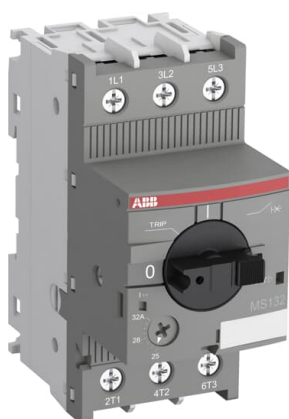


PRODUCT-DETAILS

# MS132-16

## MS132-16 Manual Motor Starter



### General Information

|                       |                               |
|-----------------------|-------------------------------|
| Extended Product Type | MS132-16                      |
| Product ID            | 1SAM350000R1011               |
| EAN                   | 4013614400117                 |
| Catalog Description   | MS132-16 Manual Motor Starter |

#### Long Description

The MS132-16 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  $I_e = 16.0$  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  $I_{cs} = 100$  kA at 400 VAC and trip class 10. 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. The handle is lockable to protect against unauthorized changes. Auxiliary contacts, signaling contacts, undervoltage releases, shunt trips, 3-phase bus bars, power in-feed blocks are available as accessory.

### Ordering

|                        |          |
|------------------------|----------|
| Minimum Order Quantity | 1 piece  |
| Customs Tariff Number  | 85362010 |

### Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 2CDC131021D0201 |
| Instructions and                  | 2CDC131022M6802 |

## Manuals

|                                   |                                    |
|-----------------------------------|------------------------------------|
| Instructions and Manuals (Part 2) | 2CDC131060M0202                    |
| Time-Current Characteristic Curve | 1SAM300505F0011                    |
| I <sup>2</sup> t Characteristic   | 1SAM300507F0001<br>1SAM300507F0003 |
| Cut-off Current Characteristic    | 1SAM300508F0001<br>1SAM300508F0003 |
| Dimension Diagram                 | 1SAM300402F0002                    |

## Dimensions

|                            |          |
|----------------------------|----------|
| Product Net Width          | 45 mm    |
| Product Net Height         | 97.8 mm  |
| Product Net Depth / Length | 86.55 mm |
| Product Net Weight         | 0.31 kg  |

## Technical

|   |   |
|---|---|
| Rated Service Short-Circuit Breaking Capacity (I <sub>cs</sub> )    | (230 V AC) 100 kA<br>(250 V DC) 3 Poles in Series 10 kA<br>(400 V AC) 100 kA<br>(440 V AC) 20 kA<br>(500 V AC) 20 kA<br>(690 V AC) 3 kA |
| Rated Ultimate Short-Circuit Breaking Capacity (I <sub>cu</sub> )   | (230 V AC) 100 kA<br>(400 V AC) 100 kA<br>(440 V AC) 20 kA<br>(500 V AC) 20 kA<br>(690 V AC) 3 kA                                       |
| Rated Instantaneous Short-Circuit Current Setting (I <sub>i</sub> ) | 240 A   |
| Setting Range   | 10 ... 16 A   |
| Rated Operational Power AC-3 (P <sub>e</sub> )                      | (400 V) Three Phase 7.5 kW  |
| Rated Operational Voltage   | Main Circuit 690 V AC<br>Main Circuit 250 V DC  |
| Rated Operational Current (I <sub>e</sub> )                         | 16 A  |
| Rated Operational Current AC-3 (I <sub>e</sub> )                    | 16 A  |
| Rated Operational Current DC-5 (I <sub>e</sub> )                    | 16 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 1.1 ... 2.8 W  |
| Number of Poles   | 3   |
| Conventional Free-air Thermal Current (I <sub>th</sub> )            | Main Circuit 16 A   |
| Degree of Protection  | Housing IP20<br>Main Circuit Terminals IP10   |
| Pollution Degree  | 3   |
| Electrical Durability   | 50000 cycle   |
| Mechanical Durability   | 100000 cycle  |
| Terminal Type   | Screw Terminals   |

