

PRODUCT-DETAILS

# MS116-6.3

## MS116-6.3 Manual Motor Starter



### General Information

|                       |                                |
|-----------------------|--------------------------------|
| Extended Product Type | MS116-6.3                      |
| Product ID            | 1SAM250000R1009                |
| EAN                   | 4013614320323                  |
| Catalog Description   | MS116-6.3 Manual Motor Starter |

#### Long Description

The MS116-6.3 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  $I_e = 6.3$  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 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 |
| Instructions and                  | 2CDC131011M6802 |

## Manuals

|                                   |   |
|-----------------------------------|---|
| Instructions and Manuals (Part 2) | 2CDC131060M0202                                       |
| Time-Current Characteristic Curve | 1SAM200505F0009                                       |
| I <sup>2</sup> t Characteristic   | 1SAM200507F0001<br>1SAM200507F0002<br>1SAM200507F0003 |
| Cut-off Current Characteristic    | 1SAM200508F0001<br>1SAM200508F0002<br>1SAM200508F0003 |
| 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 <sub>cs</sub> )    | (230 V AC) 50 kA<br>(400 V AC) 50 kA<br>(440 V AC) 6 kA<br>(500 V AC) 6 kA<br>(690 V AC) 2 kA   |
| Rated Ultimate Short-Circuit Breaking Capacity (I <sub>cu</sub> )   | (230 V AC) 50 kA<br>(400 V AC) 50 kA<br>(440 V AC) 18 kA<br>(500 V AC) 10 kA<br>(690 V AC) 3 kA |
| Rated Instantaneous Short-Circuit Current Setting (I <sub>i</sub> ) | 78.8 A  |
| Setting Range   | 4.0 ... 6.3 A   |
| Rated Operational Power AC-3 (P <sub>e</sub> )                      | (400 V) Three Phase 2.2 kW  |
| Rated Operational Voltage   | Main Circuit 690 V AC   |
| Rated Operational Current (I <sub>e</sub> )                         | 6.3 A   |
| Rated Operational Current AC-3 (I <sub>e</sub> )                    | 6.3 A   |
| Rated Frequency (f)   | Main Circuit 50 Hz<br>Main Circuit 60 Hz  |
| Rated Impulse Withstand Voltage (U <sub>imp</sub> )                 | Main Circuit 6 kV   |
| Rated Insulation Voltage (U <sub>i</sub> )                          | 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 <sub>th</sub> )            | Main Circuit 6.3 A  |
| Degree of Protection  | Housing IP20<br>Main Circuit Terminals IP10   |
| Pollution Degree  | 3   |
| Electrical Durability   | 100000 cycle  |
| Mechanical Durability   | 100000 cycle  |
| Terminal Type   | Screw Terminals   |
| Connecting Capacity   | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup>   |

|                             |   |
|-----------------------------|---|
| Main Circuit                | 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>   |
| 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<br>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<br>Electrical Conductive Board, Horizontal - Up to 690 V 1.5 mm<br>Electrical Conductive Board, Vertical 75 mm<br>Other Device Same Type, Horizontal 0 mm<br>Other Device Same Type, Vertical 150 mm |
| Actuator Type               | Rotary Handle   |
| Contact Position Indication | ON / OFF  |
| Standards                   | IEC/EN 60947-1<br>IEC/EN 60947-2<br>IEC/EN 60947-4-1<br>UL 60947-1<br>UL 60947-4-1  |

