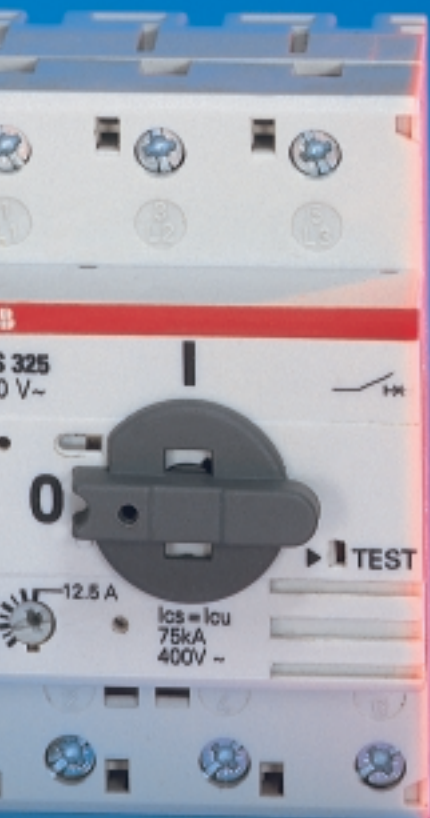




MS 325, MS 450, MS 495, MS 497 Manual Motor Starters



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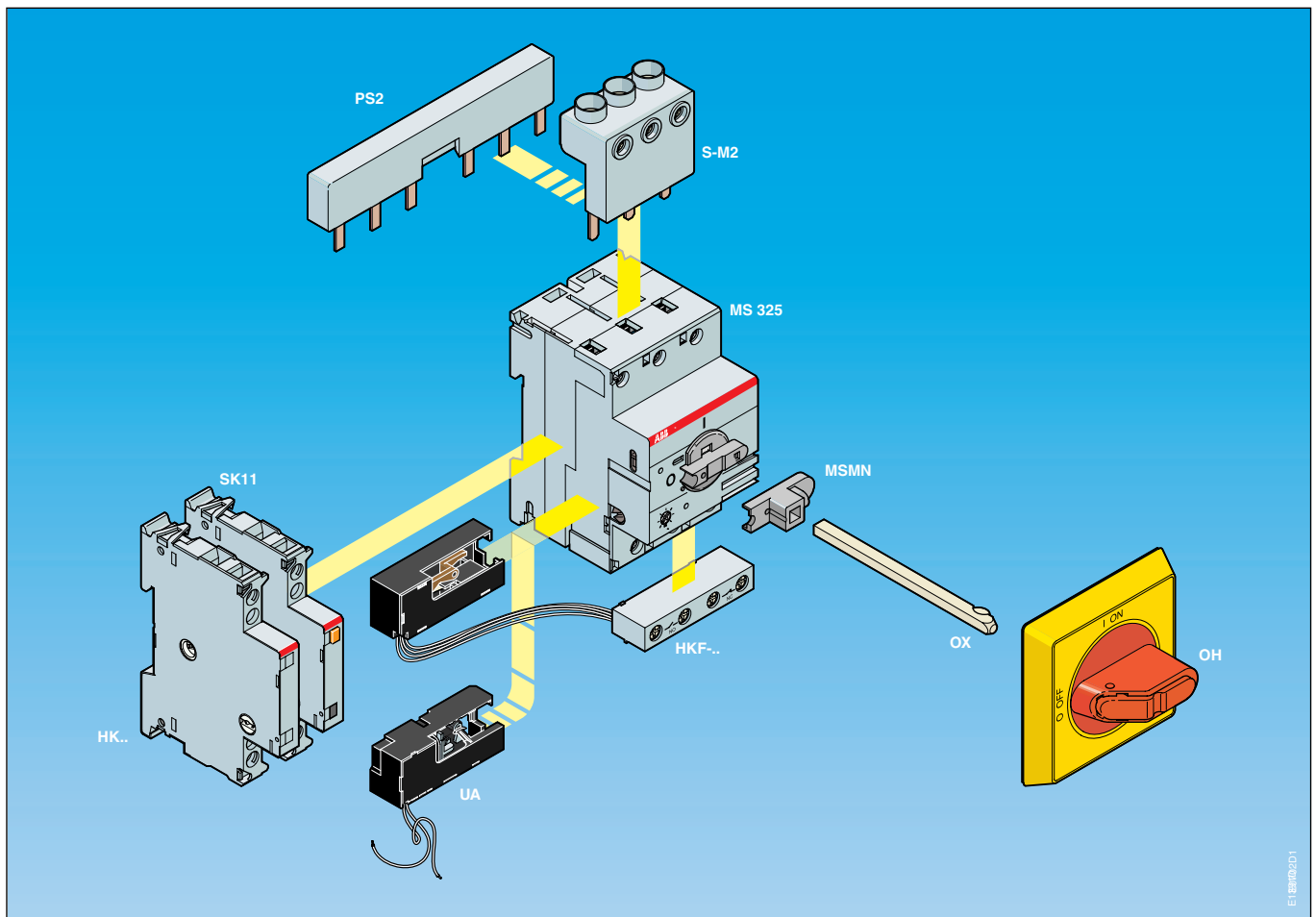
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MS 325 Manual Motor Starters