|                                     |  |
|-------------------------------------|--|
| Connecting Capacity<br>Main Circuit | Flexible with Ferrule 1/2x 0.75 ... 6 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1/2x 0.75 ... 6 mm <sup>2</sup><br>Flexible 1/2x 1 ... 2.5 mm <sup>2</sup><br>Flexible 1/2x 2.5 ... 6 mm <sup>2</sup><br>Rigid 1/2x 1 ... 2.5 mm <sup>2</sup><br>Rigid 1/2x 2.5 ... 6 mm <sup>2</sup> |
| Tightening Torque                   | Main Circuit 2 N·m   |
| Wire Stripping Length               | Main Circuit 10 mm   |
| Recommended Screw<br>Driver         | Pozidriv 2   |
| Mounting Position                   | Position 1 to 6  |
| Mounting on DIN Rail                | TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715<br>TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715   |
| Minimum Mounting<br>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<br>Indication      | ON / OFF / TRIP  |
| 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   |
| Remarks                             | UL508 Self-Protected Combination Motor Controller (Type E) in<br>combination with feeder block S1-M3-xx  |

## Technical UL/CSA

|  |  |
|--|--|
| Short-Circuit Current<br>Rating (SCCR)     | Manual Self-Protected Combination Controllers (Type E), (480Y / 277 V AC)<br>30 kA<br>Any UL Listed Fuses or Circuit-Breakers, Group Installations (480 V AC) 35<br>kA<br>Any UL Listed Fuses or Circuit-Breakers, Group Installations (600 V AC) 35<br>kA<br>Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (480 V AC) 30<br>kA<br>Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (600 V AC) 18<br>kA<br>Any UL Listed Fuses or Circuit-Breakers, Tap Conductor Protection in<br>Group Installations (480 V AC) 30 kA<br>Any UL Listed Fuses or Circuit-Breakers, Tap Conductor Protection in<br>Group Installations (600 V AC) 18 kA |
| Maximum Operating<br>Voltage UL/CSA        | Main Circuit 600 V AC  |
| Ampere Rating UL/CSA                       | 16 A   |
| Horsepower Rating<br>UL/CSA                | (200 V AC) Three Phase 3 Hp<br>(208 V AC) Three Phase 3 Hp<br>(220 ... 240 V AC) Three Phase 5 Hp<br>(440 ... 480 V AC) Three Phase 10 Hp<br>(550 ... 600 V AC) Three Phase 10 Hp  |
| Full Load Amps Motor<br>Use                | (200 V AC) Three Phase 11 A<br>(208 V AC) Three Phase 10.6 A<br>(220 ... 240 V AC) Three Phase 15.2 A<br>(440 ... 480 V AC) Three Phase 14 A<br>(550 ... 600 V AC) Three Phase 11 A  |
| Locked Rotor Amps                          | (200 V AC) Three Phase 73.6 A<br>(208 V AC) Three Phase 71 A<br>(220 ... 240 V AC) Three Phase 92 A<br>(440 ... 480 V AC) Three Phase 81 A<br>(550 ... 600 V AC) Three Phase 64.8 A  |
| General Use Rating<br>UL/CSA               | (600 V AC) 16 A  |
| Connecting Capacity<br>Main Circuit UL/CSA | Flexible 1/2x 16-8 AWG<br>Stranded 1/2x 16-8 AWG   |
| Tightening Torque                          | Main Circuit 18 in·lb  |

UL/CSA

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**Environmental**


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|  |   |
|--|---|
| Ambient Air Temperature                        | Around the Enclosure 0 ... +40 °C<br>Operation -25 ... +70 °C<br>Operation Compensated -25 ... +60 °C<br>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   |

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**Certificates and Declarations (Document Number)**


