



TMS

Manual Motor Starters

TMS Manual Motor Starters

Features

Integral Function

- ▶ Width 45mm up to 63A
- ▶ With an adjustable knob for setting full-load current of the motor

Safety

- ▶ IP-20 finger protection terminals
All live parts are properly guarded and cannot be touched with hands.

Green Design

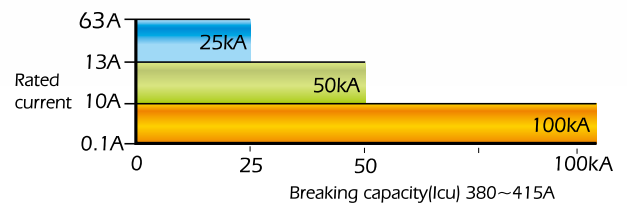
- ▶ Recyclable thermoplastic materials are used in the plastic parts
- ▶ Cadmium-free contact

Wide Variety of Accessories

- ▶ Under voltage trip UVT
- ▶ Shunt trip SHT
- ▶ Side + top mounted auxiliary contact block

High Performance

- ▶ Breaking capacity



- ▶ ON/OFF endurance
Mechanical Endurance life
-- max. 100,000 (TMS-32S(R))
-- max. 50,000 (TMS-63S)

Manual Motor Starters with short-circuit protection & thermal overload protection, designed in the structure of Thermal relay

Function of MCCB

- ▶ Short circuit protection
- ▶ Overload protection
- ▶ Protection of circuits



Function of Relay

- ▶ Overload protection
- ▶ Phase failure protection
- ▶ Rated adjustable current range
- ▶ Ambient temperature compensation



Space Saving

Installation space

MCCB+TOR
100%

Manual motor starter

43% (saving 57%)

High Breaking Capacity

Standard breaking capacity

25, 50, 100kA, 400V AC

Short Current Protection Device (SCPD)

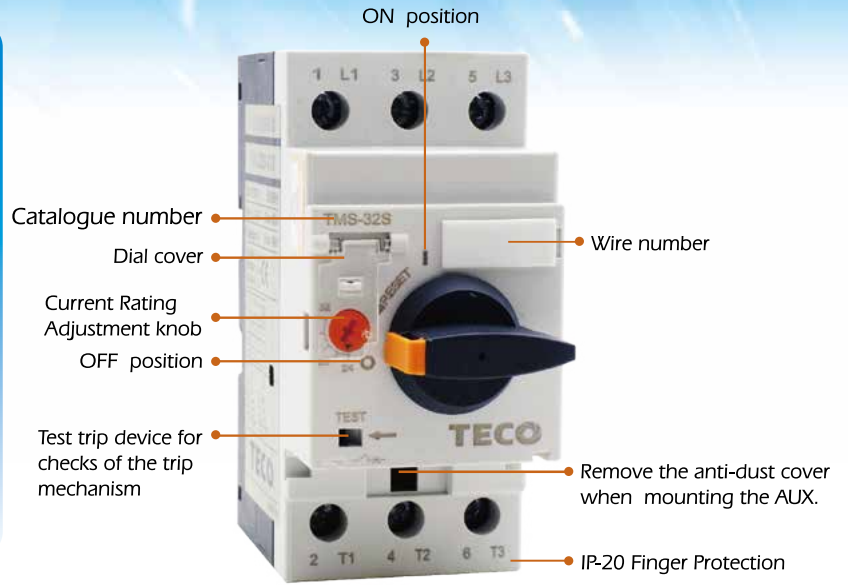
IEC 60947-4-1,
Type 1, 2

Comply With Certificates

IEC 60947-1
IEC 60947-2
IEC 60947-4-1
UL 60947-4-1

CE RoHS

The TECO Type MMSs have functions of MCCB, which provides short circuit protection & transmission line protection & phase failure protection, and also have functions of thermal relay, which has adjustable rated current & overload protection & temperature compensation that negates the temperature effect. Finally, Modular design is more convenient for production and application.



Features

- ▶ Adjustable overload protection
- ▶ Short circuit protection
- ▶ Phase failure protection
- ▶ Magnetic trip current 13 times I_e



Applications

Machine tools, Light Industry Machinery (spinning mill or ceramics factory), Conveyor Systems, Petrochemical plant, Pharmaceutical plant sewage treatment plant, Building automatic control, etc...