## Technical UL/CSA

|   |  |
|---|--|
| Short-Circuit Current Rating (SCCR)     | Any UL Listed Fuses or Circuit-Breakers, Group Installations (480 V AC) 18 kA<br>Any UL Listed Fuses or Circuit-Breakers, Group Installations (600 V AC) 5 kA<br>Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (480 V AC) 18 kA<br>Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (600 V AC) 5 kA |
| Maximum Operating Voltage UL/CSA        | Main Circuit 600 V AC  |
| Ampere Rating UL/CSA                    | 6.3 A  |
| Horsepower Rating UL/CSA                | (200 V AC) Three Phase 1 Hp<br>(208 V AC) Three Phase 1 Hp<br>(220 ... 240 V AC) Three Phase 1.5 Hp<br>(440 ... 480 V AC) Three Phase 3 Hp<br>(550 ... 600 V AC) Three Phase 5 Hp  |
| Full Load Amps Motor Use                | (200 V AC) Three Phase 6.3 A<br>(208 V AC) Three Phase 6.3 A<br>(220 ... 240 V AC) Three Phase 6.3 A<br>(440 ... 480 V AC) Three Phase 4.8 A<br>(550 ... 600 V AC) Three Phase 6.1 A   |
| Locked Rotor Amps                       | (200 V AC) Three Phase 37.8 A<br>(208 V AC) Three Phase 37.8 A<br>(220 ... 240 V AC) Three Phase 37.8 A<br>(440 ... 480 V AC) Three Phase 32 A<br>(550 ... 600 V AC) Three Phase 36.8 A  |
| General Use Rating UL/CSA               | (600 V AC) 6.3 A   |
| Connecting Capacity Main Circuit UL/CSA | Flexible 1/2x 16-12 AWG<br>Stranded 1/2x 16-12 AWG   |
| Tightening Torque UL/CSA                | Main Circuit 10 in-lb  |

## Environmental

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

|  |                                   |
|--|-----------------------------------|
| Compensation                                   |                                   |
| 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 |

## Certificates and Declarations (Document Number)

|                                       |                     |
|---------------------------------------|---------------------|
| ABS Certificate                       | 1SAA963000-0104     |
| BV Certificate                        | 1SAA963000-0204     |
| CB Certificate                        | 1SAA963000-2003     |
| CCC Certificate                       | 1SAA963000-3804     |
| CQC Certificate                       | CQC2019010307170287 |
| cUL Certificate                       | cUL_E137861         |
| Cut-off Current Characteristic        | 1SAM200508F0001     |
|                                       | 1SAM200508F0002     |
|                                       | 1SAM200508F0003     |
| Declaration of Conformity - CCC (CCC) | 2020980307003381    |
| Declaration of Conformity - CE        | 1SAD938522-0060     |
| DNV Certificate                       | 1SAA963000-0304     |
| DNV GL Certificate                    | 1SAA963000-0304     |
| EAC Certificate                       | 1SAA963000-2701     |
| Environmental Information             | 1SAC200050H0009     |
| GL Certificate                        | 1SAA963000-0402     |
| GOST Certificate                      | 1SAA963001-2702     |
| I <sup>2</sup> t Characteristic       | 1SAM200507F0001     |
|                                       | 1SAM200507F0002     |
|                                       | 1SAM200507F0003     |
| Instructions and Manuals              | 2CDC131011M6802     |
| Instructions and Manuals (Part 2)     | 2CDC131060M0202     |
| KC Certificate                        | 1SAA963000-1501     |
| LR Certificate                        | 1SAA963000-0505     |
| RMRS Certificate                      | 1SAA918000-0704     |
| RoHS Information                      | 1SAD938517-0060     |
| Time-Current Characteristic Curve     | 1SAM200505F0009     |
| UL Certificate                        | UL_E137861          |

## Container Information

|                                |                 |
|--------------------------------|-----------------|
| Package Level 1 Units          | box 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            | 4013614320323   |
| Package Level 2 Units          | carton 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          | 4013614408694 |

## 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  |
| IDEA Granular Category Code (IGCC) | 4845 >> 3 Pole Motor Circuit Protector Circuit Breakers |
| E-Number (Finland)                 | 3706009   |
| E-Number (Sweden)                  | 3111946   |

