

Motor protective circuit breakers

Motor protective circuit breakers MSP

Description

The MSP0, MSP1 motor starter protectors are compact motor starter protectors for currents up to 52 A which operate according to the current limiting principle. The devices are used for switching and protecting motors or other loads. They are fitted with instantaneous overcurrent releases and inverse-time delayed overload relay. Motor starter protectors and contactors can be combined to form fuseless starter combinations. The MSP0, MSP1 motor starter protectors are suitable for use in any climate.



MSP0

Motor Starter Protectors

- for motor protection
- MSP0: 0,4...25 A
- MSP1 : 22...52 A

The characteristic curves of these motor starter protectors are specially laid-out for the overload and short-circuit protection of motors. The inverse-time delayed releases ("a releases") are adjustable for setting the rated current of the motors to be protected. The instantaneous short-circuit releases ("n releases") are fixed-set to 12 times the value so as to assure faultless starting of the motors.



MSP1

Motor protective circuit breaker MSP

Type	Code No.	Rated current [A]	Thermal overload release [A]	Instantaneous overcurrent release [A]	Motor power [kW]	Weight [g]	Packaging [pcs]
MSP0-0,6	004646618	0,6	0,4...0,6	7,2	0,12/0,18	290	1
MSP0-1,0	004646619	1	0,6...1,0	12	0,25	290	1
MSP0-1,6	004646620	1,6	1,0...1,6	19	0,37/0,55	290	1
MSP0-2,4	004646621	2,4	1,6...2,4	29	0,75	290	1
MSP0-4,0	004646622	4	2,4...4,0	48	1,1/1,5	290	1
MSP0-6,0	004646623	6	4,0...6,0	72	2,2	290	1
MSP0-10	004646624	10	6,0...10	120	3/4	290	1
MSP0-16	004646625	16	10...16	190	7,5	290	1
MSP0-20	004646626	20	14...20	240	7,5	290	1
MSP0-25	004646627	25	18...25	300	11	290	1
MSP1-32	004646628	32	22...32	380	15	760	1
MSP1-40	004646629	40	28...40	480	18,5	760	1
MSP1-52	004646630	52	36...52	600	22	760	1

Accessories

Combinations:

Right hand side of MSP: An auxiliary contact and/or a short-circuit signalling contact

Left hand side of MSP: Undervoltage release or Shunt release

Short circuit trip indication

Type	Code No.	Description	Wiring diagram	Weight [g]	Packaging [pcs]
MSP-AS	004646617	1NO+1NC (AC-15: 3A/230V, 1.5A/400V, 1A/500V)		40	1

width=9mm

Auxiliary contact

Type	Code No.	Description	Wiring diagram	Weight [g]	Packaging [pcs]
MSP-PS11	004646631	1NO+1NC (AC-15: 3A/230V, 1.5A/400V, 1A/500V)		40	1

width=9mm

Shunt release

Type	Code No.	Rated voltage Un	Operation range	Weight [g]	Packaging [pcs]
MSP-A 230	004646632	230 VAC (220-230V 50Hz)	154-253 VAC	110	1
MSP-A 24	004646633	24 VAC (24V 50Hz, 24-60V DC)	16.8 - 26.4 VAC, 16.8 - 66VDC	110	1

width=18mm, operation range: 0.7-1.1*Un

Undervoltage release

Type	Code No.	Rated voltage Un	Operation range (for keeping)	Weight [g]	Packaging [pcs]
MSP-U 240	004646634	240 V 50Hz	204-264 VAC	110	1

width=18mm, Falling (tripping) voltage: 0.35-0.7 Un, keeping voltage: 0.85-1.1Un.

