



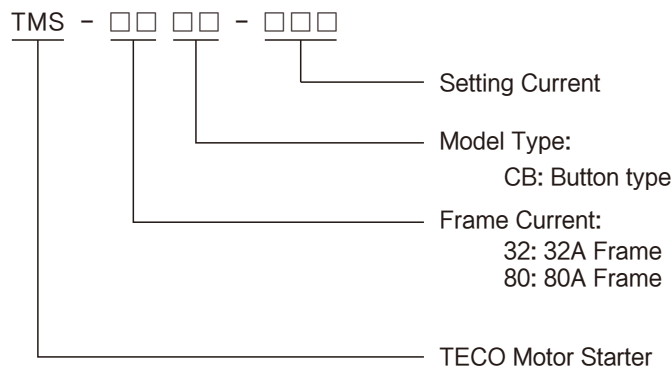
Manual Motor Starter

PRODUCT CATALOGUE

Introduction

The TMS manual motor starter is suitable for circuits with an AC voltage of up to 690V and a current ranging from 0.1A to 80A. It is designed to provide overload, phase-loss, and short-circuit protection for three-phase squirrel-cage induction motors, as well as enable infrequent starting control. It can be used for distribution circuit protection, infrequent load switching, and functions as an isolator.

Model Number and Its Meaning



General Features

The TMS Series Manual Motor Starter and Auxiliary Equipment comply with the following international standards.

EN 60947-1
EN 60947-2
EN IEC 60947-4-1
EN 60947-5-1

Pollution Degree

The TMS series manual motor starter have a pollution degree rating of Class 3 and can operate in environments with Class 3 pollution as defined in the IEC 947 standard (for industrial environments).

Environmental Protection

The TMS series manual motor starter fully consider environmental considerations in the manufacturing process, and most components are recyclable.

Ambient Temperature

The TMS series manual motor starter can operate within an ambient temperature range of -5°C to $+40^{\circ}\text{C}$. For temperatures above $+40^{\circ}\text{C}$ or below -5°C , users should consult with the manufacturer.

Technical Parameters

TMS-32CB Manual Motor Starter

Button Control

50/60Hz, AC-3				Thermal Trip Setting Range	Magnetic Trip Current	Model	
Rated Power of Three-Phase Motors							
230V kW	400V kW	415V kW	440V kW	A	A		kg
-	-	-	-	0.1...0.16	1.5	TMS-32CB-P16	0.260
-	-	-	-	0.16...0.25	2.4	TMS-32CB-P25	0.260
-	-	-	-	0.25...0.40	5	TMS-32CB-P40	0.260
-	-	-	-	0.40...0.63	8	TMS-32CB-P63	0.260
-	-	-	0.37	0.63...1	13	TMS-32CB-001	0.260
-	0.37	-	0.55	1...1.6	22.5	TMS-32CB-1P6	0.260
0.37	0.75	0.75	1.1	1.6...2.5	33.5	TMS-32CB-2P5	0.260
0.75	1.5	1.5	1.5	2.5...4	51	TMS-32CB-004	0.260
1.1	2.2	2.2	3	4...6.3	78	TMS-32CB-006	0.260
2.2	4	4	4	6...10	138	TMS-32CB-010	0.260
3	5.5	5.5	7.5	9...14	170	TMS-32CB-014	0.260
4	7.5	9	9	13...18	223	TMS-32CB-018	0.260
5.5	11	11	11	17...23	327	TMS-32CB-023	0.260
5.5	11	11	11	20...25	327	TMS-32CB-025	0.260
7.5	15	15	15	24...32	416	TMS-32CB-032	0.260