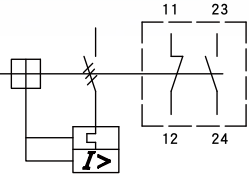
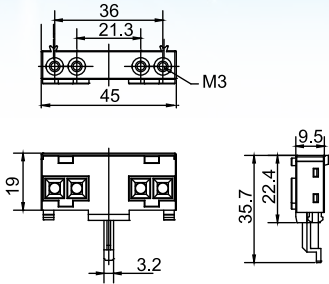

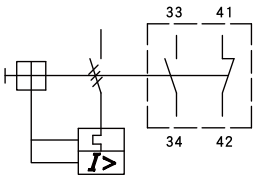
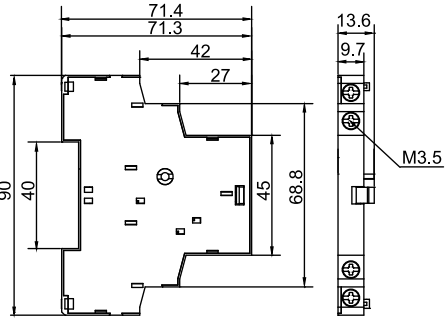

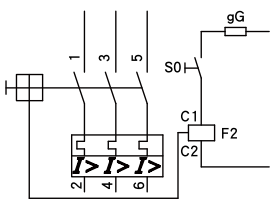
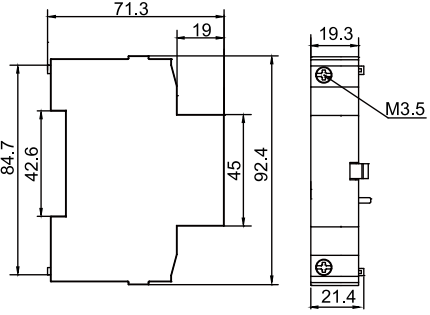

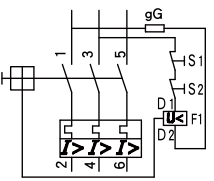
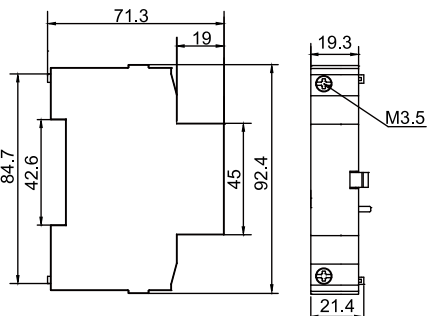
Accessories



Specifications

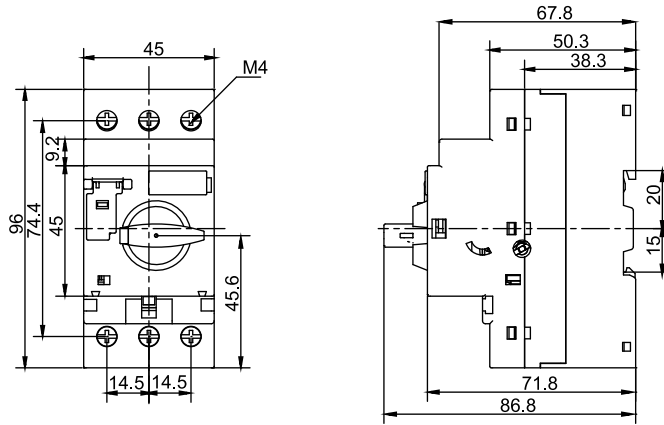
Catalogue number		TMS-32S (R)						TMS-63S					
Frame size		32						63					
													
