

MO132 manual motor starters magnetic only 0.10 to 32 A – with electromagnetic protection

2



2CDC241009F0011

MO132-6.3



2CDC241009F0011

MO132-32

Description

Manual motor starters magnetic only are electromechanical protection devices for the main circuit. They are used mainly to switch motors manually ON/OFF and protect them fuse less against short-circuit.

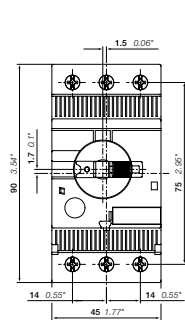
Fuse less protection with a manual motor starter saves costs, space and ensures a quick reaction under short-circuit condition, by switching off the motor within milliseconds. Fuse less starter combinations are setup together with contactors and overload relays.

Ordering details

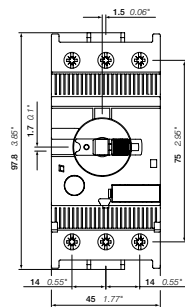
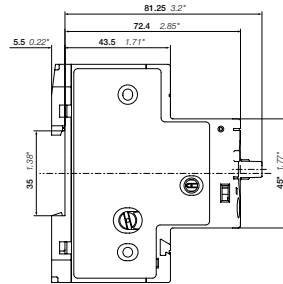
Rated operational power 400 V AC-3 ¹⁾ kW	Rated operational current A	Short-circuit breaking capacity I_{cs} at 400 V AC kA	Rated instantaneous short-circuit current setting I_i A	Type	Order code	Weight (1 pce) kg
0.03	0.16	100	1.56	MO132-0.16	1SAM360000R1001	0.215
0.06	0.25	100	2.44	MO132-0.25	1SAM360000R1002	0.215
0.09	0.40	100	3.90	MO132-0.4	1SAM360000R1003	0.215
0.12	0.63	100	6.14	MO132-0.63	1SAM360000R1004	0.215
0.25	1.0	100	11.50	MO132-1.0	1SAM360000R1005	0.215
0.55	1.6	100	18.40	MO132-1.6	1SAM360000R1006	0.265
0.75	2.5	100	28.75	MO132-2.5	1SAM360000R1007	0.265
1.5	4.0	50	50.00	MO132-4.0	1SAM360000R1008	0.265
2.2	6.3	50	78.75	MO132-6.3	1SAM360000R1009	0.265
4.0	10	50	125.00	MO132-10	1SAM360000R1010	0.265
5.5	12	50	150.00	MO132-12	1SAM360000R1012	0.310
7.5	16	50	200.00	MO132-16	1SAM360000R1011	0.310
9.0	20	50	250.00	MO132-20	1SAM360000R1013	0.310
12.5	25	50	312.50	MO132-25	1SAM360000R1014	0.310
15.5	32	25	400.00	MO132-32	1SAM360000R1015	0.310

¹⁾ For overload protection of motors, an appropriate thermal or electronic overload relay must be used

Main dimensions mm, inches



MO132 ≤ 10 A



MO132 ≥ 12 A

MO132 manual motor starters magnetic only

Technical data

Main circuit – Utilization characteristics according to IEC/EN

Type	MO132
Standards	IEC/EN 60947-2, IEC/EN 60947-4-1, IEC/EN 60947-1
Rated operational voltage U_n	690 V AC
Rated frequency	50/60 Hz
Number of poles	3
Duty time	100 %
Mechanical durability	100000 operations
Electrical durability	50000 operations
Rated impulse withstand voltage U_{imp}	6 kV
Rated insulation voltage U_i	690 V AC
Rated operational current I_n	See ordering details
Rated instantaneous short-circuit current setting I_{sc}	See ordering details
Rated service short-circuit breaking capacity I_{cs}	See table "Short-circuit breaking capacity and back-up fuses"
Rated ultimate short-circuit breaking capacity I_{cu}	See table "Short-circuit breaking capacity and back-up fuses"

