

# MS116-12



Products Low Voltage Products and Systems Circuit Breakers Manual Motor Starters

Products Low Voltage Products and Systems Control Products Manual Motor Starters Manual Motor Starters

## General Information

<b>Extended Product Type:</b>	MS116-12
<b>Product ID:</b>	1SAM250000R1012
<b>EAN:</b>	4013614348211
<b>Catalog Description:</b>	MS116-12 Manual Motor Starter
<b>Long Description:</b>	<p>The MS116-12 manual motor starter is a compact 45 mm width devices with a rated operational current of <math>I_e = 12.0</math> 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 <math>I_{cs} = 25</math> kA at 400 VAC and the 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, signalling 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.</p>

## Accessories

### 50 Products

Filter

Identifier	Type	Description	Qty
1SAM201901R1002	HKF1-20	HKF1-20 Auxiliary Contact	1
1SAM201901R1001	HKF1-11	HKF1-11 Auxiliary Contact	1
1SAM201902R1001	HK1-11	HK1-11 Auxiliary Contact	1
1SAM201902R1002	HK1-20	HK1-20 Auxiliary Contact	1
1SAM201902R1003	HK1-02	HK1-02 Auxiliary Contact	1
1SAM201902R1004	HK1-20L	HK1-20L Auxiliary Contact	1
1SAM201903R1001	SK1-11	SK1-11 Signal Contact	1
1SAM201903R1002	SK1-20	SK1-20 Signal Contact	1
1SAM201903R1003	SK1-02	SK1-02 Signal Contact	1
1SAM201904R1001	UA1-24	UA1-24 Undervoltage Release	1
1SAM201904R1004	UA1-110	UA1-110 Undervoltage Release	1
1SAM201904R1005	UA1-230	UA1-230 Undervoltage Release	1
1SAM201904R1006	UA1-400	UA1-400 Undervoltage Release	1
1SAM201904R1007	UA1-415	UA1-415 Undervoltage Release	1
1SAM201906R1102	PS1-2-0-65	PS1-2-0-65 3-Phase Busbar	1
1SAM201906R1103	PS1-3-0-65	PS1-3-0-65 3-Phase Busbar	1
1SAM201906R1104	PS1-4-0-65	PS1-4-0-65 3-Phase Busbar	1
1SAM201906R1105	PS1-5-0-65	PS1-5-0-65 3-Phase Busbar	1
1SAM201906R1112	PS1-2-1-65	PS1-2-1-65 3-Phase Busbar	1
1SAM201906R1113	PS1-3-1-65	PS1-3-1-65 3-Phase Busbar	1
1SAM201906R1114	PS1-4-1-65	PS1-4-1-65 3-Phase Busbar	1

1SAM201906R1115	PS1-5-1-65	PS1-5-1-65 3-Phase Busbar	1
1SAM201906R1122	PS1-2-2-65	PS1-2-2-65 3-Phase Busbar	1
1SAM201906R1123	PS1-3-2-65	PS1-3-2-65 3-Phase Busbar	1
1SAM201906R1124	PS1-4-2-65	PS1-4-2-65 3-Phase Busbar	1
1SAM201906R1125	PS1-5-2-65	PS1-5-2-65 3-Phase Busbar	1
1SAM201907R1101	S1-M1-25	S1-M1-25 3-Phase Power Infeed Block	1
1SAM201907R1102	S1-M2-25	S1-M2-25 3-Phase Power Infeed Block	1
1SAM201907R1103	S1-M3-25	S1-M3-25 3-Phase Power Infeed Block	1
1SAM201908R1001	BS1-3	BS1-3 Protection Cover	1
1SAM201910R1001	AA1-24	AA1-24 Shunt Trip	1
1SAM201910R1002	AA1-110	AA1-110 Shunt Trip	1
1SAM201910R1003	AA1-230	AA1-230 Shunt Trip	1
1SAM201910R1004	AA1-400	AA1-400 Shunt Trip	1
1SAM201911R1010	IB132-G	IB132-G Enclosure	1
1SAM201911R1012	IB132-F	IB132-F Enclosure	1
1SAM201912R1010	DMS132-G	DMS132-G Door Mounting Kit	1
1SAM201912R1011	DMS132-Y	DMS132-Y Door Mounting Kit	1
1SAM201913R1103	S1-M3-35	S1-M3-35 3-Phase Power Infeed Block	1
1SAM201916R1103	PS1-3-0-100	PS1-3-0-100 3-Phase Busbar	1
1SAM201916R1104	PS1-4-0-100	PS1-4-0-100 3-Phase Busbar	1
1SAM201916R1105	PS1-5-0-100	PS1-5-0-100 3-Phase Busbar	1
1SAM201916R1113	PS1-3-1-100	PS1-3-1-100 3-Phase Busbar	1
1SAM201916R1115	PS1-5-1-100	PS1-5-1-100 3-Phase Busbar	1
1SAM201916R1123	PS1-3-2-100	PS1-3-2-100 3-Phase Busbar	1
1SAM201920R1001	MSHD-LB	MSHD-LB Handles	1
1SAM201920R1002	MSHD-LY	MSHD-LY Handles	1
1SAM201920R1011	MSHD-LTB	MSHD-LTB Handles	1
1SAM201920R1012	MSHD-LTY	MSHD-LTY Handles	1
1SAM201909R1021	MSAH1	MSAH1 Shaft Supporter	1



