



## Coordinated protections of motor Starters

Direct-on-line starter Normal start with Miniature Circuit Breaker  
690 V, 6 kA, 50/60 Hz, AC-3, EN/IEC 60947-4-1, type 1

Rated Output [kW]	Motor		Miniature Circuit-Breaker			Limiter	Contactor		Overload Relay		Max allowed setting current [A]
	Rated Current [A]	Type	Rated Current [A]	Magnetic trip Current [A]	Type		Type	Current setting range [A]	Trip Class		
0.09	0.17	MO325-0,25	0.25	2.44	A9	TA25DU0,25	0,16 - 0,25	10	0.25		
0.12	0.23	MO325-0,25	0.25	2.44	A9	TA25DU0,25	0,16 - 0,25	10	0.25		
0.18	0.35	MO325-0,40	0.40	3.9	A9	TA25DU0,40	0,25 - 0,4	10	0.40		
0.25	0.49	MO325-0,63	0.63	6.14	A9	TA25DU0,63	0,4 - 0,63	10	0.63		
0.37	0.64	MO325-1,00	1	11.5	A9	TA25DU1,0	0,63 - 1,0	10	1		
0.55	0.87	MO325-1,00	1	11.5	A9	TA25DU1,0	0,63 - 1,0	10	1		
0.75	1.1	MO325-1,60	1.6	11.5	A9	TA25DU1,4	1,0 - 1,4	10	1.35		
1.1	1.6	MO325-2,50	2.5	27.5	A9	TA25DU1,8	1,3 - 1,8	10	1.75		
1.5	2.1	MO325-2,50	2.5	27.5	A9	TA25DU2,4	1,7 - 2,4	10	2.35		
2.2	2.8	MO325-4,00	4	40	A9	TA25DU3,1	2,2 - 3,1	10	2.95		
2.5	3.3	MO325-4,00	4	40	A9	TA25DU4,0	2,8 - 4,0	10	3.75		
3	3.8	MO325-4,00	4	40	A9	TA25DU4,0	2,8 - 4,0	10	3.75		
3.7	4.4	MO325-6,3	6.3	78.7	A9	TA25DU5,0	3,5 - 5	10	4.75		
4	4.9	MO325-6,3	6.3	78.7	A9	TA25DU6,5	4,5 - 6,5	10	6.25		
5	6	MO325-6,3	6.3	78.7	A9	TA25DU6,5	4,5 - 6,5	10	6.25		
5.5	6.7	MO325-9	9	135	A12	TA25DU8,5	6 - 8,5	10	8.25		
6.5	8.1	MO325-9	9	135	A12	TA25DU8,5	6 - 8,5	10	8.25		
7.5	8.9	MO325-12,5	12.5	187.5	A26	TA25DU11	7,5 - 11	10	10.5		
8	9.7	MO325-12,5	12.5	187.5	A26	TA25DU11	7,5 - 11	10	10.5		
9	10.6	MO325-12,5	12.5	187.5	A26	TA25DU14	10 - 14	10	12.5		
11	12.8	MO325-16,0	16	240	A26	TA25DU14	10 - 14	10	13.5		
12.5	15	S803S-KM32	16	240	A26	TA25DU19	13 - 19	10	16.0		
15	17	S803S-KM32	20	300	A30	TA25DU19	13 - 19	10	18.5		
18.5	21	S803S-KM32	25	375	A40	TA25DU25	18 - 25	10	24.5		
20	23	S803S-KM32	25	375	A40	TA25DU25	18 - 25	10	24.5		
22	24	S803S-KM32	32	416	A40	TA25DU25	18 - 25	10	24.5		
25	28	S803S-KM32	32	416	A40	TA25DU32	24 - 32	10	30.5		
30	32	S803S-KM40	40	520	A50	TA75DU42	29 - 42	10	35		
37	39	S803S-KM50	50	650	A63	TA75DU42	29 - 42	10	39		
40	44	S803S-KM50	50	650	A75	TA75DU52	36 - 52	10	46		
45	47	S803S-KM63	63	819	A75	TA75DU63	45 - 63	10	52		
55	57	S803S-KM63	63	819	A75	TA75DU63	45 - 63	10	63		



## Coordinated protections of motor Starters

Direct-on-line starter Normal start with Miniature Circuit Breaker  
690 V, 6 kA, 50/60 Hz, AC-3, EN/IEC 60947-4-1, type 2

