

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 breaker MSP

Technical data		according to IEC 60947-1; IEC 60947-2; IEC 60947-4-1							
Type		MSP0				MSP1			
General data									
Number of poles		3				3			
Max. rated current I_n									
• motor protection	A	25				52			
Permissible ambient temperature									
• at full rated current	°C	-20 ... +55							
• in storage	°C	-50 ... +80							
Rated operational voltage U_e	V	690							
Rated frequency	Hz	50/60							
Rated insulation voltage U_i	V	750							
Rated impulse withstand voltage U_{imp}	kV	6							
Utilization category									
• to IEC 60947-2 (motor starter protectors)		A							
• to IEC 60947-4-1 (motor starters)		AC-3							
Mechanical endurance									
• up to 25 A	Operating cycles	100000				100000			
• 25 A upwards		--				30000			
Number of operating cycles/h (on load)	1/h	25				25			
Degree of protection with open terminals/with conductors connected		IP00/IP20							
Temperatures compensation to IEC 60947-4-1		✓							
Phase failure sensitivity to IEC 60947-4-1		✓							
Power loss P_v per breaker									
I_n	A	0,6	4	6	25	2,4	6	25	63
P_v	W	5	6	7	9	8	7	14	23

Auxiliary contacts				
Utilization category		AC-15		
Rated operational voltage U_e	ACV	230	400	500
Rated operational current I_e	A	3	1.5	1
Utilization category		DC-13		
Rated operational voltage U_e DC L/R200 ms	DCV	24	60	220
Rated operational current I_e	A	2.3	0.7	0.3

Type		MSP0		MSP1	
Cross-section for main conductors					
Solid or stranded	mm ²	2 x (1 ... 6)		1 x 1.5 ... 2 x 16 or 1 x 25 + 1 x 10	
Finely stranded with end sleeve	mm ²	2 x (1 ... 4)		1 x 1.5 ... 2 x 10 or 1 x 16 + 1 x 10	
Cross-sections for auxiliary and control connecting leads					
Solid or stranded	mm ²	1 x 0.5 ... 2 x 2.5		--	
Finely stranded with end sleeve	mm ²	1 x 0.5 ... 2 x 1.5		--	

Rated short-circuit breaking capacity

The table shows the rated ultimate short-circuit breaking capacity

I_{cu} and the rated service short-circuit breaking capacity I_{cs} for the MSP motor starter protectors with respect to rated current I_n and rated operational voltage U_e .

Infeed is permitted at top or bottom without reduction of rated data. In the short-circuit proof areas, I_{cu} is at least 100 kA. A backup fuse is therefore not necessary.

In the other areas, when the short-circuit current at the installation point exceeds the rated short-circuit breaking capacity given in the table for the motor starter protectors, the motor starter protector must be protected by a backup fuse. See the following table for the maximum rated current for the backup fuse. With a backup fuse according to the table, the maximum short-circuit current is permitted to equal the rated breaking capacity of the backup fuse.