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Manual motor starters

Series Mbs25



Basic breaker
without auxiliary
switches

b-relaese [A]	s-relaese [A]	Cat. No.	Ref. No.	Pack.
0.1 - 0.16	1.9	Mbs25-001	254168	1
0.16 - 0.25	3	Mbs25-002	254174	1
0.25 - 0.4	4.8	Mbs25-004	254180	1
0.4 - 0.63	7.5	Mbs25-006	254189	1
0.63 - 1	12	Mbs25-010	254198	1
1 - 1.6	19	Mbs25-016	254209	1
1.6 - 2.5	30	Mbs25-025	254220	1
2.5 - 4	48	Mbs25-040	254231	1
4 - 6.3	75	Mbs25-063	254244	1
6.3 - 10	120	Mbs25-100	254256	1
10 - 16	190	Mbs25-160	254266	1
16 - 20	240	Mbs25-200	254275	1
20 - 25	300	Mbs25-250	254282	1

Version for transformer
without auxiliary
switches

0.1 - 0.16	3.4	Mbs25-001T	254169	1
0.16 - 0.25	5.5	Mbs25-002T	254175	1
0.25 - 0.4	8.8	Mbs25-004T	254183	1
0.4 - 0.63	13	Mbs25-006T	254191	1
0.63 - 1	21	Mbs25-010T	254200	1
1 - 1.6	33	Mbs25-016T	254212	1
1.6 - 2.5	56	Mbs25-025T	254222	1
2.5 - 4	80	Mbs25-040T	254234	1
4 - 6.3	120	Mbs25-063T	254247	1
6.3 - 10	190	Mbs25-100T	254258	1
10 - 16	300	Mbs25-160T	254268	1
16 - 20	390	Mbs25-200T	254276	1
20 - 25	390	Mbs25-250T	254284	1

Motor protective circuit breaker Mbs25

Short-circuit breaking capacity acc. to IEC 947-2

b-relaese setting range [A]	230 V			400 V			415 V			500 V			690 V		
	Icu [kA]	Ics [kA]	max. fuse (gL/gG) [kA]	Icu [kA]	Ics [kA]	max. fuse (gL/gG) [kA]	Icu [kA]	Ics [kA]	max. fuse (gL/gG) [kA]	Icu [kA]	Ics [kA]	max. fuse (gL/gG) [kA]	Icu [kA]	Ics [kA]	max. fuse (gL/gG) [kA]
0.1 - 0.16	65	65	(1)	65	65	(1)	65	65	(1)	65	65	(1)	42	42	(1)
0.16 - 0.25	65	65	(1)	65	65	(1)	65	65	(1)	65	65	(1)	42	42	(1)
0.25 - 0.4	65	65	(1)	65	65	(1)	65	65	(1)	65	65	(1)	42	42	(1)
0.4 - 0.63	65	65	(1)	65	65	(1)	65	65	(1)	65	65	(1)	42	42	(1)
0.63 - 1.0	65	65	(1)	65	65	(1)	65	65	(1)	65	65	(1)	1	1	20
1.0 - 1.6	65	65	(1)	65	65	(1)	65	65	(1)	65	65	(1)	1	1	20
1.6 - 2.5	65	65	(1)	65	65	(1)	10	5	25	3	1.5	25	1	0.5	20
2.5 - 4	65	65	(1)	10	5	35	10	5	35	3	1.5	35	1	0.5	25
4 - 6.3	65	37.5	(1)	10	5	50	10	5	50	3	1.5	50	1	0.5	35
6.3 - 10	10	5	80	4	2	80	4	2	80	3	1.5	50	1	0.5	35
10 - 16	6	3	80	4	2	80	3.5	1.7	80	3	1.5	63	1	0.5	35
16 - 20	6	3	80	4	2	80	2.5	1.2	80	1.5	0.7	63	1	0.5	50
20 - 25	6	3	80	4	2	80	2.5	1.2	80	1.5	0.7	63	1	0.5	50

(1) No fuse necessary up to the indicated current values of Icu bzw. Ics.

If the short circuit current is higher than the short-circuit breaking capacity, it is necessary to use a fuse.

To increase the short circuit breaking capacity, the manual motor starter Mbs25 can be combined with the limiter type id 50.

Following are the values for the short-circuit capacity with this combination:

Motor protective circuit breaker Mbs25 + Rapid module id50

Short-circuit breaking capacity acc. to IEC 947-2

Short-circuit breaking capacity In [A]	230 V		400 V	
	Icu [A]	Ics [A]	Icu [A]	Ics [A]
< 2.5	65	65	65	65
< 6.3	65	65	50	50
< 25	50	50	50	50

Manual motor starters

Accessories for series Mbs25

	Description	Cat. No.	Ref. No.	Pack.
Aux. switch block type HS 9 	For side mounting			
	1NO, 1NC	HS 9.11-Mbs25	254488	1
	2NO	HS 9.20-Mbs25	254495	1
	1NO (early make), 1NC	HS 9V.11-Mbs25	254499	1
	2NO (early make)	HS 9V.20-Mbs25	254502	1
	To increase contact reliability with small voltages 4 - 30V and 4 - 100mA, 1 C/O	HS 9K.001-Mbs25	254519	1
Aux. switch block type HS 10 	For internal mounting			
	1NO, 1NC	HS 10.11-Mbs25	254515	1
Trip indication switch type HS 10R	For internal mounting			
	1NO	HS10R.10-Mbs25	254504	1
	1NC	HS10R.01-Mbs25	254511	1
PE- and Neutral conductor block	For side mounting Complete with through PE and N conductors Wiring cross section 0.75 - 2.5mm ²	PE/N-Mbs25	254459	1
Shunt trip type a 	For internal mounting			
	AC 220/230V 50Hz, 240V 60Hz	a51-Mbs25	254413	1
	AC 380/400V 50Hz, 440V 60Hz	a52-Mbs25	254414	1
	AC 110V 50Hz, 120V 60Hz	a53-Mbs25	254415	1
Terminal clamps	For side mounting 4 terminals for a- or r-release	KPS-Mbs25	254460	1
Undervoltage release type r	For internal mounting			
	AC 220/230V 50Hz, 240V 60Hz	r51-Mbs25	254396	1
	AC 380/400V 50Hz, 440V 60Hz	r52-Mbs25	254397	1
	AC 110V 50Hz, 120V 60Hz	r53-Mbs25	254398	1
Rapid-Module type id 50 	For individual or group protection increases the breaking capacity of the Mbs25 up to Icu 42kA/3~ 400 V; Iu = 32A in combination with Mbs25	id50-Mbs25	254525	1
3 phase insulated busbar section type d	Fully insulated, Ui = 690 V; Iu = 63 A, for Mbs25 with HS 9			
	with 2 devices 3-phase, 99mm long	d21-Mbs25	254540	1
	with 3 devices 3-phase, 154mm long	d31-Mbs25	254545	1
	with 4 devices 3-phase, 208mm long	d41-Mbs25	254533	1
	with 5 devices 3-phase, 262mm long	d51-Mbs25	254535	1