Ordering Details



Setting range A	Type	Order code	Pack ^{ing} Piece	Weight kg
0.1 ... 0.16	MS 325 - 0.16	1SAM 15 0000 R0001	1	0.347
0.16 ... 0.25	MS 325 - 0.25	1SAM 15 0000 R0002	1	0.347
0.25 ... 0.4	MS 325 - 0.4	1SAM 15 0000 R0003	1	0.347
0.4 ... 0.63	MS 325 - 0.63	1SAM 15 0000 R0004	1	0.347
0.63 ... 1.0	MS 325 - 1.0	1SAM 15 0000 R0005	1	0.347
1.0 ... 1.6	MS 325 - 1.6	1SAM 15 0000 R0006	1	0.347
1.6 ... 2.5	MS 325 - 2.5	1SAM 15 0000 R0007	1	0.347
2.5 ... 4.0	MS 325 - 4.0	1SAM 15 0000 R0008	1	0.347
4.0 ... 6.3	MS 325 - 6.3	1SAM 15 0000 R0009	1	0.347
6.3 ... 9.0	MS 325 - 9.0	1SAM 15 0000 R0010	1	0.347
9.0 ... 12.5	MS 325 - 12.5	1SAM 15 0000 R0011	1	0.347
12.5 ... 16.0	MS 325 - 16.0	1SAM 15 0000 R0012	1	0.347
16.0 ... 20.0	MS 325 - 20.0	1SAM 15 0000 R0013	1	0.347
20.0 ... 25.0	MS 325 - 25.0	1SAM 15 0000 R0014	1	0.347



Accessories for MS 325 Manual Motor Starters

Ordering Details



Auxiliary Contacts

(The pilot contact has be mounted first on MS 325)

Mounting	Feature	Contacts	Type	Order code	Pack ^{ing} piece	Weight kg
Left side	Auxiliary contact	1 1	HK-11	1SAM 101 901 R0001	10	0.031
		2 -	HK-20	1SAM 101 901 R0002	10	0.031
		- 2	HK-02	1SAM 101 901 R0003	10	0.031
(2 sets maxi)	Pilot contact	1 -	SK-10	1SAM 101 904 R0001	10	0.031
		- 1	SK-01	1SAM 101 904 R0002	10	0.031
Front face	Auxiliary contact	1 1	HKF-11	1SAM 101 928 R0001	10	0.020
		2 -	HKF-20	1SAM 101 928 R0002	10	0.020

Under Voltage Trip

Mounting	Voltage control V (50/60 Hz)	Type	Order code	Pack ^{ing} piece	Weight kg
Left side	24	UA 24	1SAM 101 903 R0024	10	0.020
	48	UA 48	1SAM 101 903 R0048	10	0.020
	60	UA 60	1SAM 101 903 R0060	10	0.020
Not compatible with auxiliary contact in front face.	110	UA 110	1SAM 101 903 R0110	10	0.020
	230	UA 230	1SAM 101 903 R0230	10	0.020
	400	UA 400	1SAM 101 903 R0400	10	0.020
	415	UA 415	1SAM 101 903 R0415	10	0.020
	500	UA 500	1SAM 101 903 R0500	10	0.020