Rated Output [kW]	Motor		Miniature Circuit-Breaker			Contactor		Overload Relay		Max allowed setting current [A]
	Rated Current [A]	Type	Rated Current [A]	Magnetic trip Current [A]	Limiter	Type	Type	Current setting range [A]	Trip Class	
0.09	0.17	MO325-0,25	0.25	2.44		A9	TA25DU0,25	0,16 - 0,25	10	0.25
0.12	0.23	MO325-0,25	0.25	2.44		A9	TA25DU0,25	0,16 - 0,25	10	0.25
0.18	0.35	MO325-0,40	0.40	3.9		A9	TA25DU0,40	0,25 - 0,4	10	0.40
0.25	0.49	MO325-0,63	0.63	6.14		A9	TA25DU0,63	0,4 - 0,63	10	0.63
0.37	0.64	MO325-1,00	1	11.5		A9	TA25DU1,0	0,63 - 1,0	10	1
0.55	0.87	MO325-1,00	1	11.5		A9	TA25DU1,0	0,63 - 1,0	10	1
0.75	1.1	MO325-1,60	1.6	11.5		A9	TA25DU1,4	1,0 - 1,4	10	1.35
1.1	1.6	MO325-2,50	2.5	27.5		A9	TA25DU1,8	1,3 - 1,8	10	1.75
1.5	2.1	MO325-2,50	2.5	27.5		A9	TA25DU2,4	1,7 - 2,4	10	2.35
2.2	2.8	MO325-4,00	4	40		A9	TA25DU3,1	2,2 - 3,1	10	2.95
2.5	3.3	MO325-4,00	4	40		A9	TA25DU4,0	2,8 - 4,0	10	3.75
3	3.8	MO325-4,00	4	40		A9	TA25DU4,0	2,8 - 4,0	10	3.75
3.7	4.4	MO325-6,3	6.3	78.7		A9	TA25DU5,0	3,5 - 5	10	4.75
4	4.9	MO325-6,3	6.3	78.7		A9	TA25DU6,5	4,5 - 6,5	10	6.25
5	6	MO325-6,3	6.3	78.7		A9	TA25DU6,5	4,5 - 6,5	10	6.25
5.5	6.7	MO325-9	9	135		A12	TA25DU8,5	6 - 8,5	10	8.25
6.5	8.1	MO325-9	9	135		A12	TA25DU8,5	6 - 8,5	10	8.25
7.5	8.9	MO325-12,5	12.5	187.5		A26	TA25DU11	7,5 - 11	10	10.5
8	9.7	MO325-12,5	12.5	187.5		A26	TA25DU11	7,5 - 11	10	10.5
9	10.6	MO325-12,5	12.5	187.5		A26	TA25DU14	10 - 14	10	12.5
11	12.8	MO325-16,0	16	240		A26	TA25DU14	10 - 14	10	13.5
11	12.8	MO325-16,0	16	240		A26	TA25DU14	10 - 14	10	13.5
12.5	15	MO325-16,0	16	240		A26	TA25DU19	13 - 19	10	16.0
15	17	MO325-20,0	20	300		A30	TA25DU19	13 - 19	10	18.5
18.5	21	MO325-25	25	375		A40	TA25DU25	18 - 25	10	24.5
20	23	MO325-25	25	375		A40	TA25DU25	18 - 25	10	24.5
22	24	S803S-KM32	32	416		A40	TA25DU25	18 - 25	10	24.5
25	28	S803S-KM32	32	416		A40	TA25DU32	24 - 32	10	30.5
30	32	S803S-KM40	40	520		A50	TA75DU42	29 - 42	10	35
37	39	S803S-KM50	50	650		A63	TA75DU42	29 - 42	10	39
40	44	S803S-KM50	50	650		A75	TA75DU52	36 - 52	10	46
45	47	S803S-KM63	63	819		A75	TA75DU63	45 - 63	10	52
55	57	S803S-KM63	63	819		A75	TA75DU63	45 - 63	10	63



## Coordinated protections of motor Starters

Direct-on-line starter Normal start with Miniature Circuit Breaker  
690 V, 6 kA, 50/60 Hz, AC-3, EN/IEC 60947-4-1, type 1

