# MS116-1.0

Products Low Voltage Products and Systems Circuit Breakers Manual Motor Starters

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## General Information

**Extended Product Type:** MS116-1.0

**Product ID:** 1SAM250000R1005

**EAN:** 4013614320286

**Catalog Description:** MS116-1.0 Manual Motor Starter

**Long Description:** The MS116-1.0 manual motor starter is a compact 45 mm width devices with a rated operational current of Ie = 1.0 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 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.

## Additional Information

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| **ABS Certificate:** | 1SAA963000-0104 |
| **Actuator Type:** | Rotary Handle |
| **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 Compensation:** | Yes |
| **Ampere Rating UL/CSA:** | 1 A |
| **BV Certificate:** | 1SAA963000-0204 |
| **CB Certificate:** | 1SAA963000-2003 |
| **CCC Certificate:** | 1SAA963000-3804 |
| **Connecting Capacity Main Circuit UL/CSA:** | Flexible 1/2x 16-12 AWG<br>Stranded 1/2x 16-12 AWG |
| **Connecting Capacity Main Circuit:** | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm²<br>Flexible with Insulated Ferrule 1/2x 0.75 ... 2.5 mm²<br>Flexible 1/2x 0.75 ... 2.5 mm²<br>Rigid 1/2x 1 ... 4 mm² |
| **Contact Position Indication:** | ON / OFF |
| **Conventional Free-air Thermal Current ($I_{th}$):** | Main Circuit 1 A |
| **Core Credit:** | 0.00 |
| **Country of Origin:** | Germany (DE) |
| **Customs Tariff Number:** | 85362010 |
| **DNV Certificate:** | 1SAA963000-0303 |
| **Data Sheet, Technical Information:** | 2CDC131025D0201 |
| **Data Sheet, Technical Information (Part 2):** | 1SAM200505F0005 |
| **Data Sheet, Technical Information (Part 3):** | 1SAM200507F0001<br>1SAM200507F0002<br>1SAM200507F0003<br>1SAM200508F0001<br>1SAM200508F0002<br>1SAM200508F0003 |
| **Declaration of Conformity - CE:** | 1SAD938516-0060 |

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| **Degree of Protection:** | Housing IP20<br>Main Circuit Terminals IP10 |
| **Dimension Diagram:** | 1SAM200422F0001 |
| **E-nummer:** | 3111938 |
| **EAC Certificate:** | 1SAA963000-2701 |
| **EAN:** | 4013614320286 |
| **EPLAN Catalog Tree:** | Electrical engineering / Protection devices / Motor overload switch |
| **EPLAN Function Definition:** | Motor overload switch / Motor overload switch, 6 connection points / Motor overload switch thr ee-pole 1_2_3_4_5_6 |
| **ETIM 4:** | EC000074 - Motor protective circuit-breaker |
| **ETIM 5:** | EC000074 - Motor protective circuit-breaker |
| **ETIM 6:** | EC000074 - Motor protection circuit-breaker |
| **Electrical Durability:** | 100000 cycle |
| **Environmental Information:** | 1SAA963001-2401 |
| **GL Certificate:** | 1SAA963000-0402 |
| **GOST Certificate:** | 1SAA963001-2702 |
| **General Use Rating UL/CSA:** | (600 V AC) 1 A |
| **Horsepower Rating UL/CSA:** | (550 ... 600 V AC) Three Phase 0.5 Hp |
| **IIT Publishing Status:** | Level 0 - Information enabled |
| **Industrial IT Certification Level:** | 0 |
| **Instructions and Manuals:** | 2CDC131011M6802 |
| **Invoice Description:** | MS116-1.0 Manual Motor Starter Trip class 10A, 0.63 ... 1.0A |
| **LR Certificate:** | 1SAA963000-0505 |
| **Maximum Operating Altitude Permissible:** | 2000 m |
| **Maximum Operating Voltage UL/CSA:** | Main Circuit 600 V AC |
| **Mechanical Durability:** | 100000 cycle |
| **Minimum Order Quantity:** | 1 piece |
| **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 |
| **Number of Poles:** | 3 |
| **Number of Protected Poles:** | 3 |
| **Object Classification Code:** | F |
| **Package Level 1 EAN:** | 4013614320286 |
| **Package Level 1 Gross Weight:** | 0.24 kg |
| **Package Level 1 Height:** | 50 mm |
| **Package Level 1 Length:** | 95 mm |
| **Package Level 1 Units:** | 1 piece |
| **Package Level 1 Width:** | 92 mm |
| **Package Level 2 EAN:** | 4013614408656 |
| **Package Level 2 Gross Weight:** | 9.986 kg |
| **Package Level 2 Height:** | 210 mm |
| **Package Level 2 Length:** | 395 mm |
| **Package Level 2 Units:** | 40 piece |
| **Package Level 2 Width:** | 280 mm |
| **Part Type:** | New |
| **Phase Loss Sensitive:** | Yes |
| **Pollution Degree:** | 3 |
| **Power Loss:** | at Rated Operating Conditions per Pole 0.7 ... 1.7 W |
| **Product Main Type:** | MS116 |