Moulded Plastic Enclosure IP 65 with N and PE terminal - 1HK or 1 SK mountable

Design	Color	Order code	Pack ^{ing} piece	Weight kg
Twist knob, triple lockable		1SCA 022 503 R1460	1	0.253
		1SCA 022 503 R1380	1	0.253

Switch Cubicle Mounting Kit IP 65

with axial extension, lockable in OFF Position, locked in OFF position

Design	Color	Type	Order code	Pack ^{ing} piece	Weight kg
Grip black		OHB 2AJM	1SCA 022 384 R6940	1	
Grip red / yellow		OHY 2AJM	1SCA 022 384 R7080	1	
Axis 85 mm		OXS 5x85	1SCA 022 347 R3570	1	0.030
Axis 105 mm		OXS 5x105	1SCA 022 347 R3650	1	0.030
Axis 130 mm		OXS 5x130	1SCA 022 353 R4540	1	0.030
Axis 180 mm		OXS 5x180	1SCA 022 353 R4620	1	0.030
Driver (1)		MSMN	1SAM 101 923 R0001	1	
Driver spindle 32 mm (2)		MSOX	1SAM 101 924 R0001	1	

(1) For accommodating spindle and attachment to manual motor starter.

(2) Is screwed directly onto the manual motor starter.

Door Mounting Kit IP 65

Design	Color	Order code	Pack ^{ing} piece	Weight kg
Twist knob, lockable, with PE Terminal		1SAM 101 152 R0003	1	0.169
		1SAM 101 152 R0004	1	0.169

Accessories for MS 325 Manual Motor Starters

Ordering Details



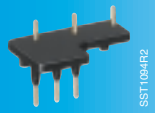
S-M2



PS4
for 4 MS 325 + 2 auxiliary contacts



PS2
for 2 MS 325 + 2 auxiliary contacts



DAB6

Power Infeed Blocks, 63 A, 690 V - Stranded cable 25 mm², flexible cable 16 mm²

Design	Type	Order code	Pack ^{ing} piece	Weight kg
Flat block	S-M1	1SAM 101 906 R0001	10	0.036
High block	S-M2	1SAM 101 906 R0002	10	0.040

Phase Buses for Cross Wiring, 63 A, 690 V

Design	Type	Référence	Pack ^{ing} piece	Weight kg
For 2 MS 325 without auxiliary contact	PS2	1SAM 101 907 R0001	10	0.032
For 2 MS 325 + 1 auxiliary contact	PS2	1SAM 101 907 R0002	10	0.036
For 2 MS 325 + 2 auxiliary contacts	PS2	1SAM 101 907 R0003	10	0.038
For 4 MS 325 without auxiliary contact	PS4	1SAM 101 907 R0004	10	0.070
For 4 MS 325 + 1 auxiliary contact	PS4	1SAM 101 907 R0005	10	0.085
For 4 MS 325 + 2 auxiliary contacts	PS4	1SAM 101 907 R0006	10	0.090

Direct Adapters for MS325 / Mini Contactors

Design	Type	Order code	Pack ^{ing} piece	Weight kg
For direct connection to B 6/B 7	DAB6	1SAM 101 910 R0001	10	0.010
For direct connection to VB 6/VB 7	DAVB6	1SAM 101 911 R0001	10	0.010

Function Marker

Design	Order code	Pack ^{ing} piece	Weight kg
Transparent cover	1SAM 101 935 R0001	10	0.004
Designation labels (160 pieces)	1SAM 101 935 R0002	1 set	0.008

MS 325 Manual Motor Starters

Technical Data

MS 325 Manual Motor Starters



Types

MS 325-0.16 to MS 325-9.0	MS325-12.5 to MS 325-25.0
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Setting range	A	0.1 ... 0.16 0.16 ... 0.25 0.25 ... 0.4 0.4 ... 0.63 0.63 ... 1.0	1.0 ... 1.6 1.6 ... 2.5 2.5 ... 4.0 4.0 ... 6.3 6.3 ... 9.0	9.0 ... 12.5 12.5 ... 16.0 16.0 ... 20.0 20.0 ... 25.0
Rated short-circuit breaking capacity 380 / 400 V	I_{cu} kA		100	50
Rated service short-circuit breaking capacity	I_{cs} = % I_{cu}		100	100
Connecting capacity main circuit				
Rigid solid	1 x mm²		1 ... 10	
Rigid stranded	1 x mm²		1 ... 10	
Flexible without cable end	1 x mm²		1 ... 6	
Auxiliary circuit				
Rigid solid	1 x mm²		0.5 ... 2.5	
	2 x mm²		0.5 ... 2.5	
Degree of protection			IP 20	
Temperature compensation			- 25 °C ... + 50 °C	
Phase failure sensitivity			yes	