Short-circuit breaking capacity and back-up fuses

I_{cs} Rated service short-circuit breaking capacity

I_{cu} Rated ultimate short-circuit breaking capacity

I_{cc} Prospective short-circuit current at installation location

Note: Maximum rated current of the back-up fuses if $I_{cc} > I_{cs}$

Type	230 V AC			400 V AC			440 V AC			500 V AC			690 V AC		
	I_{cs} kA	I_{cu} kA	gG, aM A	I_{cs} kA	I_{cu} kA	gG, aM A	I_{cs} kA	I_{cu} kA	gG, aM A	I_{cs} kA	I_{cu} kA	gG, aM A	I_{cs} kA	I_{cu} kA	gG, aM A
MO132-0.16															
MO132-0.25															
MO132-0.4															
MO132-0.63	No back-up fuse required up to $I_{cc} = 100$ kA														
MO132-1.0															
MO132-1.6															
MO132-2.5															
MO132-4.0							20	20	35	20	20	35	3	3	32
MO132-6.3							20	20	63	20	20	63	3	3	50
MO132-10							20	20	100	20	20	100	3	3	50
MO132-12							20	20	100	20	20	100	3	3	63
MO132-16							20	20	125	20	20	125	3	3	63
MO132-20							20	20	125	20	20	125	3	3	80
MO132-25	50	50	125	50	50	125	10	10	125	10	10	125	3	3	100
MO132-32	25	50	125	25	50	125	10	10	125	10	10	125	3	3	100

MO132-20: No need for back-up fuse in networks with a prospective current of up to 100 kA at 400 V.

MO132-32: No need for back-up fuse in networks with a prospective current of up to 50 kA at 400 V.

With an appropriate 125 A type gG fuse the device can be used in a network with a prospective current of up to 100 kA.



MO132 manual motor starters magnetic only

Technical data

General technical data

Type			MO132
Pollution degree			3
Phase loss sensitivity			No
Disconnect function acc. to IEC/EN 60947-2			Yes
Ambient air temperature			
Operation	Open		-25 ... +60 °C
	Enclosed (IB132)		0 ... +40 °C
Storage			-50 ... +80 °C
Ambient air temperature compensation			-
Maximum operating altitude permissible			2000 m
Resistance to shock acc. to IEC 60068-2-27			25 g / 11 ms
Resistance to vibrations acc. to IEC 60068-2-6			5 g / 3 ... 150 Hz
Mounting position			Position 1-6 (optional for single mounting)
Mounting			DIN-rail (EN 60715)
Group mounting			On request
Minimum distance to other units same type	Horizontal		0 mm
	Vertical		150 mm
Minimum distance to electrical conductive board	Horizontal, up to 400 V		0 mm
	Horizontal, up to 690 V		> 1.5 mm
	Vertical		75 mm
Degree of protection	Housing		IP20
	Main circuit terminals		IP20

Connecting characteristics

Main circuit				
Type		MO132-0.16 ... MO132-10	MO132-12 ... MO132-16	MO132-20 ... MO132-32
Connecting capacity				
 Solid	1 or 2 x	1 ... 4 mm ²	1 ... 4 mm ²	2.5 ... 6 mm ²
 Flexible	1 or 2 x	0.75 ... 2.5 mm ²	0.75 ... 2.5 mm ²	1 ... 6 mm ²
		Stranded acc. to UL/CSA	AWG 16-12	AWG 12-8
		Flexible acc. to UL/CSA	AWG 16-12	AWG 12-8
Stripping length			9 mm	10 mm
Tightening torques			0.8 ... 1.2 Nm / 10 ... 12 lb.in	1.5 Nm / 14 lb.in
Connection screw			M3.5 (Pozi driv 2)	M4 (Pozi driv 2)

MO132 manual motor starters magnetic only

Technical data

General technical data UL/CSA

Main circuit		
Maximum operational voltage		600 V
Manual motor controller ratings		see table "Manual motor controller for motor disconnect"
Motor ratings	Horse power	see table below
	Full load amps (FLA)	see table below
	Locked rotor amps (LRA)	see table below

