

Technical data IEC/EN

Data at $T_A = 40\text{ °C}$ and at rated values, if nothing else indicated

Main circuit

		2T1-4T2-6T3
Rated operational voltage U_e		690 V a.c. - V d.c.
Setting range - thermal overload protection		see table on page 1
Rated operational current AC-3 I_e		see upper value of setting range, table on page 3
Trip class		10
Rated frequency		50/60 Hz
Number of poles		3
Resistance per pole		see table on page 3
Power loss per pole		see table on page 3
Short-circuit protection device		see table on page 3

		2T1-4T2-6T3
Rated impulse withstand voltage U_{imp}		6 kV
Rated insulation voltage U_i		690 V
Pollution degree		3

		TF42 ≤ 20 A	TF42 > 20 A	
Connecting capacity	solid	1/2 x 0.75 ... 4 mm ²	1/2 x 1.5 ... 2.5 mm ² / 1/2 x 2.5 ... 10 mm ²	
		stranded	1/2 x 0.75 ... 4 mm ²	1/2 x 1.5 ... 2.5 mm ² / 1/2 x 2.5 ... 10 mm ²
	flexible with ferrule	flexible with ferrule	1/2 x 0.75 ... 4 mm ²	1/2 x 1.5 ... 2.5 mm ² / 1/2 x 2.5 ... 10 mm ²
		flexible with ferrule insulated	1/2 x 0.75 ... 4 mm ²	1/2 x 1.5 ... 6 mm ²
		flexible without ferrule	1/2 x 0.75 ... 4 mm ²	1/2 x 2.5 ... 4 mm ² / 1/2 x 4 ... 6 mm ²
Stripping length		12 mm		
Tightening torque		1.5 ... 2.5 Nm	2.5 ... 2.7 Nm	
Connection screw		M4 (Pozidrive 2)		

Auxiliary circuit

		95-96, 97-98
Rated operational voltage U_g		600 V
Conventional free air thermal current I_{th}	NC, 95-96	6 A
	NO, 97-98	4 A
Rated frequency		d.c., 50/60 Hz
Number of poles		1NC + 1NO
Rated operational current I_e		
acc. to IEC/EN 60947-5-1 for utilization category		
at AC15 at 110-120 V	NC, 95-96	3.00 A
	NO, 97-98	0.75 A
at AC15 at 220-230-240 V	NC, 95-96	3.00 A
	NO, 97-98	0.75 A
at AC15 at 440 V	NC, 95-96	0.75 A
	NO, 97-98	0.75 A
at AC15 at 480-500 V	NC, 95-96	0.75 A
	NO, 97-98	0.75 A
at DC13 at 24 V	NC, 95-96	1.25 A
	NO, 97-98	1.25 A
at DC13 at 110-120-125 V	NC, 95-96	0.55 A
	NO, 97-98	0.55 A
at DC13 at 250 V	NC, 95-96	0.27 A
	NO, 97-98	0.27 A
at DC13 at 500 V	NC, 95-96	0.15 A
	NO, 97-98	0.15 A
Minimum switching capacity		17 V / 3 mA
Short-circuit protection device	NC, 95-96	6 A, Type gG
	NO, 97-98	4 A, Type gG
Isolation data		95-96, 97-98
Rated impulse withstand voltage U_{imp}		6 kV
Rated insulation voltage U_i		690 V
Pollution degree		3
Electrical connection		95-96, 97-98
Connecting capacity	solid	1/2 x 0.75 ... 4 mm ²
	stranded	1/2 x 0.75 ... 4 mm ²
	flexible with ferrule	1/2 x 0.75 ... 2.5 mm ²
	flexible with ferrule insulated	1 x 0.75 ... 2.5 mm ²
		2 x 0.75 ... 1.5 mm ²
flexible without ferrule	1/2 x 0.75 ... 1 mm ² / 1/2 x 1 ... 2.5 mm ²	
Stripping length		9 mm
Tightening torque		1 ... 1.5 Nm
Connection screw		M3 (Pozidrive 2)

General data

Duty time		100 %
Operating frequency without early tripping		up to 15 operations/h or 60 operations/h with 40 % duty ratio, if the motor breaking current $6 \times I_n$ and the motor starting time does not exceed 1 s
Dimensions (W x H x D)		see Catalog Page.
Weight		see ordering data
Mounting		mount on the contactor and tighten the screws of the main circuit terminals or with single mounting kit on DIN rail (35 mm)
Mounting position		position 1-5
Minimum distance to other units same type	horizontal	none
	vertical	not applicable
Minimum distance to electrical conductive board	horizontal	none
	vertical	on request
Degree of protection		IP20
Altitude		up to 2000 m

