacity<br>Main Circuit      | Flexible with Ferrule 1/2x 16 ... 70 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1/2x 16 ... 70 mm <sup>2</sup><br>Flexible 1/2x 16 ... 70 mm <sup>2</sup><br>Rigid 1/2x 16 ... 70 mm <sup>2</sup> |
| Tightening Torque                        | Auxiliary Circuit 0.8 ... 1.2 N·m<br>Main Circuit 8 ... 10 N·m                                                                                                                                            |
| Wire Stripping Length                    | Auxiliary Circuit 9 mm<br>Main Circuit 25 mm                                                                                                                                                              |
| Recommended Screw<br>Driver              | Auxiliary Circuit Pozidriv 2<br>Main Circuit Hexagon 4                                                                                                                                                    |
| Mounting Position                        | any                                                                                                                                                                                                       |
| Power Loss                               | at Rated Operating Conditions per Pole 2.1 W                                                                                                                                                              |
| Suitable For                             | AF116<br>AF140                                                                                                                                                                                            |
| 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                           | (NC:) B600<br>(NO:) C300                           |
| Connecting Capacity<br>Main Circuit UL/CSA      | Flexible 1/2x 6-2/0 AWG<br>Stranded 1/2x 6-2/0 AWG |
| Connecting Capacity<br>Auxiliary Circuit UL/CSA | Flexible 1/2x 18-14 AWG<br>Stranded 1/2x 18-14 AWG |
| Tightening Torque<br>UL/CSA                     | Auxiliary Circuit 12 in·lb                         |

## Environmental

|                                               |                                                                                            |
|-----------------------------------------------|--------------------------------------------------------------------------------------------|
| Ambient Air<br>Temperature                    | Operation -25 ... +55 °C<br>Operation Compensated -25 ... +55 °C<br>Storage -40 ... +70 °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 12g<br>25g 2 shocks 13 ms                                                      |
| Resistance to Vibrations                      | 20 Cycles with Load 0.8 In: 5g 5 ... 150 ... 5 Hz                                          |
| RoHS Status                                   | Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019                     |
| Toxic Substances                              | 2CMT2023-006525                                                                            |

Control Act - TSCA

## Material Compliance

|                                             |                                                            |
|---------------------------------------------|------------------------------------------------------------|
| Conflict Minerals Reporting Template (CMRT) | 9AKK108467A5658                                            |
| REACH Declaration                           | 2CMT2021-006202                                            |
| RoHS Information                            | 2CMT2021-006277                                            |
| WEEE B2C / B2B                              | Business To Business                                       |
| WEEE Category                               | 5. Small Equipment (No External Dimension More Than 50 cm) |

## ABB EcoSolutions

|                                         |                 |
|-----------------------------------------|-----------------|
| End Of Life Disassembling Instructions  | 1SAC200334H0001 |
| Environmental Information               | 1SAC200090H0009 |
| Environmental Product Declaration - EPD | 1SAC200274H0001 |

## Certificates and Declarations

|                                  |                     |
|----------------------------------|---------------------|
| ABS Certificate                  | 1SAA941004-0101     |
| BV Certificate                   | 1SAA941003-0201     |
| CB Certificate                   | 1SAA941012-2001     |
| CCC Certificate                  | 2024010304659821    |
| CQC Certificate                  | CQC2016010309922935 |
| Declaration of Conformity - CCC  | 2020980304001320    |
| Declaration of Conformity - CE   | 1SAD101100-3507     |
| Declaration of Conformity - UKCA | 1SAD201100-3507     |
| DNV GL Certificate               | 1SAA941004-0301     |
| EAC Certificate                  | 1SAA941002-2702     |
| LR Certificate                   | 1SAA941004-0501     |
| RINA Certificate                 | RINA_ELE098115XG    |
| RMRS Certificate                 | 1SAA941002-0701     |
| UL Certificate                   | E48139-20120831     |

## Container Information

|                                |                |
|--------------------------------|----------------|
| Package Level 1 Units          | carton 1 piece |
| Package Level 1 Width          | 165 mm         |
| Package Level 1 Height         | 133 mm         |
| Package Level 1 Depth / Length | 151 mm         |
| Package Level 1 Gross Weight   | 0.945 kg       |
| Package Level 1 EAN            | 4013614446825  |
| Package Level 2 Units          | 4 piece        |
| Package Level 2 Width          | 280 mm         |
| Package Level 2 Height         | 210 mm         |

|                                |               |
|--------------------------------|---------------|
| Package Level 2 Depth / Length | 395 mm        |
| Package Level 2 Gross Weight   | 8.786 kg      |
| Package Level 2 EAN            | 4013614494369 |

External Classifications and Standards

|                                    |                                   |
|------------------------------------|-----------------------------------|
| Object Classification Code         | F                                 |
| ETIM 4                             | EC000106 - Thermal overload relay |
| ETIM 5                             | EC000106 - Thermal overload relay |
| ETIM 6                             | EC000106 - Thermal overload relay |
| ETIM 7                             | EC000106 - Thermal overload relay |
| ETIM 8                             | EC000106 - Thermal overload relay |
| eClass                             | V11.0 : 27371501                  |
| UNSPSC                             | 39122330                          |
| IDEA Granular Category Code (IGCC) | 5366 >> Thermal overload relay    |
| E-Number (Finland)                 | 3706577                           |
| E-Number (Norway)                  | 4116772                           |
| E-Number (Sweden)                  | 3210242                           |

Accessories

| Identifier      | Description                 | Type      | Quantity | Unit Of Measure |
|-----------------|-----------------------------|-----------|----------|-----------------|
| 1SFA616162R1014 | KPR3-101L Reset push button | KPR3-101L | 1        | piece           |

Categories

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

