

## MS116-1.6



### General Information

<b>Extended Product Type:</b>	MS116-1.6
<b>Product ID:</b>	1SAM25000R1006
<b>EAN:</b>	4013614320293
<b>Catalog Description:</b>	MS116-1.6 Manual Motor Starter
<b>Long Description:</b>	The MS116-1.6 manual motor starter is a compact 45 mm width devices with a rated operational current of $I_e = 1.6$ 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 $I_{cs} = 50$ 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.

### Categories [\(Show All..\)](#)

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

Parts & Services » Drives » Medium Voltage AC Drives » Industrial Drives » ACS1000

### Accessories [Show accessory images](#)

Identifier	Type	Description	Qty
<a href="#">1SAM201901R1002</a>	HKF1-20	HKF1-20 Auxiliary Contact	1
<a href="#">1SAM201901R1001</a>	HKF1-11	HKF1-11 Auxiliary Contact	1
<a href="#">1SAM201902R1001</a>	HK1-11	HK1-11 Auxiliary Contact	1
<a href="#">1SAM201902R1002</a>	HK1-20	HK1-20 Auxiliary Contact	1
<a href="#">1SAM201902R1003</a>	HK1-02	HK1-02 Auxiliary Contact	1
<a href="#">1SAM201902R1004</a>	HK1-20L	HK1-20L Auxiliary Contact	1
<a href="#">1SAM201903R1001</a>	SK1-11	SK1-11 Signal Contact	1
<a href="#">1SAM201903R1002</a>	SK1-20	SK1-20 Signal Contact	1
<a href="#">1SAM201903R1003</a>	SK1-02	SK1-02 Signal Contact	1
<a href="#">1SAM201904R1001</a>	UA1-24	UA1-24 Undervoltage Release	1
<a href="#">1SAM201904R1004</a>	UA1-110	UA1-110 Undervoltage Release	1
<a href="#">1SAM201904R1005</a>	UA1-230	UA1-230 Undervoltage Release	1
<a href="#">1SAM201904R1006</a>	UA1-400	UA1-400 Undervoltage Release	1
<a href="#">1SAM201904R1007</a>	UA1-415	UA1-415 Undervoltage Release	1
<a href="#">1SAM201906R1102</a>	PS1-2-0-65	PS1-2-0-65 3-Phase Busbar	1
<a href="#">1SAM201906R1103</a>	PS1-3-0-65	PS1-3-0-65 3-Phase Busbar	1
<a href="#">1SAM201906R1104</a>	PS1-4-0-65	PS1-4-0-65 3-Phase Busbar	1
<a href="#">1SAM201906R1105</a>	PS1-5-0-65	PS1-5-0-65 3-Phase Busbar	1
<a href="#">1SAM201906R1112</a>	PS1-2-1-65	PS1-2-1-65 3-Phase Busbar	1
<a href="#">1SAM201906R1113</a>	PS1-3-1-65	PS1-3-1-65 3-Phase Busbar	1
<a href="#">1SAM201906R1114</a>	PS1-4-1-65	PS1-4-1-65 3-Phase Busbar	1
<a href="#">1SAM201906R1115</a>	PS1-5-1-65	PS1-5-1-65 3-Phase Busbar	1
<a href="#">1SAM201906R1122</a>	PS1-2-2-65	PS1-2-2-65 3-Phase Busbar	1
<a href="#">1SAM201906R1123</a>	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

## SparePartUsedOnList [Show accessory images](#)

### Ordering

<b>EAN:</b>	4013614320293
<b>Minimum Order Quantity:</b>	1 piece
<b>Customs Tariff Number:</b>	85362010

### Container Information

<b>Package Level 1 Units:</b>	1 piece
<b>Package Level 1 Width:</b>	92.0 mm
<b>Package Level 1 Length:</b>	95.0 mm
<b>Package Level 1 Height:</b>	50.0 mm
<b>Package Level 1 Gross Weight:</b>	0.280 kg
<b>Package Level 2 Units:</b>	40 piece
<b>Package Level 2 Width:</b>	280.0 mm
<b>Package Level 2 Length:</b>	395.0 mm
<b>Package Level 2 Height:</b>	210.0 mm
<b>Package Level 2 Gross Weight:</b>	11.586 kg
<b>Package Level 2 EAN:</b>	4013614408663

### Dimensions

<b>Product Net Width:</b>	45.0 mm
<b>Product Net Height:</b>	90.0 mm
<b>Product Net Depth:</b>	85.6 mm

