

Representative Image

Alternate Catalog No. TF96-51
Catalog No. 1SAZ911201R1001

Description: TF96-51 Thermal Overload Relay

UPC No 4013614482984

Home > Contactors & Starters > Overload Relays

The TF96-51 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

Category	Overload Relays

Specifications

Product Name	Thermal Overload Relay
Rated Operational Voltage	Auxiliary Circuit 600 V AC / DC Main Circuit 690/440 V AC/V DC
Rated Operational Current	51 A
Setting Range	40 ... 51 A
Rated Impulse Withstand Voltage	Auxiliary Circuit 6 kV 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 Auxiliary Circuit NO 4 A
Rated Frequency	Auxiliary Circuit 50 Hz Auxiliary Circuit 60 Hz Auxiliary Circuit DC Main Circuit 50Hz Main Circuit 60 Hz
Rated Operational Current AC-3	51 A
Degree of Protection	Housing IP20 Main Circuit Terminals IP10
Pollution Degree	3
Suitable For	AF80 AF96
Rated Operational Current AC-15	(120 V) NC 3 A (120 V) NO 0.5 A (240 V) NC 3 A (240 V) NO 0.5 A (400 V) NC 0.75 A (400 V) NO 0.5 A (500 V) NC 0.75 A (500 V) NO 0.5 A

by ABB

Specifications

Rated Operational Current DC-13	(125 V) NC 0.55 A (125 V) NO 0.55 A (24 V) NC 1.25 A (24 V) NO 1.25 A (250 V) NC 0.27 A (250 V) NO 0.27 A (500 V) NC 0.15 A (500 V) NO 0.15 A (60 V) NC 0.55 A (60 V) NO 0.55 A
Connecting Capacity Main Circuit	Flexible with Ferrule 1/2x 6 ... 35 mm² Flexible with Ferrule 1x 6 ... 50 mm² Flexible with Insulated Ferrule 1/2x 6 ... 16 mm² Flexible with Insulated Ferrule 1x 6 ... 50 mm² Flexible 1/2x 6 ... 35 mm² Flexible 1x 6 ... 50 mm² Rigid 1/2x 6 ... 35 mm² Rigid 1x 6 ... 50 mm²
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm² Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm² Flexible 1/2x 0.75 ... 1 mm² Flexible 1/2x 1 ... 2.5 mm² Rigid 1/2x 0.75 ... 4 mm²
Wire Stripping Length	Auxiliary Circuit 9 mm Main Circuit 20 mm
Tightening Torque	Auxiliary Circuit 1 ... 1.2 N·m Main Circuit 6.0 ... 9.0 N·m
Mounting Position	Position 1 to 6
Power Loss	at Rated Operating Conditions per Pole 2.6 ... 4.3 W
Standards	IEC/EN 60947-1 IEC/EN 60947-4-1 IEC/EN 60947-5-1 UL 60947-1 UL 60947-4-1
Recommended Screw Driver	Auxiliary Circuit Pozidriv 2 Main Circuit Hexagon 4
Maximum Operating Voltage UL/CSA	Main Circuit 600 V AC
Ampere Rating UL/CSA	51 A
Contact Rating UL/CSA	(NC:) B600 (NC:) Q600 (NO:) Q600 (NO:) D300
Connecting Capacity Main Circuit UL/CSA	Flexible 1x 8-1 AWG Flexible 2x 8-3 AWG Stranded 1x 8-1 AWG Stranded 2x 8-3 AWG
Ambient Air Temperature	Operation -40 ... +70 °C Operation Compensated -40 ... +70 °C Storage -50 ... +80 °C
Ambient Air Temperature Compensation	Yes
Connecting Capacity Auxiliary Circuit UL/CSA	Flexible 1/2x 18-12 AWG 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 Main Circuit 50 ... 80 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

eClass	7.0 27371501
ETIM 4	EC000106 - Thermal overload relay

Dimensions

Product Net Width	69.9 mm
Product Net Height	106.9 mm
Product Net Weight	0.52 kg
Product Net Depth / Length	106.3 mm

Package Information

Package Level 1 Units	1 piece
Package Level 1 Width	97 mm
Package Level 1 Depth / Length	97 mm
Package Level 1 Gross Weight	0.62 kg
Package Level 1 EAN	4013614482984
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	4013614485428
Package Level 2 Gross Weight	7.826 kg
Package Level 2 Height	210 mm

Ordering

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