Rated Output [kW]	Motor		Miniature Circuit-Breaker			Limiter	Contactor		Overload Relay		Max allowed setting current [A]
	Rated Current [A]	Type	Rated Current [A]	Magnetic trip Current [A]	Type		Type	Current setting range [A]	Trip Class		
0.09	0.17	MO325-0,25	0.25	2.44	A9	E16DU0,32	0,1 - 0,32	10	0.25		
0.12	0.23	MO325-0,25	0.25	2.44	A9	E16DU0,32	0,1 - 0,32	10	0.32		
0.18	0.35	MO325-0,40	0.40	3.9	A9	E16DU1,0	0,3 - 1,0	10	0.36		
0.25	0.49	MO325-0,63	0.63	6.14	A9	E16DU1,0	0,3 - 1,0	10	0.57		
0.37	0.64	MO325-1,00	1	11.5	A9	E16DU1,0	0,3 - 1,0	10	0.9		
0.55	0.87	MO325-1,00	1	11.5	A9	E16DU1,0	0,3 - 1,0	10	0.9		
0.75	1.1	MO325-1,60	1.6	11.5	A9	E16DU2,7	0,9 - 2,7	10	1.45		
1.1	1.6	MO325-2,50	2.5	27.5	A9	E16DU2,7	0,9 - 2,7	10	2.2		
1.5	2.1	MO325-2,50	2.5	27.5	A9	E16DU2,7	0,9 - 2,7	10	2.2		
2.2	2.8	MO325-4,00	4	40	A9	E16DU6,3	2 - 6,3	10	3.5		
2.5	3.3	MO325-4,00	4	40	A9	E16DU6,3	2 - 6,3	10	3.5		
3	3.8	MO325-4,00	4	40	A9	E16DU6,3	2 - 6,3	10	3.8		
3.7	4.4	MO325-6,3	6.3	78.7	A9	E16DU6,3	2 - 6,3	10	5.4		
4	4.9	MO325-6,3	6.3	78.7	A9	E16DU6,3	2 - 6,3	10	5.4		
5	6	MO325-6,3	6.3	78.7	A12	E16DU18,9	5,7 - 18,9	10	6.3		
5.5	6.7	MO325-9	9	135	A12	E16DU18,9	5,7 - 18,9	10	7.5		
6.5	8.1	MO325-9	9	135	A26	E16DU18,9	5,7 - 18,9	10	10		
7.5	8.9	MO325-12,5	12.5	187.5	A16	E16DU18,9	5,7 - 18,9	10	10		
8	9.7	MO325-12,5	12.5	187.5	A26	E16DU18,9	5,7 - 18,9	10	10		
9	10.6	MO325-12,5	12.5	187.5	A26	E16DU18,9	5,7 - 18,9	10	14		
11	12.8	MO325-16,0	16	240	A26	E16DU18,9	5,7 - 18,9	10	14		
12.5	15	MO325-16,0	16	240	A26	E16DU18,9	5,7 - 18,9	10	16.0		
15	17	S803S-KM32	20	300	A26	E45DU30	9 - 30	10	18.5		
18.5	21	S803S-KM32	25	375	A30	E45DU30	9 - 30	10	24.5		
20	23	S803S-KM32	25	375	A40	E45DU45	15 - 45	10	24.5		
22	24	S803S-KM32	32	416	A40	E45DU45	15 - 45	10	24.5		
25	28	S803S-KM32	32	416	A40	E45DU45	15 - 45	10	30.5		
30	32	S803S-KM40	40	520	A40	E45DU45	15 - 45	10	35		
37	39	S803S-KM50	50	650	A63	E80DU80	27 - 80	10	39		
40	44	S803S-KM50	50	650	A75	E80DU80	27 - 80	10	46		
45	47	S803S-KM63	63	819	A75	E80DU80	27 - 80	10	48.5		
55	57	S803S-KM63	63	819	A75	E80DU80	27 - 80	10	61.5		



## Coordinated protections of motor Starters

Direct-on-line starter Normal start with Miniature Circuit Breaker  
690 V, 6 kA, 50/60 Hz, AC-3, EN/IEC 60947-4-1, type 2

Rated Output [kW]	Motor		Miniature Circuit-Breaker			Contactor		Overload Relay		Max allowed setting current [A]
	Rated Current [A]	Type	Rated Current [A]	Magnetic trip Current [A]	Limiter	Type	Type	Current setting range [A]	Trip Class	
0.09	0.17	MO325-0,25	0.25	2.44		A9	E16DU0,32	0,1 - 0,32	10	0.25
0.12	0.23	MO325-0,25	0.25	2.44		A9	E16DU0,32	0,1 - 0,32	10	0.32
0.18	0.35	MO325-0,40	0.40	3.9		A9	E16DU1,0	0,3 - 1,0	10	0.36
0.25	0.49	MO325-0,63	0.63	6.14		A9	E16DU1,0	0,3 - 1,0	10	0.57
0.37	0.64	MO325-1,00	1	11.5		A9	E16DU1,0	0,3 - 1,0	10	0.9
0.55	0.87	MO325-1,00	1	11.5		A9	E16DU1,0	0,3 - 1,0	10	0.9
0.75	1.1	MO325-1,60	1.6	11.5		A9	E16DU2,7	0,9 - 2,7	10	1.45
1.1	1.6	MO325-2,50	2.5	27.5		A9	E16DU2,7	0,9 - 2,7	10	2.2
1.5	2.1	MO325-2,50	2.5	27.5		A9	E16DU2,7	0,9 - 2,7	10	2.2
2.2	2.8	MO325-4,00	4	40		A9	E16DU6,3	2 - 6,3	10	3.5
2.5	3.3	MO325-4,00	4	40		A9	E16DU6,3	2 - 6,3	10	3.5
3	3.8	MO325-4,00	4	40		A9	E16DU6,3	2 - 6,3	10	3.8
3.7	4.4	MO325-6,3	6.3	78.7		A9	E16DU6,3	2 - 6,3	10	5.4
4	4.9	MO325-6,3	6.3	78.7		A9	E16DU6,3	2 - 6,3	10	5.4
5	6	MO325-6,3	6.3	78.7		A12	E16DU18,9	5,7 - 18,9	10	6.3
5.5	6.7	MO325-9	9	135		A12	E16DU18,9	5,7 - 18,9	10	7.5
6.5	8.1	MO325-9	9	135		A26	E16DU18,9	5,7 - 18,9	10	10
7.5	8.9	MO325-12,5	12.5	187.5		A16	E16DU18,9	5,7 - 18,9	10	10
8	9.7	MO325-12,5	12.5	187.5		A26	E16DU18,9	5,7 - 18,9	10	10
9	10.6	MO325-12,5	12.5	187.5		A26	E16DU18,9	5,7 - 18,9	10	14
11	12.8	MO325-16,0	16	240		A26	E16DU18,9	5,7 - 18,9	10	14
12.5	15	MO325-16,0	16	240		A26	E16DU18,9	5,7 - 18,9	10	16.0
15	17	S803S-KM32	20	300		A26	E45DU30	9 - 30	10	18.5
18.5	21	S803S-KM32	25	375		A30	E45DU30	9 - 30	10	24.5
20	23	S803S-KM32	25	375		A40	E45DU45	15 - 45	10	24.5
22	24	S803S-KM32	32	416		A40	E45DU45	15 - 45	10	24.5
25	28	S803S-KM32	32	416		A40	E45DU45	15 - 45	10	30.5
30	32	S803S-KM40	40	520		A40	E45DU45	15 - 45	10	35
37	39	S803S-KM50	50	650		A63	E80DU80	27 - 80	10	39
40	44	S803S-KM50	50	650		A75	E80DU80	27 - 80	10	46
45	47	S803S-KM63	63	819		A75	E80DU80	27 - 80	10	48.5
55	57	S803S-KM63	63	819		A75	E80DU80	27 - 80	10	61.5



