TA25DU-M thermal overload relays
With screw terminals - 0.10 … 32.0 A



TA25DU-19M

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Description

The TA25DU-M thermal overload relays are economic electromechanical protection devices for the main circuit. They offer reliable protection for motors in the event of overload or phase failure. The devices have trip class 10A.

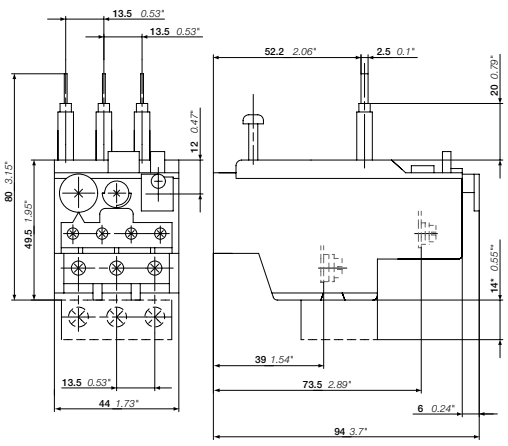
The thermal overload relays are three pole relays with bimetal tripping elements. The motor current flows through the bimetal tripping elements and heats them directly and indirectly. In case of an overload (over current), the bimetal elements bent as a result of the heating. This leads to a release 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
– Two electrically isolated auxiliary contacts – 1 N.O. + 1 N.C.
– TEST and STOP function – Trip indication on the front
– Temperature compensation
– Suitable for three- and single-phase applications

Ordering details

Setting range A	Short-circuit protective device	Trip class	Type	Order code		Weight (1 pce) kg
0.10 ... 0.16	0.50 A, Fuse type F	10A	TA25DU-0.16M	1SAZ211201R2005		0.150
0.16 ... 0.25	0.63 A, Fuse type F	10A	TA25DU-0.25M	1SAZ211201R2009		0.150
0.25 ... 0.40	1.25 A, Fuse type F	10A	TA25DU-0.4M	1SAZ211201R2013		0.150
0.40 ... 0.63	2 A, Fuse type gG / -	10A	TA25DU-0.63M	1SAZ211201R2017		0.150
0.63 ... 1.00	4 A, Fuse type gG / 2 A aM	10A	TA25DU-1.0M	1SAZ211201R2021		0.150
1.00 ... 1.40	6 A, Fuse type gG / 2 A aM	10A	TA25DU-1.4M	1SAZ211201R2023		0.150
1.30 ... 1.80	6 A, Fuse type gG / 4 A aM	10A	TA25DU-1.8M	1SAZ211201R2025		0.150
1.70 ... 2.40	6 A, Fuse type gG / 4 A aM	10A	TA25DU-2.4M	1SAZ211201R2028		0.150
2.20 ... 3.10	10 A, Fuse type gG / 6 A aM	10A	TA25DU-3.1M	1SAZ211201R2031		0.150
2.80 ... 4.00	10 A, Fuse type gG / 6 A aM	10A	TA25DU-4.0M	1SAZ211201R2033		0.150
3.50 ... 5.00	16 A, Fuse type gG / 10 A aM	10A	TA25DU-5.0M	1SAZ211201R2035		0.150
4.50 ... 6.50	20 A, Fuse type gG / 16 A aM	10A	TA25DU-6.5M	1SAZ211201R2038		0.150
6.00 ... 8.50	20 A, Fuse type gG / 20 A aM	10A	TA25DU-8.5M	1SAZ211201R2040		0.150
7.50 ... 11.00	35 A, Fuse type gG / 25 A aM	10A	TA25DU-11M	1SAZ211201R2043		0.150
10.00 ... 14.00	35 A, Fuse type gG / 25 A aM	10A	TA25DU-14M	1SAZ211201R2045		0.150
13.00 ... 19.00	50 A, Fuse type gG / 35 A aM	10A	TA25DU-19M	1SAZ211201R2047		0.170
18.00 ... 25.00	63 A, Fuse type gG / 50 A aM	10A	TA25DU-25M	1SAZ211201R2051		0.170
24.00 ... 32.00	80 A, Fuse type gG / 63 A aM	10A	TA25DU-32M	1SAZ211201R2053		0.200

