

Representative Image

Alternate Catalog No. TF42-1.3B
Catalog No. 1SAZ741201R1025

Description: TF42-1.3B Thermal Overload Relay

UPC No 4013614517099

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The TF42-B thermal overload relays are economic electromechanical protection devices for the main circuit, complying with the latest railway rolling stock standards and allowing installation in passengers or driver cabins for trains frequently operating tunnels or undergrounds. They offer a reliable protection for motors in the event of overload or phase failure. The devices have trip class 10. The thermal overload relays are three pole relays with bimetal tripping elements. The motor current flows through the bimetal tripping elements and heats them directly and indirectly. In case of an overload (over current), the bimetal elements bent as a result of the heating. This leads to a release of the relay and a change of the contacts switching position (95-96 / 97-98). – Manual or automatic reset selectable – Phase loss sensitive acc. to IEC/EN 60947-4-1 – TEST and STOP function – Trip indication on the front – Temperature compensation – Suitable for three- and single-phase applications – designed in accordance to the applicable parts of IEC 60077 standard – shocks and vibration withstand conforming to IEC 61373 (category 1, class B) – usable according to European fire and smoke safety standard EN 45545-2

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	1.3 A
Setting Range	1.0 ... 1.3 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 Main Circuit 0 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	1.3 A
Degree of Protection	IP20
Pollution Degree	3

Specifications

Suitable For	AF09ZB AF09B AF12ZB AF12B AF16ZB AF16B AF26ZB AF26B AF30ZB AF30B AF38ZB AF38B
Rated Operational Current AC-15	(120 V) NC 3 A (120 V) NO 0.75 A (240 V) NC 3 A (240 V) NO 0.75 A (400 V) NC 0.75 A (400 V) NO 0.75 A (500 V) NC 0.75 A (500 V) NO 0.75 A
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 ... 1.2 N·m Main Circuit 2.5 ... 2.7 N·m
Power Loss	at Rated Operating Conditions per Pole 1.1 ... 2.0 W
Standards	CSA 22.2 No. 14 IEC 60077-1 (applicable parts) IEC 60077-2 (applicable parts) IEC/EN 60947-1 IEC/EN 60947-4-1 IEC/EN 60947-5-1 UL508
Recommended Screw Driver	Main Circuit Pozidriv 2
Maximum Operating Voltage UL/CSA	Main Circuit 600 V AC
Ampere Rating UL/CSA	1.3 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

Specifications

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 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

Dimensions

Product Net Width	45 mm
Product Net Height	88.3 mm
Product Net Weight	0.13kg
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	0.145 kg
Package Level 1 EAN	4013614517099
Package Level 1 Height	92 mm
Package Level 2 Width	280 mm
Package Level 2 Units	48 piece
Package Level 2 Depth / Length	395 mm
Package Level 2 EAN	4013614517327
Package Level 2 Gross Weight	7.346 kg
Package Level 2 Height	210 mm

Ordering

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