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Electrical connection

		MO132 ≤ 10 A	MO132-12, -16	MO132-20, -25, -32
Connecting capacity	Stranded	1/2 x AWG 16 ... 12		1/2 x AWG 12 ... 8
	Flexible without ferrule	1/2 x AWG 16 ... 12		1/2 x AWG 12 ... 8
Stripping length		9 mm	10 mm	10 mm
Tightening torque		10 ... 12 lb-in	14 lb-in	18 lb-in
Connection screw		M3.5 (Pozidriv 2)	M4 (Pozidriv 2)	M4 (Pozidriv 2)

Motor rating, single phase

hp Horse power

FLA Full load amps

LRA Locked rotor amps

Type	220 ... 240 V AC			440 ... 480 V AC		
	hp	FLA	LRA	hp	FLA	LRA
MO132-0.16	-	0.16	0.96	-	0.16	0.96
MO132-0.25	-	0.25	1.5	-	0.25	1.5
MO132-0.4	-	0.4	2.4	-	0.4	2.4
MO132-0.63	-	0.63	3.78	-	0.63	3.78
MO132-1.0	-	1	6	-	1	6
MO132-1.6	1/10	1.6	9.6	-	1.6	9.6
MO132-2.5	1/6	2.5	15	1/2	2.5	15
MO132-4.0	1/3	4	24	1/2	4	24
MO132-6.3	1/2	6.3	37.8	1	6.3	37.8
MO132-10	1-1/2	10	60	3	8.5	46
MO132-12	2	12	72	3	8.5	64
MO132-16	2	12	72	5	14	81
MO132-20	3	17	92	5	14	81
MO132-25	3	17	127	7-1/2	21	116
MO132-32	5	28	162	10	26	145

MO132 manual motor starters magnetic only

Technical data

Motor rating, three phase

hp Horse power

FLA Full load amps

LRA Locked rotor amps

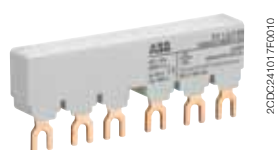
Type	110 ... 120 V AC			220 ... 240 V AC			440 ... 480 V AC			500 ... 600 V AC		
	hp	FLA	LRA	hp	FLA	LRA	hp	FLA	LRA	hp	FLA	LRA
MO132-0.16	-	0.16	0.96	-	0.16	0.96	-	0.16	0.96	-	0.16	0.96
MO132-0.25	-	0.25	1.5	-	0.25	1.5	-	0.25	1.5	-	0.25	1.5
MO132-0.4	-	0.4	2.4	-	0.4	2.4	-	0.4	2.4	-	0.4	2.4
MO132-0.63	-	0.63	3.78	-	0.63	3.78	-	0.63	3.78	-	0.63	3.78
MO132-1.0	-	1	6	-	1	6	-	1	6	1/2	1	6
MO132-1.6	-	1.6	9.6	-	1.6	9.6	3/4	1.6	9.6	3/4	1.6	9.6
MO132-2.5	-	2.5	15	1/2	2.5	15	1	2.5	15	1-1/2	2.5	15
MO132-4.0	-	4	24	1	4	24	2	4	24	3	3.9	26
MO132-6.3	1/2	6.3	37.8	1-1/2	6.3	37.8	3	4.8	32	5	6.1	37
MO132-10	3/4	10	60	3	9.6	64	5	7.6	46	7-1/2	9	51
MO132-12	1-1/2	12	72	3	9.6	64	7-1/2	11	64	10	11	65
MO132-16	2	16	84	5	15.2	92	10	14	81	10	11	65
MO132-20	3	19.2	128	5	15.2	92	10	14	81	15	17	93
MO132-25	3	19.2	128	7-1/2	22	127	15	21	116	20	22	116
MO132-32	5	30.4	184	10	28	162	20	27	145	25	27	146

Manual motor controller for motor disconnect

Type	Circuit breaker or class R fuse per UL/NEC 480 V / 600 V	Maximum short-circuit current rating	
		480 V	600 V
		kA	kA
MO132-0.16	with minimum interrupting rating of 35,000 rms symmetrical amperes	30	18
MO132-0.25		30	18
MO132-0.4		30	18
MO132-0.63		30	18
MO132-1.0		30	18
MO132-1.6		30	18
MO132-2.5		30	18
MO132-4.0		30	18
MO132-6.3		30	18
MO132-10		30	18
MO132-12		30	18
MO132-16		30	18
MO132-20		30	18
MO132-25		30	18
MO132-32		30	18