Rated operational voltage (Ue)		690 VAC						690 VAC					
Rated Insulation voltage (Ui)		1000 VAC						1000 VAC					
Rated Frequency		50 / 60Hz						50 / 60Hz					
Conformity to Standards	Setting Current Range () means max. Current Ie(A)	Rated breaking capacity (kA)											
		220-240		380-415		600-690		220-240		380-415		600-690	
		Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics
IEC 60947-2 EN 60947-2 Icu/Ics	0.1-0.16 (0.16)	100	100	100	100	100	100	—	—	—	—	—	—
	0.16-0.25 (0.25)	100	100	100	100	100	100	—	—	—	—	—	—
	0.25-0.4 (0.4)	100	100	100	100	100	100	—	—	—	—	—	—
	0.4-0.63 (0.63)	100	100	100	100	100	100	—	—	—	—	—	—
	0.63-1.0 (1)	100	100	100	100	100	100	—	—	—	—	—	—
	1.0-1.6 (1.6)	100	100	100	100	100	100	—	—	—	—	—	—
	1.6-2.5 (2.5)	100	100	100	100	3	3	—	—	—	—	—	—
	2.5-4.0 (4)	100	100	100	100	3	3	—	—	—	—	—	—
	4-6 (6)	100	100	100	100	3	3	—	—	—	—	—	—
	5-8 (8)	100	100	100	100	3	3	—	—	—	—	—	—
	6.3-10 (10)	100	100	50	38	3	3	100	100	100	100	4	3
	9-13 (13)	100	100	50	38	3	3	100	100	50	38	4	3
	11-16 (16)	100	100	25	19	3	3	100	100	25	19	4	3
	14-20 (20)	50	50	25	19	3	3	50	38	25	19	4	3
	19-25 (25)	50	50	25	19	3	3	—	—	—	—	—	—
	18-26 (26)	—	—	—	—	—	—	50	38	25	19	4	3
	22-32 (32)	—	—	—	—	—	—	50	38	25	19	4	3
24-32 (32)	50	50	25	19	3	3	—	—	—	—	—	—	
28-40 (40)	—	—	—	—	—	—	50	38	25	19	4	3	
35-50 (50)	—	—	—	—	—	—	50	38	25	19	4	3	
45-63 (63)	—	—	—	—	—	—	50	38	25	19	4	3	
Overall dimensions (mm)	W	45						54					
	H	96						130					
	D	87						126					
Weight (g)		330						850					
Accessories	Under voltage trip UVT	●						●					
	Shunt trip SHT	●						●					
	Side mounted auxiliary switch	●						●					
	Top mounted auxiliary switch	●						●					
Temperature compensation		YES						YES					
Phase Loss protection		YES						YES					
Protection degree		IP 20						IP 20					
Mechanical endurance (Ops)		100,000						50,000					
Electrical endurance (Ops)		100,000						25,000					
Operating environmental temperature		-25~ +60°C						-25~ +60°C					
Storage environmental temperature		-40 ~ +80°C						-40 ~ +80°C					
Altitude (m)		2,000						2,000					
Rated impulse withstand voltage (Uimp)		6kV						6kV					
Approvals		CCC/CB/UL						CC/CB/UL					

Accessories

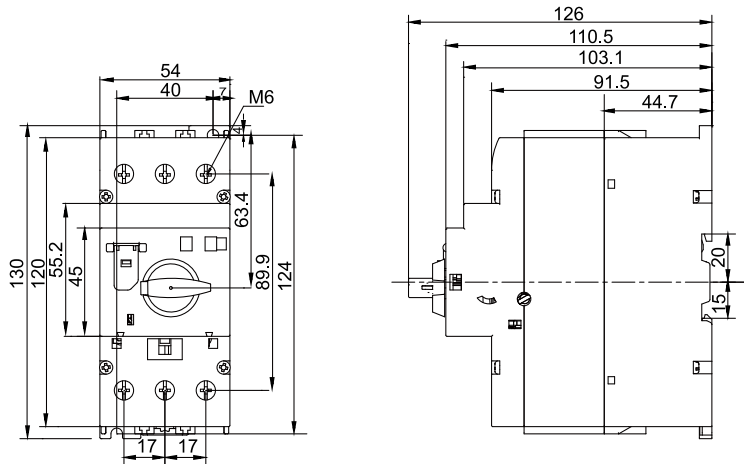
Catalogue number	Features/wiring diagram	Contact configuration	Rated insulation voltage (V)	weight (g)	Dimensions (mm)
TMS-X-T Top mounted auxiliary switch 	<ul style="list-style-type: none"> The contactor is related to TMS's ON/OFF operation  <p>TMS-X-T (1b 1a)</p>	1a1b or 1a or 1b	—	85	
TMS-X-S Side mounted auxiliary switch 	<ul style="list-style-type: none"> The contactor is related to TMS's ON/OFF operation The right side can be stacked, it can be installed up to two auxiliary contacts blocks  <p>TMS-X-S (1a 1b)</p>	1a1b or 2a or 2b	—	196	
TMS-S Shunt trip 	The device is used for remote tripping of TMS note : <ul style="list-style-type: none"> This device can't be used with the under voltage trip device at the same time Voltage signal to TMS can't exceed 10 seconds  <p>TMS-S</p>	—	24V 110V 220V 380V 440V	130	
TMS-U Under voltage trip 	This device trips the TMS when the control voltage drops below a tripping threshold. note : <ul style="list-style-type: none"> This device can't be used with the shunt trip device at the same time  <p>TMS-U</p>	—	24V 110V 220V 380V 440V	132	

