

Representative Image

# Alternate Catalog No. TF65-47
# Catalog No. 1SAZ811201R1004

**Description: TF65-47 Thermal Overload Relay**

**UPC No 4013614482946**

**Home > Contactors & Starters > Overload Relays**

The TF65-47 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 10. Further features are the temperature compensation, trip contact (NC), signal contact (NO), automatic- or manual reset selectable, trip-free mechanism, STOP function and a trip indication. The overload relays are connected directly to the block contactors. Single mounting kits are available as accessory.

## Descriptors

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|---|---|
| Category | Overload Relays |

## Specifications

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|---|---|
| Product Name | Thermal Overload Relay |
| Rated Operational Voltage | Auxiliary Circuit 600 V AC / DC<br>Main Circuit 690/440 V AC/V DC |
| Rated Operational Current | 47 A |
| Setting Range | 36 ... 47 A |
| Rated Impulse Withstand Voltage | Auxiliary Circuit 6 kV<br>Main Circuit 8 kV |
| Rated Insulation Voltage | 690 V |
| Number of Poles | 3 |
| Number of Auxiliary Contacts NC | 1 |
| Number of Auxiliary Contacts NO | 1 |
| Number of Protected Poles | 3 |
| Trip Class | class 10 |
| Conventional Free-air Thermal Current | Auxiliary Circuit NC 6 A<br>Auxiliary Circuit NO 4 A |
| Rated Frequency | Auxiliary Circuit 50 Hz<br>Auxiliary Circuit 60 Hz<br>Auxiliary Circuit DC<br>Main Circuit 50Hz<br>Main Circuit 60 Hz |
| Rated Operational Current AC-3 | 47 A |
| Degree of Protection | Housing IP20<br>Main Circuit Terminals IP10 |
| Pollution Degree | 3 |
| Suitable For | AF40<br>AF52<br>AF65 |
| Rated Operational Current AC-15 | (120 V) NC 3 A<br>(120 V) NO 0.5 A<br>(240 V) NC 3 A<br>(240 V) NO 0.5 A<br>(400 V) NC 0.75 A<br>(400 V) NO 0.5 A<br>(500 V) NC 0.75 A<br>(500 V) NO 0.5 A |

by ABB

## Specifications

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|---|---|
| Rated Operational Current DC-13 | (125 V) NC 0.55 A<br>(125 V) NO 0.55 A<br>(24 V) NC 1.25 A<br>(24 V) NO 1.25 A<br>(250 V) NC 0.27 A<br>(250 V) NO 0.27 A<br>(500 V) NC 0.15 A<br>(500 V) NO 0.15 A<br>(60 V) NC 0.55 A<br>(60 V) NO 0.55 A |
| Connecting Capacity Main Circuit | Flexible with Ferrule 1/2x 2.5 ... 10 mm²<br>Flexible with Ferrule 1x 2.5 ... 35 mm²<br>Flexible with Insulated Ferrule 1x 2.5 ... 35 mm²<br>Flexible with Insulated Ferrule 1/2x 2.5 ... 10 mm²<br>Flexible 1/2x 2.5 ... 16 mm²<br>Flexible 1x 2.5 ... 35 mm²<br>Rigid 1/2x 2.5 ... 16 mm²<br>Rigid 1x 2.5 ... 35 mm² |
| Connecting Capacity Auxiliary Circuit | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm²<br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm²<br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm²<br>Flexible 1/2x 0.75 ... 1 mm²<br>Flexible 1/2x 1 ... 2.5 mm²<br>Rigid 1/2x 0.75 ... 4 mm² |
| Wire Stripping Length | Auxiliary Circuit 9 mm<br>Main Circuit 17 mm |
| Tightening Torque | Auxiliary Circuit 1 ... 1.2 N·m<br>Main Circuit 4.0 ... 4.5 N·m |
| Mounting Position | Position 1 to 6 |
| Power Loss | at Rated Operating Conditions per Pole 2.1 ... 3.6 W |
| 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 |
| Recommended Screw Driver | Auxiliary Circuit Pozidriv 2<br>Main Circuit Pozidriv 2 |
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V AC |
| Ampere Rating UL/CSA | 47 A |
| Contact Rating UL/CSA | (NC:) B600<br>(NC:) Q600<br>(NO:) Q600<br>(NO:) D300 |
| Connecting Capacity Main Circuit UL/CSA | Flexible 1x 12-2 AWG<br>Flexible 2x 12-6 AWG<br>Stranded 1x 12-2 AWG<br>Stranded 2x 12-6 AWG |
| Ambient Air Temperature | Operation -40 ... +70 °C<br>Operation Compensated -40 ... +70 °C<br>Storage -50 ... +80 °C |
| Ambient Air Temperature Compensation | Yes |
| Connecting Capacity Auxiliary Circuit UL/CSA | Flexible 1/2x 18-12 AWG<br>Stranded 1/2x 18-12 AWG |
| Resistance to Shock acc. to IEC 60068-2-27 | 11 ms Pulse 25g |
| Maximum Operating Altitude Permissible | 2000 m |
| RoHS Status | Following EU Directive 2011/65/EU |
| Resistance to Vibrations acc. to IEC 60068-2-6 | 5g / 3 ... 150 Hz |
| Tightening Torque UL/CSA | Auxiliary Circuit 9 ... 11 in·lb<br>Main Circuit 35 ... 40 in·lb |
| Object Classification Code | F |

## Classifications

| | |
|---|---|
| ETIM 5.0 | EC000106 - Thermal overload relay |
| ETIM 6.0 | EC000106 - Thermal overload relay |
| ETIM 7 | EC000106 - Thermal overload relay |

## Classifications

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|---|---|
| eClass | 7.0 27371501 |
| ETIM 4 | EC000106 - Thermal overload relay |

## Dimensions

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|---|---|
| Product Net Width | 54.9 mm |
| Product Net Height | 101.4 mm |
| Product Net Weight | 0.372 kg |
| Product Net Depth / Length | 106.9 mm |

## Package Information

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|---|---|
| Package Level 1 Units | 1 piece |
| Package Level 1 Width | 123 mm |
| Package Level 1 Depth / Length | 82 mm |
| Package Level 1 Gross Weight | 0.456 kg |
| Package Level 1 EAN | 4013614482946 |
| Package Level 1 Height | 121 mm |
| Package Level 2 Width | 280 mm |
| Package Level 2 Units | 12 piece |
| Package Level 2 Depth / Length | 395 mm |
| Package Level 2 EAN | 4013614485343 |
| Package Level 2 Gross Weight | 5.858 kg |
| Package Level 2 Height | 210 mm |

## Ordering

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| ECN | N |
| Customs Tariff Number | 85364900 |
| ECCN | N |
| ABB MDF Code | 3DL - Relays (LV / Control + Protection) |