MO132 manual motor starters magnetic only

Main accessories



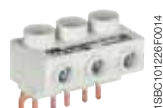
PS1-2-0-65

2CDC24101TF0010



PS1-3-1-100

2CDC241014F0010



S1-M1-25

1SBC10126F0014



S1-M2-25

1SBC10126F0014



SA1

SK0108B91

Description

Three-phase busbars ensure a quick and safe connection and are therefore a cost effective solution. A variety of different three-phase busbars up to 100 A are in the assortment. Between 2 and 5 manual motor starters with none, one or two lateral auxiliary contacts can be connected. Different three-phase feeder terminals are available according to the application.

Ordering details

Rated operational current A	Number of MMS	Number of lateral aux.	Type	Order code	Pkg qty	Weight (1 pce) kg
Three-phase busbars						
65	2	0	PS1-2-0-65	1SAM201906R1102	10	0.034
65	3	0	PS1-3-0-65	1SAM201906R1103	10	0.055
65	4	0	PS1-4-0-65	1SAM201906R1104	10	0.077
65	5	0	PS1-5-0-65	1SAM201906R1105	10	0.098
65	2	1	PS1-2-1-65	1SAM201906R1112	10	0.036
65	3	1	PS1-3-1-65	1SAM201906R1113	10	0.060
65	4	1	PS1-4-1-65	1SAM201906R1114	10	0.087
65	5	1	PS1-5-1-65	1SAM201906R1115	10	0.108
65	2	2	PS1-2-2-65	1SAM201906R1122	10	0.040
65	3	2	PS1-3-2-65	1SAM201906R1123	10	0.067
65	4	2	PS1-4-2-65	1SAM201906R1124	10	0.095
65	5	2	PS1-5-2-65	1SAM201906R1125	10	0.122
100	3	0	PS1-3-0-100	1SAM201916R1103	10	0.084
100	4	0	PS1-4-0-100	1SAM201916R1104	10	0.117
100	5	0	PS1-5-0-100	1SAM201916R1105	10	0.154
100	3	1	PS1-3-1-100	1SAM201916R1113	10	0.094
100	4	1	PS1-4-1-100	1SAM201916R1114	10	0.134
100	5	1	PS1-5-1-100	1SAM201916R1115	10	0.172
100	3	2	PS1-3-2-100	1SAM201916R1123	10	0.105

Rated operational current A	Rated cross section mm ²	Mounting form	Type	Order code	Pkg qty	Weight (1 pce) kg
Three-phase feeder terminals						
65	25	Flat	S1-M1-25	1SAM201907R1101	10	0.038
65	25	High	S1-M2-25	1SAM201907R1102	10	0.051
65	25	UL type E and IEC	S1-M3-25	1SAM201907R1103	10	0.042
100	35	UL type E and IEC	S1-M3-35	1SAM201913R1103	10	0.060

Description	Type	Order code	Pkg qty	Weight (1 pce) kg
Protection cover for busbars	BS1-3	1SAM201908R1001	50	0.003
Padlock + two keys	SA2	GJF1101903R0002	10	0.020
Screw fixing kit	FS116	1SAM201909R1001	1	0.020

MO132 manual motor starters magnetic only

Main accessories

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1SBC101208F0014

HKF1-11



1SBC101209F0014

HK1-11



1SBC101219F0014

SK1-11



1SBC101211F0014

AA1-24



1SBC101212F0014

UA1-24

Description

MO132 manual motor starters can be equipped with auxiliary contacts for lateral/front mounting, signalling contact for lateral mounting, undervoltage release and shunt trips. The accessories can be fitted wiring free and without tools. A variety of combinations is possible as required for the application. The auxiliary contacts change position with the main contacts. Undervoltage release are used for remote tripping of the manual motor starter especially for emergency stop circuits. Shunt trips release the MMS used for remote tripping.