## Coordinated protections of motor Starters

Direct-on-line starter Normal start with Miniature Circuit Breaker  
690 V, 6 kA, 50/60 Hz, AC-3, EN/IEC 60947-4-1, type 1

Rated Output [kW]	Motor		Miniature Circuit-Breaker			Limiter	Contactor		Overload Relay		Max allowed setting current [A]
	Rated Current [A]	Type	Rated Current [A]	Magnetic trip Current [A]	Type		Type	Current setting range [A]	Trip Class		
0.09	0.17	MO325-0,25	0.25	2.44	A9	UMC22-FBP	0.1 - 63	10	0.25		
0.12	0.23	MO325-0,25	0.25	2.44	A9	UMC22-FBP	0.1 - 63	10	0.32		
0.18	0.35	MO325-0,40	0.40	3.9	A9	UMC22-FBP	0.1 - 63	10	0.36		
0.25	0.49	MO325-0,63	0.63	6.14	A9	UMC22-FBP	0.1 - 63	10	0.57		
0.37	0.64	MO325-1,00	1	11.5	A9	UMC22-FBP	0.1 - 63	10	0.9		
0.55	0.87	MO325-1,00	1	11.5	A9	UMC22-FBP	0.1 - 63	10	0.9		
0.75	1.1	MO325-1,60	1.6	11.5	A9	UMC22-FBP	0.1 - 63	10	1.45		
1.1	1.6	MO325-2,50	2.5	27.5	A9	UMC22-FBP	0.1 - 63	10	2.2		
1.5	2.1	MO325-2,50	2.5	27.5	A9	UMC22-FBP	0.1 - 63	10	2.2		
2.2	2.8	MO325-4,00	4	40	A9	UMC22-FBP	0.1 - 63	10	3.5		
2.5	3.3	MO325-4,00	4	40	A9	UMC22-FBP	0.1 - 63	10	3.5		
3	3.8	MO325-4,00	4	40	A9	UMC22-FBP	0.1 - 63	10	3.8		
3.7	4.4	MO325-6,3	6.3	78.7	A9	UMC22-FBP	0.1 - 63	10	5.4		
4	4.9	MO325-6,3	6.3	78.7	A9	UMC22-FBP	0.1 - 63	10	5.4		
5	6	MO325-6,3	6.3	78.7	A9	UMC22-FBP	0.1 - 63	10	6.3		
5.5	6.7	MO325-9	9	135	A9	UMC22-FBP	0.1 - 63	10	7.5		
6.5	8.1	MO325-9	9	135	A12	UMC22-FBP	0.1 - 63	10	10		
7.5	8.9	MO325-12,5	12.5	187.5	A12	UMC22-FBP	0.1 - 63	10	10		
8	9.7	MO325-12,5	12.5	187.5	A16	UMC22-FBP	0.1 - 63	10	10		
9	10.6	MO325-12,5	12.5	187.5	A26	UMC22-FBP	0.1 - 63	10	14		
11	12.8	MO325-16,0	16	240	A26	UMC22-FBP	0.1 - 63	10	14		
12.5	15	MO325-16,0	16	240	A26	UMC22-FBP	0.1 - 63	10	16.0		
15	17	MO325-20,0	20	300	A26	UMC22-FBP	0.1 - 63	10	18.5		
18.5	21	MO325-25	25	375	A30	UMC22-FBP	0.1 - 63	10	24.5		
20	23	MO325-25	25	375	A40	UMC22-FBP	0.1 - 63	10	24.5		
22	24	S803S-KM32	32	416	A40	UMC22-FBP	0.1 - 63	10	24.5		
25	28	S803S-KM32	32	416	A40	UMC22-FBP	0.1 - 63	10	30.5		
30	32	S803S-KM40	40	520	A40	UMC22-FBP	0.1 - 63	10	35		
37	39	S803S-KM50	50	650	A63	UMC22-FBP	0.1 - 63	10	39		
40	44	S803S-KM50	50	650	A75	UMC22-FBP	0.1 - 63	10	46		
45	47	S803S-KM63	63	819	A75	UMC22-FBP	0.1 - 63	10	48.5		
55	57	S803S-KM63	63	819	A75	UMC22-FBP	0.1 - 63	10	61.5		