Manual motor starters

Accessories for series Mbs25

		Description	Cat. No.	Ref. No.	Pack.
	Protective cover	3-pole for unused busbar terminations	d-BSK	254542	1
	Terminal block type db	Fully insulated, U _i = 690 V; I _u = 63 A 3-pole for 3-phase insulated busbar section type d	db	254537	1
	Moulded enclosure type i	Surface mounting			
		Protection degree IP41	i41	254430	1
		Protection degree IP55	i55	254435	1
		Kit IP 55 for enclosure IP41	i-IP41/55	254452	1
	Enclosure type gi	Especially for the American and Canadian market Protection grade IP 55 with NPT-threads 2 x 1/2" and 2 x 3/4"	gi55	254522	1
	Moulded front plate type it	Flush mounting			
		Protection degree IP41	it41	254441	1
		Protection degree IP55	it55	254445	1
		Kit IP 55 for front plate IP41	it-IP41/55	254455	1
	Neutral conductor	For enclosure and front plate	i/it-N	254449	1
	Padlocking device	For enclosure IP41 and front plate (colour yellow) for 3 padlocks in the OFF position	i/it-SV	254422	1
	Emergency OFF device	For enclosure IP41 and front plate IP41 Mushroom head latched, pull to release	i/it-PTZ	254424	1
		For enclosure IP41 and front plate IP41, protection degree IP55, red pushbutton with yellow backplate Mushroom head key lockable (fact. ass.), release with key	i/it-PTS	254427	1
		For enclosure IP41 and front plate IP41 Mushroom head transient	i/it-PTT	254428	1

Thermal and magnetic motor protection circuit breakers

Series Mbs32 - Standard breaking capacity

CLASS 10



Rated power 3 phase motors at 400Vac Pn	Rated current In ⁽¹⁾	Thermal current setting range	Instantaneous short-circuit release	Rated ultimate short-circuit breaking capacity at 400V Icu kA	Rated service short-circuit breaking capacity at 400V Ics kA	Cat. No.	Ref. No.	Pack.
kW	A	A	A					
0.02	0.16	0.1 - 0.16	2.1	100	100	Mbs32SG001	107395	5
0.06	0.25	0.16 - 0.25	3.3	100	100	Mbs32SG002	107396	5
0.09	0.4	0.25 - 0.4	5.2	100	100	Mbs32SG004	107397	5
0.12/0.18	0.63	0.4 - 0.63	8.2	100	100	Mbs32SG006	107398	5
0.25	1	0.63 - 1	13	100	100	Mbs32SG010	107399	5
0.37/0.55	1.6	1 - 1.6	20.8	100	100	Mbs32SG016	107400	5
0.75	2.5	1.6 - 2.5	32.5	100	100	Mbs32SG025	107401	5
1.5	4	2.5 - 4	52	100	100	Mbs32SG040	107402	5
2.2	6.3	4 - 6.3	81.9	100	100	Mbs32SG063	107403	5
3/4	10	6.3 - 10	130	100	100	Mbs32SG100	107404	5
5.5	13	9 - 13	169	50	38	Mbs32SG130	107405	5
7.5	16	11 - 16	208	25	19	Mbs32SG160	107406	5
10	20	14 - 20	260	25	19	Mbs32SG200	107407	5
11	25	19 - 25	325	25	19	Mbs32SG250	107408	5
15	32	24 - 32	416	25	19	Mbs32SG320	107409	5

(1) Rated current: highest thermal current setting range value.

Series Mbs32 - High breaking capacity

CLASS 10



Rated power 3 phase motors at 400Vac Pn	Rated current In ⁽¹⁾	Thermal current setting range	Instantaneous short-circuit release	Rated ultimate short-circuit breaking capacity at 400V Icu kA	Rated service short-circuit breaking capacity at 400V Ics kA	Cat. No.	Ref. No.	Pack.
kW	A	A	A					
0.02	0.16	0.1 - 0.16	2.1	100	100	Mbs32HG001	107419	5
0.06	0.25	0.16 - 0.25	3.3	100	100	Mbs32HG002	107420	5
0.09	0.4	0.25 - 0.4	5.2	100	100	Mbs32HG004	107421	5
0.12/0.18	0.63	0.4 - 0.63	8.2	100	100	Mbs32HG006	107422	5
0.25	1	0.63 - 1	13	100	100	Mbs32HG010	107423	5
0.37/0.55	1.6	1 - 1.6	20.8	100	100	Mbs32HG016	107424	5
0.75	2.5	1.6 - 2.5	32.5	100	100	Mbs32HG025	107425	5
1.5	4	2.5 - 4	52	100	100	Mbs32HG040	107426	5
2.2	6.3	4 - 6.3	81.9	100	100	Mbs32HG063	107427	5
3/4	10	6.3 - 10	130	100	100	Mbs32HG100	107428	5
5.5	13	9 - 13	169	100	100	Mbs32HG130	107429	5
7.5	16	11 - 16	208	50	38	Mbs32HG160	107430	5
10	20	14 - 20	260	50	38	Mbs32HG200	107431	5
11	25	19 - 25	325	50	38	Mbs32HG250	107432	5
15	32	24 - 32	416	50	38	Mbs32HG320	107433	5

(1) Rated current: highest thermal current setting range value.

Series Mbs32

Magnetic motor protection circuit breakers

Series Mss32 - Standard breaking capacity



Rated power 3 phase motors at 400Vac Pn kW	Rated current In A	Thermal current setting range (1) A	Instantaneous short-circuit release A	Rated ultimate short-circuit breaking capacity at 400V Icu kA	Rated service short-circuit breaking capacity at 400V Ics kA	Cat. No.	Ref. No.	Pack.
0.02	0.16	-	2.1	100	100	Ms32SG001	107443	5
0.06	0.25	-	3.3	100	100	Ms32SG002	107444	5
0.09	0.4	-	5.2	100	100	Ms32SG004	107445	5
0.12/0.18	0.63	-	8.2	100	100	Ms32SG006	107446	5
0.25	1	-	13	100	100	Ms32SG010	107447	5
0.37/0.55	1.6	-	20.8	100	100	Ms32SG016	107448	5
0.75	2.5	-	32.5	100	100	Ms32SG025	107449	5
1.5	4	-	52	100	100	Ms32SG040	107450	5
2.2	6.3	-	81.9	100	100	Ms32SG063	107451	5
3/4	10	-	130	100	100	Ms32SG100	107452	5
5.5	13	-	169	50	38	Ms32SG130	107453	5
7.5	16	-	208	25	19	Ms32SG160	107454	5
10	20	-	260	25	19	Ms32SG200	107455	5
11	25	-	325	25	19	Ms32SG250	107456	5
15	32	-	416	25	19	Ms32SG320	107457	5

(1) Select appropriate thermal overload relay for the starter. See chapter G, pages G.3-G.6