MS 450 - MS 495 - MS 497 Manual Motor Starters

Ordering Details

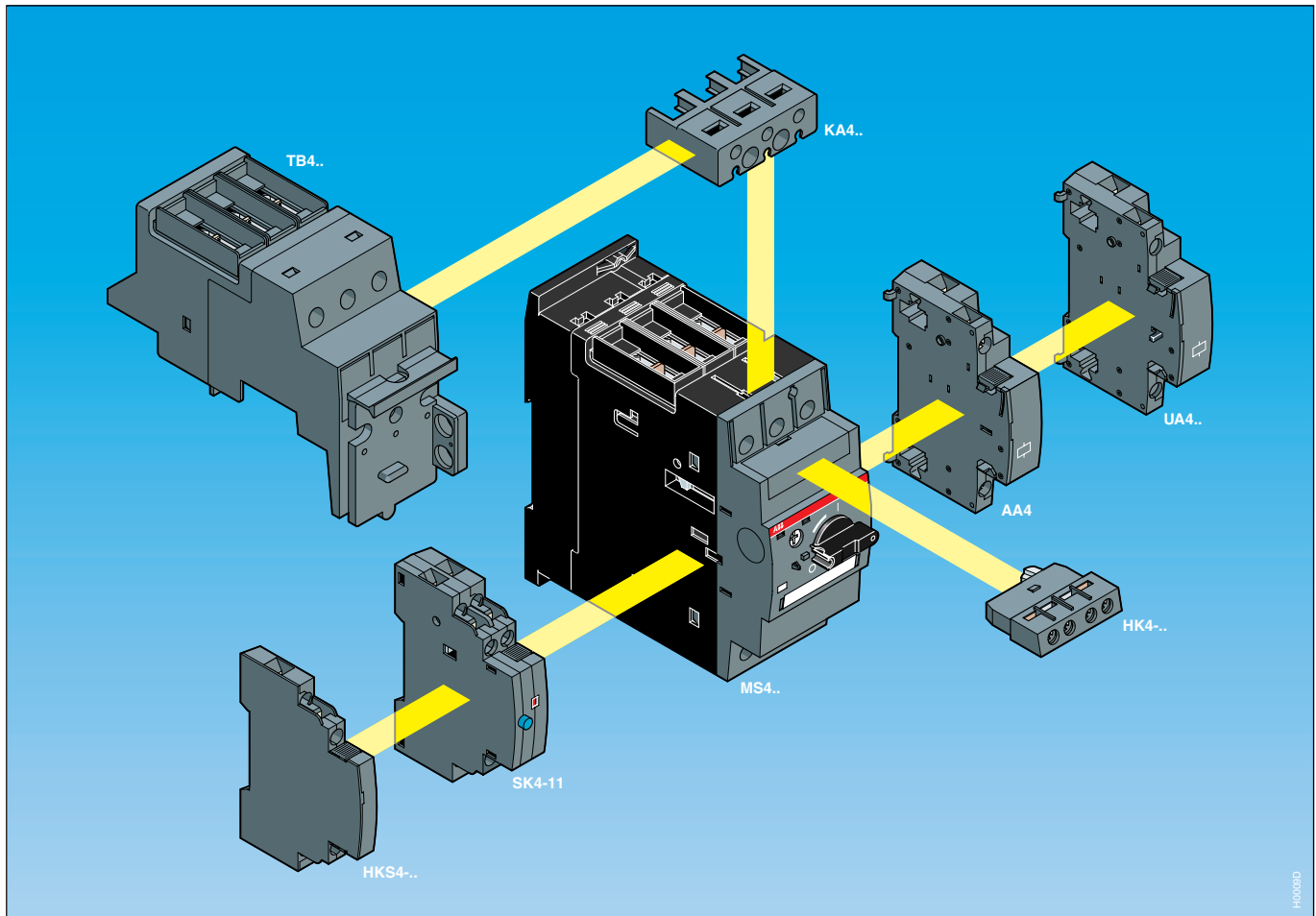


MS 450 Manual Motor Starter

Setting range A	Breaking capacity I_{cu} (400 V) kA	Type	Order code	Pack ^{ing} piece	Weight kg
11 ... 16	50	MS 450 - 16	1SAM 450 000 R1001	1	0.960
14 ... 20	50	MS 450 - 20	1SAM 450 000 R1002	1	0.960
18 ... 25	50	MS 450 - 25	1SAM 450 000 R1003	1	0.960
22 ... 32	50	MS 450 - 32	1SAM 450 000 R1004	1	0.960
28 ... 40	50	MS 450 - 40	1SAM 450 000 R1005	1	0.960
36 ... 45	50	MS 450 - 45	1SAM 450 000 R1006	1	0.960
40 ... 50	50	MS 450 - 50	1SAM 450 000 R1007	1	0.960

MS 495 Manual Motor Starters

28 ... 40	50	MS 495 - 40	1SAM 550 000 R1005	1	2.100
36 ... 50	50	MS 495 - 50	1SAM 550 000 R1006	1	2.100
45 ... 63	50	MS 495 - 63	1SAM 550 000 R1007	1	2.100
57 ... 75	50	MS 495 - 75	1SAM 550 000 R1008	1	2.100
70 ... 90	50	MS 495 - 90	1SAM 550 000 R1009	1	2.100
80 ... 100	50	MS 495 - 100	1SAM 550 000 R1010	1	2.100



Accessories for MS 450 - MS 495 - MS 497 Manual Motor Starters

Ordering Details



MS 497 Manual Motor Starters

Setting range A	Breaking capacity I _{cu} (400 V) kA	Type	Order code	Pack ^{ing} piece	Weight kg
11 ... 16	100	MS 497 - 16	1SAM 580 000 R1001	1	2.1
14 ... 20	100	MS 497 - 20	1SAM 580 000 R1002	1	2.1
