

Representative Image

Alternate Catalog No. TF42-20
Catalog No. 1SAZ721201R1049

Description: TF42-20 Thermal Overload Relay

UPC No 4016779764971

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The TF42-20 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 V AC
Rated Operational Current	20 A
Setting Range	16 ... 20 A
Rated Impulse Withstand Voltage	Auxiliary Circuit 6 kV Main Circuit 6 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	20 A
Degree of Protection	IP20
Pollution Degree	3
Suitable For	AF09 AF12 AF16 AF26 AF30 AF38
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

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 0.75 ... 4 mm² Flexible with Insulated Ferrule 1/2x 0.75 ... 4 mm² Flexible 1/2x 0.75 ... 4 mm² Rigid 1/2x 0.75 ... 4 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 12 mm
Tightening Torque	Auxiliary Circuit 1 ... 1.5 N·m Main Circuit 1.5 ... 2.5 N·m
Mounting Position	Position 1 to 5
Power Loss	at Rated Operating Conditions per Pole 1.8 ... 2.6 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	Main Circuit Pozidriv 2
Maximum Operating Voltage UL/CSA	Main Circuit 600 V AC
Ampere Rating UL/CSA	20 A
Contact Rating UL/CSA	(NC:) B600 (NC:) Q600 (NO:) Q600 (NO:) D300
Connecting Capacity Main Circuit UL/CSA	Flexible 1/2x 18-10 AWG Stranded 1/2x 18-10 AWG
Ambient Air Temperature	Operation -25 ... +60 °C Operation Compensated -25 ... +60 °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 ... 13 in·lb Main Circuit 13 ... 22 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
eClass	7.0 27371501
ETIM 4	EC000106 - Thermal overload relay

Dimensions

Product Net Width	45 mm
Product Net Height	88.3 mm
Product Net Weight	0.135kg
Product Net Depth / Length	70.5 mm

Package Information

Package Level 1 Units	1 piece
Package Level 1 Width	48 mm
Package Level 1 Depth / Length	78 mm
Package Level 1 Gross Weight	0.15 kg
Package Level 1 EAN	4016779764971
Package Level 1 Height	92 mm
Package Level 2 Width	280 mm
Package Level 2 Units	40 piece
Package Level 2 Depth / Length	395 mm
Package Level 2 EAN	4013614440199
Package Level 2 Gross Weight	7.586 kg
Package Level 2 Height	210 mm

Ordering

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