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 PRODUCT-DETAILS

## TF65-33

### TF65-33 Thermal Overload Relay




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#### General Information

Extended Product Type	TF65-33
Product ID	1SAZ811201R1002
EAN	4013614482922
Catalog Description	TF65-33 Thermal Overload Relay

#### Long Description

The TF65-33 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.

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#### Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

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#### Dimensions

Product Net Width	54.9 mm
Product Net Height	101.4 mm
Product Net Depth / Length	106.9 mm
Product Net Weight	0.372 kg

## Popular Downloads

Data Sheet, Technical Information	2CDC106069D0201
Data Sheet, Technical Information (Part 2)	1SAZ900502F0006
Data Sheet, Technical Information (Part 3)	1SAZ800503 1SAZ800506
Instructions and Manuals	2CDC106051M6803
Instructions and Manuals (Part 2)	2CDC106085M6801
Dimension Diagram	1SAZ800401F0001

## Technical

Setting Range	25 ... 33 A
Rated Operational Voltage	Auxiliary Circuit 600 V AC/DC Main Circuit 690 V AC Main Circuit 440 V DC
Rated Operational Current ( $I_e$ )	33 A
Rated Operational Current AC-3 ( $I_e$ )	33 A
Rated Frequency (f)	Auxiliary Circuit 50 Hz Auxiliary Circuit 60 Hz Auxiliary Circuit DC Main Circuit 50 Hz Main Circuit 60 Hz
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 6 A Auxiliary Circuit NO 4 A
Rated Operational Current AC-15 ( $I_e$ )	(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
Rated Operational Current DC-13 ( $I_e$ )	(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
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 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>
Connecting Capacity Main Circuit	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>
Tightening Torque	Auxiliary Circuit 1 ... 1.2 N·m Main Circuit 4.0 ... 4.5 N·m
Wire Stripping Length	Auxiliary Circuit 9 mm Main Circuit 17 mm
Recommended Screw Driver	Auxiliary Circuit Pozidriv 2 Main Circuit Pozidriv 2
Mounting Position	Position 1 to 6
Power Loss	at Rated Operating Conditions per Pole 2.2 ... 3.8 W
Suitable For	AF40 AF52 AF65
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	33 A
Contact Rating UL/CSA	(NC:) B600 (NC:) Q600 (NO:) Q600 (NO:) D300
Connecting Capacity Main Circuit UL/CSA	Flexible 1x 12-2 AWG Flexible 2x 12-6 AWG Stranded 1x 12-2 AWG Stranded 2x 12-6 AWG
Connecting Capacity Auxiliary Circuit UL/CSA	Flexible 1/2x 18-12 AWG Stranded 1/2x 18-12 AWG
Tightening Torque UL/CSA	Auxiliary Circuit 9 ... 11 in·lb Main Circuit 35 ... 40 in·lb

## Environmental

Ambient Air Temperature	Operation -40 ... +70 °C Operation Compensated -40 ... +70 °C Storage -50 ... +80 °C
Ambient Air Temperature Compensation	Yes
Maximum Operating Altitude Permissible	2000 m
Resistance to Shock acc. to IEC 60068-2-27	11 ms Pulse 25g
Resistance to Vibrations acc. to IEC 60068-2-6	5g / 3 ... 150 Hz
RoHS Status	Following EU Directive 2011/65/EU

## Certificates and Declarations (Document Number)

ABS Certificate	1SAA941003-0101
ATEX Certificate	1SAA941005-3901
BV Certificate	1SAA941001-0203
CB Certificate	1SAA941015-2001
CCC Certificate	1SAA941012-3801
cUL Certificate	cUL_E48139
Declaration of Conformity - CE	1SAD938510-0187
DNV GL Certificate	1SAA941004-0301
EAC Certificate	1SAA941002-2701
GOST Certificate	1SAA941001-2701
Instructions and Manuals	2CDC106051M6803
Instructions and Manuals (Part 2)	2CDC106085M6801
LR Certificate	1SAA941003-0501
RINA Certificate	RINA_ELE098115XG
RMRS Certificate	1SAA941002-0701
RoHS Information	1SAD938507-0187
UL Certificate	UL_E48139

## Container Information

Package Level 1 Units	1 piece
Package Level 1 Width	123 mm
Package Level 1 Height	121 mm
Package Level 1 Depth / Length	82 mm
Package Level 1 Gross Weight	0.456 kg
Package Level 1 EAN	4013614482922
Package Level 2 Units	12 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	5.858 kg
Package Level 2 EAN	4013614485329

## Classifications

Object Classification Code	F
ETIM 4	EC000106 - Thermal overload relay
ETIM 5	EC000106 - Thermal overload relay
ETIM 6	EC000106 - Thermal overload relay
ETIM 7	EC000106 - Thermal overload relay
eClass	7.0 27371501
UNSPSC	39121521
E-Number (Sweden)	3210264

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## Categories

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Low Voltage Products and Systems → Control Products → Contactors → Thermal Overload Relays





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