Ordering details

Auxiliary contacts N.O.	Auxiliary contacts N.C.	Description	Type	Order code	Pkg qty	Weight (1 pce) kg
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Auxiliary contacts – mountable on the front

1	1		HKF1-11	1SAM201901R1001	10	0.015
2	0		HKF1-20	1SAM201901R1002	10	0.015

Auxiliary contacts – mountable on the right

1	1	Max. 2 pieces	HK1-11	1SAM201902R1001	2	0.035
2	0	Max. 2 pieces	HK1-20	1SAM201902R1002	2	0.035
0	2	Max. 2 pieces	HK1-02	1SAM201902R1003	2	0.035
2	0	With lead contacts	HK1-20L	1SAM201902R1004	2	0.035

Signalling contacts – mountable on the right

1	1	For tripped alarm, max. 2 pieces	SK1-11	1SAM201903R1001	2	0.035
2	0	For tripped alarm, max. 2 pieces	SK1-20	1SAM201903R1002	2	0.035
0	2	For tripped alarm, max. 2 pieces	SK1-02	1SAM201903R1003	2	0.035

Rated control supply voltage V	Frequency Hz	Type	Order code	Pkg qty	Weight (1 pce) kg
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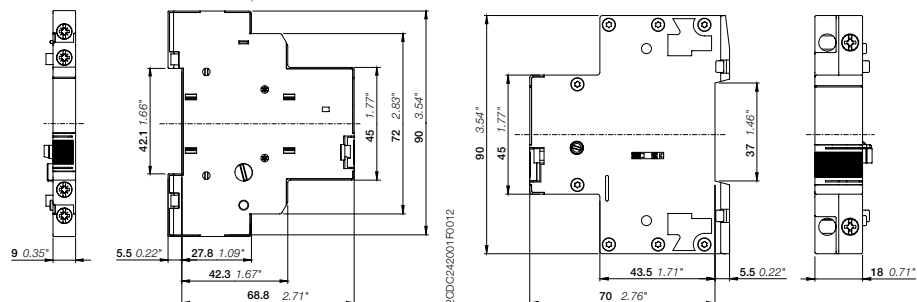
Shunt trip units – mountable on the left

20 ... 24	50/60	AA1-24	1SAM201910R1001	1	0.100
110	50/60	AA1-110	1SAM201910R1002	1	0.100
200 ... 240	50/60	AA1-230	1SAM201910R1003	1	0.100
350 ... 415	50/60	AA1-400	1SAM201910R1004	1	0.100

Undervoltage releases – mountable on the left

24	50	UA1-24	1SAM201904R1001	1	0.100
48	50	UA1-48	1SAM201904R1002	1	0.100
60	50	UA1-60	1SAM201904R1003	1	0.100
110 ... 120	50/60	UA1-110	1SAM201904R1004	1	0.100
208	60	UA1-208	1SAM201904R1008	1	0.100
230 ... 240	50/60	UA1-230	1SAM201904R1005	1	0.100
400	50	UA1-400	1SAM201904R1006	1	0.100
415 ... 480	50/60	UA1-415	1SAM201904R1007	1	0.100