18 ... 25	100	MS 497 - 25	1SAM 580 000 R1003	1	2.1
22 ... 32	100	MS 497 - 32	1SAM 580 000 R1004	1	2.1
28 ... 40	100	MS 497 - 40	1SAM 580 000 R1005	1	2.1
36 ... 50	100	MS 497 - 50	1SAM 580 000 R1006	1	2.1
45 ... 63	100	MS 497 - 63	1SAM 580 000 R1007	1	2.1
57 ... 75	100	MS 497 - 75	1SAM 580 000 R1008	1	2.1
70 ... 90	100	MS 497 - 90	1SAM 580 000 R1009	1	2.1
80 ... 100	100	MS 497 - 100	1SAM 580 000 R1010	1	2.1

Auxiliary Contacts

(The pilot contact has be mounted first on the MMS)

Mounting	Feature	Contacts	Type	Order code	Pack ^{ing} piece	Weight kg
Left side (2 sets maxi.)	Auxiliary contact	1 1	HKS4-11	1SAM 401 902 R1001	2	0.03
		2 0	HKS4-20	1SAM 401 902 R1002	2	0.03
		0 2	HKS4-02	1SAM 401 902 R1003	2	0.03
	Pilot contact	1 1	SK4-11	1SAM 401 904 R1001	1	0.07
Front	Auxiliary contact	1 1	HK4-11	1SAM 401 901 R1001	10	0.02
		1	HK4-W	1SAM 401 901 R1002	10	0.02

Under Voltage Trip

Mounting	Voltage control V (50 Hz)	Type	Order code	Pack ^{ing} piece	Weight kg
Left side	24	UA4 - 24	1SAM 401 905 R1004	1	0.12
	110	UA4 - 110	1SAM 401 905 R1001	1	0.12
	230	UA4 - 230	1SAM 401 905 R1002	1	0.12
	400	UA4 - 400	1SAM 401 905 R1003	1	0.12
Right side with aux. contacts	230	UA4 - HK - 230	1SAM 401 906 R1001	1	0.12
	400	UA4 - HK - 400	1SAM 401 906 R1002	1	0.12