Connection terminals

Type	Code No.	Description	Weight [g]	Packaging [pcs]
MSP-IZ2	004646635	busbar connection of 2 MSPs	50	1
MSP-IZ3	004646636	busbar connection of 3 MSPs	50	1
MSP-IZ4	004646637	busbar connection of 4 MSPs	100	1
MSP-TA1	004646638	3 phase line side terminal	110	1
MSP-TA2	004646639	3 phase line side terminal (in combination with MSP-IZ...)	50	1



MSP-AS



MSP-PS11



MSP-A 230



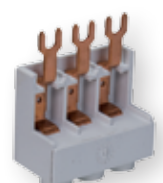
MSP-U 240



MSP-IZ3



MSP-TA1



MSP-TA2

Motor protective circuit breakers MPE 25

Rated current
0,16 - 32 A

Example of MPE configuration:

Advantages

- With overload and short circuit protection
- Fixed short circuit release 13 x I_n
- With phase-failure sensitivity according to IEC/EN 60947-4-1
- With temperature compensation
- Can be used as main switch
- MPE25 up to 10A at 400/415V are self-protected
- MPE25 above 10A provide a breaking capacity of 50kA at 400/415V according to IEC/EN 60947-2

IE3 CONFORM



Motor protective circuit breaker MPE25

Type	Code No.	Operational inst. current I _n (A)	Setting overl. release I _r (A)	Short-circuit release I _{rm} (A)	Weight [g]	Packaging [pcs]
MPE25-0,16	004648001	0.16	0,1-0,16	1.9	322	1
MPE25-0,25	004648002	0.25	0,16-0,25	3	322	1
MPE25-0,40	004648003	0.4	0,25-0,4	4,8	322	1
MPE25-0,63	004648004	0.63	0,4-0,63	7,5	322	1
MPE25-1,0	004648005	1	0,63-1,0	12	322	1
MPE25-1,6	004648006	1.6	1,0-1,6	19	322	1
MPE25-2,5	004648007	2.5	1,6-2,5	30	322	1
MPE25-4,0	004648008	4	2,5-4,0	48	322	1
MPE25-6,3	004648009	6.3	4,0-6,3	75	322	1
MPE25-10	004648010	10	6,3-10	120	322	1
MPE25-16	004648011	16	10-16	190	322	1
MPE25-20	004648012	20	16-20	240	322	1
MPE25-25	004648013	25	20-25	300	322	1
MPE25-32	004648014	32	25-32	384	322	1



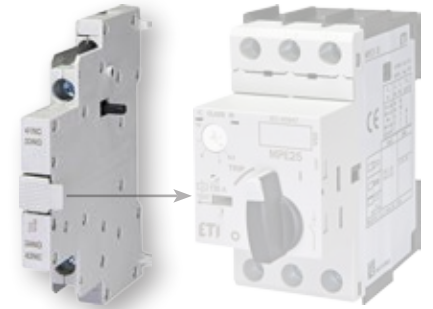
Front mountable auxiliary contact block, the 45mm widths - MPE remain unchanged

Type	Code No.	Wiring diagram	Auxiliary contacts NO, NC	Weight [g]	Packaging [pcs]
ACBFE-11	004648021		1, 1	20	1

Motor protective circuit breakers

Left side mountable contact block, can be combined with front mountable auxiliary contact block

Type	Code No.	Wiring diagram	Auxiliary contacts NO, NC	Weight [g]	Packaging [pcs]
ACBSE-11	004648022		1, 1	38	1
ACBSE-20	004648023		2, 0	38	1



Trip indicating contact block, mounted on the left side

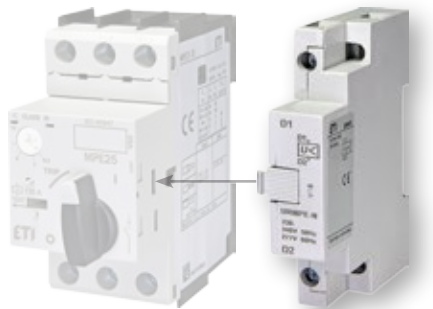
Type	Code No.	Wiring diagram	Notes	Weight [g]	Packaging [pcs]
TSBE	004648024		Separate tripped and short-circuit 1NC for each circuit. Allows mounting with lateral aux. contact block. Left side mounting. TBSE alarms, 1NO +	150	1



Undervoltage release, mounted on the right side

Type	Code No.	Wiring diagram	actuating voltages	Weight [g]	Packaging [pcs]
URMPE-N	004648027		230-240V AC	115	1
URMPE-U	004648028		400-415V AC		