Main dimensions mm, inches



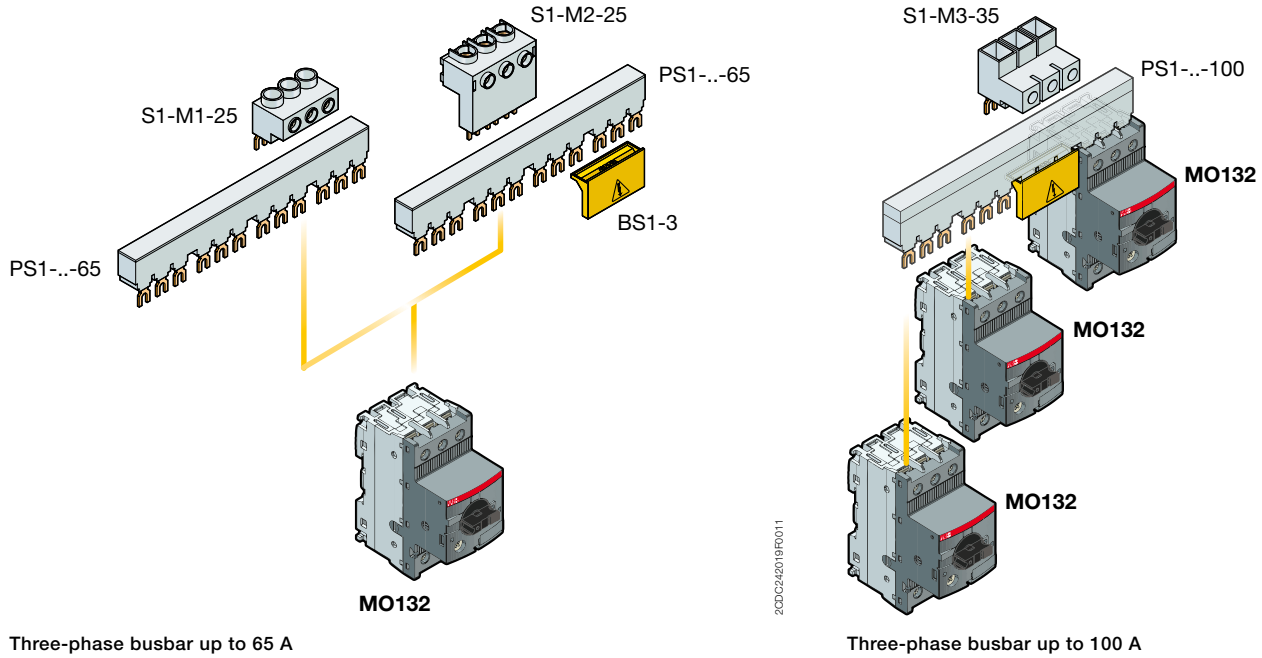
HK1

UA1

MO132 manual motor starters magnetic only

Main accessories

Manual motor starter with three-phase busbar systems



Three-phase busbar up to 65 A

Three-phase busbar up to 100 A

General technical data

Type	PS1-xxx-65	PS1-xxx-100	S1-Mx-25	S1-Mx-35
Standards	IEC/EN 60947-4-1, IEC/EN 60947-1			
Rated operational voltage U_n	690 V			
Rated operational current I_n	65 A	100 A	65 A	100 A
Rated frequency	50/60 Hz			
Rated impulse withstand voltage U_{imp}	6 kV			
Rated insulation voltage U_i	690 V AC			
Pollution degree	3			
Cross-section	10 mm ²	16 mm ²	25 mm ²	35 mm ²
Ambient air temperature	Operation: -25 ... +70 °C Storage: -50 ... +80 °C			
Resistance to shock acc. to IEC 60068-2-27	25 g / 11 ms			
Resistance to vibrations acc. to IEC 60068-2-6	5 g / 3 ... 150 Hz			