Series Mss32 - High breaking capacity



Rated power 3 phase motors at 400Vac Pn kW	Rated current In A	Thermal current setting range (1) A	Instantaneous short-circuit release A	Rated ultimate short-circuit breaking capacity at 400V Icu kA	Rated service short-circuit breaking capacity at 400V Ics kA	Cat. No.	Ref. No.	Pack.
0.02	0.16	-	2.1	100	100	Ms32HG001	107467	5
0.06	0.25	-	3.3	100	100	Ms32HG002	107468	5
0.09	0.4	-	5.2	100	100	Ms32HG004	107469	5
0.12/0.18	0.63	-	8.2	100	100	Ms32HG006	107470	5
0.25	1	-	13	100	100	Ms32HG010	107471	5
0.37/0.55	1.6	-	20.8	100	100	Ms32HG016	107472	5
0.75	2.5	-	32.5	100	100	Ms32HG025	107473	5
1.5	4	-	52	100	100	Ms32HG040	107474	5
2.2	6.3	-	81.9	100	100	Ms32HG063	107475	5
3/4	10	-	130	100	100	Ms32HG100	107476	5
5.5	13	-	169	100	100	Ms32HG130	107477	5
7.5	16	-	208	50	38	Ms32HG160	107478	5
10	20	-	260	50	38	Ms32HG200	107479	5
11	25	-	325	50	38	Ms32HG250	107480	5
15	32	-	416	50	38	Ms32HG320	107481	5

(1) Select appropriate thermal overload relay for the starter. See chapter G, pages G.3-G.6

Thermal and magnetic motor protection circuit breakers

Series Mbs63 - Standard breaking capacity

CLASS 10



Rated power 3 phase motors at 400Vac Pn kW	Rated current In ⁽¹⁾ A	Thermal current setting range A	Instantaneous short-circuit release A	Rated ultimate short-circuit breaking capacity at 400V Icu kA	Rated service short-circuit breaking capacity at 400V Ics kA	Cat. No.	Ref. No.	Pack.
3/4	10	6.3 - 10	130	100	100	Mbs63SG100	107410	1
5.5	13	9 - 13	169	25	19	Mbs63SG130	107411	1
7.5	16	11 - 16	208	25	19	Mbs63SG160	107412	1
10	20	14 - 20	260	25	19	Mbs63SG200	107413	1
11	25	19 - 25	325	25	19	Mbs63SG250	107414	1
15	32	24 - 32	416	25	19	Mbs63SG320	107415	1
18.5	40	28 - 40	520	25	19	Mbs63SG400	107416	1
22	50	35 - 50	650	25	19	Mbs63SG500	107417	1
30	63	45 - 63	819	25	19	Mbs63SG630	107418	1

(1) Rated current: highest thermal current setting range value.

Series Mbs63 - High breaking capacity

CLASS 10



Rated power 3 phase motors at 400Vac Pn kW	Rated current In ⁽¹⁾ A	Thermal current setting range A	Instantaneous short-circuit release A	Rated ultimate short-circuit breaking capacity at 400V Icu kA	Rated service short-circuit breaking capacity at 400V Ics kA	Cat. No.	Ref. No.	Pack.
3/4	10	6.3 - 10	130	100	100	Mbs63HG100	107434	1
5.5	13	9 - 13	169	50	38	Mbs63HG130	107435	1
7.5	16	11 - 16	208	50	38	Mbs63HG160	107436	1
10	20	14 - 20	260	50	38	Mbs63HG200	107437	1
11	25	19 - 25	325	50	38	Mbs63HG250	107438	1
15	32	24 - 32	416	50	38	Mbs63HG320	107439	1
18.5	40	28 - 40	520	50	38	Mbs63HG400	107440	1
22	50	35 - 50	650	50	38	Mbs63HG500	107441	1
30	63	45 - 63	819	50	38	Mbs63HG630	107442	1

(1) Rated current: highest thermal current setting range value.

Magnetic motor protection circuit breakers

Series Ms63 - Standard breaking capacity



Rated power 3 phase motors at 400Vac Pn kW	Rated current In A	Thermal current setting range ⁽¹⁾ A	Instantaneous short-circuit release A	Rated ultimate short-circuit breaking capacity at 400V Icu kA	Rated service short-circuit breaking capacity at 400V Ics kA	Cat. No.	Ref. No.	Pack.
3/4	10	-	130	100	100	Ms63SG100	107458	1
5.5	13	-	169	25	19	Ms63SG130	107459	1
7.5	16	-	208	25	19	Ms63SG160	107460	1
10	20	-	260	25	19	Ms63SG200	107461	1
11	25	-	325	25	19	Ms63SG250	107462	1
15	32	-	416	25	19	Ms63SG320	107463	1
18.5	40	-	520	25	19	Ms63SG400	107464	1
22	50	-	650	25	19	Ms63SG500	107465	1
30	63	-	819	25	19	Ms63SG630	107466	1

(1) Select appropriate thermal overload relay for the starter. See chapter G, pages G.3-G.6

Series Ms63 - High breaking capacity



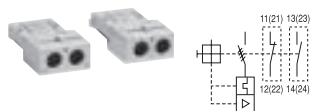
Rated power 3 phase motors at 400Vac Pn kW	Rated current In A	Thermal current setting range ⁽¹⁾ A	Instantaneous short-circuit release A	Rated ultimate short-circuit breaking capacity at 400V Icu kA	Rated service short-circuit breaking capacity at 400V Ics kA	Cat. No.	Ref. No.	Pack.
3/4	10	-	130	100	100	Ms63HG100	107482	1
5.5	13	-	169	50	38	Ms63HG130	107483	1
7.5	16	-	208	50	38	Ms63HG160	107484	1
10	20	-	260	50	38	Ms63HG200	107485	1
11	25	-	325	50	38	Ms63HG250	107486	1
15	32	-	416	50	38	Ms63HG320	107487	1
18.5	40	-	520	50	38	Ms63HG400	107488	1
22	50	-	650	50	38	Ms63HG500	107489	1
30	63	-	819	50	38	Ms63HG630	107490	1

(1) Select appropriate thermal overload relay for the starter. See chapter G, pages G.3-G.6

Auxiliaries for series Mbs32/63

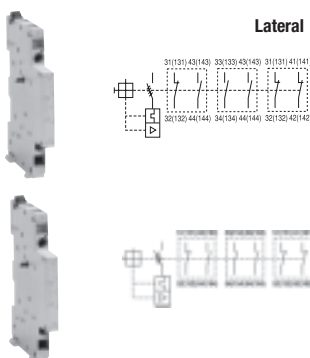
Auxiliary contact blocks

Frontal



Description	For use with	Type	Cat. No.	Ref. No.	Pack.
Maximum 2 auxiliary contact blocks per manual motor starter	M(b)s32... and M(b)s63...	1 NO	MAHS10FB	136160	5
	M(b)s32... and M(b)s63...	1 NC	MAHS01FB	136161	5

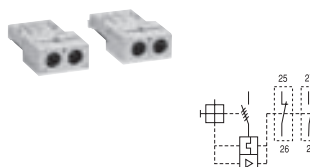
Lateral



Two contacts	M(b)s32... and M(b)s63...	1 NO + 1 NC	MAHS11LL	136162	10
Side mounting on the left	M(b)s32... and M(b)s63...	2 NO	MAHS20LL	136163	10
	M(b)s32... and M(b)s63...	2 NC	MAHS02LL	136164	10