TMS-32CB

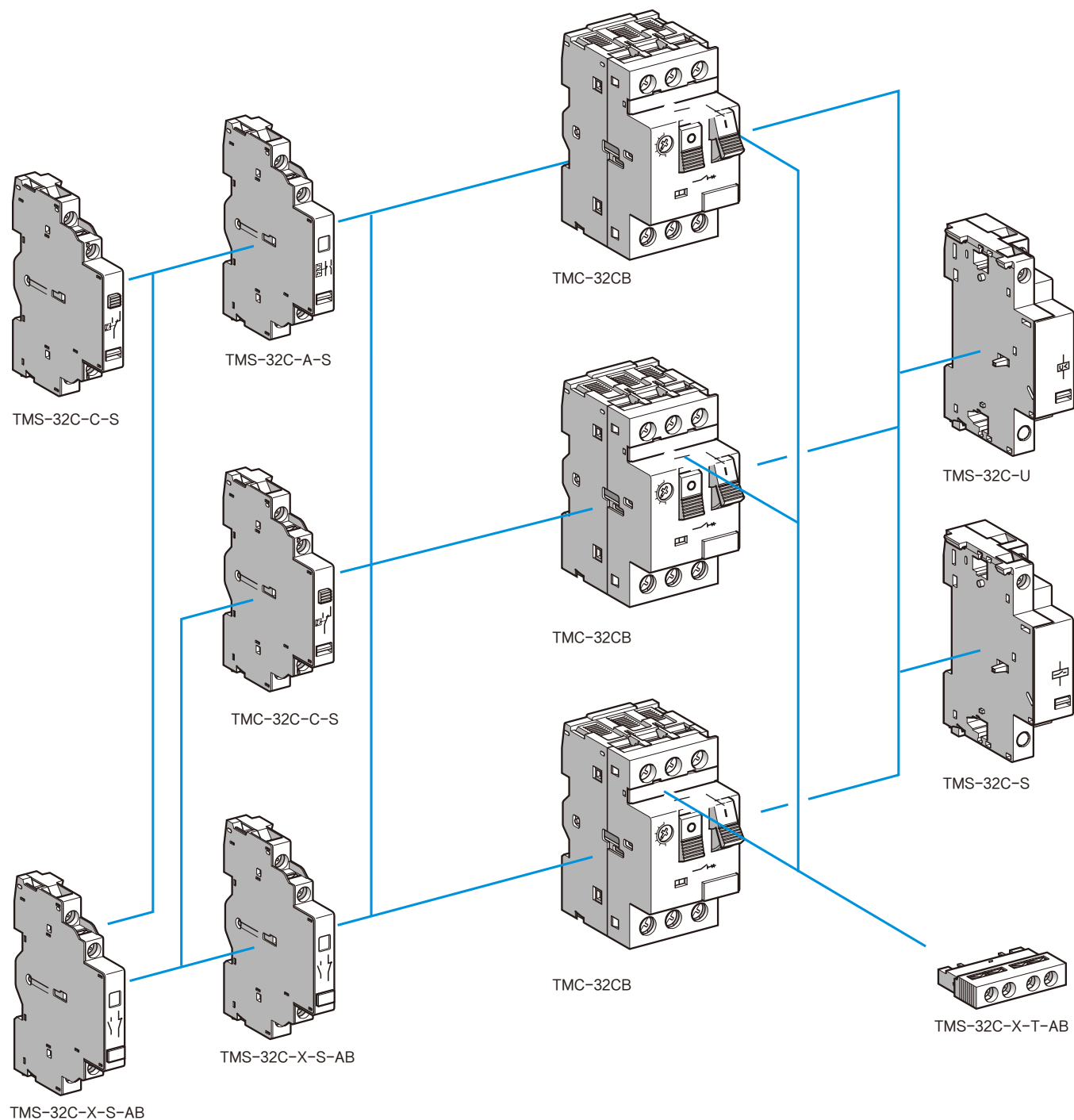
TMS-80CB Manual Motor Starter

Button Control

50/60Hz, AC-3				Thermal Trip Setting Range	Magnetic Trip Current	Model	
Rated Power of Three-Phase Motors							
230V kW	400V kW	415V kW	440V kW	A	A		kg
1	18.5	22	22	25 to 40	480	TMS-80CB-040	0.700
15	30	33	33	40 to 63	756	TMS-80CB-063	0.700
22	40	45	45	56 to 80	960	TMS-80CB-080	0.700