## Coordinated protections of motor Starters

Direct-on-line starter Normal start with Miniature Circuit Breaker  
690 V, 6 kA, 50/60 Hz, AC-3, EN/IEC 60947-4-1, type 2

Rated Output [kW]	Motor		Miniature Circuit-Breaker			Limiter	Contactor		Overload Relay		Max allowed setting current [A]
	Rated Current [A]	Type	Rated Current [A]	Magnetic trip Current [A]	Type		Type	Current setting range [A]	Trip Class		
0.09	0.17	MO325-0,25	0.25	2.44	A9	UMC22-FBP	0.1 - 63	10	0.25		
0.12	0.23	MO325-0,25	0.25	2.44	A9	UMC22-FBP	0.1 - 63	10	0.32		
0.18	0.35	MO325-0,40	0.40	3.9	A9	UMC22-FBP	0.1 - 63	10	0.36		
0.25	0.49	MO325-0,63	0.63	6.14	A9	UMC22-FBP	0.1 - 63	10	0.57		
0.37	0.64	MO325-1,00	1	11.5	A9	UMC22-FBP	0.1 - 63	10	0.9		
0.55	0.87	MO325-1,00	1	11.5	A9	UMC22-FBP	0.1 - 63	10	0.9		
0.75	1.1	MO325-1,60	1.6	11.5	A9	UMC22-FBP	0.1 - 63	10	1.45		
1.1	1.6	MO325-2,50	2.5	27.5	A9	UMC22-FBP	0.1 - 63	10	2.2		
1.5	2.1	MO325-2,50	2.5	27.5	A9	UMC22-FBP	0.1 - 63	10	2.2		
2.2	2.8	MO325-4,00	4	40	A9	UMC22-FBP	0.1 - 63	10	3.5		
2.5	3.3	MO325-4,00	4	40	A9	UMC22-FBP	0.1 - 63	10	3.5		
3	3.8	MO325-4,00	4	40	A9	UMC22-FBP	0.1 - 63	10	3.8		
3.7	4.4	MO325-6,3	6.3	78.7	A9	UMC22-FBP	0.1 - 63	10	5.4		
4	4.9	MO325-6,3	6.3	78.7	A9	UMC22-FBP	0.1 - 63	10	5.4		
5	6	MO325-6,3	6.3	78.7	A12	UMC22-FBP	0.1 - 63	10	6.3		
5.5	6.7	MO325-9	9	135	A12	UMC22-FBP	0.1 - 63	10	7.5		
6.5	8.1	MO325-9	9	135	A26	UMC22-FBP	0.1 - 63	10	10		
7.5	8.9	MO325-12,5	12.5	187.5	A16	UMC22-FBP	0.1 - 63	10	10		
8	9.7	MO325-12,5	12.5	187.5	A26	UMC22-FBP	0.1 - 63	10	10		
9	10.6	MO325-12,5	12.5	187.5	A26	UMC22-FBP	0.1 - 63	10	14		
11	12.8	MO325-16,0	16	240	A26	UMC22-FBP	0.1 - 63	10	14		
12.5	15	MO325-16,0	16	240	A26	UMC22-FBP	0.1 - 63	10	16.0		
15	17	MO325-20,0	20	300	A26	UMC22-FBP	0.1 - 63	10	18.5		
18.5	21	MO325-25	25	375	A30	UMC22-FBP	0.1 - 63	10	24.5		
20	23	MO325-25	25	375	A40	UMC22-FBP	0.1 - 63	10	24.5		
22	24	S803S-KM32	32	416	A40	UMC22-FBP	0.1 - 63	10	24.5		
25	28	S803S-KM32	32	416	A40	UMC22-FBP	0.1 - 63	10	30.5		
30	32	S803S-KM40	40	520	A40	UMC22-FBP	0.1 - 63	10	35		
37	39	S803S-KM50	50	650	A63	UMC22-FBP	0.1 - 63	10	39		
40	44	S803S-KM50	50	650	A75	UMC22-FBP	0.1 - 63	10	46		
45	47	S803S-KM63	63	819	A75	UMC22-FBP	0.1 - 63	10	48.5		
55	57	S803S-KM63	63	819	A75	UMC22-FBP	0.1 - 63	10	61.5		



## Coordinated protections of motor Starters

Direct-on-line starter Heavy Duty 20s with Miniature Circuit Breaker  
690 V, 6 kA, 50/60 Hz, AC-3, EN/IEC 60947-4-1, type 1