## Accessories

| Identifier      | Description                    | Type     | Quantity | Unit Of Measure |
|-----------------|--------------------------------|----------|----------|-----------------|
| 1SAM201901R1001 | HKF1-11 Hilfskontakt           | HKF1-11  | 1        | piece           |
| 1SAM201901R1201 | HKF1-11K Hilfskontakt          | HKF1-11K | 1        | piece           |
| 1SAM201901R1002 | HKF1-20 Hilfskontakt           | HKF1-20  | 1        | piece           |
| 1SAM201901R1202 | HKF1-20K Hilfskontakt          | HKF1-20K | 1        | piece           |
| 1SAM201901R1004 | HKF1-01 Hilfskontakt           | HKF1-01  | 1        | piece           |
| 1SAM201901R1003 | HKF1-10 Hilfskontakt           | HKF1-10  | 1        | piece           |
| 1SAM201902R1002 | HK1-20 Hilfskontakt            | HK1-20   | 1        | piece           |
| 1SAM201902R1202 | HK1-20K Hilfskontakt           | HK1-20K  | 1        | piece           |
| 1SAM201902R1001 | HK1-11 Hilfskontakt            | HK1-11   | 1        | piece           |
| 1SAM201902R1201 | HK1-11K Hilfskontakt           | HK1-11K  | 1        | piece           |
| 1SAM201902R1003 | HK1-02 Hilfskontakt            | HK1-02   | 1        | piece           |
| 1SAM201902R1203 | HK1-02K Hilfskontakt           | HK1-02K  | 1        | piece           |
| 1SAM201902R1004 | HK1-20L Hilfskontakt           | HK1-20L  | 1        | piece           |
| 1SAM201902R1204 | HK1-20LK Hilfskontakt          | HK1-20LK | 1        | piece           |
| 1SAM201903R1002 | SK1-20 Signalkontakt           | SK1-20   | 1        | piece           |
| 1SAM201903R1202 | SK1-20K Signalkontakt          | SK1-20K  | 1        | piece           |
| 1SAM201903R1001 | SK1-11 Signalkontakt           | SK1-11   | 1        | piece           |
| 1SAM201903R1201 | SK1-11K Signalkontakt          | SK1-11K  | 1        | piece           |
| 1SAM201903R1003 | SK1-02 Signalkontakt           | SK1-02   | 1        | piece           |
| 1SAM201903R1203 | SK1-02K Signalkontakt          | SK1-02K  | 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           |
| 1SAM201904R1010 | UA1-20 Unterspannungsauslöser  | UA1-20   | 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           |
| 1SAM201904R1008 | UA1-208 Unterspannungsauslöser | UA1-208  | 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           |

