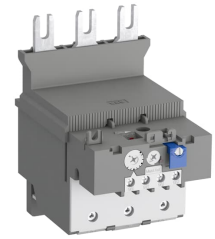


# TF140DU-90



## TF140DU-90 Thermal Overload Relay

### General Information

Extended Product Type	TF140DU-90
Product ID	1SAZ431201R1001
EAN	4013614446818
Catalog Description	TF140DU-90 Thermal Overload Relay
Long Description	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.

### Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

### Dimensions

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

### Popular Downloads

Data Sheet, Technical Information	2CDC106061D0201
Data Sheet, Technical Information (Part 2)	1SAZ400503F0001
Instructions and Manuals	2CDC106050M6802
Dimension Diagram	1SAZ400404F0001

### Technical

Setting Range	66 ... 90 A
Rated Operational Voltage	Auxiliary Circuit 440 V DC Auxiliary Circuit 500 V AC Main Circuit 690 V AC
Rated Operational Current ( $I_e$ )	90 A
Rated Operational Current AC-3 ( $I_e$ )	90 A

Rated Frequency (f)	Auxiliary Circuit 50 Hz Auxiliary Circuit 60 Hz Auxiliary Circuit DC Main Circuit 60 Hz Main Circuit 50 Hz Main Circuit DC
Rated Impulse Withstand Voltage ( $U_{imp}$ )	Auxiliary Circuit 6 kV Main Circuit 8 kV
Rated Insulation Voltage ( $U_i$ )	690 V
Number of Poles	3
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 Auxiliary Circuit NO 6 A
Rated Operational Current AC-15 ( $I_e$ )	(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
Rated Operational Current DC-13 ( $I_e$ )	(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
Degree of Protection	Housing IP20 Main Circuit Terminals IP10
Pollution Degree	3
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup> Flexible 1/2x 0.75 ... 2.5 mm <sup>2</sup> Rigid 1/2x 0.75 ... 4 mm <sup>2</sup>
Connecting Capacity Main Circuit	Flexible with Ferrule 1/2x 16 ... 70 mm <sup>2</sup> Flexible with Insulated Ferrule 1/2x 16 ... 70 mm <sup>2</sup> Flexible 1/2x 16 ... 70 mm <sup>2</sup> Rigid 1/2x 16 ... 70 mm <sup>2</sup>
Tightening Torque	Auxiliary Circuit 0.8 ... 1.2 N·m Main Circuit 8 ... 10 N·m
Wire Stripping Length	Auxiliary Circuit 9 mm Main Circuit 25 mm
Recommended Screw Driver	Auxiliary Circuit Pozidriv 2 Main Circuit Hexagon 4
Mounting Position	Position 1 to 5
Power Loss	at Rated Operating Conditions per Pole 2.4 ... 4.4 W
Suitable For	AF116 AF140
Standards	IEC/EN 60947-1 IEC/EN 60947-4-1 IEC/EN 60947-5-1 UL 60947-1 UL 60947-4-1

## Technical UL/CSA

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
Connecting Capacity Auxiliary Circuit UL/CSA	Flexible 1/2x 18-14 AWG Stranded 1/2x 18-14 AWG
Tightening Torque UL/CSA	Auxiliary Circuit 12 in-lb

## Environmental

Ambient Air Temperature	Operation -25 ... +55 °C Operation Compensated -25 ... +55 °C Storage -40 ... +70 °C
Ambient Air Temperature Compensation	Yes
Maximum Operating Altitude Permissible	2000 m
Resistance to Shock acc. to IEC 60068-2-27	11 ms Pulse 12g
RoHS Status	Following EU Directive 2011/65/EU

## Certificates and Declarations (Document Number)

ABS Certificate	1SAA941004-0101
BV Certificate	1SAA941003-0201
CB Certificate	1SAA941012-2001
CCC Certificate	1SAA941009-3802
cUL Certificate	cUL_E48139
Declaration of Conformity - CE	1SAD938505-0185
DNV GL Certificate	1SAA941004-0301
EAC Certificate	1SAA941002-2702
GOST Certificate	1SAA941001-2701
Instructions and Manuals	2CDC106050M6802
LR Certificate	1SAA941004-0501
RINA Certificate	RINA_ELE098115XG
RMRS Certificate	1SAA941002-0701
RoHS Information	1SAD938503-0185
UL Certificate	UL_E48139

## Container Information

Package Level 1 Units	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	4013614446818
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	4013614494352