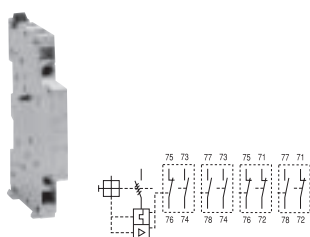
Two contacts	M(b)s32... and M(b)s63...	1 NO + 1 NC	MAHS11LR	136165	10
Side mounting on the right	M(b)s32... and M(b)s63...	2 NO	MAHS20LR	136166	10
	M(b)s32... and M(b)s63...	2 NC	MAHS02LR	136167	10

Alarm contact block



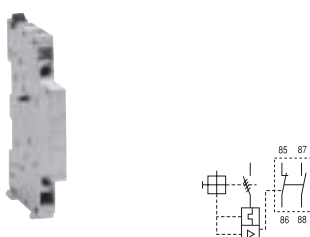
Description	For use with	Type	Cat. No.	Ref. No.	Pack.
Frontal mounting on the right	M(b)s32... and M(b)s63...	1 NO	MAHSb10FR	136157	5
Single contact	M(b)s32... and M(b)s63...	1 NC	MAHSb01FR	136158	5

Auxiliary / alarm contact block



Description	For use with	Type	Cat. No.	Ref. No.	Pack.
Side mounting on the left	M(b)s32... and M(b)s63...	1 NO (Alarm) + 1 NO (Aux.)	MAHSd1010LL	136168	10
(front alarm contact block can not be used at the same time)	M(b)s32... and M(b)s63...	1 NO (Alarm) + 1 NC (Aux.)	MAHSd1001LL	136169	10
	M(b)s32... and M(b)s63...	1 NC (Alarm) + 1 NO (Aux.)	MAHSd0110LL	136170	10
Two contacts	M(b)s32... and M(b)s63...	1 NC (Alarm) + 1 NC (Aux.)	MAHSd0101LL	136171	10

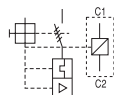
Short-circuit alarm contact block



Description	For use with	Type	Cat. No.	Ref. No.	Pack.
Side mounting on the left	M(b)s32... and M(b)s63...	1 NO + 1 NC	MAHSs11LL	136172	10
Two contacts NO + NC					
Mechanical indication marking					

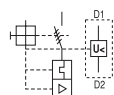
Auxiliaries for series Mbs32/63

Shunt trip device



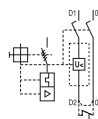
Description	For use with	Coil voltage	Cat. No.	Ref. No.	Pack.
Side mounting on the right Can not be used together with the undervoltage trip device	M(b)s32... and M(b)s63...	24V 50/60Hz	MAaLRA1	136173	5
	M(b)s32... and M(b)s63...	48V 60Hz	MAaLRAF	136174	5
	M(b)s32... and M(b)s63...	48V 50Hz / 60V 60Hz	MAaLRAG	136175	5
	M(b)s32... and M(b)s63...	110/127V 50Hz / 120V 60Hz	MAaLRAJ	136176	5
	M(b)s32... and M(b)s63...	208V 60Hz	MAaLRAM	136177	5
	M(b)s32... and M(b)s63...	220/230V 50Hz / 240/260V 60Hz	MAaLRAN	136178	5
	M(b)s32... and M(b)s63...	240V 50Hz / 277V 60Hz	MAaLRAR	136179	5
	M(b)s32... and M(b)s63...	380/400V 50Hz	MAaLRAU	136180	5
	M(b)s32... and M(b)s63...	415/440V 50Hz / 460/480V 60Hz	MAaLRAW	136181	5
	M(b)s32... and M(b)s63...	500V 50Hz / 600V 60Hz	MAaLRDY	136182	5
	M(b)s32... and M(b)s63...	24 to 60Vdc	MAaLRDD	136183	5
	M(b)s32... and M(b)s63...	110 to 240Vdc	MAaLRDJ	136184	5

Undervoltage trip device

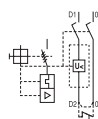


Description	For use with	Coil voltage	Cat. No.	Ref. No.	Pack.
Side mounting on the right Can not be used together with the shunt trip device	M(b)s32... and M(b)s63...	24V 50Hz	MArLRAD	136185	5
	M(b)s32... and M(b)s63...	24V 60Hz	MArLRAC	136186	5
	M(b)s32... and M(b)s63...	48V 50Hz	MArLRAG	136187	5
	M(b)s32... and M(b)s63...	48V 60Hz	MArLRAF	136188	5
	M(b)s32... and M(b)s63...	110/127V 50Hz / 120V 60Hz	MArLRAJ	136189	5
	M(b)s32... and M(b)s63...	208V 60Hz	MArLRAM	136190	5
	M(b)s32... and M(b)s63...	220/230V 50Hz / 240/260V 60Hz	MArLRAN	136191	5
	M(b)s32... and M(b)s63...	240V 50Hz / 277V 60Hz	MArLRAR	136192	5
	M(b)s32... and M(b)s63...	380/400V 50Hz	MArLRAU	136193	5
	M(b)s32... and M(b)s63...	415/440V 50Hz / 460/480V 60Hz	MArLRAW	136194	5
	M(b)s32... and M(b)s63...	500V 50Hz / 600V 60Hz	MArLRAY	136195	5

With 2NO early make auxiliary contacts



Side mounting on the right Can not be used together with the shunt trip device	M(b)s32*S...	24V 50Hz	MAr20LTAD	136196	5
	M(b)s32*S...	24V 60Hz	MAr20LTAC	136197	5
	M(b)s32*S...	48V 50Hz	MAr20LTAG	136198	5
	M(b)s32*S...	48V 60Hz	MAr20LTAF	136199	5
	M(b)s32*S...	110/127V 50Hz / 120V 60Hz	MAr20LTAJ	136200	5
	M(b)s32*S...	208V 60Hz	MAr20LTAM	136201	5
	M(b)s32*S...	220/230V 50Hz / 240/260V 60Hz	MAr20LTAN	136202	5
	M(b)s32*S...	240V 50Hz / 277V 60Hz	MAr20LTAR	136203	5
	M(b)s32*S...	380/400V 50Hz	MAr20LTAU	136204	5
	M(b)s32*S...	415/440V 50Hz / 460/480V 60Hz	MAr20LTAW	136205	5
	M(b)s32*S...	500V 50Hz / 600V 60Hz	MAr20LTAY	136206	5



Side mounting on the right Can not be used together with the shunt trip device	M(b)s32H and M(b)s63...	24V 50Hz	MAr20LCAD	136207	5
	M(b)s32H and M(b)s63...	24V 60Hz	MAr20LCAC	136208	5
	M(b)s32H and M(b)s63...	48V 50Hz	MAr20LCAG	136209	5
	M(b)s32H and M(b)s63...	48V 60Hz	MAr20LCAF	136210	5
	M(b)s32H and M(b)s63...	110/127V 50Hz / 120V 60Hz	MAr20LCAJ	136211	5
	M(b)s32H and M(b)s63...	208V 60Hz	MAr20LCAM	136212	5
	M(b)s32H and M(b)s63...	220/230V 50Hz / 240/260V 60Hz	MAr20LCAN	136213	5
	M(b)s32H and M(b)s63...	240V 50Hz / 277V 60Hz	MAr20LCAR	136214	5
	M(b)s32H and M(b)s63...	380/400V 50Hz	MAr20LCAU	136215	5
	M(b)s32H and M(b)s63...	415/440V 50Hz / 460/480V 60Hz	MAr20LCAW	136216	5
	M(b)s32H and M(b)s63...	500V 50Hz / 600V 60Hz	MAr20LCAY	136217	5

