MS116-4.0

MS116-4.0 Manual Motor Starter



General Information

Extended Product Type	MS116-4.0
Product ID	1SAM250000R1008
EAN	4013614320316
Catalog Description	MS116-4.0 Manual Motor Starter
Long Description	The MS116-4.0 manual motor starter (also known as motor protection circuit breaker or manual motor protector) is a compact 45 mm width device with a rated operational current of Ie = 4.0 A. This device is used to manually switch on and off motors and to protect them reliably and without the need for a fuse from short-circuits, overload and phase failures. The manual motor starter offers a rated service short-circuit breaking capacity Ics = 50 kA at 400 VAC and trip class 10A. Further features are the build-in disconnect function, temperature compensation, trip-free mechanism and a rotary handle with a clear switch position indication. The manual motor starter is suitable for three- and single-phase applications. Auxiliary contacts, signaling contacts, undervoltage releases, shunt trips, 3-phase bus bars, power in-feed blocks and locking devices for protection against unauthorized changes are available as accessory.

Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85362010

Popular Downloads

Data Sheet, Technical Information	2CDC131025D0201
Data Sheet, Technical Information (Part 2)	1SAM200505F0108
Data Sheet, Technical Information (Part 3)	1SAM200507F0001 1SAM200507F0002 1SAM200507F0003 1SAM200508F0001 1SAM200508F0002 1SAM200508F0003
Instructions and Manuals	2CDC131011M6802
Instructions and Manuals (Part 2)	2CDC131085M0201
Dimension Diagram	1SAM200422F0001

Dimensions

Product Net Width	45 mm
Product Net Height	90 mm
Product Net Depth / Length	85.6 mm
Product Net Weight	0.265 kg

Technical

Rated Service Short-Circuit Breaking Capacity (I_{cs})	(230 V AC) 50 kA (400 V AC) 50 kA (440 V AC) 6 kA (500 V AC) 6 kA (690 V AC) 2 kA
Rated Ultimate Short-Circuit Breaking Capacity (I_{cu})	(230 V AC) 50 kA (400 V AC) 50 kA (440 V AC) 6 kA (500 V AC) 6 kA (690 V AC) 2 kA
Rated Instantaneous Short-Circuit Current Setting (I_i)	50 A
Setting Range	2.5 ... 4.0 A
Rated Operational Power AC-3 (P_e)	(400 V) Three Phase 1.5 kW
Rated Operational Voltage	Main Circuit 690 V AC
Rated Operational Current (I_e)	4 A
Rated Operational Current AC-3 (I_e)	4 A
Rated Frequency (f)	Main Circuit 50 Hz Main Circuit 60 Hz
Rated Impulse Withstand Voltage (U_{imp})	Main Circuit 6 kV
Rated Insulation Voltage (U_i)	690 V
Power Loss	at Rated Operating Conditions per Pole 0.7 ... 1.8 W
Number of Poles	3
Conventional Free-air Thermal Current (I_{th})	Main Circuit 4 A
Degree of Protection	Housing IP20 Main Circuit Terminals IP10
Pollution Degree	3
Electrical Durability	100000 cycle
Mechanical Durability	100000 cycle
Terminal Type	Screw Terminals
Connecting Capacity Main Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm² Flexible with Insulated Ferrule 1/2x 0.75 ... 2.5 mm² Flexible 1/2x 0.75 ... 2.5 mm² Rigid 1/2x 1 ... 4 mm²
Tightening Torque	Main Circuit 0.8 ... 1.2 N·m
Wire Stripping Length	Main Circuit 9 mm
Recommended Screw Driver	Pozidriv 2
Mounting Position	Position 1 to 6
Mounting on DIN Rail	TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715 TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715
Minimum Mounting Distance	Electrical Conductive Board, Horizontal - Up to 400 V 0 mm Electrical Conductive Board, Horizontal - Up to 690 V 1.5 mm Electrical Conductive Board, Vertical 75 mm Other Device Same Type, Horizontal 0 mm Other Device Same Type, Vertical 150 mm
Actuator Type	Rotary Handle
Contact Position Indication	ON / OFF
Standards	IEC/EN 60947-1 IEC/EN 60947-2 IEC/EN 60947-4-1 UL 60947-1 UL 60947-4-1

Environmental

Ambient Air Temperature	Around the Enclosure 0 ... +40 °C Operation -25 ... +70 °C Operation Compensated -25 ... +55 °C Storage -50 ... +80 °C
Ambient Air Temperature Compensation	Yes
Maximum Operating Altitude Permissible	2000 m
Resistance to Shock acc. to IEC 60068-2-27	11 ms Pulse 25g
Resistance to Vibrations acc. to IEC 60068-2-6	5g / 3 ... 150 Hz
RoHS Status	Following EU Directive 2011/65/EU

