

MS116-6.3



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 → ACS2000

Parts & Services → Drives → Medium voltage AC drives → Special purpose drives → ACS1000

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 |
| Data Sheet, Technical Information (Part 2): | 1SAM200505F0009 |
| Data Sheet, Technical Information (Part 3): | 1SAM200507F0001 1SAM200507F0002 1SAM200507F0003 1SAM200508F0001 1SAM200508F0002 1SAM200508F0003 |
| Instructions and Manuals: | 2CDC131011M6802 |
| 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_{cs}): | (230 V AC) 50 kA (400 V AC) 50 kA (440 V AC) 6 kA (500 V AC) 6 kA (690 V AC) 2 kA |
| Rated Ultimate Short-Circuit Breaking Capacity (I_{cu}): | (230 V AC) 50 kA (400 V AC) 50 kA (440 V AC) 6 kA (500 V AC) 6 kA (690 V AC) 2 kA |
| Rated Instantaneous Short-Circuit Current Setting (I_i): | 78.8 A |
| Setting Range: | 4 ... 6.3 A |
| Rated Operational Power AC-3 (P_e): | (400 V) Three Phase 2.2 kW |
| Rated Operational Voltage: | Main Circuit 690 V AC |
| Rated Operational Current (I_e): | 6.3 A |
| Rated Operational Current AC-3 (I_e): | 6.3 A |
| Rated Frequency (f): | Main Circuit 50 Hz Main Circuit 60 Hz |
| Rated Impulse Withstand Voltage (U_{imp}): | Main Circuit 6 kV |
| Rated Insulation Voltage (U_i): | 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_{th}): | Main Circuit 6.3 A |
| Degree of Protection: | Housing IP20 Main Circuit Terminals IP10 |
| Pollution Degree: | 3 |
| Electrical Durability: | 100000 cycle |
| Mechanical Durability: | 100000 cycle |
| Terminal Type: | Screw Terminals |

| | |
|--|---|
| Connecting Capacity Main Circuit: | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 1/2x 0.75 ... 2.5 mm ² Flexible 1/2x 0.75 ... 2.5 mm ² Rigid 1/2x 1 ... 4 mm ² |
| 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 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 Electrical Conductive Board, Horizontal - Up to 690 V 1.5 mm Electrical Conductive Board, Vertical 75 mm Other Device Same Type, Horizontal 0 mm Other Device Same Type, Vertical 150 mm |
| Actuator Type: | Rotary Handle |
| Contact Position Indication: | ON / OFF |
| Standards: | IEC/EN 60947-1 IEC/EN 60947-2 IEC/EN 60947-4-1 UL 60947-1 UL 60947-4-1 |

Environmental

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

Technical UL/CSA

| | |
|--|-----------------------|
| 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 (208 V AC) Three Phase 1 Hp (220 ... 240 V AC) Three Phase 1.5 Hp (440 ... 480 V AC) Three Phase 3 Hp (550 ... 600 V AC) Three Phase 5 Hp |
| General Use Rating UL/CSA: | (600 V AC) 6.3 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: | 1SAA963000-0104 |
| BV Certificate: | 1SAA963000-0204 |
| CB Certificate: | 1SAA963000-2003 |
| CCC Certificate: | 1SAA963000-3804 |
| cUL Certificate: | cUL_E137861 |
| Declaration of Conformity - CE: | 1SAD938517-0060 |
| DNV Certificate: | 1SAA963000-0303 |
| DNV GL Certificate: | 1SAA963000-0303 |
| EAC Certificate: | 1SAA963000-2701 |
| Environmental Information: | 1SAA963001-2401 |
| GL Certificate: | 1SAA963000-0402 |
| GOST Certificate: | 1SAA963001-2702 |
| Instructions and Manuals: | 2CDC131011M6802 |
| KC Certificate: | 1SAA963000-1501 |
| LR Certificate: | 1SAA963000-0505 |
| RMRS Certificate: | 1SAA918000-0704 |
| RoHS Information: | 1SAD938517-0060 |
| UL Certificate: | UL_E137861 |