Main dimensions mm, *inches*



TA25DU-M + DX25

2CDC232023F0011

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TA25DU-M thermal overload relays
Technical data

Main circuit – Utilization characteristics according to IEC/EN

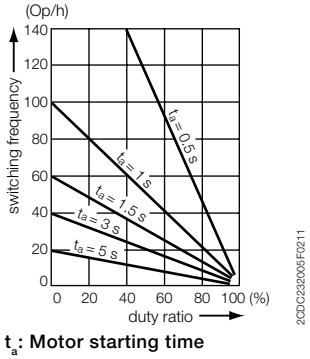
Type	TA25DU-M
Standards	IEC/EN 60947–4–1, IEC/EN 60947-5-1, IEC/EN 60947-1
Rated operational voltage U_e	690 V AC
Rated frequency	DC, 50/60 Hz
Frequency range	0 ... 400 Hz
Trip class	10A
Number of poles	3
Duty time	100 %
Operating frequency without early tripping	Up to 15 operations/h, see "Technical diagram – Intermittent periodic duty"
Rated impulse withstand voltage U_{imp}	6 kV
Rated insulation voltage U_i	690 V AC

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Auxiliary circuit according to IEC/EN

Type		TA25DU-M
Rated operational voltage U_e		500 V AC, 440 V DC
Conventional free air thermal current I_{th}	**N.C., 95-96**	10 A
	N.O., 97-98	6 A
Rated frequency		DC, 50/60 Hz
Number of poles		1 N.O. + 1 N.C.
I_e / Rated operational current AC-15 acc. to IEC/EN 60947-5-1 for utilization category		
110-120 V	**N.C., 95-96**	3.00 A
	N.O., 97-98	1.50 A
220-230-240 V	**N.C., 95-96**	3.00 A
	N.O., 97-98	1.50 A
440 V	**N.C., 95-96**	1.00 A
	N.O., 97-98	1.00 A
480-500 V	**N.C., 95-96**	1.00 A
	N.O., 97-98	1.00 A
I_e / Rated operational current DC-13 acc. to IEC/EN 60947-5-1 for utilization category		
24 V	**N.C., 95-96**	1.25 A
	N.O., 97-98	1.25 A
60 V	**N.C., 95-96**	0.25 A
	N.O., 97-98	0.25 A
110-120-125 V	**N.C., 95-96**	0.25 A
	N.O., 97-98	0.25 A
250 V	**N.C., 95-96**	0.12 A
	N.O., 97-98	0.04 A
Minimum switching capacity		17 V / 3 mA
Short-circuit protective device	**N.C., 95-96**	10 A, Fuse type gG
	N.O., 97-98	6 A, Fuse type gG
Rated impulse withstand voltage U_{imp}		6 kV
Rated insulation voltage U_i		690 V

Technical diagram – Intermittent periodic duty



t_a: Motor starting time

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TA25DU-M thermal overload relays
Technical data

General technical data

Type		TA25DU-M
Pollution degree		3
Phase loss sensitive		Yes
Ambient air temperature		
Operation	Open - compensated	-25 ... +55 °C
	Open	-25 ... +55 °C
Storage		-40 ... +70 °C
Ambient air temperature compensation		Acc. to IEC/EN60947-4-1
Maximum operating altitude permissible		2000 m
Resistance to shock acc. to IEC 60068-2-27		12g / 15 ms
Mounting position		Position 1-6
Mounting		Mount on the contactor and tighten the screws of the main circuit terminals or with single mounting kit on DIN rail (35 mm)
Degree of protection	Housing	IP20
	Main circuit terminals	IP10

Electrical connection

Main circuit

Type			TA25DU-M (0.16-11 A)	TA25DU-M (14-25 A)	TA25DU-M (32 A)
Connecting capacity					
	Rigid	**1 x**	0.75 ... 4 mm²	1.5 ... 6 mm²	1.5 ... 10 mm²
		2 x	0.75 ... 4 mm²	1.5 ... 6 mm²	-
	Flexible with insulated ferrule	**1 x or 2 x**[1)]	0.75 ... 4 mm²	1.5 ... 4 mm²	1.5 ... 6 mm²
Stripping length			12 mm	12 mm	15 mm
Tightening torques			1.4 - 2.0 Nm	1.4 - 2.0 Nm	2.5 - 3.2 Nm
Connection screw			M4 (Pozidriv 2)	M4 (Pozidriv 2)	M5 (Pozidriv 2)