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|                                   |                                    |
|-----------------------------------|------------------------------------|
| ABS Certificate                   | 1SAA963001-0101                    |
| ATEX Certificate                  | 1SAA963000-3902                    |
| BV Certificate                    | 1SAA963001-0202                    |
| CB Certificate                    | 1SAA963002-2002                    |
| CCC Certificate                   | 1SAA963001-3805                    |
| cUL Certificate                   | cUL_E137861<br>cUL_E345003         |
| cULus Certificate                 | cUL_E137861                        |
| Cut-off Current Characteristic    | 1SAM300508F0001<br>1SAM300508F0003 |
| Declaration of Conformity - CE    | 1SAD938514-0125                    |
| DNV GL Certificate                | 1SAA963001-0304                    |
| EAC Certificate                   | 1SAA963000-2701                    |
| GOST Certificate                  | 1SAA963001-2702                    |
| I <sup>2</sup> t Characteristic   | 1SAM300507F0001<br>1SAM300507F0003 |
| Instructions and Manuals          | 2CDC131022M6802                    |
| Instructions and Manuals (Part 2) | 2CDC131060M0202                    |
| LR Certificate                    | 1SAA963001-0502                    |
| RINA Certificate                  | Rina_MS132                         |
| RMRS Certificate                  | 1SAA918000-0704                    |
| RoHS Information                  | 1SAD938511-0125                    |
| Time-Current Characteristic Curve | 1SAM300505F0011                    |
| UL Certificate                    | UL_E137861<br>UL_E345003           |

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**Container Information**


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|                                |             |
|--------------------------------|-------------|
| Package Level 1 Units          | box 1 piece |
| Package Level 1 Width          | 92 mm       |
| Package Level 1 Depth / Length | 102 mm      |
| Package Level 1 Height         | 50 mm       |
| Package Level 1 Gross Weight   | 0.325 kg    |

|                                |                 |
|--------------------------------|-----------------|
| Package Level 1 EAN            | 4013614400117   |
| 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   | 13.386 kg       |
| Package Level 2 EAN            | 4013614409011   |

## 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 (Sweden)                  | 3112127   |

## Accessories

| Identifier      | Description                    | Type     | Quantity | Unit Of Measure |
|-----------------|--------------------------------|----------|----------|-----------------|
| 1SAM101923R0002 | MSMN Mitnehmer                 | MSMN     | 1        | piece           |
| 1SAM101923R0012 | MSMNO Mitnehmer                | MSMNO    | 1        | piece           |
| 1SAM101924R0003 | MSOX-32 Achse                  | MSOX-32  | 1        | piece           |
| 1SAM101924R0013 | MSOX-30 Achse                  | MSOX-30  | 1        | piece           |
| 1SAM201901R1001 | HKF1-11 Hilfskontakt           | HKF1-11  | 1        | piece           |
| 1SAM201901R1002 | HKF1-20 Hilfskontakt           | HKF1-20  | 1        | piece           |
| 1SAM201901R1003 | HKF1-10 Hilfskontakt           | HKF1-10  | 1        | piece           |
| 1SAM201901R1004 | HKF1-01 Hilfskontakt           | HKF1-01  | 1        | piece           |
| 1SAM201901R1201 | HKF1-11K Hilfskontakt          | HKF1-11K | 1        | piece           |
| 1SAM201901R1202 | HKF1-20K Hilfskontakt          | HKF1-20K | 1        | piece           |
| 1SAM201902R1001 | HK1-11 Hilfskontakt            | HK1-11   | 1        | piece           |
| 1SAM201902R1002 | HK1-20 Hilfskontakt            | HK1-20   | 1        | piece           |
| 1SAM201902R1003 | HK1-02 Hilfskontakt            | HK1-02   | 1        | piece           |
| 1SAM201902R1004 | HK1-20L Hilfskontakt           | HK1-20L  | 1        | piece           |
| 1SAM201902R1201 | HK1-11K Hilfskontakt           | HK1-11K  | 1        | piece           |
| 1SAM201902R1202 | HK1-20K Hilfskontakt           | HK1-20K  | 1        | piece           |
| 1SAM201902R1203 | HK1-02K Hilfskontakt           | HK1-02K  | 1        | piece           |
| 1SAM201902R1204 | HK1-20LK Hilfskontakt          | HK1-20LK | 1        | piece           |
| 1SAM201903R1001 | SK1-11 Signalkontakt           | SK1-11   | 1        | piece           |
| 1SAM201903R1002 | SK1-20 Signalkontakt           | SK1-20   | 1        | piece           |
| 1SAM201903R1003 | SK1-02 Signalkontakt           | SK1-02   | 1        | piece           |
| 1SAM201903R1201 | SK1-11K Signalkontakt          | SK1-11K  | 1        | piece           |
| 1SAM201903R1202 | SK1-20K Signalkontakt          | SK1-20K  | 1        | piece           |
| 1SAM201903R1203 | SK1-02K Signalkontakt          | SK1-02K  | 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           |
| 1SAM201904R1005 | UA1-230 Unterspannungsauslöser | UA1-230  | 1        | piece           |