|                 |  |             |   |       |
|-----------------|--|-------------|---|-------|
| 1SAM201904R1009 | UA1-575 Unterspannungsauslöser                             | UA1-575     | 1 | piece |
| 1SAM201906R1102 | PS1-2-0-65 3-Phasen Sammelschiene                          | PS1-2-0-65  | 1 | piece |
| 1SAM201906R1112 | PS1-2-1-65 3-Phasen Sammelschiene                          | PS1-2-1-65  | 1 | piece |
| 1SAM201906R1122 | PS1-2-2-65 3-Phasen Sammelschiene                          | PS1-2-2-65  | 1 | piece |
| 1SAM201916R1103 | PS1-3-0-100 3-Phasen Sammelschiene                         | PS1-3-0-100 | 1 | piece |
| 1SAM201906R1103 | PS1-3-0-65 3-Phasen Sammelschiene                          | PS1-3-0-65  | 1 | piece |
| 1SAM201916R1113 | PS1-3-1-100 3-Phasen Sammelschiene                         | PS1-3-1-100 | 1 | piece |
| 1SAM201906R1113 | PS1-3-1-65 3-Phasen Sammelschiene                          | PS1-3-1-65  | 1 | piece |
| 1SAM201916R1123 | PS1-3-2-100 3-Phasen Sammelschiene                         | PS1-3-2-100 | 1 | piece |
| 1SAM201906R1123 | PS1-3-2-65 3-Phasen Sammelschiene                          | PS1-3-2-65  | 1 | piece |
| 1SAM201916R1104 | PS1-4-0-100 3-Phasen Sammelschiene                         | PS1-4-0-100 | 1 | piece |
| 1SAM201906R1104 | PS1-4-0-65 3-Phasen Sammelschiene                          | PS1-4-0-65  | 1 | piece |
| 1SAM201916R1114 | PS1-4-1-100 3-Phasen Sammelschiene                         | PS1-4-1-100 | 1 | piece |
| 1SAM201906R1114 | PS1-4-1-65 3-Phasen Sammelschiene                          | PS1-4-1-65  | 1 | piece |
| 1SAM201906R1124 | PS1-4-2-65 3-Phasen Sammelschiene                          | PS1-4-2-65  | 1 | piece |
| 1SAM201916R1105 | PS1-5-0-100 3-Phasen Sammelschiene                         | PS1-5-0-100 | 1 | piece |
| 1SAM201906R1105 | PS1-5-0-65 3-Phasen Sammelschiene                          | PS1-5-0-65  | 1 | piece |
| 1SAM201916R1115 | PS1-5-1-100 3-Phasen Sammelschiene                         | PS1-5-1-100 | 1 | piece |
| 1SAM201906R1115 | PS1-5-1-65 3-Phasen Sammelschiene                          | PS1-5-1-65  | 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 |
| 1SAM201913R1103 | S1-M3-35 3-Phasen Einspeiseblock                           | S1-M3-35    | 1 | piece |
| 1SAM201914R1002 | S1-PB1-25 3-Phasen Einspeiseblock                          | S1-PB1-25   | 1 | piece |
| 1SAM201914R1001 | PB1-1-32 Phasenverbinder                                   | PB1-1-32    | 1 | piece |
| 1SAM201908R1001 | BS1-3 Schutzabdeckung                                      | BS1-3       | 1 | piece |
| 1SAM201909R1001 | FS116 Schraubenbefestigungs-Kit                            | FS116       | 1 | piece |
| GJF1101903R0001 | SA1 - Schaltsperre   | SA1         | 1 | piece |
| GJF1101903R0002 | SA2 - Vorhängeschloss                                      | SA2         | 1 | piece |
| GJF1101903R0003 | SA3 - Vorhängeschloss                                      | SA3         | 1 | piece |
| 1SAM201911R1012 | IB132-F Gehäuse  | IB132-F     | 1 | piece |
| 1SAM201911R1010 | IB132-G Gehäuse  | IB132-G     | 1 | piece |
| 1SAM201911R1011 | IB132-Y Gehäuse  | IB132-Y     | 1 | piece |
| 1SAM201912R1010 | DMS132-G Türmontagesatz                                    | DMS132-G    | 1 | piece |
| 1SAM201912R1011 | DMS132-Y Türmontagesatz                                    | DMS132-Y    | 1 | piece |
| 1SAM201909R1021 | MSAH1 Wellenhalter   | MSAH1       | 1 | piece |
| 1SAM201920R1001 | MSHD-LB Griff  | MSHD-LB     | 1 | piece |
| 1SAM201920R1002 | MSHD-LY Griff  | MSHD-LY     | 1 | piece |
| 1SAM201920R1000 | MSH-AR Wellenführungsring                                  | MSH-AR      | 1 | piece |
| 1SAM101923R0002 | MSMN Mitnehmer   | MSMN        | 1 | piece |
| 1SAM101923R0012 | MSMNO Mitnehmer  | MSMNO       | 1 | piece |
| 1SCA101647R1001 | OXS6X85 Welle Länge 85mm Wellen-ø 6mm für Selektorgriffe   | OXS6X85     | 1 | piece |
| 1SCA108043R1001 | OXS6X105 Welle Länge 105mm Wellen-ø 6mm für Pistolengriffe | OXS6X105    | 1 | piece |
| 1SCA101655R1001 | OXS6X130 Welle Länge 130mm Wellen-ø 6mm für Selektorgriffe | OXS6X130    | 1 | piece |
| 1SCA101659R1001 | OXS6X180 Welle Länge 180mm Wellen-ø 6mm für Selektorgriffe | OXS6X180    | 1 | piece |

---

**Categories**


---

Low Voltage Products and Systems → Circuit Breakers → Manual Motor Starters

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