#### Ordering

**EAN:** 4013614348211

**Minimum Order Quantity:** 1 piece

**Customs Tariff Number:** 85362010

#### Container Information

**Package Level 1 Units:** 1 piece

**Package Level 1 Width:** 92.0 mm

**Package Level 1 Length:** 95.0 mm

Package Level 1 Height:	50.0 mm
Package Level 1 Gross Weight:	0.280 kg
Package Level 2 Units:	40 piece
Package Level 2 Width:	280.0 mm
Package Level 2 Length:	395.0 mm
Package Level 2 Height:	210.0 mm
Package Level 2 Gross Weight:	11.586 kg
Package Level 2 EAN:	4013614408724

#### Dimensions

Product Net Width:	45.0 mm
Product Net Height:	90.0 mm
Product Net Depth:	85.6 mm
Product Net Weight:	0.265 kg

#### Technical

Rated Service Short-Circuit Breaking Capacity ( $I_{cs}$ ):	(230V AC) 25.0 kA (400V AC) 25.0 kA (440V AC) 6.0 kA (500V AC) 6.0 kA (690V AC) 2.0 kA
Rated Ultimate Short-Circuit Breaking Capacity ( $I_{cu}$ ):	(230V AC) 25.0 kA (400V AC) 25.0 kA (440V AC) 6.0 kA (500V AC) 6.0 kA (690V AC) 2.0 kA
Rated Instantaneous Short-Circuit Current Setting ( $I_i$ ):	180.0 A
Setting Range:	8.00 ... 12.0 A
Rated Operational Power AC-3 ( $P_e$ ):	(400V) Three Phase 5.50 kW
Rated Operational Voltage:	Main Circuit 690 V AC
Rated Operational Current ( $I_e$ ):	12 A
Rated Operational Current AC-3 ( $I_e$ ):	12.00 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:	Per Pole 1.0 ... 2.3 W
Number of Poles:	3
Conventional Free-air Thermal Current ( $I_{th}$ ):	Main Circuit 12.00 A
Degree of Protection:	IP20
Pollution Degree:	3
Electrical Durability:	100000 cycle
Mechanical Durability:	100000 cycle
Connecting Capacity-Main Circuit:	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup> Flexible 1/2x 0.75 ... 2.5 mm <sup>2</sup> Rigid 1/2x 1 ... 4 mm <sup>2</sup>
Tightening Torque:	Main Circuit 0.8 ... 1.2 N·m
Wire Stripping Length:	Main Circuit 9 mm
Recommended Screw Driver:	M3.5
Mounting Position:	Position 1 to 6
Actuator Type:	Rotary Handle
Contact Position Indication:	ON / OFF
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

<b>Standards:</b>	IEC/EN 60947-1 IEC/EN 60947-2 IEC/EN 60947-4-1 UL 60947-1 UL 60947-4-1
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#### Environmental

<b>Ambient Air Temperature:</b>	Around the Enclosure 0 ... +40 °C Operation -25 ... +70 °C Operation Compensated -25 ... +55 °C Storage -50 ... +80 °C
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<b>Ambient Air Temperature Compensation:</b>	Yes
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<b>Maximum Operating Altitude Permissible:</b>	2000 m
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<b>Resistance to Shock acc. to IEC 60068-2-27:</b>	11 ms Pulse 250 m/s <sup>2</sup>
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<b>Resistance to Vibrations acc. to IEC 60068-2-6:</b>	5g / 3 ... 150 Hz
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<b>RoHS Status:</b>	Following EU Directive 2002/95/EC August 18, 2005 and amendment
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#### Technical UL/CSA

<b>Maximum Operating Voltage UL/CSA:</b>	Main Circuit 600 V AC
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<b>Horse Power Rating UL/CSA:</b>	220 ... 240V AC Three Phase 3.00 Hp 440 ... 480V AC Three Phase 7.50 Hp 550 ... 600V AC Three Phase 10.00 Hp
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<b>Ampere Rating UL/CSA:</b>	12.00 A
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<b>General Use Rating UL/CSA:</b>	600V AC 12.00 A
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<b>Connecting Capacity-Main Circuit UL/CSA:</b>	Flexible 1/2x 16 ... 8 AWG Stranded 1/2x 16 ... 8 AWG
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<b>Tightening Torque UL/CSA:</b>	Main Circuit 10 in·lb
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#### Certificates and Declarations (Document Number)

<b>ABS Certificate:</b>	1SAA963000-0102
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<b>BV Certificate:</b>	1SAA963000-0202
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<b>CB Certificate:</b>	1SAA963000-2002
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<b>CCC Certificate:</b>	1SAA963000-3803
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<b>cUL Certificate:</b>	cUL_E137861
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<b>Declaration of Conformity - CE:</b>	1SAD938515-0060
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<b>DNV Certificate:</b>	1SAA963000-0302
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<b>EAC Certificate:</b>	1SAA963000-2701
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<b>GL Certificate:</b>	1SAA963000-0402
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<b>GOST Certificate:</b>	1SAA937000-2703
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<b>LR Certificate:</b>	1SAA963000-0504
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<b>RMRS Certificate:</b>	1SAA918000-0703
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<b>RoHS Information:</b>	1SAA963001-4407
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<b>UL Certificate:</b>	UL_E137861
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#### Classifications

<b>Object Classification Code:</b>	F
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<b>E-nummer:</b>	3111949
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<b>UNSPSC:</b>	39121521
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