|                 |   |             |   |       |
|-----------------|---|-------------|---|-------|
| 1SAM201904R1006 | UA1-400 Unterspannungsauslöser  | UA1-400     | 1 | piece |
| 1SAM201904R1007 | UA1-415 Unterspannungsauslöser  | UA1-415     | 1 | piece |
| 1SAM201904R1008 | UA1-208 Unterspannungsauslöser  | UA1-208     | 1 | piece |
| 1SAM201904R1009 | UA1-575 Unterspannungsauslöser  | UA1-575     | 1 | piece |
| 1SAM201904R1010 | UA1-20 Unterspannungsauslöser   | UA1-20      | 1 | piece |
| 1SAM201906R1102 | PS1-2-0-65 3-Phasen Sammelschiene                                     | PS1-2-0-65  | 1 | piece |
| 1SAM201906R1103 | PS1-3-0-65 3-Phasen Sammelschiene                                     | PS1-3-0-65  | 1 | piece |
| 1SAM201906R1104 | PS1-4-0-65 3-Phasen Sammelschiene                                     | PS1-4-0-65  | 1 | piece |
| 1SAM201906R1105 | PS1-5-0-65 3-Phasen Sammelschiene                                     | PS1-5-0-65  | 1 | piece |
| 1SAM201906R1112 | PS1-2-1-65 3-Phasen Sammelschiene                                     | PS1-2-1-65  | 1 | piece |
| 1SAM201906R1113 | PS1-3-1-65 3-Phasen Sammelschiene                                     | PS1-3-1-65  | 1 | piece |
| 1SAM201906R1114 | PS1-4-1-65 3-Phasen Sammelschiene                                     | PS1-4-1-65  | 1 | piece |
| 1SAM201906R1115 | PS1-5-1-65 3-Phasen Sammelschiene                                     | PS1-5-1-65  | 1 | piece |
| 1SAM201906R1122 | PS1-2-2-65 3-Phasen Sammelschiene                                     | PS1-2-2-65  | 1 | piece |
| 1SAM201906R1123 | PS1-3-2-65 3-Phasen Sammelschiene                                     | PS1-3-2-65  | 1 | piece |
| 1SAM201906R1124 | PS1-4-2-65 3-Phasen Sammelschiene                                     | PS1-4-2-65  | 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 |
| 1SAM201908R1001 | BS1-3 Schutzabdeckung   | BS1-3       | 1 | piece |
| 1SAM201909R1001 | FS116 Schraubenbefestigungs-Kit                                       | FS116       | 1 | piece |
| 1SAM201909R1021 | MSAH1 Wellenhalter  | MSAH1       | 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 |
| 1SAM201911R1010 | IB132-G Gehäuse   | IB132-G     | 1 | piece |
| 1SAM201911R1011 | IB132-Y Gehäuse   | IB132-Y     | 1 | piece |
| 1SAM201911R1012 | IB132-F Gehäuse   | IB132-F     | 1 | piece |
| 1SAM201912R1010 | DMS132-G Türmontagesatz   | DMS132-G    | 1 | piece |
| 1SAM201912R1011 | DMS132-Y Türmontagesatz   | DMS132-Y    | 1 | piece |
| 1SAM201913R1103 | S1-M3-35 3-Phasen Einspeiseblock                                      | S1-M3-35    | 1 | piece |
| 1SAM201914R1001 | PB1-1-32 Phasenverbinder  | PB1-1-32    | 1 | piece |
| 1SAM201914R1002 | S1-PB1-25 3-Phasen Einspeiseblock                                     | S1-PB1-25   | 1 | piece |
| 1SAM201916R1103 | PS1-3-0-100 3-Phasen Sammelschiene                                    | PS1-3-0-100 | 1 | piece |