**Product Net Weight:** 0.265 kg

---

## Technical

---

<b>Rated Service Short-Circuit Breaking Capacity (<math>I_{cs}</math>):</b>	(230V AC) 50.0 kA (400V AC) 50.0 kA (440V AC) 30.0 kA (500V AC) 30.0 kA (690V AC) 30.0 kA
<b>Rated Ultimate Short-Circuit Breaking Capacity (<math>I_{cu}</math>):</b>	(230V AC) 50.0 kA (400V AC) 50.0 kA (440V AC) 30.0 kA (500V AC) 30.0 kA (690V AC) 30.0 kA
<b>Rated Instantaneous Short-Circuit Current Setting (<math>I_i</math>):</b>	20.0 A
<b>Setting Range:</b>	1.00 ... 1.60 A
<b>Rated Operational Power AC-3 (<math>P_e</math>):</b>	(400V) Three Phase 0.55 kW
<b>Rated Operational Voltage:</b>	Main Circuit 690 V AC
<b>Rated Operational Current (<math>I_o</math>):</b>	1.6 A
<b>Rated Operational Current AC-3 (<math>I_o</math>):</b>	1.60 A
<b>Rated Frequency (f):</b>	Main Circuit 50 Hz Main Circuit 60 Hz
<b>Rated Impulse Withstand Voltage (<math>U_{imp}</math>):</b>	Main Circuit 6 kV
<b>Rated Insulation Voltage (<math>U_i</math>):</b>	690 V
<b>Power Loss:</b>	Per Pole 0.7 ... 1.7 W
<b>Number of Poles:</b>	3
<b>Conventional Free-air Thermal Current (<math>I_{th}</math>):</b>	Main Circuit 1.60 A
<b>Degree of Protection:</b>	IP20
<b>Pollution Degree:</b>	3
<b>Electrical Durability:</b>	100000 cycle
<b>Mechanical Durability:</b>	100000 cycle
<b>Connecting Capacity-Main Circuit:</b>	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>
<b>Tightening Torque:</b>	Main Circuit 0.8 ... 1.2 N·m
<b>Wire Stripping Length:</b>	Main Circuit 9 mm
<b>Recommended Screw Driver:</b>	Pozidriv 2
<b>Mounting Position:</b>	Position 1 to 6
<b>Actuator Type:</b>	Rotary Handle
<b>Contact Position Indication:</b>	ON / OFF
<b>Mounting on DIN Rail:</b>	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

---

## 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
<b>Ambient Air Temperature Compensation:</b>	Yes
<b>Maximum Operating Altitude Permissible:</b>	2000 m
<b>Resistance to Shock acc. to IEC 60068-2-27:</b>	11 ms Pulse 250 m/s <sup>2</sup>
<b>Resistance to Vibrations acc. to IEC 60068-2-6:</b>	5g / 3 ... 150 Hz
<b>RoHS Status:</b>	Following EU Directive 2002/95/EC August 18, 2005 and amendment

### Technical UL/CSA

<b>Maximum Operating Voltage UL/CSA:</b>	Main Circuit 600 V AC
<b>Horse Power Rating UL/CSA:</b>	440 ... 480V AC Three Phase 0.75 Hp 550 ... 600V AC Three Phase 0.75 Hp
<b>Ampere Rating UL/CSA:</b>	1.60 A
<b>General Use Rating UL/CSA:</b>	600V AC 1.60 A
<b>Connecting Capacity-Main Circuit UL/CSA:</b>	Flexible 1/2x 16 ... 12 AWG Stranded 1/2x 16 ... 12 AWG
<b>Tightening Torque UL/CSA:</b>	Main Circuit 10 in·lb

### Certificates and Declarations (Document Number)

<b>ABS Certificate:</b>	1SAA963000-0102
<b>BV Certificate:</b>	1SAA963000-0202
<b>CB Certificate:</b>	1SAA963000-2003
<b>CCC Certificate:</b>	1SAA963000-3803
<b>cUL Certificate:</b>	cUL_E137861
<b>Declaration of Conformity - CE:</b>	1SAD938515-0060
<b>DNV Certificate:</b>	1SAA963000-0302
<b>EAC Certificate:</b>	1SAA963000-2701
<b>GL Certificate:</b>	1SAA963000-0402
<b>GOST Certificate:</b>	1SAA937000-2703
<b>LR Certificate:</b>	1SAA963000-0504
<b>RMRS Certificate:</b>	1SAA918000-0703
<b>RoHS Information:</b>	1SAA963001-4407
<b>UL Certificate:</b>	UL_E137861

### Classifications

<b>Object Classification Code:</b>	F
<b>eClass:</b>	7.0 27370401
<b>E-nummer:</b>	3111940
<b>UNSPSC:</b>	39121521



