

PRODUCT-DETAILS

# TF65-40

## TF65-40 Thermal Overload Relay



### General Information

Extended Product Type	TF65-40
Product ID	1SAZ811201R1003
EAN	4013614482939
Catalog Description	TF65-40 Thermal Overload Relay
Long Description	The TF65-40 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.

### Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

### Popular Downloads

Data Sheet, Technical Information	2CDC106069D0201
Data Sheet, Technical Information (Part 2)	1SAC200122W0001
Data Sheet, Technical Information (Part 3)	1SAZ800503 1SAZ800506

Instructions and Manuals	2CDC106051M6803
Instructions and Manuals (Part 2)	2CDC106085M6801
Time-Current Characteristic Curve	1SAZ800502F0003
Dimension Diagram	1SAZ800401F0001

## 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

## Technical

Setting Range	30 ... 40 A
Rated Operational Voltage	Auxiliary Circuit 600 V AC/DC Main Circuit 690 V AC Main Circuit 440 V DC
Rated Operational Current ( $I_e$ )	40 A
Rated Operational Current AC-3 ( $I_e$ )	40 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	1 ... 6
Power Loss	at Rated Operating Conditions per Pole 2.1 ... 3.7 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	40 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

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**Certificates and Declarations (Document Number)**


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ABS Certificate	1SAA941003-0101
ATEX Certificate	1SAA941005-3901
BV Certificate	1SAA941001-0203
CB Certificate	1SAA941015-2001
CQC Certificate	CQC2014010309689432
cUL Certificate	cUL_E48139
Declaration of Conformity - CCC	2020980309000291
Declaration of Conformity - CE	1SAD938512-0187
Declaration of Conformity - UKCA	1SAD938501-1187
DNV GL Certificate	1SAA941004-0301
EAC Certificate	1SAA941002-2701
Environmental Information	1SAC200058H0009
IECEX Certificate	1SAA941001-4001
Instructions and Manuals	2CDC106051M6803
Instructions and Manuals (Part 2)	2CDC106085M6801
LR Certificate	1SAA941003-0501
RINA Certificate	RINA_ELE098115XG
RMRS Certificate	1SAA941002-0701
RoHS Information	1SAD938512-0187
Time-Current Characteristic Curve	1SAZ800502F0003
UL Certificate	cUL_E48139

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**Container Information**


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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	4013614482939
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	4013614485336

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**Classifications**


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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	V11.0 : 27371501
UNSPSC	39121520
IDEA Granular Category Code (IGCC)	5364 >> Overload relay
E-Number (Finland)	3706585
E-Number (Sweden)	3210265

## Accessories

Identifier	Description	Type	Quantity	Unit Of Measure
1SAZ801901R1001	DB65 Single Mounting Kit	DB65	1	piece
1SAX101911R1001	DRS-F-01 Remote Reset Coil	DRS-F-01	1	piece
1SAX101911R1002	DRS-F-02 Remote Reset Coil	DRS-F-02	1	piece
1SAX101911R1003	DRS-F-03 Remote Reset Coil	DRS-F-03	1	piece
1SAX101911R1004	DRS-F-04 Remote Reset Coil	DRS-F-04	1	piece
1SAZ701904R1001	DRS-F-TF-01 Remote Coil	DRS-F-TF-01	1	piece
1SAZ701904R1002	DRS-F-TF-02 Remote Coil	DRS-F-TF-02	1	piece
1SAZ701904R1003	DRS-F-TF-03 Remote Coil	DRS-F-TF-03	1	piece
1SAZ701904R1004	DRS-F-TF-04 Remote Coil	DRS-F-TF-04	1	piece
1SAZ701903R1001	WRH-F Holder	WRH-F	1	piece
1SAZ701903R1011	WRB-400 Bowden Wire	WRB-400	1	piece
1SAZ701903R1012	WRB-600 Bowden Wire	WRB-600	1	piece
1SAZ701903R1013	WRB-1000 Bowden Wire	WRB-1000	1	piece
1SAZ701903R1030	WRBG Gasket	WRBG	1	piece
1SFA616162R1014	KPR3-101L Reset push button	KPR-101L	1	piece

## Categories

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