| 1SAM201916R1104 | PS1-4-0-100 3-Phasen Sammelschiene                                    | PS1-4-0-100 | 1 | piece |
| 1SAM201916R1105 | PS1-5-0-100 3-Phasen Sammelschiene                                    | PS1-5-0-100 | 1 | piece |
| 1SAM201916R1113 | PS1-3-1-100 3-Phasen Sammelschiene                                    | PS1-3-1-100 | 1 | piece |
| 1SAM201916R1114 | PS1-4-1-100 3-Phasen Sammelschiene                                    | PS1-4-1-100 | 1 | piece |
| 1SAM201916R1115 | PS1-5-1-100 3-Phasen Sammelschiene                                    | PS1-5-1-100 | 1 | piece |
| 1SAM201916R1123 | PS1-3-2-100 3-Phasen Sammelschiene                                    | PS1-3-2-100 | 1 | piece |
| 1SAM201920R1000 | MSH-AR Wellenführungsring   | MSH-AR      | 1 | piece |
| 1SAM201920R1011 | MSHD-LTB Griff  | MSHD-LTB    | 1 | piece |
| 1SAM201920R1012 | MSHD-LTY Griff  | MSHD-LTY    | 1 | piece |
| 1SAM301901R1001 | CK1-11 Kurzschluss-Signalkontakt                                      | CK1-11      | 1 | piece |
| 1SAM301901R1002 | CK1-20 Kurzschluss-Signalkontakt                                      | CK1-20      | 1 | piece |
| 1SAM301901R1003 | CK1-02 Kurzschluss-Signalkontakt                                      | CK1-02      | 1 | piece |
| 1SCA101647R1001 | OX56X85 Welle Länge 85mm Wellen- $\emptyset$ 6mm für Selektorgriffe   | OX56X85     | 1 | piece |
| 1SCA101655R1001 | OX56X130 Welle Länge 130mm Wellen- $\emptyset$ 6mm für Selektorgriffe | OX56X130    | 1 | piece |
| 1SCA101659R1001 | OX56X180 Welle Länge 180mm Wellen- $\emptyset$ 6mm für Selektorgriffe | OX56X180    | 1 | piece |
| 1SCA108043R1001 | OX56X105 Welle Länge 105mm Wellen- $\emptyset$ 6mm für Pistolengriffe | OX56X105    | 1 | piece |
| GJF1101903R0002 | SA2 - Vorhängeschloss   | SA2         | 1 | piece |

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

| Identifier            | Description              | Quantity | Unit Of Measure |
|-----------------------|--------------------------|----------|-----------------|
| ACS 5000 Water Cooled | No Description Available | 1        | piece           |
| ACS 6000              | No Description Available | 1        | piece           |

### Product specific part data

| Product               | Category             | Drive Part Category          |
|-----------------------|----------------------|------------------------------|
| ACS 5000 Water Cooled | ACS5000 Water-Cooled | Switches, Relays, Contactors |
| ACS 6000              | ACS6000              | Switches, Relays, Contactors |

### Categories

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

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

Drives → Medium voltage AC drives → General Performance Drives → ACS5000 Water-Cooled

Drives → Medium voltage AC drives → Industrial drives → ACS6000