Current Emission Trip

Mounting	Voltage control V (50/60 Hz / DC)	Type	Order code	Pack ^{ing} piece	Weight kg
Right side	(20 ... 70)	AA4 - 24	1SAM 401 907 R1001	1	0.11
	(70 ... 190)	AA4 - 110	1SAM 401 907 R1002	1	0.11
	(190 ... 230)	AA4 - 230	1SAM 401 907 R1003	1	0.11
	(230 ... 500)	AA4 - 400	1SAM 401 907 R1004	1	0.11

Terminal Shrouds

Description	Type	Order code	Pack ^{ing} piece	Weight kg
For MS 450	KA 450	1SAM 401 908 R1001	1	0.01
For MS 49x	KA 495	1SAM 501 901 R1001	1	0.01
For MS 49x, lugs or terminals connect.	KA 495 C	1SAM 501 902 R1001	1	0.03

Sealed Protection for Settings and Isolation Blocks

Description	Type	Order code	Pack ^{ing} piece	Weight kg
Sealed protection for MS 450	SA 450	1SAM 401 909 R1001	1	0.007
Isolation blocks	TB 450	1SAM 401 910 R1001	1	0.300

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MS 450 - 495 - 497 Manual Motor Starters

Technical Data

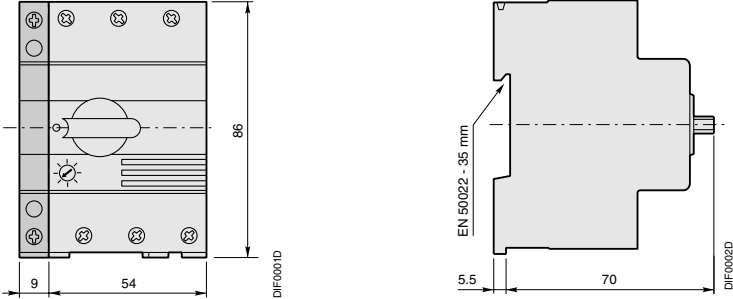
MS 450 - 495 - 497 Manual Motor Starters



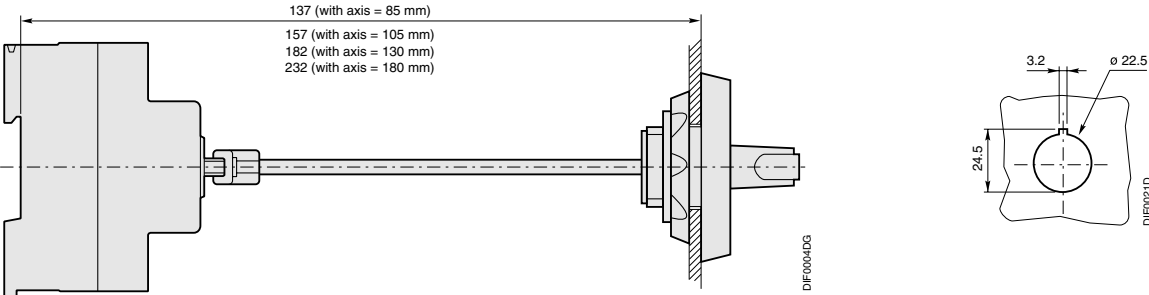
Types		MS 450	MS 495	MS 497	
Setting range	A	11 ... 16 14 ... 20 18 ... 25 22 ... 32 28 ... 40	36 ... 45 40 ... 50	28 ... 40 36 ... 50 45 ... 63 57 ... 75 70 ... 90 80 ... 100	11 ... 16 14 ... 20 18 ... 25 22 ... 32 28 ... 40 36 ... 50
Rated short-circuit breaking capacity 380 / 400 V	I_{cu} kA	50	50	100	
Rated service short-circuit breaking capacity	I_{cs} = % I_{cu}	50	50	100	
Connecting capacity main circuit					
Rigid solid	1 x mm²	0.75 ... 35	2.5 ... 70	2.5 ... 70	
	2 x mm²	0.75 ... 25	2.5 ... 50	2.5 ... 50	
Rigid stranded	1 x mm²	0.75 ... 35	2.5 ... 70	2.5 ... 70	
	2 x mm²	0.75 ... 25	2.5 ... 50	2.5 ... 50	
Flexible without cable end	1 x mm²	0.75 ... 25	2.5 ... 50	2.5 ... 50	
	2 x mm²	0.75 ... 16	2.5 ... 35	2.5 ... 35	
Auxiliary circuit					
Rigid solid	1 x mm²	0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5	
	2 x mm²	0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5	
Temperature compensation			yes		
Air temperature maxi.					
Open	°C		-20 ... + 60		
Enclosed	°C		-20 ... + 35		
Storage	°C		-50 ... + 80		
Phase failure sensitivity			yes		