Terminal protector

Description	For use with	Cat. No.	Ref. No.	Pack.
Protection against accidental finger touch (IP20) for GPS2 manual motor starters	M(b)s63...	MAPTP63	107183	50

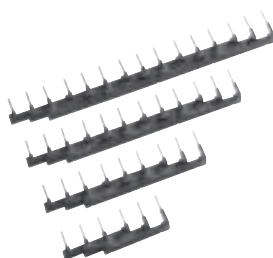
Accessories for series Mbs32/63

External handle operator



Description	For use with	Type	Cat. No.	Ref. No.	Pack.
Used for distance mounting on a panel Lockable with 1, 2 or 3 padlocks diameter 4 to 8 mm Two types: standard and emergency applications ON/OFF/TRIPPING position marking Protection degree: IP55 Shaft mounting depths: 139.8 - 289.8 mm for MA32HB, MA32HR 161 - 311.1 mm for MA63HB, MA63HR Package parts and quantities: 1 handle unit 1 shaft 1 shaft guide 1 latch (screws) 4 mounting screws	M(b)s32*H...	Standard (black)	MA32HB	136218	5
	M(b)s32*H ...	Emergency (red/yellow)	MA32HR	136219	5
	M(b)s63...	Standard (black)	MA63HB	136220	5
	M(b)s63 ...	Emergency (red/yellow)	MA63HR	136221	5

Busbar system



3-phase feed-in terminals

Main busbar

Busbar cover

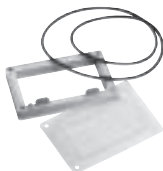
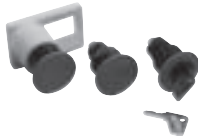
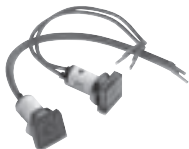
Description	For use with	Connection	Cat. No.	Ref. No.	Pack.
Main feeding terminal	M(b)s32...	Terminal capacity: 25 mm ²	Md32F	107188	10
Upper connection	M(b)s63...	Terminal capacity: 50 mm ²	Md63F	107189	1
Modular spacing 45 mm	for 2 M(b)s32... + frontal auxiliaries	Pin	Md32B02	107035	5
	for 3 M(b)s32... + frontal auxiliaries	Pin	Md32B03	107036	5
	for 4 M(b)s32... + frontal auxiliaries	Pin	Md32B04	107037	5
	for 5 M(b)s32... + frontal auxiliaries	Pin	Md32B05	107038	5
Modular spacing 54 mm	for 2 M(b)s32... + 9mm lateral auxiliary	Pin	Md32B12	107039	5
	for 3 M(b)s32... + 9mm lateral auxiliary	Pin	Md32B13	107040	5
	for 4 M(b)s32... + 9mm lateral auxiliary	Pin	Md32B14	107041	5
	for 5 M(b)s32... + 9mm lateral auxiliary	Pin	Md32B15	107042	5
Modular spacing 63 mm	for 2 M(b)s32... + 18mm lateral auxiliary or 2 x 9mm lateral auxiliary	Fork	Md32B22	107043	10
	for 4 M(b)s32... + 18mm lateral auxiliary or 2 x 9mm lateral auxiliary	Fork	Md32B24	107044	10
Modular spacing 55 mm	for 2 M(b)s63... + frontal auxiliaries	Pin	Md63B02	107045	1
	for 3 M(b)s63... + frontal auxiliaries	Pin	Md63B03	107046	1
	for 4 M(b)s63... + frontal auxiliaries	Pin	Md63B04	107047	1
Modular spacing 64 mm	for 2 M(b)s63... + 9mm lateral auxiliary	Pin	Md63B12	107048	1
	for 3 M(b)s63... + 9mm lateral auxiliary	Pin	Md63B13	107049	1
	for 4 M(b)s63... + 9mm lateral auxiliary	Pin	Md63B14	107050	1
Modular spacing 73 mm	for 2 M(b)s63... + 18mm lateral auxiliary or 2 x 9mm lateral auxiliary	Pin	Md63B22	107051	1
	for 4 M(b)s63... + 18mm lateral auxiliary or 2 x 9mm lateral auxiliary	Pin	Md63B24	107052	1
Touch guard for non used space	M(b)s32...	-	Md32G	107054	10
	M(b)s63...	-	Md63G	107055	10

Enclosures for series Mbs32/63

Enclosures for M(b)s32SG

	Plastic enclosures	Description	Cat. No.	Ref. No.	Pack.
		Surface mounting IP41	Mi41	136222	1
		Surface mounting IP55	Mi55	136223	1
		Flush mounting IP41	MIT41	136224	1
		Flush mounting IP55	MIT55	136225	1

Accessories for enclosures

	Neutral connection	Description	Cat. No.	Ref. No.	Pack.
		To be used inside the enclosure	MiN	136226	1
	Adaptor set	For enclosures used with M(b)s32*SG and undervoltage release with 2 NO auxiliary contacts	MIAS	107108	1
	Padlocking device	For three padlocks with max. 8 mm shackle diameter Not to be used with emergency stop handle	MiD	136227	1
	Conversion kit IP41 to IP55		MiC	136228	1
	Emergency mushroom push-button	Mushroom with impulse functions	MiPM	136229	1
		Mushroom self latching, unlatching by turning	MiPL	136230	1
		Mushroom self latching, unlatching with a key	MiPK	136231	1
	Indicator lamps	Green 110/220V	MILGJ	136232	1
		Green 220/240V	MILGN	136233	1
		Green 380/440V	MILGU	136234	1
		Green 480/500V	MILGX	136235	1
		Green 600V	MILGY	136236	1
		Red 110/220V	MILRJ	136237	1
		Red 220/240V	MILRN	136238	1
		Red 380/440V	MILRU	136239	1
		Red 480/500V	MILRX	136240	1
		Red 600V	MILRY	136241	1
		Transparent 110/220V	MILCJ	136242	1
		Transparent 220/240V	MILCN	136243	1
		Transparent 380/440V	MILCU	136244	1
		Transparent 480/500V	MILCX	136245	1
		Transparent 600V	MILCY	136246	1