TMS-80CB



Additional Contact Block

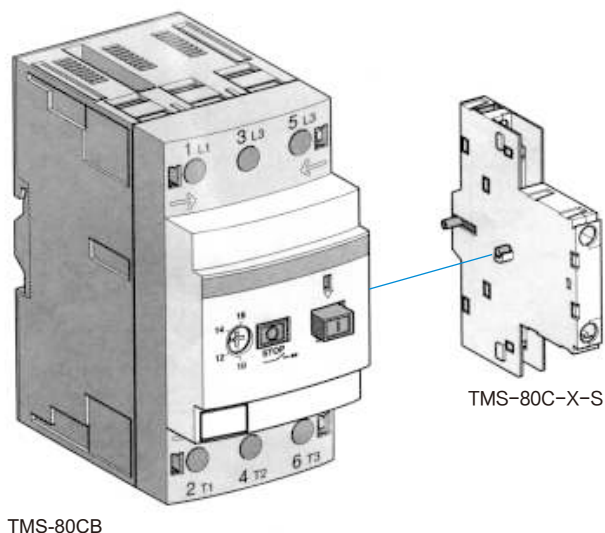
Type	Installation	Contact type	Model	kg	
Auxiliary contact	Front(one)	N/O+N/C	TMS-32C-X-T-AB	0.020	
		N/O+N/O	TMS-32C-X-T-2A	0.020	
	Side (Max two on the left side)	N/O+N/C	TMS-32C-X-S-AB	0.050	
		N/O+N/O	TMS-32C-X-S-2A	0.050	
Fault signal contact + Auxiliary contact	Side(one on the left side)	N/O	+N/O	TMS-32C-A-S-AA	0.055
		(fault)	+N/C	TMS-32C-A-S-BA	0.055
		N/C	+N/O	TMS-32C-A-S-AB	0.055
		(fault)	+N/C	TMS-32C-A-S-BB	0.055
Electromagnetic fault signal contact	Side(one on the left side)	C/O	TMS-32C-C-S	0.045	

Electrical Trip

Type	Installation	Voltage	Model	kg
Undervoltage release	Side(one on the right side)	110...127V 50Hz	TMS-32C-U-E	0.105
		220...240V 50Hz	TMS-32C-U-H	0.105
		380...415V 50Hz	TMS-32C-U-L	0.105
Shunt release	Side(one on the right side)	110...127V 50Hz	TMS-32C-S-E	0.105
		220...240V 50Hz	TMS-32C-S-H	0.105
		380...415V 50Hz	TMS-32C-S-L	0.105

Additional Contact Block

Type	Installation	Contact type	Model	kg
Auxiliary	Side (one on the right side)	N/C+N/O	TMS-80C-X-S-AB	0.060
		N/O+N/O	TMS-80C-X-S-2A	0.060



TMS Series Manual Motor Starter

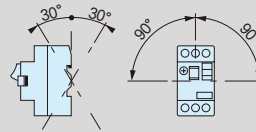
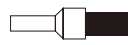
Breaking Capacity Selection Table

