

# MS116-10



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

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| <b>Extended Product Type:</b> | MS116-10                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Product ID:</b>            | 1SAM250000R1010                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>EAN:</b>                   | 4013614320330                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Catalog Description:</b>   | MS116-10 Manual Motor Starter                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Long Description:</b>      | The MS116-10 manual motor starter is a compact 45 mm width devices with a rated operational current of $I_e = 10.0$ 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 $I_{cs} = 50$ kA at 400 VAC and the trip class 10A. |

## Additional Information

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| <b>ABS Certificate:</b>                                        | 1SAA963000-0104                                                                                                                                                                                                  |
| <b>Actuator Type:</b>                                          | Rotary Handle                                                                                                                                                                                                    |
| <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                                                                                                                                                                                                              |
| <b>Ampere Rating UL/CSA:</b>                                   | 10 A                                                                                                                                                                                                             |
| <b>BV Certificate:</b>                                         | 1SAA963000-0204                                                                                                                                                                                                  |
| <b>CB Certificate:</b>                                         | 1SAA963000-2003                                                                                                                                                                                                  |
| <b>CCC Certificate:</b>                                        | 1SAA963000-3804                                                                                                                                                                                                  |
| <b>Connecting Capacity Main Circuit UL/CSA:</b>                | Flexible 1/2x 16-12 AWG<br>Stranded 1/2x 16-12 AWG                                                                                                                                                               |
| <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>Contact Position Indication:</b>                            | ON / OFF                                                                                                                                                                                                         |
| <b>Conventional Free-air Thermal Current (I<sub>th</sub>):</b> | Main Circuit 10 A                                                                                                                                                                                                |
| <b>Core Credit:</b>                                            | 0.00                                                                                                                                                                                                             |
| <b>Country of Origin:</b>                                      | Germany (DE)                                                                                                                                                                                                     |
| <b>Customs Tariff Number:</b>                                  | 85362010                                                                                                                                                                                                         |
| <b>DNV Certificate:</b>                                        | 1SAA963000-0303                                                                                                                                                                                                  |
| <b>Data Sheet, Technical Information:</b>                      | 2CDC131025D0201                                                                                                                                                                                                  |
| <b>Data Sheet, Technical Information (Part 2):</b>             | 1SAM200505F0010                                                                                                                                                                                                  |
| <b>Data Sheet, Technical Information (Part 3):</b>             | 1SAM200507F0001<br>1SAM200507F0002<br>1SAM200507F0003<br>1SAM200508F0001<br>1SAM200508F0002<br>1SAM200508F0003                                                                                                   |
| <b>Declaration of Conformity - CE:</b>                         | 1SAD938516-0060                                                                                                                                                                                                  |
| <b>Degree of Protection:</b>                                   | Housing IP20<br>Main Circuit Terminals IP10                                                                                                                                                                      |
| <b>Dimension Diagram:</b>                                      | 1SAM200422F0001                                                                                                                                                                                                  |
| <b>E-number:</b>                                               | 3111948                                                                                                                                                                                                          |