Manual motor starters - Coordination tables

Coordination type 1 65kA at 380/400V and 415V

MOTOR(1)			MANUAL MOTOR STARTER				CONTACTOR			LINKS
Rated power	Rated current		Cat. No.	Rated current In (A)	Thermal current Setting range (A)	Magnetic current (A)	Series	Smallest wire Cu (PVC)(2) 380/415V (mm ²)	Minimum frontal electrical safety clearance (mm)	Cat. No. (3)
	380/400V (A)	415V (A)								
0.06	0.23	0.21	Mbs32SG002	0.25	0.16 - 0.25	3.2	LS02K / LS4K	1	20	MF32L05B/MF32L7*
0.09	0.34	0.31	Mbs32SG004	0.4	0.25 - 0.4	5.2	LS02K / LS4K	1	20	MF32L05B/MF32L7*
0.12	0.44	0.4	Mbs32SG006	0.63	0.4 - 0.63	8.2	LS02K / LS4K	1	20	MF32L05B/MF32L7*
0.18	0.65	0.63	Mbs32SG010	1	0.63 - 1	13	LS02K / LS4K	1	20	MF32L05B/MF32L7*
0.25	0.9	0.8	Mbs32SG010	1	0.63 - 1	13	LS02K / LS4K	1	20	MF32L05B/MF32L7*
0.37	1.25	1.1	Mbs32SG016	1.6	1 - 1.6	20.5	LS02K / LS4K	1	20	MF32L05B/MF32L7*
0.55	1.6	1.5	Mbs32SG016	1.6	1 - 1.6	20.5	LS02K / LS4K	1	20	MF32L05B/MF32L7*
0.75	2	1.9	Mbs32SG025	2.5	1.6 - 2.5	32.5	LS02K / LS4K	1	20	MF32L05B/MF32L7*
1.1	2.6	2.5	Mbs32SG040	4	2.5 - 4	52	LS02K / LS4K	1	20	MF32L05B/MF32L7*
1.5	3.5	3.4	Mbs32SG040	4	2.5 - 4	52	LS02K / LS4K	1	20	MF32L05B/MF32L7*
2.2	5	4.5	Mbs32SG063	6.3	4 - 6.3	82	LS02K / LS4K	1	20	MF32L05B/MF32L7*
3	7	6.5	Mbs32SG100	10	6.3 - 10	130	LS05 / LS4K	1.5	20	MF32L05B/MF32L7*
4	9	8	Mbs32SG100	10	6.3 - 10	130	LS05 / LS4K	1.5	20	MF32L05B/MF32L7*
5.5	12	11	Mbs32HG130	13	9 - 13	169	LS5K	2.5	20	MF32L7*
7.5	16	14	Mbs32HG160	16	11 - 16	208	LS7K	2.5	20	MF32L7*
11	22.5	21	Mbs32HG250	25	19 - 25	325	LS11K	4	20	MF32L11*
15	30	28	Mbs32HG320	32	24 - 32	416	LS15K	6	20	MF32L16*
11	22.5	21	Mbs63HG250	25	19 - 25	325	LS15K	4	20	MF63L16*
15	30	28	Mbs63HG320	32	24 - 32	416	LS15K	6	20	MF63L16*
18.5	37	35	Mbs63HG400	40	28 - 40	520	LS18K	10	20	MF63L18*
22	44	41	Mbs63HG500	50	35 - 50	650	LS22K	10	25	MF63L30A
30	60	55	Mbs63HG630	63	45 - 63	820	LS30K	16	25	MF63L30A

Coordination type 2 65kA at 380/400V and 415V

MOTOR(1)			MANUAL MOTOR STARTER				CONTACTOR			LINKS
Rated power	Rated current		Cat. No.	Rated current In (A)	Thermal current Setting range (A)	Magnetic current (A)	Series	Smallest wire Cu (PVC)(2) 380/415V (mm ²)	Minimum frontal electrical safety clearance (mm)	Cat. No. (3)
	380/400V (A)	415V (A)								
0.06	0.23	0.21	Mbs32HG002	0.25	0.16 - 0.25	3.2	LS4K	1	20	MF32L7*
0.09	0.34	0.31	Mbs32HG004	0.4	0.25 - 0.4	5.2	LS4K	1	20	MF32L7*
0.12	0.44	0.4	Mbs32HG006	0.63	0.4 - 0.63	8.2	LS4K	1	20	MF32L7*
0.18	0.65	0.63	Mbs32HG010	1	0.63 - 1	13	LS4K	1	20	MF32L7*
0.25	0.9	0.8	Mbs32HG010	1	0.63 - 1	13	LS4K	1	20	MF32L7*
0.37	1.25	1.1	Mbs32HG016	1.6	1 - 1.6	20.5	LS4K	1	20	MF32L7*
0.55	1.6	1.5	Mbs32HG016	1.6	1 - 1.6	20.5	LS4K	1	20	MF32L7*
0.75	2	1.9	Mbs32HG025	2.5	1.6 - 2.5	32.5	LS4K	1	20	MF32L7*
1.1	2.6	2.5	Mbs32HG040	4	2.5 - 4	52	LS11K	1	20	MF32L11*
1.5	3.5	3.4	Mbs32HG040	4	2.5 - 4	52	LS11K	1	20	MF32L11*
2.2	5	4.5	Mbs32HG063	6.3	4 - 6.3	82	LS11K	1	20	MF32L11*
3	7	6.5	Mbs32HG100	10	6.3 - 10	130	LS11K	1.5	20	MF32L11*
4	9	8	Mbs32HG100	10	6.3 - 10	130	LS11K	1.5	20	MF32L11*
5.5	12	11	Mbs32HG130	13	9 - 13	169	LS11K	2.5	20	MF32L11*
7.5	16	14	Mbs32HG160	16	11 - 16	208	LS11K	2.5	20	MF32L11*
11	22.5	21	Mbs32HG250	25	19 - 25	325	LS11K	4	20	MF32L11*
15	30	28	Mbs32HG320	32	24 - 32	416	LS15K	6	20	MF32L16*
11	22.5	21	Mbs63HG250 (4)	25	19 - 25	325	LS15K	4	20	MF63L16*
15	30	28	Mbs63HG320 (4)	32	24 - 32	416	LS15K	6	20	MF63L16*
18.5	37	35	Mbs63HG400 (4)	40	28 - 40	520	LS18K	10	20	MF63L18*
22	44	41	Mbs63HG500 (4)	50	35 - 50	650	LS22K	10	25	MF63L30A
30	60	55	Mbs63HG630 (4)	63	45 - 63	820	LS30K	16	25	MF63L30A

(1) Currents are relevant to four pole motors not having special characteristics of torque.

Inrush currents: 8 time rated current for 1s.

(2) The minimum cycle cross-sections are referred to an ambient temperature of 30°C max. in free air.

Cables are to withstand the maximum let-through energy and the motor rated current. Besides the user should consider the drop voltage on the cables, the type of laying and the ambient temperature.

(3) Complete cat. nrs., see page I.13

(4) Test running.