Dimensions

TMS-32S(R)



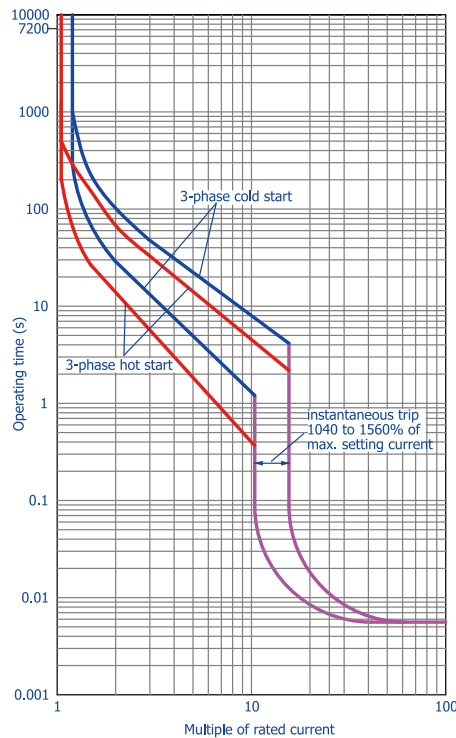
TMS-63S



Tripping Curves

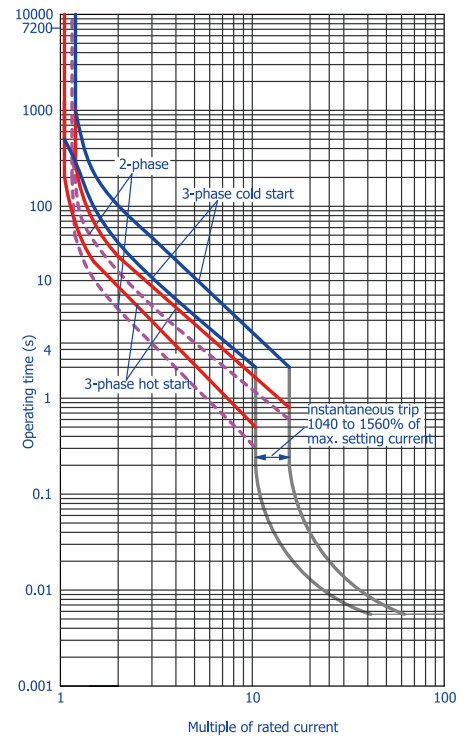
TMS-32S(R)

Tripping Curves

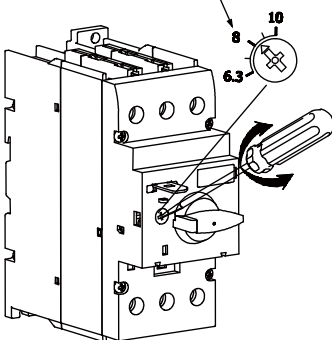


TMS-63S

Tripping Curves

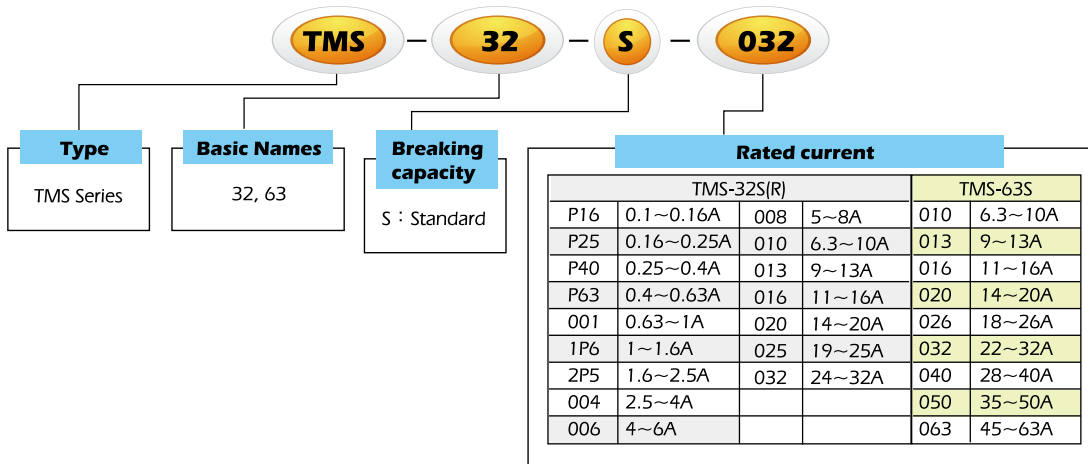


Current Rating
Adjustment knob
(Overload protection)

