

Representative Image

Alternate Catalog No. TF140DU-90
Catalog No. 1SAZ431201R1001

Description: TF140DU-90 Thermal Overload Relay

UPC No 4013614446818

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The TF140DU-90 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.

Descriptors

Category	Overload Relays

Specifications

Product Name	Thermal Overload Relay
Rated Operational Voltage	Auxiliary Circuit 440/500 V DC/V AC Main Circuit 690 V AC
Rated Operational Current	90 A
Setting Range	66 ... 90 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 10A
Conventional Free-air Thermal Current	Auxiliary Circuit NC 10 A Auxiliary Circuit NO 6 A
Rated Frequency	Auxiliary Circuit 50 Hz Auxiliary Circuit 60 Hz Auxiliary Circuit DC Main Circuit 60 Hz Main Circuit 50Hz Main Circuit DC
Rated Operational Current AC-3	90 A
Degree of Protection	Housing IP20 Main Circuit Terminals IP10
Pollution Degree	3
Suitable For	AF116 AF140
Rated Operational Current AC-15	(120 V) NC 3 A (120 V) NO 1.5 A (240 V) NC 3 A (240 V) NO 1.5 A (400 V) NC 1.9 A (400 V) NO 1 A (440 V) NC 1 A (440 V) NO 1 A (500 V) NC 1 A (500 V) NO 1 A

by ABB

Specifications

Rated Operational Current DC-13	(125 V) NC 0.25 A (125 V) NO 0.25 A (24 V) NC 1.25 A (24 V) NO 1.25 A (250 V) NC 0.12 A (250 V) NO 0.04 A (60 V) NC 0.25 A (60 V) NO 0.25 A
Connecting Capacity Main Circuit	Flexible with Ferrule 1/2x 16 ... 70 mm² Flexible with Insulated Ferrule 1/2x 16 ... 70 mm² Flexible 1/2x 16 ... 70 mm² Rigid 1/2x 16 ... 70 mm²
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm² Flexible 1/2x 0.75 ... 2.5 mm² Rigid 1/2x 0.75 ... 4 mm²
Wire Stripping Length	Auxiliary Circuit 9 mm Main Circuit 25 mm
Tightening Torque	Auxiliary Circuit 0.8 ... 1.2 N·m Main Circuit 8 ... 10 N·m
Mounting Position	Position 1 to 5
Power Loss	at Rated Operating Conditions per Pole 2.4 ... 4.4 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	90 A
Contact Rating UL/CSA	(NC:) B600 (NO:) C300
Connecting Capacity Main Circuit UL/CSA	Flexible 1/2x 6-2/0 AWG Stranded 1/2x 6-2/0 AWG
Ambient Air Temperature	Operation -25 ... +55 °C Operation Compensated -25 ... +55 °C Storage -40 ... +70 °C
Ambient Air Temperature Compensation	Yes
Connecting Capacity Auxiliary Circuit UL/CSA	Flexible 1/2x 18-14 AWG Stranded 1/2x 18-14 AWG
Resistance to Shock acc. to IEC 60068-2-27	11 ms Pulse 12g
Maximum Operating Altitude Permissible	2000 m
RoHS Status	Following EU Directive 2011/65/EU
Tightening Torque UL/CSA	Auxiliary Circuit 12 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	89 mm
Product Net Height	140 mm
Product Net Weight	0.82 kg
Product Net Depth / Length	126 mm

Package Information

Package Level 1 Units	1 piece
Package Level 1 Width	165 mm
Package Level 1 Depth / Length	151 mm
Package Level 1 Gross Weight	0.945 kg
Package Level 1 EAN	4013614446818
Package Level 1 Height	133 mm
Package Level 2 Width	280 mm
Package Level 2 Units	4 piece
Package Level 2 Depth / Length	395 mm
Package Level 2 EAN	4013614494352
Package Level 2 Gross Weight	8.786 kg
Package Level 2 Height	210 mm

Ordering

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