Manual motor starters - Coordination tables

Coordination type 1 50kA at 500V and 525V

MOTOR(1)			MANUAL MOTOR STARTER				CONTACTOR			LINKS
Rated power	Rated current		Cat. No.	Rated current In	Thermal current	Magnetic current	Series	Smallest wire Cu (PVC)(2)	Minimum frontal electrical safety clearance	Cat. No. (3)
(kW)	500V (A)	525V (A)		(A)	Setting range (A)	(A)		380/415V (mm ²)	(mm)	
0.06	0.17	0.16	Mbs32SG002	0.25	0.16 - 0.25	3.2	LS02K/LS4K	1	20	MF32L05B/MF32L7*
0.09	0.24	0.22	Mbs32SG002	0.25	0.16 - 0.25	3.2	LS02K/LS4K	1	20	MF32L05B/MF32L7*
0.12	0.33	0.3	Mbs32SG004	0.4	0.25 - 0.4	5.2	LS02K/LS4K	1	20	MF32L05B/MF32L7*
0.18	0.48	0.46	Mbs32SG006	0.63	0.4 - 0.63	8.2	LS02K/LS4K	1	20	MF32L05B/MF32L7*
0.25	0.66	0.64	Mbs32SG010	1	0.63 - 1	13	LS02K/LS4K	1	20	MF32L05B/MF32L7*
0.37	0.9	0.85	Mbs32SG010	1	0.63 - 1	13	LS02K/LS4K	1	20	MF32L05B/MF32L7*
0.55	1.2	1.15	Mbs32SG016	1.6	1 - 1.6	20.5	LS02K/LS4K	1	20	MF32L05B/MF32L7*
0.75	1.5	1.45	Mbs32SG016	1.6	1 - 1.6	20.5	LS02K/LS4K	1	20	MF32L05B/MF32L7*
1.1	2.1	1.9	Mbs32SG025	2.5	1.6 - 2.5	32.5	LS02K/LS4K	1	20	MF32L05B/MF32L7*
1.5	2.8	2.6	Mbs32SG040	4	2.5 - 4	52	LS02K/LS4K	1	20	MF32L05B/MF32L7*
2.2	3.9	3.6	Mbs32SG040	4	2.5 - 4	52	LS02K/LS4K	1	20	MF32L05B/MF32L7*
3	5.3	5	Mbs32SG063	6.3	4 - 6.3	82	LS02K/LS4K	1	20	MF32L05B/MF32L7*
4	6.8	6.5	Mbs32HG100	10	6.3 - 10	130	LS05/LS4K	1	20	MF32L05B/MF32L7*
5.5	9.1	8.6	Mbs32HG100	10	6.3 - 10	130	LS4K	1.5	20	MF32L7*
7.5	12	11.4	Mbs32HG130	13	9 - 13	169	LS5K	2.5	20	MF32L7*
10	15.5	14.8	Mbs32HG160	16	11 - 16	208	LS7K	2.5	20	MF32L7*
11	17.6	17	Mbs32HG200	20	14 - 20	260	LS11K	2.5	20	MF32L11*
15	23	22	Mbs32HG250	25	19 - 25	325	LS11K	4	20	MF32L11*
18.5	28.5	27	Mbs32HG320	32	24 - 32	416	LS15K	6	20	MF32L16*
11	17.6	17	Mbs63HG200	20	14 - 20	260	LS15K	2.5	20	MF63L16*
15	23	22	Mbs63HG250	25	19 - 25	325	LS15K	4	20	MF63L16*
18.5	28.5	27	Mbs63HG320	32	24 - 32	416	LS15K	6	20	MF63L16*
22	33	31.5	Mbs63HG400	40	28 - 40	520	LS18K	6/10	20	MF63L18*
30	45	43	Mbs63HG500	50	35 - 50	650	LS22K	10	25	MF63L30A
37	53	52	Mbs63HG630	63	45 - 63	820	LS30K	16	25	MF63L30A

Coordination type 2 50kA at 500V and 525V

MOTOR(1)			MANUAL MOTOR STARTER				CONTACTOR			LINKS
Rated power	Rated current		Cat. No.	Rated current In	Thermal current	Magnetic current	Series	Smallest wire Cu (PVC)(2)	Minimum frontal electrical safety clearance	Cat. No. (3)
(kW)	500V (A)	525V (A)		(A)	Setting range (A)	(A)		380/415V (mm ²)	(mm)	
0.06	0.17	0.16	Mbs32S/HG002	0.25	0.16 - 0.25	3.2	LS05/LS4K	1	20	MF32L05B/MF32L7*
0.09	0.24	0.22	Mbs32S/HG002	0.25	0.16 - 0.25	3.2	LS05/LS4K	1	20	MF32L05B/MF32L7*
0.12	0.33	0.3	Mbs32S/HG004	0.4	0.25 - 0.4	5.2	LS05/LS4K	1	20	MF32L05B/MF32L7*
0.18	0.48	0.46	Mbs32S/HG006	0.63	0.4 - 0.63	8.2	LS05/LS4K	1	20	MF32L05B/MF32L7*
0.25	0.66	0.64	Mbs32S/HG010	1	0.63 - 1	13	LS05/LS4K	1	20	MF32L05B/MF32L7*
0.37	0.9	0.85	Mbs32S/HG010	1	0.63 - 1	13	LS05/LS4K	1	20	MF32L05B/MF32L7*
0.55	1.2	1.15	Mbs32S/HG016	1.6	1 - 1.6	20.5	LS05/LS4K	1	20	MF32L05B/MF32L7*
0.75	1.5	1.45	Mbs32S/HG016	1.6	1 - 1.6	20.5	LS05/LS4K	1	20	MF32L05B/MF32L7*
1.1	2.1	1.9	Mbs32S/HG025	2.5	1.6 - 2.5	32.5	LS5K	1	20	MF32L7*
1.5	2.8	2.6	Mbs32S/HG040	4	2.5 - 4	52	LS11K	1	20	MF32L11*
2.2	3.9	3.6	Mbs32S/HG040	4	2.5 - 4	52	LS11K	1	20	MF32L11*
3	5.3	5	Mbs32S/HG063	6.3	4 - 6.3	82	LS11K	1	20	MF32L11*
4	6.8	6.5	Mbs32HG100	10	6.3 - 10	130	LS11K	1	20	MF32L11*
5.5	9.1	8.6	Mbs32HG100	10	6.3 - 10	130	LS11K	1.5	20	MF32L11*
7.5	12	11.4	Mbs32HG130	13	9 - 13	169	LS11K	2.5	20	MF32L11*
10	15.5	14.8	Mbs32HG160	16	11 - 16	208	LS11K	2.5	20	MF32L11*
11	17.6	17	Mbs32HG200	20	14 - 20	260	LS11K	2.5	20	MF32L11*
15	23	22	Mbs32HG250	25	19 - 25	325	LS15K	4	20	MF32L16*
18.5	28.5	27	Mbs32HG320	32	24 - 32	416	LS15K	6	20	MF32L16*
11	17.6	17	Mbs63HG200	20	14 - 20	260	LS15K	2.5	20	MF63L16*
15	23	22	Mbs63HG250	25	19 - 25	325	LS15K	4	20	MF63L16*
18.5	28.5	27	Mbs63HG320	32	24 - 32	416	LS18K	6	20	MF63L18*
22	33	31.5	Mbs63HG400	40	28 - 40	520	LS22K	6/10	25	MF63L30A
30	45	43	Mbs63HG500	50	35 - 50	650	LS22K	10	25	MF63L30A
37	53	52	Mbs63HG630	63	45 - 63	820	LS30K	16	25	MF63L30A

(1) Currents are relevant to four pole motors not having special characteristics of torque.