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Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 600 V AC
Ampere Rating UL/CSA	4 A
Horsepower Rating UL/CSA	(200 V AC) Three Phase 0.75 Hp (208 V AC) Three Phase 0.75 Hp (220 ... 240 V AC) Three Phase 1 Hp (440 ... 480 V AC) Three Phase 2 Hp (550 ... 600 V AC) Three Phase 3 Hp
Full Load Amps Motor Use	(200 V AC) Three Phase 4 A (208 V AC) Three Phase 4 A (220 ... 240 V AC) Three Phase 4 A (440 ... 480 V AC) Three Phase 4 A (550 ... 600 V AC) Three Phase 3.9 A
Locked Rotor Amps	(200 V AC) Three Phase 24 A (208 V AC) Three Phase 24 A (220 ... 240 V AC) Three Phase 24 A (440 ... 480 V AC) Three Phase 24 A (550 ... 600 V AC) Three Phase 25.6 A
General Use Rating UL/CSA	(600 V AC) 4 A
Connecting Capacity Main Circuit UL/CSA	Flexible 1/2x 16-12 AWG Stranded 1/2x 16-12 AWG
Tightening Torque UL/CSA	Main Circuit 10 in·lb

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Certificates and Declarations (Document Number)

ABS Certificate	1SAA963000-0104
BV Certificate	1SAA963000-0204
CB Certificate	1SAA963000-2003
CCC Certificate	1SAA963000-3804
cUL Certificate	cUL_E137861
Declaration of Conformity - CE	1SAD938517-0060
DNV Certificate	1SAA963000-0303
DNV GL Certificate	1SAA963000-0303
EAC Certificate	1SAA963000-2701
Environmental Information	1SAA963001-2401
GL Certificate	1SAA963000-0402
GOST Certificate	1SAA963001-2702
Instructions and Manuals	2CDC131011M6802
KC Certificate	1SAA963000-1501
LR Certificate	1SAA963000-0505
RMRS Certificate	1SAA918000-0704
RoHS Information	1SAD938517-0060

UL Certificate	UL_E137861

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Container Information

Package Level 1 Units	1 piece
Package Level 1 Width	92 mm
Package Level 1 Depth / Length	95 mm
Package Level 1 Height	50 mm
Package Level 1 Gross Weight	0.28 kg
Package Level 1 EAN	4013614320316
Package Level 2 Units	40 piece
Package Level 2 Width	280 mm
Package Level 2 Depth / Length	395 mm
Package Level 2 Height	210 mm
Package Level 2 Gross Weight	11.586 kg
Package Level 2 EAN	4013614408687

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Classifications

Object Classification Code	F
ETIM 4	EC000074 - Motor protective circuit-breaker
ETIM 5	EC000074 - Motor protective circuit-breaker
ETIM 6	EC000074 - Motor protection circuit-breaker
ETIM 7	EC000074 - Motor protection circuit-breaker
eClass	7.0 27370401
UNSPSC	39121521

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Accessories

Identifier	Description	Type	Quantity	Unit Of Measure
1SAM101923R0002	MSMN Antrieb	MSMN	1	piece
1SAM101923R0012	MSMNO Antrieb	MSMNO	1	piece
1SAM101924R0003	MSOX-32 Antriebswelle	MSOX-32	1	piece
1SAM101924R0013	MSOX-30 Antriebswelle	MSOX-30	1	piece
1SAM201901R1001	HKF1-11 Hilfskontakt	HKF1-11	1	piece
1SAM201901R1002	HKF1-20 Hilfskontakt	HKF1-20	1	piece
1SAM201901R1003	HKF1-10 Hilfskontakt	HKF1-10	1	piece
1SAM201901R1004	HKF1-01 Hilfskontakt	HKF1-01	1	piece
1SAM201902R1001	HK1-11 Hilfskontakt	HK1-11	1	piece
1SAM201902R1002	HK1-20 Hilfskontakt	HK1-20	1	piece
1SAM201902R1003	HK1-02 Hilfskontakt	HK1-02	1	piece
1SAM201902R1004	HK1-20L Hilfskontakt	HK1-20L	1	piece
1SAM201903R1001	SK1-11 Signalkontakt	SK1-11	1	piece
1SAM201903R1002	SK1-20 Signalkontakt	SK1-20	1	piece
1SAM201903R1003	SK1-02 Signalkontakt	SK1-02	1	piece
1SAM201904R1001	UA1-24 Unterspannungsauslöser	UA1-24	1	piece