Model				TMS-32CB												TMS-80CB		
				P16~001	1P6	2P5	4	6	10	14	18	23	25	32	40	63	80	
Rated current			A	0.1~1	1~1.6	1.6~2.5	2.5~4	4~6.3	6~10	9~14	13~18	17~23	20~25	24~32	25~40	40~63	56~80	
Breaking capacity conforming to EN 60947-2	230/	Icu	kA	★	★	★	★	★	★	30	30	30	30	30	75	75	75	
	240V	Ics% (1)		★	★	★	★	★	★	100	100	100	100	100	75	75	75	
	400/	Icu	kA	30	30	30	30	30	10	10	10	10	10	10	30	30	12	
	415V	Ics% (1)		50	50	50	50	50	50	50	50	40	40	50	50	50	50	
	440V	Icu	kA	20	20	20	20	20	8	8	8	6	6	8	25	25	10	
		Ics% (1)		50	50	50	50	50	50	50	50	50	50	50	50	50	50	
	500V	Icu	kA	10	10	10	10	10	6	6	6	4	4	4	8	8	4	
		Ics% (1)		75	75	75	75	75	75	75	75	75	75	75	75	75	75	
	690V	Icu	kA	3	3	3	3	3	3	3	3	3	3	3	4	4	2	
		Ics% (1)		75	75	75	75	75	75	75	75	75	75	75	75	75	75	
If the breaking capacity Ics > Icu, the corresponding fuse can be used.	230/	aM	A	●	●	●	●	●	●	●	●	80	80	80	●	●	●	
	240V	gl	A	●	●	●	●	●	●	●	●	100	100	100	●	●	●	
	400/	aM	A	●	●	●	●	●	●	63	63	80	80	80	250	315	315	
	415V	gl	A	●	●	●	●	●	●	80	80	100	100	100	315	400	400	
	440V	aM	A	●	●	●	50	50	50	50	50	63	63	63	250	315	315	
		gl	A	●	●	●	63	63	63	63	63	80	80	80	315	400	400	
	500V	aM	A	●	●	●	50	50	50	50	50	50	50	50	160	200	200	
		gl	A	●	●	●	63	63	63	63	63	63	63	63	200	250	250	
	690V	aM	A	●	16	25	32	32	32	40	40	40	40	40	160	200	200	
		gl	A	●	20	32	40	40	40	50	50	50	50	50	200	250	250	

Note: ★ > 100kA;

● No fuse is required. The breaking capacity Icu > Ics.

(1) Expressed as a percentage of Icu.

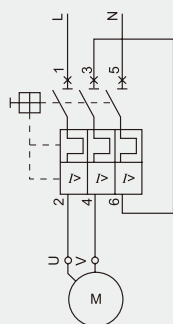
Model		TMS-32CB		TMS-80CB		
Standard		EN 60947-1,60947-2,EN IEC 60947-4-1				
Protection treatment		“hot and humid”		“TC”		
Impact resistance		30g		22g		
Vibration resistance		5g (5~150Hz)		2.5g (0~2.5Hz)		
Ambient temperature	℃	-40…+80		-40…+80		
-Storage						
-Working	℃	-20…+60		-20…+60		
Temperature compensation	℃	-20…+60		-20…+60		
Flame retardancy	℃	960		960		
Maximum operating altitude	m	2000		3000		
Working position				It is more suitable for vertical use.		
The number of wires and the cross-sectional area for wiring		MAX	MIN	MAX	MIN	
	mm ²	2 x 6	2 x 1	1 x 35	1 x 2.5	
	Hard wire	mm ²	2 x 6	2 x 1.5	2 x 16	1 x 2.5
	Soft wire without terminal blocks	mm ²	2 x 4	2 x 1	2 x 16	1 x 2.5
	Flexible wire with terminal blocks					
Suitable for isolation		√		√		
Tightening torque	Nm	1.7		5		
Resistant to mechanical shock	J	0.5		0.5		
Usage category		A		A		
EN 60947-2		AC-3		AC-3		
EN IEC 60947-4-1		AC-3		AC-3		
Rated operating voltage (U _e)	V	690		690		
Rated insulation voltage (U _i)	V	690		690		
Rated operating frequency	Hz	50/60		50/60		
Rated impulse withstand voltage (U _{imp})	kV	6		6		
Total dissipated energy of each pole	W	2.5	TMS-80CB-040,063		TMS-80CB-080	
			6		8	
Mechanical life (C.O)	C.O.	100000		20000	20000	
Electrical life For AC-3 load	C.O. 440V In/2	100000		10000	10000	
Load rating (Maximum operating frequency)	C.O./h	25		25		
Rated load EN IEC 60947-4-1		Continuous load		Continuous load		

Model			TMC-32C-U	TMC-32C-S
Rated insulation voltage(Ui)		V	690	690
Operating voltage		V	0.85...1.1Un	0.7...1.1Un
Release voltage		V	0.7...0.35Un	0.75...0.2Un
Power consumption during picking-up	AC	VA	12	14
	DC	W	8	10.5
Power consumption during holding	AC	VA	3.5	5
	DC	W	1.1	1.6
Operating time		ms	From the moment when the voltage reaches its operating value until the starter disconnects. 10...15	
Load factor			100%	
Wiring	Number of conductors		1 or 2	
	Hard wire		1...2.5	
	Soft wire without terminal blocks		0.75...2.5	
	Flexible wire with terminal blocks		0.75...1.5	
Tightening torque		N.m	1.4MAX	
Mechanical life (C.O.)		C.O.	100000	