Rated Output [kW]	Motor	Miniature Circuit-Breaker			Limiter	Contactor		Overload Relay		Max allowed setting current [A]
	Rated Current [A]	Type	Rated Current [A]	Magnetic trip Current [A]		Type	Type	Current setting range [A]	Trip Class	
0.09	0.17	MO325-0,25	0.25	2.44		A9	E16DU0,32	0,1 - 0,32	20	0.25
0.12	0.23	MO325-0,25	0.25	2.44		A9	E16DU0,32	0,1 - 0,32	20	0.32
0.18	0.35	MO325-0,40	0.40	3.9		A9	E16DU1,0	0,3 - 1,0	20	0.36
0.25	0.49	MO325-0,63	0.63	6.14		A9	E16DU1,0	0,3 - 1,0	20	0.57
0.37	0.64	MO325-1,00	1	11.5		A9	E16DU1,0	0,3 - 1,0	20	0.9
0.55	0.87	MO325-1,00	1	11.5		A9	E16DU1,0	0,3 - 1,0	20	0.9
0.75	1.1	MO325-1,60	1.6	11.5		A9	E16DU2,7	0,9 - 2,7	20	1.45
1.1	1.6	MO325-2,50	2.5	27.5		A9	E16DU2,7	0,9 - 2,7	20	2.2
1.5	2.1	MO325-2,50	2.5	27.5		A9	E16DU2,7	0,9 - 2,7	20	2.2
2.2	2.8	MO325-4,00	4	40		A9	E16DU6,3	2 - 6,3	20	3.5
2.5	3.3	MO325-4,00	4	40		A9	E16DU6,3	2 - 6,3	20	3.5
3	3.8	MO325-4,00	4	40		A9	E16DU6,3	2 - 6,3	20	3.8
3.7	4.4	MO325-6,3	6.3	78.7		A9	E16DU6,3	2 - 6,3	20	5.4
4	4.9	MO325-6,3	6.3	78.7		A9	E16DU6,3	2 - 6,3	20	5.4
5	6	MO325-6,3	6.3	78.7		A12	E16DU18,9	5,7 - 18,9	20	6.3
5.5	6.7	MO325-9	9	135		A12	E16DU18,9	5,7 - 18,9	20	7.5
6.5	8.1	MO325-9	9	135		A26	E16DU18,9	5,7 - 18,9	20	10
7.5	8.9	MO325-12,5	12.5	187.5		A16	E16DU18,9	5,7 - 18,9	20	10
8	9.7	MO325-12,5	12.5	187.5		A26	E16DU18,9	5,7 - 18,9	20	10
9	10.6	MO325-12,5	12.5	187.5		A26	E16DU18,9	5,7 - 18,9	20	14
11	12.8	MO325-16,0	16	240		A26	E16DU18,9	5,7 - 18,9	20	14
12.5	15	MO325-16,0	16	240		A26	E16DU18,9	5,7 - 18,9	20	16.0
15	17	MO325-20,0	20	300		A26	E45DU30	9 - 30	20	18.5
18.5	21	MO325-25	25	375		A30	E45DU30	9 - 30	20	24.5
20	23	MO325-25	25	375		A40	E45DU45	15 - 45	20	24.5
22	24	S803S-KM32	32	416		A40	E45DU45	15 - 45	20	24.5
25	28	S803S-KM32	32	416		A40	E45DU45	15 - 45	20	30.5
30	32	S803S-KM40	40	520		A40	E45DU45	15 - 45	20	35
37	39	S803S-KM50	50	650		A63	E80DU80	27 - 80	20	39
40	44	S803S-KM50	50	650		A75	E80DU80	27 - 80	20	46



## Coordinated protections of motor Starters

Direct-on-line starter Heavy Duty 20s with Miniature Circuit Breaker  
690 V, 6 kA, 50/60 Hz, AC-3, EN/IEC 60947-4-1, type 2