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| <b>EAC Certificate:</b>                        | 1SAA963000-2701                                                                                                     |
| <b>EAN:</b>                                    | 4013614320330                                                                                                       |
| <b>EPLAN Catalog Tree:</b>                     | Electrical engineering / Protection devices / Motor overload switch                                                 |
| <b>EPLAN Function Definition:</b>              | Motor overload switch / Motor overload switch, 6 connection points / Motor overload switch three-pole 1_2_3_4_5_6   |
| <b>ETIM 4:</b>                                 | EC000074 - Motor protective circuit-breaker                                                                         |
| <b>ETIM 5:</b>                                 | EC000074 - Motor protective circuit-breaker                                                                         |
| <b>ETIM 6:</b>                                 | EC000074 - Motor protection circuit-breaker                                                                         |
| <b>Electrical Durability:</b>                  | 100000 cycle                                                                                                        |
| <b>Environmental Information:</b>              | 1SAA963001-2401                                                                                                     |
| <b>GL Certificate:</b>                         | 1SAA963000-0402                                                                                                     |
| <b>GOST Certificate:</b>                       | 1SAA963001-2702                                                                                                     |
| <b>General Use Rating UL/CSA:</b>              | (600 V AC) 10 A                                                                                                     |
| <b>Horsepower Rating UL/CSA:</b>               | (220 ... 240 V AC) Three Phase 3 Hp<br>(440 ... 480 V AC) Three Phase 5 Hp<br>(550 ... 600 V AC) Three Phase 7.5 Hp |
| <b>IIT Publishing Status:</b>                  | Level 0 - Information enabled                                                                                       |
| <b>Industrial IT Certification Level:</b>      | 0                                                                                                                   |
| <b>Instructions and Manuals:</b>               | 2CDC131011M6802                                                                                                     |
| <b>Invoice Description:</b>                    | MS116-10 Manual Motor Starter Trip class 10A, 6.3 ... 10A                                                           |
| <b>LR Certificate:</b>                         | 1SAA963000-0505                                                                                                     |
| <b>Maximum Operating Altitude Permissible:</b> | 2000 m                                                                                                              |
| <b>Maximum Operating Voltage UL/CSA:</b>       | Main Circuit 600 V AC                                                                                               |
| <b>Mechanical Durability:</b>                  | 100000 cycle                                                                                                        |
| <b>Minimum Order Quantity:</b>                 | 1 piece                                                                                                             |
| <b>Mounting Position:</b>                      | Position 1 to 6                                                                                                     |
| <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>Number of Poles:</b>                        | 3                                                                                                                   |
| <b>Number of Protected Poles:</b>              | 3                                                                                                                   |
| <b>Object Classification Code:</b>             | F                                                                                                                   |
| <b>Package Level 1 EAN:</b>                    | 4013614320330                                                                                                       |
| <b>Package Level 1 Gross Weight:</b>           | 0.28 kg                                                                                                             |
| <b>Package Level 1 Height:</b>                 | 50 mm                                                                                                               |
| <b>Package Level 1 Length:</b>                 | 95 mm                                                                                                               |
| <b>Package Level 1 Units:</b>                  | 1 piece                                                                                                             |
| <b>Package Level 1 Width:</b>                  | 92 mm                                                                                                               |
| <b>Package Level 2 EAN:</b>                    | 4013614408700                                                                                                       |
| <b>Package Level 2 Gross Weight:</b>           | 11.586 kg                                                                                                           |
| <b>Package Level 2 Height:</b>                 | 210 mm                                                                                                              |
| <b>Package Level 2 Length:</b>                 | 395 mm                                                                                                              |
| <b>Package Level 2 Units:</b>                  | 40 piece                                                                                                            |
| <b>Package Level 2 Width:</b>                  | 280 mm                                                                                                              |
| <b>Part Type:</b>                              | New                                                                                                                 |
| <b>Phase Loss Sensitive:</b>                   | Yes                                                                                                                 |
| <b>Pollution Degree:</b>                       | 3                                                                                                                   |
| <b>Power Loss:</b>                             | at Rated Operating Conditions per Pole 0.9 ... 2.4 W                                                                |
| <b>Product Main Type:</b>                      | MS116                                                                                                               |
| <b>Product Name:</b>                           | Manual Motor Starter                                                                                                |
| <b>Product Net Depth:</b>                      | 85.6 mm                                                                                                             |

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| Product Net Height:                                                           | 90 mm                                                                                         |
| Product Net Weight:                                                           | 0.265 kg                                                                                      |
| Product Net Width:                                                            | 45 mm                                                                                         |
| RMRS Certificate:                                                             | 1SAA918000-0704                                                                               |
| Rated Current ( $I_n$ ):                                                      | 10 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 ( $I_i$ ):                  | 150 A                                                                                         |
| Rated Insulation Voltage ( $U_i$ ):                                           | 690 V                                                                                         |
| Rated Operational Current ( $I_e$ ):                                          | 10 A                                                                                          |
| Rated Operational Current AC-3 ( $I_e$ ):                                     | 10 A                                                                                          |
| Rated Operational Power AC-3 ( $P_e$ ):                                       | (400 V) Three Phase 4 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) 6 kA<br>(500 V AC) 6 kA<br>(690 V AC) 2 kA |
| Rated Service Short-Circuit Breaking Capacity, in % of $I_{cu}$ ( $I_{cs}$ ): | 100 %                                                                                         |
| Rated Ultimate Short-Circuit Breaking Capacity ( $I_{cu}$ ):                  | (230 V AC) 50 kA<br>(400 V AC) 50 kA<br>(440 V AC) 6 kA<br>(500 V AC) 6 kA<br>(690 V AC) 2 kA |
| Rated Uninterrupted Current ( $I_u$ ):                                        | 10 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:                                                                | 6.3 ... 10 A                                                                                  |
| Short Description:                                                            | MS116-10 Manual Motor Starter                                                                 |
| Short-Circuit Protective Devices:                                             | gG Type Fuses 50 A, 690 V AC<br>gG Type Fuses 63 A, 440 V AC<br>gG Type Fuses 63 A, 500 V AC  |
| 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                                                                                    |

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

