

## General Information

<b>Extended Product Type:</b>	TF65-28
<b>Product ID:</b>	1SAZ811201R1001
<b>EAN:</b>	4013614482915
<b>Catalog Description:</b>	TF65-28 Thermal Overload Relay
<b>Long Description:</b>	The TF65-28 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.

## Additional Information

<b>ABS Certificate:</b>	1SAA941003-0101
<b>ATEX Certificate:</b>	1SAA941005-3901
<b>Ambient Air Temperature:</b>	Operation -25 ... +60 °C Operation Compensated -25 ... +60 °C Storage -50 ... +80 °C
<b>Ambient Air Temperature Compensation:</b>	Yes
<b>Ampere Rating UL/CSA:</b>	28 A
<b>BV Certificate:</b>	1SAA941001-0202
<b>CB Certificate:</b>	1SAA941015-2001
<b>CCC Certificate:</b>	1SAA941012-3801
<b>Co-ordination with Short-Circuit Protective Devices - Type 1:</b>	gG Type Fuses 80 A
<b>Co-ordination with Short-Circuit Protective Devices - Type 2:</b>	gG Type Fuses 80 A
<b>Connecting Capacity Auxiliary Circuit UL/CSA:</b>	Flexible 1/2x 18-12 AWG Stranded 1/2x 18-12 AWG
<b>Connecting Capacity Main Circuit UL/CSA:</b>	Flexible 1x 12-2 AWG Flexible 2x 12-6 AWG Stranded 1x 12-2 AWG Stranded 2x 12-6 AWG
<b>Connecting Capacity Auxiliary Circuit:</b>	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup> Flexible 1/2x 0.75 ... 1 mm <sup>2</sup> Flexible 1/2x 1 ... 2.5 mm <sup>2</sup> Rigid 1/2x 0.75 ... 4 mm <sup>2</sup>
<b>Connecting Capacity Main Circuit:</b>	Flexible with Ferrule 1/2x 2.5 ... 10 mm <sup>2</sup> Flexible with Ferrule 1x 2.5 ... 35 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 2.5 ... 35 mm <sup>2</sup> Flexible with Insulated Ferrule 1/2x 2.5 ... 10 mm <sup>2</sup> Flexible 1/2x 2.5 ... 16 mm <sup>2</sup> Flexible 1x 2.5 ... 35 mm <sup>2</sup> Rigid 1/2x 2.5 ... 16 mm <sup>2</sup> Rigid 1x 2.5 ... 35 mm <sup>2</sup>
<b>Contact Rating UL/CSA:</b>	(NC:) B600 (NC:) Q600 (NO:) Q600 (NO:) D300
<b>Conventional Free-air Thermal Current (I<sub>th</sub>):</b>	Auxiliary Circuit NC 6 A Auxiliary Circuit NO 4 A

Country of Origin:	China (CN)
Customs Tariff Number:	85364900
Data Sheet, Technical Information:	2CDC106069D0201
Data Sheet, Technical Information (Part 2):	1SAZ800502F0003
Declaration of Conformity - CE:	1SAD938506-0187
Degree of Protection:	Housing IP20 Main Circuit Terminals IP10
Dimension Diagram:	1SAZ800401F0001
E-nummer:	3210263
EAC Certificate:	1SAA941002-2701
EAN:	4013614482915
EPLAN Catalog Tree:	Electrical engineering / Relays, contactors / General
EPLAN Function Definition:	NO contact / NO contact, 2 connection points / NO auxiliary contact 97_98 NC contact / NC contact, 2 connection points / NC auxiliary contact 95_96 Overload / Thermal release, 6 connection points / Thermal release (bimetal relay) 1_2_3_4_5_6
ETIM 4:	EC000106 - Thermal overload relay
ETIM 5:	EC000106 - Thermal overload relay
ETIM 6:	EC000106 - Thermal overload relay
GOST Certificate:	1SAA941001-2701
Instructions and Manuals:	2CDC106051M6803
Instructions and Manuals (Part 2):	2CDC106085M6801
Invoice Description:	TF65-28 Thermal Overload Relay Trip Class 10, 22-28A
LR Certificate:	1SAA941003-0501
Maximum Operating Altitude Permissible:	2000 m
Maximum Operating Voltage UL/CSA:	Main Circuit 600 V AC
Minimum Order Quantity:	1 piece
Mounting Position:	Position 1 to 6
Mounting Type:	Mounted on Contactor
Number of Auxiliary Contacts NC:	1
Number of Auxiliary Contacts NO:	1
Number of Poles:	3
Number of Protected Poles:	3
Object Classification Code:	F
Package Level 1 EAN:	4013614482915
Package Level 1 Gross Weight:	0.456 kg
Package Level 1 Height:	121 mm
Package Level 1 Length:	82 mm
Package Level 1 Units:	1 piece
Package Level 1 Width:	123 mm
Package Level 2 EAN:	4013614485312
Package Level 2 Gross Weight:	5.858 kg
Package Level 2 Height:	210 mm
Package Level 2 Length:	395 mm
Package Level 2 Units:	12 piece
Package Level 2 Width:	280 mm
Phase Loss Sensitive:	Yes
Pollution Degree:	3
Power Loss:	at Rated Operating Conditions per Pole 1.9 ... 3.1 W
Product Frame Size:	3