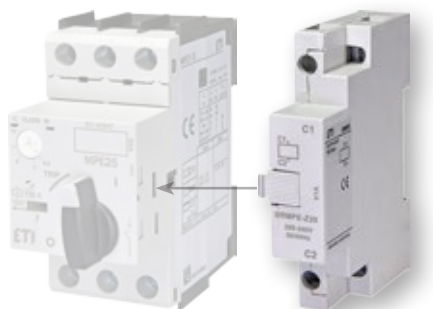
Pick-up voltage $>0,85 \times U_e$ Drop-out voltage $0,35-0,7 \times U_e 100\%DF$



Shunt release, mounted on the right side

Type	Code No.	Wiring diagram	actuating voltages	Weight [g]	Packaging [pcs]
SRMPE-Z20	004648030		200-240V AC	115	1

Pick-up voltage $0,7 \times U_e 100\%DF$





Accessories				
Type	Code No.	Description	Weight [g]	Packaging [pcs]
SCMPE	004648025	Scale cover	15	5
PLMPE	004648026	Push-in-lugs	25	2



Insulated enclosure with black/grey rotary handle, IP55					
For use with	Code No.	Notes	Type	Weight [g]	Packaging [pcs]
MPE25 + ACBFE11 + ACBSE11 // ACBSE20 + PL..	004648032	with black/grey rotary handle with integrated PE(N) terminal	MPEE55G	365	1
MPE25 + URMPE // SRMPE + ACBFE11 + ACBSE11 ali ACBSE20 + PL..	004648033	lockable in OFF position with 3 padlocks two M25 metric cable entry knockout, top and bottom	MLPEE55G	415	1



Insulated enclosure with red/yellow rotary handle, IP55					
For use with	Code No.	Notes	Type	Weight [g]	Packaging [pcs]
MPE25 + ACBFE11 + ACBSE11 // ACBSE20 + PL..	004648034	with red/yellow rotary handle for use as Emergency-Stop switches to IEC/EN 60204 with integrated PE(N) terminal	MPEE55G-E	365	1
MPE25 + URMPE // SRMPE + ACBFE11 + ACBSE11 or ACBSE20 + PL..	004648035	lockable in OFF position with 3 padlocks two M25 metric cable entry knockout, top and bottom	MLPEE55G-E	415	1

Neutral terminal					
For use with	Code No.	Description	Type	Weight [g]	Packaging [pcs]
MPEE55G, MLPEE55G, MPEE55G-E & MLPEE55G-E	004648038	for connection of a 5th conductor	NL-MPEE	365	1

Motor protective circuit breakers

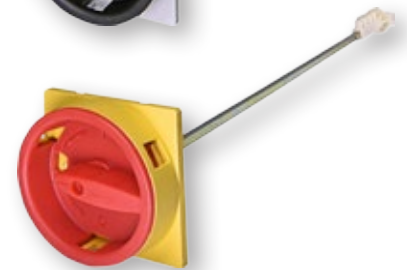
Flush mounting enclosure

Type	Code No.	colour	Description	Weight [g]	Packaging [pcs]
FMEE55	004648036	black	- for MPE mounting on panel door - degree of protection IP55 - moulded plastic front plate with rotary operating mechanism	200	1
FMEE55-E	004648037	red/yellow	- lockable in OFF position - allows access. ACBFE-11, ACBSE-11 or ACBSE-20 and URMPE / SRMPE - allow installation of sig. lamp	200	1



Door coupling rotary handle black/grey and red/yellow, IP55

Type	Code No.	colour	Notes	Weight [g]	Packaging [pcs]
RMMPE130 (130 mm)	004648039	black	- extension shaft, length 130 to 155mm - extension shaft, length 330 to 355mm	76	1
RMMPE330 (330 mm)	004648040		- door coupling rotary handle black/grey - extension shaft can be cut of any required length min. 80mm	114	
RMMPE130E (130 mm)	004648041	red/yellow	- thickness of panel door 1 to 3,5mm - for use of main switch IEC/EN60204 - ON/OFF/Tripped position	76	1
RMMPE330E (330 mm)	004648042		- lockable in OFF pos. with 3 padlocks - the MPE can also be used turned 90°	114	



Indicator light

Type	Code No.	Notes	colour	Weight [g]	Packaging [pcs]
PLE230 PLE400	004648043 004648044	voltage: 210...230V voltage: 400...560V	red	17	10
PLE230G PLE400G	004648045 004648046	voltage: 210...230V voltage: 400...560V	green		
PLE230W PLE400W	004648047 004648048	voltage: 210...230V voltage: 400...560V	white		