MS 325 Manual Motor Starters

Dimensions (in mm)



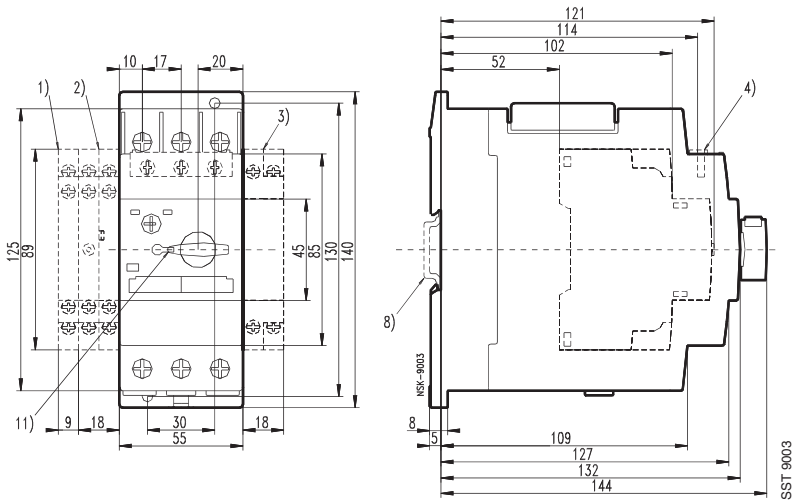
MS 325 + SK or HK (maximum mounting: 2 blocks)



Door mounting kit

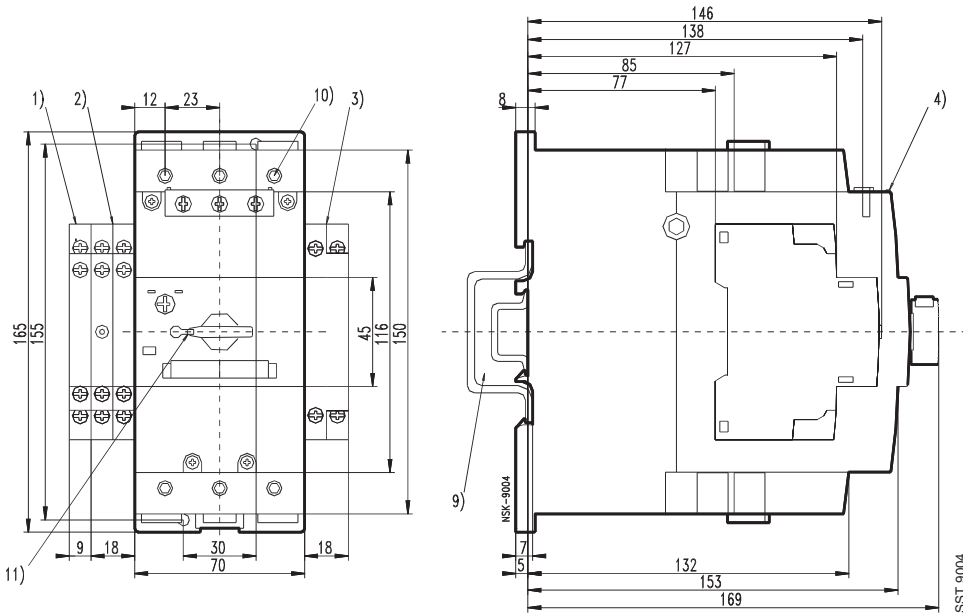
MS 450 - 495 - 497 Manual Motor Starters

Dimensions (in mm)



- ① HK S4 auxiliary contact
- ② SK4 pilot contact
- ③ AA4 - UA4 under or emission trip
- ④ HK4 auxiliary contact
- ⑧ 35 mm DIN rail, EN 50022
- ⑨ 35 mm DIN rail, EN 50022 + 15 mm
- ⑪ Twist knob in stop position

MS 450



MS 495 - 497

Notes

