

## MS116-2.5



### General Information

|                               |   |
|-------------------------------|---|
| <b>Extended Product Type:</b> | MS116-2.5   |
| <b>Product ID:</b>            | 1SAM250000R1007   |
| <b>EAN:</b>                   | 4013614320309   |
| <b>Catalog Description:</b>   | MS116-2.5 Manual Motor Starter  |
| <b>Long Description:</b>      | The MS116-2.5 manual motor starter is a compact 45 mm width devices with a rated operational current of $I_e = 2.5$ 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

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

### 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   |
| <a href="#">1SAM201906R1124</a> | 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

|                                |               |
|--------------------------------|---------------|
| <b>EAN:</b>                    | 4013614320309 |
| <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 mm         |
| <b>Package Level 1 Length:</b>       | 95 mm         |
| <b>Package Level 1 Height:</b>       | 50 mm         |
| <b>Package Level 1 Gross Weight:</b> | 0.28 kg       |
| <b>Package Level 2 Units:</b>        | 40 piece      |
| <b>Package Level 2 Width:</b>        | 280 mm        |
| <b>Package Level 2 Length:</b>       | 395 mm        |
| <b>Package Level 2 Height:</b>       | 210 mm        |
| <b>Package Level 2 Gross Weight:</b> | 11.586 kg     |
| <b>Package Level 2 EAN:</b>          | 4013614408670 |

## Dimensions

|                            |          |
|----------------------------|----------|
| <b>Product Net Width:</b>  | 45 mm    |
| <b>Product Net Height:</b> | 90 mm    |
| <b>Product Net Depth:</b>  | 85.6 mm  |
| <b>Product Net Weight:</b> | 0.265 kg |

## Technical

|  |  |
|--|--|
| <b>Rated Service Short-Circuit Breaking Capacity (<math>I_{cs}</math>):</b>  | (230V AC) 50 kA<br>(400V AC) 50 kA<br>(440V AC) 10 kA<br>(500V AC) 10 kA<br>(690V AC) 5 kA   |
| <b>Rated Ultimate Short-Circuit Breaking Capacity (<math>I_{cu}</math>):</b> | (230V AC) 50 kA<br>(400V AC) 50 kA<br>(440V AC) 10 kA<br>(500V AC) 10 kA<br>(690V AC) 5 kA   |
| <b>Rated Instantaneous Short-Circuit Current Setting (<math>I_i</math>):</b> | 31.3 A   |
| <b>Setting Range:</b>  | 1.60 ... 2.50 A  |
| <b>Rated Operational Power AC-3 (<math>P_e</math>):</b>                      | (400V) Three Phase 0.75 kW   |
| <b>Rated Operational Voltage:</b>  | Main Circuit 690 V AC  |
| <b>Rated Operational Current (<math>I_\theta</math>):</b>                    | 2.5 A  |
| <b>Rated Operational Current AC-3 (<math>I_\theta</math>):</b>               | 2.5 A  |
| <b>Rated Frequency (f):</b>  | Main Circuit 50 Hz<br>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 ... 1.8 W   |
| <b>Number of Poles:</b>  | 3  |
| <b>Conventional Free-air Thermal Current (<math>I_{th}</math>):</b>          | Main Circuit 2.5 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><br>Flexible with Insulated Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>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<br>TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715   |
| <b>Standards:</b>  | IEC/EN 60947-1<br>IEC/EN 60947-2<br>IEC/EN 60947-4-1<br>UL 60947-1<br>UL 60947-4-1   |

## Environmental

|  |   |
|--|---|
| <b>Ambient Air Temperature:</b>              | Around the Enclosure 0 ... +40 °C<br>Operation -25 ... +70 °C<br>Operation Compensated -25 ... +55 °C<br>Storage -50 ... +80 °C |
| <b>Ambient Air Temperature Compensation:</b> | Yes<br><br>2000 m   |

**Maximum Operating Altitude  
Permissible:**

**Resistance to Shock acc. to IEC 60068-2-27:** 11 ms Pulse 250 m/s<sup>2</sup>

**Resistance to Vibrations acc. to IEC 60068-2-6:** 5g / 3 ... 150 Hz

**RoHS Status:** Following EU Directive 2002/95/EC August 18, 2005 and amendment

**Technical UL/CSA**

**Maximum Operating Voltage UL/CSA:** Main Circuit 600 V AC

**Horsepower Rating UL/CSA:** 220 ... 240V AC Three Phase 0.5 Hp  
440 ... 480V AC Three Phase 1 Hp  
550 ... 600V AC Three Phase 1.5 Hp

**Ampere Rating UL/CSA:** 2.5 A

**General Use Rating UL/CSA:** 600V AC 2.5 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

**Certificates and Declarations (Document Number)**

**ABS Certificate:** 1SAA963000-0102

**BV Certificate:** 1SAA963000-0202

**CB Certificate:** 1SAA963000-2003

**CCC Certificate:** 1SAA963000-3803

**cUL Certificate:** cUL\_E137861

**Declaration of Conformity - CE:** 1SAD938515-0060

**DNV Certificate:** 1SAA963000-0302

**EAC Certificate:** 1SAA963000-2701

**GL Certificate:** 1SAA963000-0402

**GOST Certificate:** 1SAA937000-2703

**LR Certificate:** 1SAA963000-0504

**RMRS Certificate:** 1SAA918000-0703

**RoHS Information:** 1SAA963001-4407

**UL Certificate:** UL\_E137861

**Classifications**

**Object Classification Code:** F

**eClass:** 7.0 27370401

**E-nummer:** 3111942

**UNSPSC:** 39121521