Electrical connection

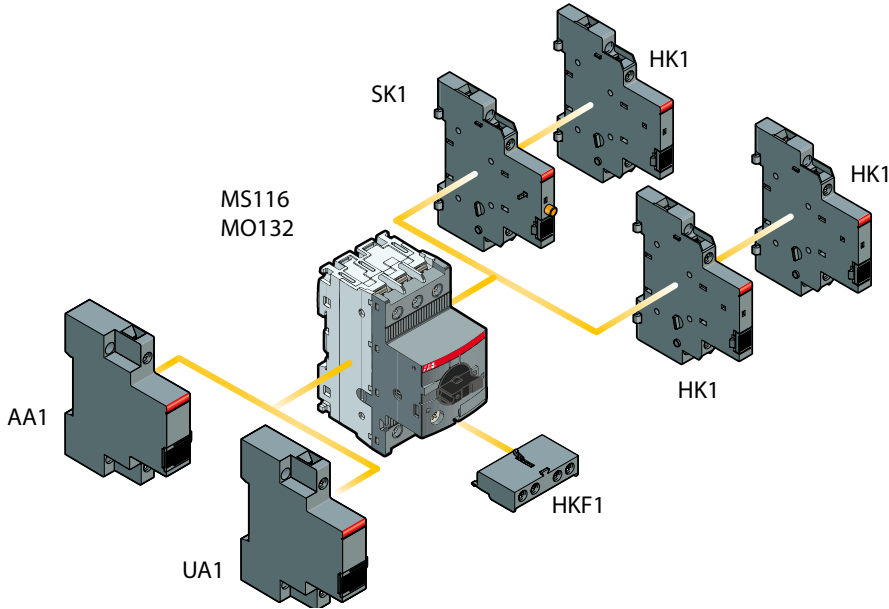
Main circuit

Type	S1-Mx-25	S1-Mx-35
Connecting capacity		
Solid	1 x 6 ... 25 mm ²	10 ... 35 mm ²
Flexible	1 x 6 ... 16 mm ²	10 ... 35 mm ²
Stranded acc. to UL/CSA	1 x AWG 10-4	AWG 8-2
Flexible acc. to UL/CSA	1 x AWG 10-6	AWG 8-2
Stripping length	10 mm	12 mm
Tightening torques	2.5 Nm / 22 lb.in	4.5 Nm / 40 lb.in
Connection screw	PZ2 (6 mm)	Hexagon SW4

MO132 manual motor starters magnetic only

Main accessories

Manual motor starter with accessories



2CDC24601FD013

General technical data



Type	HK1	SK1	HKF1
Standards	IEC/EN 60947-2, IEC/EN 60947-4-1, IEC/EN 60947-1		
Rated operational voltage U_n	690 V AC / 600 DC		250 V AC / 250 V DC
Conventional free-air thermal current I_{th}	6 A		5 A
Rated frequency	50/60 Hz		
Rated impulse withstand voltage U_{imp}	6 kV		
Rated insulation voltage U_i	690 V AC		250 V AC
Pollution degree	3		
Ambient air temperature	Operation: -25 ... +70 °C Storage: -50 ... +80 °C		
Resistance to shock acc. to IEC 60068-2-27	25 g / 11 ms		
Resistance to vibrations acc. to IEC 60068-2-6	5 g / 3 ... 150 Hz		
I_e / Rated operational current AC-15 acc. to IEC/EN 60947-5-1 for utilization category			
	24 V, 120 V	6 A	3 A
	240 V	4 A	1.5 A
	400 V	3 A	-
	440 V, 690 V	1 A	-
I_e / Rated operational current DC-13 acc. to IEC/EN 60947-5-1 for utilization category			
	24 V	2 A	1 A
	125 V	0.55 A	0.27 A
	250 V	0.27 A	0.11 A
	440 V, 600 V	0.15 A	-
Minimum switching capacity	17 V / 5 mA		
Short-circuit protective device	N.C., 95-96	10 A Type gG	
	N.O., 97-98	10 A Type gG	
Duty time	100 %		
Mounting	Right side of MMS		Front of MMS
Mounting positions	1-6		
Mechanical durability	50000 cycles		-
Electrical durability	50000 cycles		-

2CDC131036C0201

MO132 manual motor starters magnetic only

Main accessories

Electrical connection

Main circuit		HK1	SK1	HKF1
Type				
Connecting capacity				
 Solid	1 or 2 x	1 ... 1.5 mm ²		1 ... 2.5 mm ²
 Flexible	1 or 2 x	0.75 ... 1.5 mm ²		
	1 or 2 x	AWG 16-14		
	1 or 2 x	AWG 16-14		
Stripping length				
		8 mm		
Tightening torques				
		0.8 ... 1.2 Nm / 7 lb.in		
Connection screw				
		M3 (Pozidriv 2)		

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MO132 manual motor starters magnetic only

Main accessories

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2CDC241004F0010

IB132-Y



2CDC241003F0010

IB132-G



2CDC241002F0010

DMS132-Y



2CDC241001F0010

DMS132-G

Description

IB132 are IP65 enclosures for single MMS installation. Additional mounting of auxiliary and signalling contacts, shunt trips and undervoltage release is possible. The handle is lockable in OFF position. For detailed specification see installation instruction.