Container Information

| | |
|--|---------------|
| Package Level 1 Units: | 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: | 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 |
| E-nummer: | 3111946 |
| 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 |

Accessories

| Identifier | Description | Type | Qty | Unit Of Measure |
|-------------------|-----------------------------|-------------|------------|------------------------|
| 1SAM101923R0002 | MSMN Driver | MSMN | 1 | piece |
| 1SAM101923R0012 | MSMNO Driver | MSMNO | 1 | piece |
| 1SAM101924R0003 | MSEX-32 Driver Shaft | MSEX-32 | 1 | piece |
| 1SAM101924R0013 | MSEX-30 Driver Shaft | MSEX-30 | 1 | piece |
| 1SAM201901R1001 | HKF1-11 Auxiliary Contact | HKF1-11 | 1 | piece |
| 1SAM201901R1002 | HKF1-20 Auxiliary Contact | HKF1-20 | 1 | piece |
| 1SAM201901R1003 | HKF1-10 Auxiliary Contact | HKF1-10 | 1 | piece |
| 1SAM201901R1004 | HKF1-01 Auxiliary Contact | HKF1-01 | 1 | piece |
| 1SAM201902R1001 | HK1-11 Auxiliary Contact | HK1-11 | 1 | piece |
| 1SAM201902R1002 | HK1-20 Auxiliary Contact | HK1-20 | 1 | piece |
| 1SAM201902R1003 | HK1-02 Auxiliary Contact | HK1-02 | 1 | piece |
| 1SAM201902R1004 | HK1-20L Auxiliary Contact | HK1-20L | 1 | piece |
| 1SAM201903R1001 | SK1-11 Signal Contact | SK1-11 | 1 | piece |
| 1SAM201903R1002 | SK1-20 Signal Contact | SK1-20 | 1 | piece |
| 1SAM201903R1003 | SK1-02 Signal Contact | SK1-02 | 1 | piece |
| 1SAM201904R1001 | UA1-24 Undervoltage Release | UA1-24 | 1 | piece |

| Identifier | Description | Type | Qty | Unit Of Measure |
|-------------------|------------------------------|-------------|------------|------------------------|
| 1SAM201904R1002 | UA1-48 Undervoltage Release | UA1-48 | 1 | piece |
| 1SAM201904R1003 | UA1-60 Undervoltage Release | UA1-60 | 1 | piece |
| 1SAM201904R1004 | UA1-110 Undervoltage Release | UA1-110 | 1 | piece |
| 1SAM201904R1005 | UA1-230 Undervoltage Release | UA1-230 | 1 | piece |
| 1SAM201904R1006 | UA1-400 Undervoltage Release | UA1-400 | 1 | piece |
| 1SAM201904R1007 | UA1-415 Undervoltage Release | UA1-415 | 1 | piece |
| 1SAM201904R1008 | UA1-208 Undervoltage Release | UA1-208 | 1 | piece |
| 1SAM201904R1010 | UA1-20 Undervoltage Release | UA1-20 | 1 | piece |
| 1SAM201906R1102 | PS1-2-0-65 Busbar | PS1-2-0-65 | 1 | piece |
| 1SAM201906R1103 | PS1-3-0-65 Busbar | PS1-3-0-65 | 1 | piece |
| 1SAM201906R1104 | PS1-4-0-65 Busbar | PS1-4-0-65 | 1 | piece |
| 1SAM201906R1105 | PS1-5-0-65 Busbar | PS1-5-0-65 | 1 | piece |
| 1SAM201906R1112 | PS1-2-1-65 Busbar | PS1-2-1-65 | 1 | piece |
| 1SAM201906R1113 | PS1-3-1-65 Busbar | PS1-3-1-65 | 1 | piece |
| 1SAM201906R1114 | PS1-4-1-65 Busbar | PS1-4-1-65 | 1 | piece |
| 1SAM201906R1115 | PS1-5-1-65 Busbar | PS1-5-1-65 | 1 | piece |
| 1SAM201906R1122 | PS1-2-2-65 Busbar | PS1-2-2-65 | 1 | piece |
| 1SAM201906R1123 | PS1-3-2-65 Busbar | PS1-3-2-65 | 1 | piece |
| 1SAM201906R1124 | PS1-4-2-65 Busbar | PS1-4-2-65 | 1 | piece |
| 1SAM201906R1125 | PS1-5-2-65 Busbar | PS1-5-2-65 | 1 | piece |
| 1SAM201907R1101 | S1-M1-25 Power Infeed Block | S1-M1-25 | 1 | piece |
| 1SAM201907R1102 | S1-M2-25 Power Infeed Block | S1-M2-25 | 1 | piece |
| 1SAM201907R1103 | S1-M3-25 Power Infeed Block | S1-M3-25 | 1 | piece |
| 1SAM201908R1001 | BS1-3 Protection Cover | BS1-3 | 1 | piece |
| 1SAM201909R1001 | FS116 Screw Fixing Kit | FS116 | 1 | piece |
| 1SAM201909R1021 | MSAH1 Shaft Supporter | MSAH1 | 1 | piece |