Rated Output [kW]	Motor	Miniature Circuit-Breaker			Limiter	Contactor		Overload Relay		Max allowed setting current [A]
	Rated Current [A]	Type	Rated Current [A]	Magnetic trip Current [A]		Type	Type	Current setting range [A]	Trip Class	
0.09	0.17	MO325-0,25	0.25	2.44		A9	E16DU0,32	0,1 - 0,32	20	0.25
0.12	0.23	MO325-0,25	0.25	2.44		A9	E16DU0,32	0,1 - 0,32	20	0.32
0.18	0.35	MO325-0,40	0.40	3.9		A9	E16DU1,0	0,3 - 1,0	20	0.36
0.25	0.49	MO325-0,63	0.63	6.14		A9	E16DU1,0	0,3 - 1,0	20	0.57
0.37	0.64	MO325-1,00	1	11.5		A9	E16DU1,0	0,3 - 1,0	20	0.9
0.55	0.87	MO325-1,00	1	11.5		A9	E16DU1,0	0,3 - 1,0	20	0.9
0.75	1.1	MO325-1,60	1.6	11.5		A9	E16DU2,7	0,9 - 2,7	20	1.45
1.1	1.6	MO325-2,50	2.5	27.5		A9	E16DU2,7	0,9 - 2,7	20	2.2
1.5	2.1	MO325-2,50	2.5	27.5		A9	E16DU2,7	0,9 - 2,7	20	2.2
2.2	2.8	MO325-4,00	4	40		A9	E16DU6,3	2 - 6,3	20	3.5
2.5	3.3	MO325-4,00	4	40		A9	E16DU6,3	2 - 6,3	20	3.5
3	3.8	MO325-4,00	4	40		A9	E16DU6,3	2 - 6,3	20	3.8
3.7	4.4	MO325-6,3	6.3	78.7		A9	E16DU6,3	2 - 6,3	20	5.4
4	4.9	MO325-6,3	6.3	78.7		A9	E16DU6,3	2 - 6,3	20	5.4
5	6	MO325-6,3	6.3	78.7		A12	E16DU18,9	5,7 - 18,9	20	6.3
5.5	6.7	MO325-9	9	135		A12	E16DU18,9	5,7 - 18,9	20	7.5
6.5	8.1	MO325-9	9	135		A26	E16DU18,9	5,7 - 18,9	20	10
7.5	8.9	MO325-12,5	12.5	187.5		A16	E16DU18,9	5,7 - 18,9	20	10
8	9.7	MO325-12,5	12.5	187.5		A26	E16DU18,9	5,7 - 18,9	20	10
9	10.6	MO325-12,5	12.5	187.5		A26	E16DU18,9	5,7 - 18,9	20	14
11	12.8	MO325-16,0	16	240		A26	E16DU18,9	5,7 - 18,9	20	14
12.5	15	MO325-16,0	16	240		A26	E16DU18,9	5,7 - 18,9	20	16.0
15	17	MO325-20,0	20	300		A26	E45DU30	9 - 30	20	18.5
18.5	21	MO325-25	25	375		A30	E45DU30	9 - 30	20	24.5
20	23	MO325-25	25	375		A40	E45DU45	15 - 45	20	24.5
22	24	S803S-KM32	32	416		A40	E45DU45	15 - 45	20	24.5
25	28	S803S-KM32	32	416		A40	E45DU45	15 - 45	20	30.5
30	32	S803S-KM40	40	520		A40	E45DU45	15 - 45	20	35
37	39	S803S-KM50	50	650		A63	E80DU80	27 - 80	20	39
40	44	S803S-KM50	50	650		A75	E80DU80	27 - 80	20	46



## Coordinated protections of motor Starters

Direct-on-line starter Heavy Duty 20s with Miniature Circuit Breaker  
690 V, 6 kA, 50/60 Hz, AC-3, EN/IEC 60947-4-1, type 1

Rated Output [kW]	Motor	Miniature Circuit-Breaker			Limiter	Contactor		Overload Relay		Max allowed setting current [A]
	Rated Current [A]	Type	Rated Current [A]	Magnetic trip Current [A]		Type	Type	Current setting range [A]	Trip Class	
0.09	0.17	MO325-0,25	0.25	2.44		A9	UMC22-FBP	0.1 - 63	20	0.25
0.12	0.23	MO325-0,25	0.25	2.44		A9	UMC22-FBP	0.1 - 63	20	0.32
0.18	0.35	MO325-0,40	0.40	3.9		A9	UMC22-FBP	0.1 - 63	20	0.36
0.25	0.49	MO325-0,63	0.63	6.14		A9	UMC22-FBP	0.1 - 63	20	0.57
0.37	0.64	MO325-1,00	1	11.5		A9	UMC22-FBP	0.1 - 63	20	0.9
0.55	0.87	MO325-1,00	1	11.5		A9	UMC22-FBP	0.1 - 63	20	0.9
0.75	1.1	MO325-1,60	1.6	11.5		A9	UMC22-FBP	0.1 - 63	20	1.45
1.1	1.6	MO325-2,50	2.5	27.5		A9	UMC22-FBP	0.1 - 63	20	2.2
1.5	2.1	MO325-2,50	2.5	27.5		A9	UMC22-FBP	0.1 - 63	20	2.2
2.2	2.8	MO325-4,00	4	40		A9	UMC22-FBP	0.1 - 63	20	3.5
2.5	3.3	MO325-4,00	4	40		A9	UMC22-FBP	0.1 - 63	20	3.5
3	3.8	MO325-4,00	4	40		A9	UMC22-FBP	0.1 - 63	20	3.8
3.7	4.4	MO325-6,3	6.3	78.7		A9	UMC22-FBP	0.1 - 63	20	5.4
4	4.9	MO325-6,3	6.3	78.7		A9	UMC22-FBP	0.1 - 63	20	5.4
5	6	MO325-6,3	6.3	78.7		A9	UMC22-FBP	0.1 - 63	20	6.3
5.5	6.7	MO325-9	9	135		A9	UMC22-FBP	0.1 - 63	20	7.5
6.5	8.1	MO325-9	9	135		A12	UMC22-FBP	0.1 - 63	20	10
7.5	8.9	MO325-12,5	12.5	187.5		A12	UMC22-FBP	0.1 - 63	20	10
8	9.7	MO325-12,5	12.5	187.5		A16	UMC22-FBP	0.1 - 63	20	10
9	10.6	MO325-12,5	12.5	187.5		A26	UMC22-FBP	0.1 - 63	20	14
11	12.8	MO325-16,0	16	240		A26	UMC22-FBP	0.1 - 63	20	14
12.5	15	MO325-16,0	16	240		A26	UMC22-FBP	0.1 - 63	20	16.0
15	17	MO325-20,0	20	300		A26	UMC22-FBP	0.1 - 63	20	18.5
18.5	21	MO325-25	25	375		A30	UMC22-FBP	0.1 - 63	20	24.5
20	23	MO325-25	25	375		A40	UMC22-FBP	0.1 - 63	20	24.5
22	24	S803S-KM32	32	416		A40	UMC22-FBP	0.1 - 63	20	24.5
25	28	S803S-KM32	32	416		A40	UMC22-FBP	0.1 - 63	20	30.5
30	32	S803S-KM40	40	520		A40	UMC22-FBP	0.1 - 63	20	35
37	39	S803S-KM50	50	650		A63	UMC22-FBP	0.1 - 63	20	39
40	44	S803S-KM50	50	650		A75	UMC22-FBP	0.1 - 63	20	46