Electromagnetic compatibility

Electromagnetic compatibility		not applicable
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Environmental data

Ambient air temperature		
Operation	open - compensated without derating	-25 ... +60 °C (> 38 A: -25 ... +50 °C)
	open	-25 ... +60 °C (> 38 A: -25 ... +50 °C)
Storage		-50 ... +80 °C
Temperature compensation		continuous
Vibration (sinusoidal) acc. to IEC/EN 60068-2-6 (Fc)		5g / 3 ... 150 Hz
Shock (half-sine) acc. to IEC/EN 60068-2-27 (Ea)		25g / 11 ms

Standards / directives

Product standard		IEC/EN 60947-4-1
		IEC/EN 60497-5-1
		IEC/EN 60947-1
		UL 508, CSA22.2 No. 14
Low Voltage Directive		2006/95/EC
EMC Directive		2004/108/EC
RoHS Directive		2002/95/EC

Technical data UL/CSA

Full load amps and short-circuit protection device

Type	Full load amps (FLA)	Short-circuit protection device			
		480 / 600 V a.c.		480 / 600 V a.c.	
		SCCR	Fuse type	SCCR	Fuse type
TF42-0.13	0.13 A	18 kA	1 A, K5	100 kA	30 A, Class J
TF42-0.17	0.17 A	18 kA	1 A, K5	100 kA	30 A, Class J
TF42-0.23	0.23 A	18 kA	1 A, K5	100 kA	30 A, Class J
TF42-0.31	0.31 A	18 kA	3 A, K5	100 kA	30 A, Class J
TF42-0.41	0.41 A	18 kA	3 A, K5	100 kA	30 A, Class J
TF42-0.55	0.55 A	18 kA	3 A, K5	100 kA	30 A, Class J
TF42-0.74	0.74 A	18 kA	3 A, K5	100 kA	30 A, Class J
TF42-1.0	1.00 A	18 kA	6 A, K5	100 kA	30 A, Class J
TF42-1.3	1.30 A	18 kA	6 A, K5	100 kA	30 A, Class J
TF42-1.7	1.70 A	18 kA	6 A, K5	100 kA	30 A, Class J
TF42-2.3	2.30 A	18 kA	10 A, K5	100 kA	30 A, Class J
TF42-3.1	3.10 A	18 kA	10 A, K5	100 kA	30 A, Class J
TF42-4.2	4.20 A	18 kA	15 A, K5	100 kA	30 A, Class J
TF42-5.7	5.70 A	18 kA	20 A, K5	100 kA	30 A, Class J
TF42-7.6	7.60 A	18 kA	25 A, K5	100 kA	30 A, Class J
TF42-10	10.0 A	18 kA	35 A, K5	100 kA	45 A, Class J
TF42-13	13.0 A	18 kA	40 A, K5	100 kA	45 A, Class J
TF42-16	16.0 A	18 kA	60 A, K5	100 kA	45 A, Class J
TF42-20	20.0 A	18 kA	80 A, K5	100 kA	60 A, Class J
TF42-24	24.0 A	18 kA	80 A, K5	100 kA	60 A, Class J
TF42-29	29.0 A	18 kA	100 A, K5	100 kA	100 A, Class J
TF42-35	35.0 A	18 kA	150 A, K5	100 kA	175 A, Class J
TF42-38	38.0 A	18 kA	150 A, K5	100 kA	175 A, Class J

Main circuit

Maximum operational voltage	600 V a.c.
Trip rating	125 % of FLA
Full load amps (FLA)	see table above
Short-circuit rating RMS symmetrical	see table above
Short-circuit protection device	see table above

Electrical connection	TF42 ≤ 20 A		TF42 > 20 A
	Connecting capacity	stranded	1/2 x AWG 18 ... 10
flexible without ferrule		1/2 x AWG 18 ... 10	1/2 x AWG 14 ... 6
Stripping length	12 mm		
Tightening torque	13 ... 22 lb-in		22 lb-in

Auxiliary circuit

Conventional thermal current	NC, 95-96	5 A
	NO, 97-98	2.5 A
Making and breaking capacity	NC, 95-96	B600, Q300
	NO, 97-98	D300, Q300

Electrical connection		
Connecting capacity	stranded	1/2 x AWG 18 ... 12
	flexible without ferrule	1/2 x AWG 18 ... 12
Stripping length	9 mm	
Tightening torque	9 ... 13 lb-in	