Circuit breaker-contactor link module

Type	Code No.	Notes	For use with	Weight [g]	Packaging [pcs]
ECCMPE07	004648052	for electrical and mechanical linking motor protective circuit breaker	CE07	27	1
ECCMPE25	004648053	MPE25 and contactor	CEM9...25		



Motor protective circuit breaker MS25

Main application field: control (start-up, protection and switch-off) of AC electric motors with powers up to 11 kW (380/400 V) or other consumers up to 25 A; it can also be used as the main switch according to EN 60204 or VDE 0113 standards.

Versions:

- MS25 - with overload and short circuit protection

Manual control:

- START, STOP, push-buttons
- Test of release function (TEST)

- Phase-failure sensitivity according to IEC/EN 60947-4-1
- Automatic switch-off with thermal or magnetic release
- Control with under-voltage release or shunt release
- Isolating distance between contacts: 4.5 mm per contact place
- Hard wire or fine wire connection
- Simple and fast mounting by snap fitting on 35 mm wide mounting rail in compliance with EN 60715; fixing with two screws is also possible
- Vertical or horizontal operation position



Motor protective circuit breaker MS25

Type	Code No.	Operational inst. current I _u (A)	Setting overl. release I _r (A)	Weight [g]	Packaging [pcs]
MS25-0,16	004600010	0.16	0,1-0,16	255	1
MS25-0,25	004600020	0.25	0,16-0,25	255	1
MS25-0,40	004600030	0.4	0,25-0,4	255	1
MS25-0,63	004600040	0.63	0,4-0,63	255	1
MS25-1,0	004600050	1	0,63-1,0	255	1
MS25-1,6	004600060	1.6	1,0-1,6	255	1
MS25-2,5	004600070	2.5	1,6-2,5	255	1
MS25-4,0	004600080	4	2,5-4,0	255	1
MS25-6,3	004600090	6.3	4,0-6,3	255	1
MS25-10	004600100	10	6,3-10	255	1
MS25-16	004600110	16	10-16	255	1
MS25-20	004600120	20	16-20	255	1
MS25-25	004600320	25	20-25	255	1

Motor protective circuit breakers

Auxiliary switch for lateral mounting PS

Auxiliary switch for lateral mounting PS					
Type	Code No.	Wiring diagram	Auxiliary contacts NO, NC	Weight [g]	Packaging [pcs]
PS 20	004600160		2,0	30	1/10
PS 01	004600150		0,1	30	1/10
PS 10	004600140		1,0	30	1/10
PS 11	004600130		1,1	30	1/10



ETICON

Shunt release

Shunt release					
Type	Code No.	Wiring diagram	actuating voltages	Weight [g]	Packaging [pcs]
A 230	004600170		220V-240V	30	1/10



Undervoltage release

Undervoltage release					
Type	Code No.	Wiring diagram	actuating voltages	Weight [g]	Packaging [pcs]
U 230	004600180		220V-240V	30	1/10



Enclosure O Front plate CP

Enclosure O Front plate CP				
Type	Code No.	IP	Weight [g]	Packaging [pcs]
O - 41	004600190	41	25	1
O - 55	004600200	55	25	1
CP - 41	004600210	41	20	1
CP - 55	004600220	55	20	1



O-IP41/55



CP-IP41/55

Emergency stop push-button



Emergency stop push-button

Type	Code No.	Weight [g]	Packaging [pcs]
NAT	004600270	15	1/20
NAT-lock	004600280	20	1/20

Padlocking feature Z



Padlocking feature Z

Type	Code No.	Weight [g]	Packaging [pcs]
Z	004600260	30	1/10

Neutral link NL



Neutral link NL

Type	Code No.	Weight [g]	Packaging [pcs]
NL	004600330	10	1/10

Signal lamp SS



Signal lamp SS

Type	Code No.	Colour	Weight [g]	Packaging [pcs]
SS B 400V	004600230	white	10	1/10
SS R 400V	004600240	red	10	1/10
SS Z 400V	004600250	green	10	1/10