<b>Product Main Type:</b>	TF65
<b>Product Name:</b>	Thermal Overload Relay
<b>Product Net Depth:</b>	106.9 mm
<b>Product Net Height:</b>	101.4 mm
<b>Product Net Weight:</b>	0.372 kg
<b>Product Net Width:</b>	54.9 mm
<b>RINA Certificate:</b>	RINA_ELE098115XG
<b>RMRS Certificate:</b>	1SAA941002-0701
<b>Rated Current (<math>I_n</math>):</b>	28 A
<b>Rated Frequency (f):</b>	Auxiliary Circuit 50 Hz Auxiliary Circuit 60 Hz Auxiliary Circuit DC Main Circuit 50 Hz Main Circuit 60 Hz
<b>Rated Impulse Withstand Voltage (<math>U_{imp}</math>):</b>	Auxiliary Circuit 6 kV Main Circuit 8 kV
<b>Rated Insulation Voltage (<math>U_i</math>):</b>	690 V
<b>Rated Operational Current (<math>I_e</math>):</b>	28 A
<b>Rated Operational Current AC-15 (<math>I_e</math>):</b>	(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
<b>Rated Operational Current AC-3 (<math>I_e</math>):</b>	28 A
<b>Rated Operational Current DC-13 (<math>I_e</math>):</b>	(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
<b>Rated Operational Voltage:</b>	Auxiliary Circuit 600 V AC/DC Main Circuit 690 V AC Main Circuit 440 V DC
<b>Recommended Screw Driver:</b>	Auxiliary Circuit Pozidriv 2 Main Circuit Pozidriv 2
<b>Resistance to Shock acc. to IEC 60068-2-27:</b>	11 ms Pulse 25g
<b>Resistance to Vibrations acc. to IEC 60068-2-6:</b>	5g / 3 ... 150 Hz
<b>RoHS Date:</b>	1310
<b>RoHS Information:</b>	1SAA941008-4401
<b>RoHS Status:</b>	Following EU Directive 2002/95/EC August 18, 2005 and amendment
<b>Selling Unit of Measure:</b>	piece
<b>Setting Range:</b>	22 ... 28 A
<b>Short-Circuit Protective Devices:</b>	Auxiliary Circuit NC - gG Type Fuses 6 A Auxiliary Circuit NO - gG Type Fuses 4 A
<b>Standards:</b>	IEC/EN 60947-1 IEC/EN 60947-4-1 IEC/EN 60947-5-1

UL 60947-1  
UL 60947-4-1

<b>Suitable For:</b>	AF40 AF52 AF65
<b>Suitable for Product Class:</b>	Block Contactors
<b>Terminal Type:</b>	Screw Terminals
<b>Tightening Torque:</b>	Auxiliary Circuit 1 ... 1.2 N·m Main Circuit 4.0 ... 4.5 N·m
<b>Tightening Torque UL/CSA:</b>	Auxiliary Circuit 9 ... 11 in·lb Main Circuit 35 ... 40 in·lb
<b>Trip Class:</b>	10
<b>UL Certificate:</b>	UL_E48139
<b>UNSPSC:</b>	39121521
<b>Wire Stripping Length:</b>	Auxiliary Circuit 9 mm Main Circuit 17 mm
<b>cUL Certificate:</b>	cUL_E48139
<b>eClass:</b>	7.0 27371501
<b>DNV GL Certificate:</b>	1SAA941004-0301