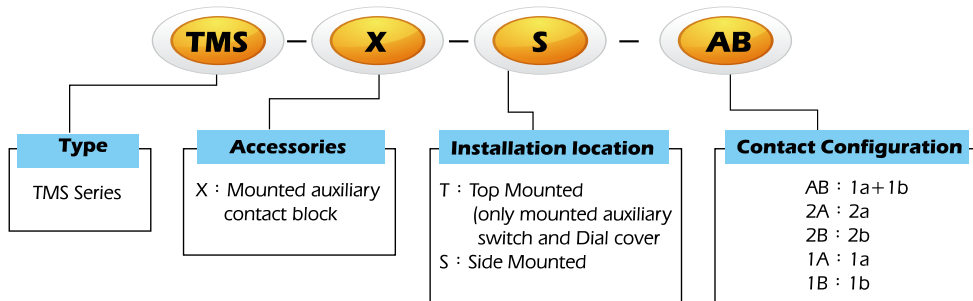


Type Number Description

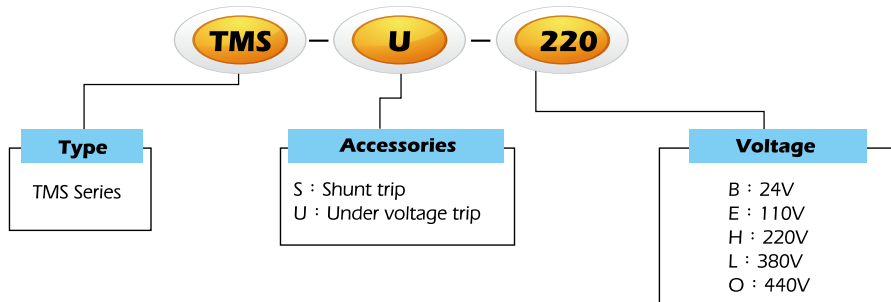
▶ TMS-32S(R) \ TMS-63S (Noumenon)



▶ TMS-32S(R) \ TMS-63S – auxiliary contact block



▶ TMS-32S(R) \ TMS-63S – Under voltage trip \ Shunt trip



Note : Frequency of Undervoltage trip and Shunt trip device is 50/60 Hz

Product Horsepower

► TMS-32S(R)

Standard	Rated Power Capacities (A)	Setting Current Range (A)	Single phase (HP)		Three phase (HP)		
			110-120V	220-240V	220-240V	440-480V	550-600V
UL 60947-4-1	0.16	0.1-0.16	—	—	—	—	—
	0.25	0.16-0.25	—	—	—	—	—
	0.4	0.25-0.4	—	—	—	—	—
	0.63	0.4-0.63	—	—	—	—	—
	1	0.63-1.0	—	—	—	—	1/2
	1.6	1.0-1.6	—	1/10	—	3/4	3/4
	2.5	1.6-2.5	—	1/6	1/2	1	1 1/2
	4	2.5-4	1/8	1/3	3/4	2	3
	6	4-6	1/4	1/2	1 1/2	3	5
	8	5-8	1/3	1	2	5	5
	10	6.3-10	1/2	1 1/2	3	5	7 1/2
	13	9-13	1/2	2	3	7 1/2	10
	16	11-16	1	2	5	10	10
	20	14-20	1 1/2	3	5	10	15
	25	19-25	2	—	7 1/2	15	20
32	24-32	2	5	10	20	30	

► TMS-63S

Standard	Rated Power Capacities (A)	Setting Current Range (A)	Single phase (HP)		Three phase (HP)		
			110-120V	220-240V	220-240V	440-480V	550-600V
UL 60947-4-1	10	6.3-10	1/2	1 1/2	3	5	7 1/2
	13	9-13	1/2	2	3	7 1/2	10
	16	11-16	1	2	5	10	10
	20	14-20	1 1/2	3	5	10	15
	26	18-26	2	3	7 1/2	15	20
	32	22-32	2	5	10	20	30
	40	28-40	3	7 1/2	10	30	30
	50	35-50	3	10	15	30	40
	63	45-63	5	10	20	40	60



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Ratings and specifications covered in this brochure may be subject to change without notice

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