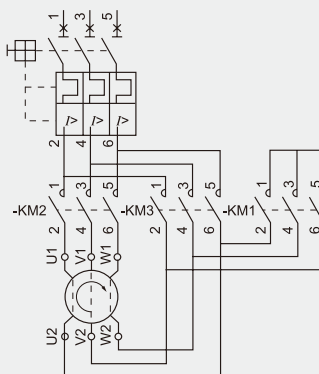
Model		TMS-32C-X-S							TMS-32C-A-S, TMS-32C-C-S			
Rated Insulation Voltage U_i EN 60947-1	V	690							690			
Conventional heating current I_{th}	A	6							2.5			
Mechanical life	C. O.	100,000							1,000			
Operating power and current EN 60947-5-1 AC operation	V	AC-15/100 000 C.O.							AC-14/1 000 C.O.			
Rated operating voltage U_e		48	110 127	230 240	380 415	440	500	690	24	48	110 127	230 240
Power	VA	300	500	720	850	650	500	400	36	48	72	72
Rated operating current I_e	A	6	4.5	3.3	2.2	1.5	1	0.6	1.5	1	0.5	0.3
Operating power and current EN 60947-5-1 DC operation	V	DC-13/100 000 C.O.							DC-13/1 000 C.O.			
Rated operating voltage U_e		24	48	60	110	220	-	-	24	48	60	-
Power	W	140	240	180	140	120	-	-	24	15	9	-
Rated operating current I_e	A	6	5	3	1.3	0.5	-	-	1	0.3	0.15	-
Wiring	Number of conductors	1 or 2							1 or 2			
	Hard wire	mm ² 1...2.5							mm ² 1...2.5			
	Soft wire without terminal blocks	mm ² 0.75...2.5							mm ² 0.75...2.5			
	Flexible wire with terminal blocks	mm ² 0.75...1.5							mm ² 0.75...1.5			
Tightening torque	N.m	1.4MAX							1.4MAX			

Model		TMS-32C-X-T				TMS-80C-X-S							
Rated Insulation Voltage U_i EN 60947-1	V	250(Main 690)				690							
Conventional heating current I_{th}	A	2.5				6							
Mechanical life	C. O.	1,000				100,000							
Operating power and current EN 60947-5-1 AC operation	V	AC-15/100 000 C.O.				AC-11/100 000 C.O.							
Rated operating voltage U_e		24	48	110 127	230 240	48	110 127	230 240	380 415	440	500	690	
Power	VA	48	60	120	120	350	500	800	850	700	700	400	
Rated operating current I_e	A	2	1.25	1	0.5	6	4.5	3.5	2.2	1.5	1.5	0.6	
Operating power and current EN 60947-5-1 DC operation	V	DC-13/100 000 C.O.				DC-11/100 000 C.O.							
Rated operating voltage U_e		24	48	60	-	24	48	60	110	220	-	-	
Power	W	24	15	9	-	140	240	180	140	120	-	-	
Rated operating current I_e	A	1	0.3	0.15	-	6	5	3	1.3	0.5	-	-	
Wiring	Number of conductors	1 or 2				1				2			
	Hard wire	mm ² 1...2.5				mm ² 1...2.5				mm ² 1...2.5			
	Soft wire without terminal blocks	mm ² 0.75...2.5				mm ² 0.75...2.5				mm ² 0.75...2.5			
	Flexible wire with terminal blocks	mm ² 0.75...1.5				mm ² 0.75...2.5				mm ² 0.75...1.5			
Tightening torque	N.m	1.4MAX				1.4MAX				1.4MAX			