## Coordinated protections of motor Starters

Direct-on-line starter Heavy Duty 20s with Miniature Circuit Breaker  
690 V, 6 kA, 50/60 Hz, AC-3, EN/IEC 60947-4-1, type 2

Rated Output [kW]	Motor	Miniature Circuit-Breaker			Limiter	Contactor		Overload Relay		Max allowed setting current [A]
	Rated Current [A]	Type	Rated Current [A]	Magnetic trip Current [A]		Type	Type	Current setting range [A]	Trip Class	
0.09	0.17	MO325-0,25	0.25	2.44		A9	UMC22-FBP	0.1 - 63	20	0.25
0.12	0.23	MO325-0,25	0.25	2.44		A9	UMC22-FBP	0.1 - 63	20	0.32
0.18	0.35	MO325-0,40	0.40	3.9		A9	UMC22-FBP	0.1 - 63	20	0.36
0.25	0.49	MO325-0,63	0.63	6.14		A9	UMC22-FBP	0.1 - 63	20	0.57
0.37	0.64	MO325-1,00	1	11.5		A9	UMC22-FBP	0.1 - 63	20	0.9
0.55	0.87	MO325-1,00	1	11.5		A9	UMC22-FBP	0.1 - 63	20	0.9
0.75	1.1	MO325-1,60	1.6	11.5		A9	UMC22-FBP	0.1 - 63	20	1.45
1.1	1.6	MO325-2,50	2.5	27.5		A9	UMC22-FBP	0.1 - 63	20	2.2
1.5	2.1	MO325-2,50	2.5	27.5		A9	UMC22-FBP	0.1 - 63	20	2.2
2.2	2.8	MO325-4,00	4	40		A9	UMC22-FBP	0.1 - 63	20	3.5
2.5	3.3	MO325-4,00	4	40		A9	UMC22-FBP	0.1 - 63	20	3.5
3	3.8	MO325-4,00	4	40		A9	UMC22-FBP	0.1 - 63	20	3.8
3.7	4.4	MO325-6,3	6.3	78.7		A9	UMC22-FBP	0.1 - 63	20	5.4
4	4.9	MO325-6,3	6.3	78.7		A9	UMC22-FBP	0.1 - 63	20	5.4
5	6	MO325-6,3	6.3	78.7		A12	UMC22-FBP	0.1 - 63	20	6.3
5.5	6.7	MO325-9	9	135		A12	UMC22-FBP	0.1 - 63	20	7.5
6.5	8.1	MO325-9	9	135		A26	UMC22-FBP	0.1 - 63	20	10
7.5	8.9	MO325-12,5	12.5	187.5		A16	UMC22-FBP	0.1 - 63	20	10
8	9.7	MO325-12,5	12.5	187.5		A26	UMC22-FBP	0.1 - 63	20	10
9	10.6	MO325-12,5	12.5	187.5		A26	UMC22-FBP	0.1 - 63	20	14
11	12.8	MO325-16,0	16	240		A26	UMC22-FBP	0.1 - 63	20	14
12.5	15	MO325-16,0	16	240		A26	UMC22-FBP	0.1 - 63	20	16.0
15	17	MO325-20,0	20	300		A26	UMC22-FBP	0.1 - 63	20	18.5
18.5	21	MO325-25	25	375		A30	UMC22-FBP	0.1 - 63	20	24.5
20	23	MO325-25	25	375		A40	UMC22-FBP	0.1 - 63	20	24.5
22	24	S803S-KM32	32	416		A40	UMC22-FBP	0.1 - 63	20	24.5
25	28	S803S-KM32	32	416		A40	UMC22-FBP	0.1 - 63	20	30.5
30	32	S803S-KM40	40	520		A40	UMC22-FBP	0.1 - 63	20	35
37	39	S803S-KM50	50	650		A63	UMC22-FBP	0.1 - 63	20	39
40	44	S803S-KM50	50	650		A75	UMC22-FBP	0.1 - 63	20	46