Inrush currents: 8 time rated current for 1s.

(2) The minimum cycle cross-sections are referred to an ambient temperature of 30°C max. in free air.

Cables are to withstand the maximum let-through energy and the motor rated current. Besides the user should consider the drop voltage on the cables, the type of laying and the ambient temperature.

(3) Complete cat. nrs., see page I.13

Manual motor starters - Coordination tables

Coordination Type 1 65kA at 380/400V and 415V

MOTOR(1)			MANUAL MOTOR STARTER			CONTACTOR	OVERLOAD RELAY		Smallest wire Cu (PVC)(2)	Minimum frontal safety clearance
Rated power	Rated current		Cat. No.	Rated current In	Thermal current	Magnetic current	Series	Series	Setting range	
	380/400V (A)	415V (A)		(A)	(A)	(A)				380/415V (mm ²)
0.06	0.23	0.21	Ms32S/HG002	0.25	-	3.3	LS4K	b18K	0.16 - 0.26	1
0.09	0.34	0.31	Ms32S/HG004	0.4	-	5.2	LS4K	b18K	0.25 - 0.41	1
0.12	0.44	0.4	Ms32S/HG006	0.63	-	8.2	LS4K	b18K	0.4 - 0.65	1
0.18	0.65	0.63	Ms32S/HG010	1	-	13	LS4K	b18K	0.4 - 0.65	1
0.25	0.9	0.8	Ms32S/HG010	1	-	13	LS4K	b18K	0.65 - 1.1	1
0.37	1.25	1.1	Ms32S/HG016	1.6	-	20.8	LS4K	b18K	1 - 1.5	1
0.55	1.6	1.5	Ms32S/HG016	1.6	-	20.8	LS4K	b18K	1.3 - 1.9	1
0.75	2	1.9	Ms32S/HG025	2.5	-	32.5	LS4K	b18K	1.8 - 2.7	1
1.1	2.6	2.5	Ms32S/HG040	4	-	52	LS4K	b18K	2.5 - 4	1
1.5	3.5	3.4	Ms32S/HG040	4	-	52	LS4K	b18K	2.5 - 4	1
2.2	5	4.5	Ms32S/HG063	6.3	-	81.9	LS4K	b18K	4 - 6.3	1
3	7	6.5	Ms32S/HG100	10	-	130	LS4K	b18K	5.5 - 8.5	1.5
4	9	8	Ms32S/HG100	10	-	130	LS4K	b18K	8 - 12	1.5
5.5	12	11	Ms32HG130	13	-	169	LS5K	b18K	10 - 16	2.5
7.5	-	14	Ms32HG160	16	-	208	LS7K	b18K	10 - 16	2.5
7.5	16	-	Ms32HG160	16	-	208	LS7K	b18K	14.5 - 18	2.5
11	22.5	21	Ms32HG250	25	-	325	LS11K	b18K	21 - 26	4
15	30	28	Ms32HG320	32	-	416	LS11K	b18K	25 - 32	6
11	22.5	21	Ms63HG250	25	-	325	LS11K	b18K	21 - 26	4
15	30	28	Ms63HG320	32	-	416	LS15K	b18K	25 - 32	6
18.5	37	35	Ms63HG400	40	-	520	LS18K	b18K	30 - 40	10
22	-	40	Ms63HG500	50	-	650	LS22K	b55K	30 - 43	10
22	44	-	Ms63HG500	50	-	650	LS22K	b55K	42 - 55	10
30	60	55	Ms63HG630	63	-	819	LS30K	b55K	54 - 65	16

Coordination Type 2 65kA at 380/400V and 415V

MOTOR(1)			MANUAL MOTOR STARTER			CONTACTOR	OVERLOAD RELAY		Smallest wire Cu (PVC)(2)	Minimum frontal safety clearance
Rated power	Rated current		Cat. No.	Rated current In	Thermal current	Magnetic current	Series	Series	Setting range	
	380/400V (A)	415V (A)		(A)	(A)	(A)				380/415V (mm ²)
0.06	0.23	0.21	Ms32S/HG002	0.25	-	3.3	LS4K	b18K	0.16 - 0.26	1
0.09	0.34	0.31	Ms32S/HG004	0.4	-	5.2	LS4K	b18K	0.25 - 0.41	1
0.12	0.44	0.4	Ms32S/HG006	0.63	-	8.2	LS4K	b18K	0.4 - 0.65	1
0.18	0.65	0.63	Ms32S/HG010	1	-	13	LS4K	b18K	0.4 - 0.65	1
0.25	0.9	0.8	Ms32S/HG010	1	-	13	LS4K	b18K	0.65 - 1.1	1
0.37	1.25	1.1	Ms32S/HG016	1.6	-	20.8	LS4K	b18K	1 - 1.5	1
0.55	1.6	1.5	Ms32S/HG016	1.6	-	20.8	LS4K	b18K	1.3 - 1.9	1
0.75	2	1.9	Ms32S/HG025	2.5	-	32.5	LS4K	b18K	1.8 - 2.7	1
1.1	2.6	2.5	Ms32S/HG040	4	-	52	LS5K	b18K	2.5 - 4	1
1.5	3.5	3.4	Ms32S/HG040	4	-	52	LS5K	b18K	2.5 - 4	1
2.2	5	4.5	Ms32S/HG063	6.3	-	81.9	LS7K	b18K	4 - 6.3	1
3	7	6.5	Ms32S/HG100	10	-	130	LS11K	b18K	5.5 - 8.5	1.5
4	9	8	Ms32S/HG100	10	-	130	LS11K	b18K	8 - 12	1.5
5.5	12	11	Ms32HG130	13	-	169	LS11K	b18K	10 - 16	1.5
7.5	-	14	Ms32HG160	16	-	208	LS11K	b18K	10 - 16	2.5
7.5	16	-	Ms32HG160	16	-	208	LS11K	b18K	14.5 - 18	2.5
11	22.5	21	Ms32HG250	25	-	325	LS11K	b18K	21 - 26	4
15	30	28	Ms32HG320	32	-	416	LS15K	b18K	25 - 32	6
11	22.5	21	Ms63HG250	25	-	325	LS15K	b18K	21 - 26	4
15	30	28	Ms63HG320	32	-	416	LS15K	b18K	25 - 32	6
18.5	37	35	Ms63HG400	40	-	520	LS18K	b18K	30 - 40	6
22	-	40	Ms63HG500	50	-	650	LS22K	b55K	30 - 43	10
22	44	-	Ms63HG500	50	-	650	LS22K	b55K	42 - 55	10
30	60	55	Ms63HG630	63	-	819	LS30K	b55K	54 - 65	16

(1) Currents are relevant to four pole motors not having special characteristics of torque.

Inrush currents: ≤ 8 time rated current for ≤ 1s.

(2) The minimum cycle cross-sections are referred to an ambient temperature of 30°C max. in free air and are selected to withstand the maximum let-through energy and the motor rated current. Besides the user has to consider the drop voltage, the type of laying and ambient temperature.

Notes