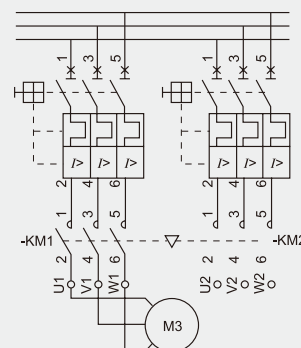
Single-phase or DC motor



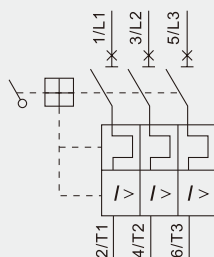
Star-delta starter



Dual power supply



Product wiring diagram



Auxiliary contact

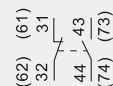
TMS-32C-X-T-AB



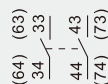
TMS-32C-X-T-2A



TMS-32C-X-S-AB



TMS-32C-X-S-2A



TMS-80C-X-S-AB



TMS-80C-X-S-2A

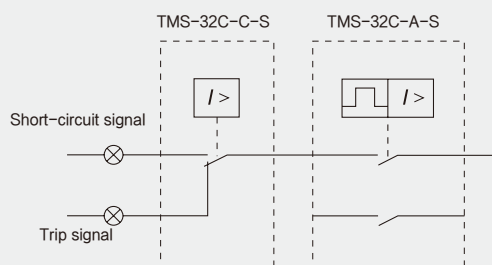


Electromagnetic fault signal contact

TMS-32C-C-S

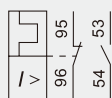


Fault signal contact + Electromagnetic fault signal contact

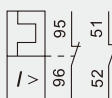


Fault signal contact + Auxiliary contact

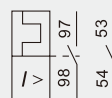
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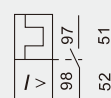
TMS-32C-A-S-BB



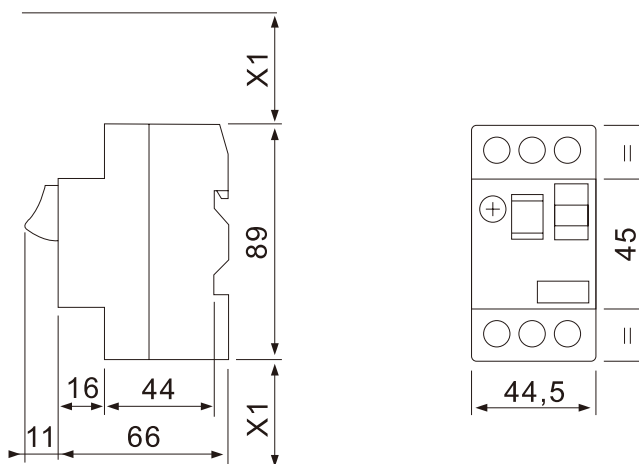
TMS-32C-A-S-AA



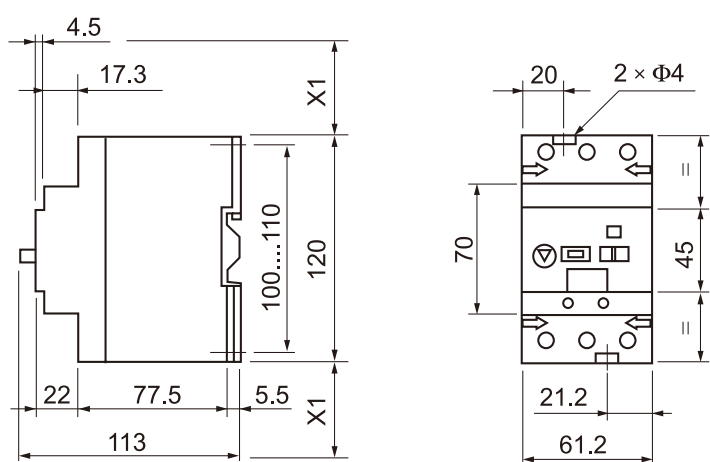
TMS-32C-A-S-BA



TMS-32CB overall & installation dimensions



TMS-80CB overall & installation dimensions



X1=Clearance
(ISC maxi)

40mm, Appl. to Ue < 500V
50mm, Appl. to Ue < 690V

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