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|---|---|
| **Product Main Type:** | MS116 |
| **Product Name:** | Manual Motor Starter |
| **Product Net Depth:** | 85.6 mm |
| **Product Net Height:** | 90 mm |
| **Product Net Weight:** | 0.225 kg |
| **Product Net Width:** | 45 mm |
| **RMRS Certificate:** | 1SAA918000-0704 |
| **Rated Current ($I_n$):** | 1 A |
| **Rated Frequency (f):** | Main Circuit 50 Hz<br>Main Circuit 60 Hz |
| **Rated Impulse Withstand Voltage ($U_{imp}$):** | Main Circuit 6 kV |
| **Rated Instantaneous Short-Circuit Current Setting ($I_i$):** | 12.5 A |
| **Rated Insulation Voltage ($U_i$):** | 690 V |
| **Rated Operational Current ($I_e$):** | 1 A |
| **Rated Operational Current AC-3 ($I_e$):** | 1 A |
| **Rated Operational Power AC-3 ($P_e$):** | (400 V) Three Phase 0.25 kW |
| **Rated Operational Voltage:** | Main Circuit 690 V AC |
| **Rated Service Short-Circuit Breaking Capacity ($I_{cs}$):** | (230 V AC) 50 kA<br>(400 V AC) 50 kA<br>(440 V AC) 30 kA<br>(500 V AC) 30 kA<br>(690 V AC) 30 kA |
| **Rated Service Short-Circuit Breaking Capacity, in % of Icu ($I_{cs}$):** | 100 % |
| **Rated Ultimate Short-Circuit Breaking Capacity ($I_{cu}$):** | (230 V AC) 50 kA<br>(400 V AC) 50 kA<br>(440 V AC) 30 kA<br>(500 V AC) 30 kA<br>(690 V AC) 30 kA |
| **Rated Uninterrupted Current ($I_u$):** | 1 A |
| **Recommended Screw Driver:** | Pozidriv 2 |
| **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 Date:** | 1105 |
| **RoHS Information:** | 1SAA963001-4409 |
| **Selectivity Category:** | A |
| **Selling Unit of Measure:** | piece |
| **Setting Range:** | 0.63 ... 1 A |
| **Short Description:** | MS116-1.0 Manual Motor Starter |
| **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 |
| **Suitable for Isolation:** | Yes |
| **Terminal Type:** | Screw Terminals |
| **Tightening Torque:** | Main Circuit 0.8 ... 1.2 N·m |
| **Tightening Torque UL/CSA:** | Main Circuit 10 in·lb |
| **Trip Class:** | 10A |
| **UL Certificate:** | UL_E137861 |

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| **UNSPSC:** | 39121521 |
| **Utilization:** | Motor Protection |
| **Wire Stripping Length:** | Main Circuit 9 mm |
| **cUL Certificate:** | cUL_E137861 |
| **eClass:** | 7.0 27370401 |
| **DNV GL Certificate:** | 1SAA963000-0303 |