| Identifier | Description | Type | Qty | Unit Of Measure |
|-----------------|------------------------------|-------------|-----|-----------------|
| 1SAM201910R1001 | AA1-24 Shunt Trip | AA1-24 | 1 | piece |
| 1SAM201910R1002 | AA1-110 Shunt Trip | AA1-110 | 1 | piece |
| 1SAM201910R1003 | AA1-230 Shunt Trip | AA1-230 | 1 | piece |
| 1SAM201910R1004 | AA1-400 Shunt Trip | AA1-400 | 1 | piece |
| 1SAM201911R1010 | IB132-G Enclosure | IB132-G | 1 | piece |
| 1SAM201911R1011 | IB132-Y Enclosure | IB132-Y | 1 | piece |
| 1SAM201911R1012 | IB132-F Enclosure | IB132-F | 1 | piece |
| 1SAM201912R1010 | DMS132-G Door Mounting Kit | DMS132-G | 1 | piece |
| 1SAM201912R1011 | DMS132-Y Door Mounting Kit | DMS132-Y | 1 | piece |
| 1SAM201914R1001 | PB1-1-32 Connecting Link | PB1-1-32 | 1 | piece |
| 1SAM201914R1002 | S1-PB1-25 Power Infeed Block | S1-PB1-25 | 1 | piece |
| 1SAM201916R1103 | PS1-3-0-100 Busbar | PS1-3-0-100 | 1 | piece |
| 1SAM201916R1104 | PS1-4-0-100 Busbar | PS1-4-0-100 | 1 | piece |
| 1SAM201916R1105 | PS1-5-0-100 Busbar | PS1-5-0-100 | 1 | piece |
| 1SAM201916R1113 | PS1-3-1-100 Busbar | PS1-3-1-100 | 1 | piece |
| 1SAM201916R1114 | PS1-4-1-100 Busbar | PS1-4-1-100 | 1 | piece |
| 1SAM201916R1115 | PS1-5-1-100 Busbar | PS1-5-1-100 | 1 | piece |
| 1SAM201916R1123 | PS1-3-2-100 Busbar | PS1-3-2-100 | 1 | piece |
| 1SAM201920R1000 | MSH-AR Shaft Alignment Ring | MSH-AR | 1 | piece |
| 1SAM201920R1001 | MSHD-LB Handles | MSHD-LB | 1 | piece |
| 1SAM201920R1002 | MSHD-LY Handles | MSHD-LY | 1 | piece |

Where Used (as a spare part for "Products")

| Identifier | Description | Qty | Unit Of Measure |
|------------|--------------------------|-----|-----------------|
| ACS 1000 | No Description Available | 1 | piece |
| ACS 2000 | No Description Available | 1 | piece |

Product specific part data

| Product | Category | Drive Part Category |
|----------|----------|------------------------------|
| ACS 2000 | ACS2000 | Switches, Relays, Contactors |
| ACS 1000 | ACS1000 | Switches, Relays, Contactors |