1SAM201904R1002	UA1-48 Unterspannungsauslöser	UA1-48	1	piece
1SAM201904R1003	UA1-60 Unterspannungsauslöser	UA1-60	1	piece
1SAM201904R1004	UA1-110 Unterspannungsauslöser	UA1-110	1	piece
1SAM201904R1005	UA1-230 Unterspannungsauslöser	UA1-230	1	piece
1SAM201904R1006	UA1-400 Unterspannungsauslöser	UA1-400	1	piece
1SAM201904R1007	UA1-415 Unterspannungsauslöser	UA1-415	1	piece
1SAM201904R1008	UA1-208 Unterspannungsauslöser	UA1-208	1	piece
1SAM201904R1010	UA1-20 Unterspannungsauslöser	UA1-20	1	piece
1SAM201906R1102	PS1-2-0-65 3-Phasen Sammelschiene	PS1-2-0-65	1	piece
1SAM201906R1103	PS1-3-0-65 3-Phasen Sammelschiene	PS1-3-0-65	1	piece
1SAM201906R1104	PS1-4-0-65 3-Phasen Sammelschiene	PS1-4-0-65	1	piece
1SAM201906R1105	PS1-5-0-65 3-Phasen Sammelschiene	PS1-5-0-65	1	piece
1SAM201906R1112	PS1-2-1-65 3-Phasen Sammelschiene	PS1-2-1-65	1	piece
1SAM201906R1113	PS1-3-1-65 3-Phasen Sammelschiene	PS1-3-1-65	1	piece
1SAM201906R1114	PS1-4-1-65 3-Phasen Sammelschiene	PS1-4-1-65	1	piece
1SAM201906R1115	PS1-5-1-65 3-Phasen Sammelschiene	PS1-5-1-65	1	piece
1SAM201906R1122	PS1-2-2-65 3-Phasen Sammelschiene	PS1-2-2-65	1	piece
1SAM201906R1123	PS1-3-2-65 3-Phasen Sammelschiene	PS1-3-2-65	1	piece
1SAM201906R1124	PS1-4-2-65 3-Phasen Sammelschiene	PS1-4-2-65	1	piece
1SAM201906R1125	PS1-5-2-65 3-Phasen Sammelschiene	PS1-5-2-65	1	piece
1SAM201907R1101	S1-M1-25 3-Phasen Einspeiseblock	S1-M1-25	1	piece
1SAM201907R1102	S1-M2-25 3-Phasen Einspeiseblock	S1-M2-25	1	piece
1SAM201907R1103	S1-M3-25 3-Phasen Einspeiseblock	S1-M3-25	1	piece
1SAM201908R1001	BS1-3 Schutzabdeckung	BS1-3	1	piece
1SAM201909R1001	FS116 Schraubenbefestigungs-Kit	FS116	1	piece
1SAM201909R1021	MSAH1 Wellenhalter	MSAH1	1	piece
1SAM201910R1001	AA1-24 Arbeitsstromauslöser	AA1-24	1	piece
1SAM201910R1002	AA1-110 Arbeitsstromauslöser	AA1-110	1	piece
1SAM201910R1003	AA1-230 Arbeitsstromauslöser	AA1-230	1	piece
1SAM201910R1004	AA1-400 Arbeitsstromauslöser	AA1-400	1	piece
1SAM201911R1010	IB132-G Gehäuse	IB132-G	1	piece
1SAM201911R1011	IB132-Y Gehäuse	IB132-Y	1	piece
1SAM201911R1012	IB132-F Gehäuse	IB132-F	1	piece
1SAM201912R1010	DMS132-G Türbefestigungs-Kit	DMS132-G	1	piece
1SAM201912R1011	DMS132-Y Türbefestigungs-Kit	DMS132-Y	1	piece
1SAM201914R1001	PB1-1-32 Phasenverbinder	PB1-1-32	1	piece
1SAM201914R1002	S1-PB1-25 3-Phasen Einspeiseklemme	S1-PB1-25	1	piece
1SAM201916R1103	PS1-3-0-100 3-Phasen Sammelschiene	PS1-3-0-100	1	piece
1SAM201916R1104	PS1-4-0-100 3-Phasen Sammelschiene	PS1-4-0-100	1	piece
1SAM201916R1105	PS1-5-0-100 3-Phasen Sammelschiene	PS1-5-0-100	1	piece
1SAM201916R1113	PS1-3-1-100 3-Phasen Sammelschiene	PS1-3-1-100	1	piece

1SAM201916R1114	PS1-4-1-100 3-Phasen Sammelschiene	PS1-4-1-100	1	piece
1SAM201916R1115	PS1-5-1-100 3-Phasen Sammelschiene	PS1-5-1-100	1	piece
1SAM201916R1123	PS1-3-2-100 3-Phasen Sammelschiene	PS1-3-2-100	1	piece
1SAM201920R1000	MSH-AR Ausrichtungsring Welle	MSH-AR	1	piece
1SAM201920R1001	MSHD-LB Griff	MSHD-LB	1	piece
1SAM201920R1002	MSHD-LY Griff	MSHD-LY	1	piece

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Categories

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