[1)] Combination of different wires not possible

Auxiliary circuit

Type			TA25DU-M
Connecting capacity			
	Rigid	**1 x or 2 x**	0.75 ... 4 mm²
	Flexible	**1 x or 2 x**	0.75 ... 2.5 mm²
Stripping length			9 mm
Tightening torques			0.8 ... 1.3 Nm
Connection screw			M3.5 (Pozidriv 2)

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TA25DU-M thermal overload relays
Accessories


SST01494

DX25


2CDC231017F0006

DB25/25A


SST20591

DR25-A-220/380



1SFC151402F0001

KPR-101L

Description

The single mounting kits offer the possibility to mount the overload relays separately from the contactor. The DS25-A allows electrically remote tripping of TA25DU-M. DR25-A coil for remote reset of TA25DU-M.

Ordering details

For thermal overload relays	Description	Type	Order code		Weight (1 pce) kg
Terminal block and mounting kits					
TA25DU-0.16M; ... 25M / DB25/25 A	Terminal block 10 mm²	DX25	1SAZ201307R0002		0.030
TA25DU-0.16M ... 25M	Single mounting kit	DB25/25A	1SAZ201108R0001		0.055
TA25DU-32M	Single mounting kit	DB25/32A	1SAZ201108R0002		0.080
Remote reset coil					
TA25DU-M	24 V, 50/60 Hz	DR25-A-24	1SAZ201504R0001		0.050
TA25DU-M	48 V, 50/60 Hz	DR25-A-48	1SAZ201504R0002		0.050
TA25DU-M	110 V, 50/60 Hz	DR25-A-110	1SAZ201504R0003		0.050
TA25DU-M	220/380 V, 50/60 Hz	DR25-A-220/380	1SAZ201504R0005		0.050
TA25DU-M	500 V, 50/60 Hz	DR25-A-500	1SAZ201504R0006		0.050

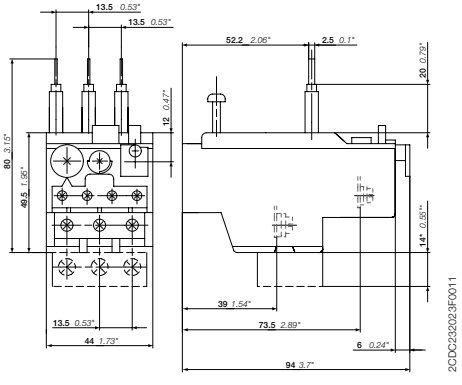
The remote reset coil is to be connected to auxiliary contact 97-98 of TA25DU-M.
The coil is not suitable for Continuous operation. Impulse duration: maximum 0.2 seconds.

Accessories for reset function

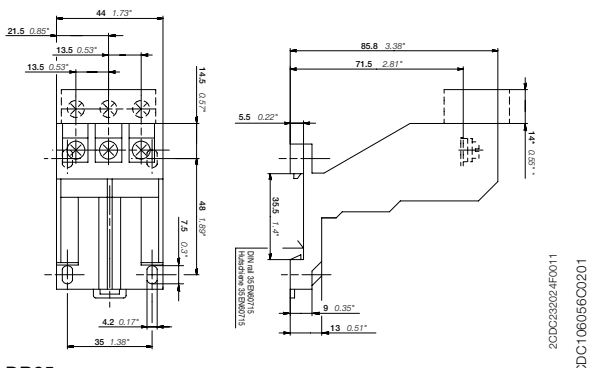
TA25DU-M	Reset push button*	KPR-101L	1SFA616162R1014		0.027

*Note: for more information see catalogue 1SFC151004C0201

Main dimensions mm, *inches*



TA25DU-M + DX25



DB25