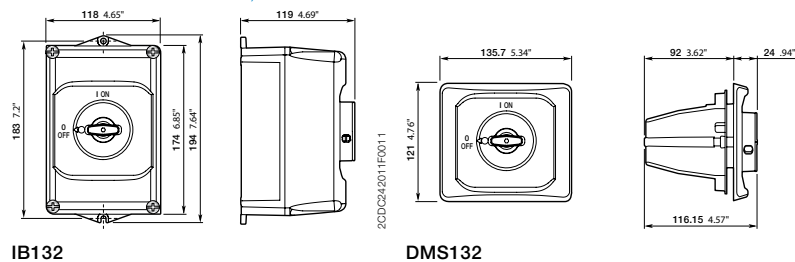
DMS132 are IP65 door mounting kits for MMS installation in any enclosure. Additional mounting of auxiliary, signalling, shunt trips and undervoltage release is possible. The handle is lockable in OFF position. For detailed specification see installation instruction.

Ordering details

Description	Color	Type	Order code	Pkg qty	Weight (1 pce) kg
Enclosures IP65					
Padlockable max. 3 padlocks with bail diameter 4 ... 6.5 mm	Yellow/red	IB132-Y	1SAM201911R1011	1	0.370
	Grey/black	IB132-G	1SAM201911R1010	1	0.370
Door mounting kit IP65					
Padlockable max. 3 padlocks with bail diameter 4 ... 6.5 mm	Yellow/red	DMS132-Y	1SAM201912R1011	1	0.170
	Grey/black	DMS132-G	1SAM201912R1010	1	0.170

Indication I-O-T and ON-OFF-T

Main dimensions mm, inches



MO132 manual motor starters magnetic only

Main accessories



MSHD-LTB

2CDC24100FF0011



MSHD-LTY

2CDC241006FF0011



MSMN

2CDC241004FF0011



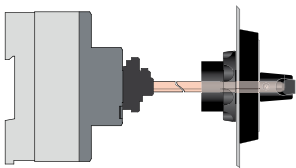
MSOX-30

2CDC241005FF0011



MSH-AR

2CDC241001FF0012



Shaft alignment ring

2CDC242003FF0012

Description

The complete set includes handle, shaft and driver. All accessories fit 6 mm shafts of maximum 180 mm length. The degree of protection for handles MSHD is IP64.

Ordering details

Description	Shaft length mm	Type	Order code	Pkg qty	Weight (1 pce) kg
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Shafts

For selector type handles. Shaft diameter 6 mm. Shaft extension for door coupling driver.

85	OXS6X85	1SCA101647R1001	1	0.020
105	OXS6X105	1SCA108043R1001	1	0.020
130	OXS6X130	1SCA101655R1001	1	0.030
180	OXS6X180	1SCA101659R1001	1	0.040

Description	Color mm	Type	Order code	Pkg qty	Weight (1 pce) kg
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Selector type handles IP64

Padlockable max. 3 padlocks with bail diameter 5 ... 8 mm, door interlock in ON position defeatable, for use with 6 mm OXS6...types up to 180 mm or driver shafts MSOX.

Black	MSHD-LTB ¹⁾	1SAM201920R1011	1	0.065
Yellow	MSHD-LTY ¹⁾	1SAM201920R1012	1	0.065

¹⁾ Indication I-O-T and ON-OFF-T

Description	Type	Order code	Pkg qty	Weight (1 pce) kg
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Driver

Coupling driver for use with 6 mm OXS6... types up to 180 mm.

MSMN ¹⁾	1SAM101923R0002	1	0.002
MSMNO ²⁾	1SAM101923R0012	1	0.002

¹⁾ Coded - Positioning of ON indication dependent from mounting orientation of the MS

²⁾ Uncoded - Positioning of ON indication independent from mounting orientation of the MS

Description	Shaft length mm	Type	Order code	Pkg qty	Weight (1 pce) kg
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Driver shafts

Driver shaft - combination driver & shaft. Shaft diameter 6 mm.

32	MSOX-32 ¹⁾	1SAM101924R0003	1	0.010
30	MSOX-30 ²⁾	1SAM101924R0013	1	0.010

¹⁾ MSOX-32 is for normal vertical use

²⁾ MSOX-30 is for horizontal use

Description	Type	Order code	Pkg qty	Weight (1 pce) kg
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Shaft alignment ring

The MSH-AR supports the long axis for alignment to the handle inlet. It makes closing panel doors more easy.

MSH-AR	1SAM201920R1000	1	0.010
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