

PRODUCT-DETAILS

MS165-42

MS165-42 Manual Motor Starter



General Information

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|-----------------------|-------------------------------|
| Extended Product Type | MS165-42 |
| Product ID | 1SAM451000R1015 |
| EAN | 4013614486098 |
| Catalog Description | MS165-42 Manual Motor Starter |

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| Long Description | <p>MS165 is a compact and powerful range for motor protection up to 45 kW (400 V) / 80 A in width of 55 mm. They offer a reliable protection for motors in the event of overload or phase failure. The devices have trip class 10.</p> <p>This type has also a clear and reliable indication of fault in a separate window in the event of short-circuit tripping. 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 (also known as motor protection circuit breaker or manual motor protector) 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, power in-feed blocks are available as accessory. These are suitable throughout the MS116/MS132/MS165 range.</p> |
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Ordering

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

Popular Downloads

| | |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 2CDC131083D0201 |
|-----------------------------------|-----------------|

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|-----------------------------------|-----------------|
| Instructions and Manuals | 2CDC131081M6801 |
| Instructions and Manuals (Part 2) | 2CDC131060M0202 |
| Time-Current Characteristic Curve | 1SAM400505F0005 |
| I ² t Characteristic | 1SAM400506F0001 |
| Cut-off Current Characteristic | 1SAM400507F0001 |
| Dimension Diagram | 1SAM400401F0001 |

Dimensions

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| Product Net Width | 55 mm |
| Product Net Height | 142.65 mm |
| Product Net Depth / Length | 122.1 mm |
| Product Net Weight | 0.97 kg |

Technical

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| Rated Service Short-Circuit Breaking Capacity (I _{cs}) | (230 V AC) 50 kA (250 V DC) 3 Poles in Series 100 kA (400 V AC) 50 kA (440 V AC) 50 kA (500 V AC) 30 kA (690 V AC) 10 kA |
| Rated Ultimate Short-Circuit Breaking Capacity (I _{cu}) | (230 V AC) 50 kA (250 V DC) 100 kA (400 V AC) 50 kA (440 V AC) 50 kA (500 V AC) 30 kA (690 V AC) 10 kA |
| Rated Instantaneous Short-Circuit Current Setting (I _i) | 630 A |
| Setting Range | 30 ... 42 A |
| Rated Operational Power AC-3 (P _e) | (400 V) Three Phase 22 kW |
| Rated Operational Power AC-3e (P _e) | (400 V) Three Phase 22 kW |
| Rated Operational Voltage | Main Circuit 690 V AC Main Circuit 250 V DC |
| Rated Operational Current (I _e) | 42 A |
| Rated Operational Current AC-3 (I _e) | 42 A |
| Rated Operational Current AC-3e (I _e) | 42 A |
| Rated Operational Current DC-5 (I _e) | 42 A |
| Rated Frequency (f) | Main Circuit 50 Hz Main Circuit 60 Hz |
| Rated Impulse Withstand Voltage (U _{imp}) | Main Circuit 8 kV |
| Rated Insulation Voltage (U _i) | 1000 V |
| Power Loss | at Rated Operating Conditions per Pole 2.79 ... 5.47 W |
| Number of Poles | 3 |
| Conventional Free-air Thermal Current (I _{th}) | Main Circuit 42 A |
| Degree of Protection | Housing IP20 |

| Main Circuit Terminals IP10 | |
|-------------------------------------|--|
| Pollution Degree | 3 |
| Electrical Durability | 25000 cycle |
| Mechanical Durability | 50000 cycle |
| Terminal Type | Screw Terminals |
| Connecting Capacity Main Circuit | Flexible with Ferrule 1/2x 1 ... 35 mm ² Flexible with Insulated Ferrule 1/2x 1 ... 35 mm ² Flexible 1/2x 1 ... 35 mm ² Rigid 1/2x 1 ... 4 mm ² Solid 1/2x 1 ... 4 mm ² Stranded 1/2x 1 ... 50 mm ² |
| Tightening Torque | Main Circuit 4 N·m |
| Wire Stripping Length | Main Circuit 16 mm |
| Recommended Screw Driver | Pozidriv 2 |
| Mounting Position | 1 ... 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 1000 V 1.5 mm 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 / TRIP |
| Standards | CSA 22.2 No. 14 IEC/EN 60947-1 IEC/EN 60947-2 IEC/EN 60947-4-1 UL 60947-4-1 |

Technical UL/CSA

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| Short-Circuit Current Rating (SCCR) | Manual Self-Protected Combination Controllers (Type E), (480Y / 277 V AC) | 65 kA |
| | Manual Self-Protected Combination Controllers (Type E), (600Y / 347 V AC) | 30 kA |
| | Any UL Listed Fuses or Circuit-Breakers, Group Installations (480 V AC) | 65 kA |
| | Any UL Listed Fuses or Circuit-Breakers, Group Installations (600 V AC) | 30 kA |
| | Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (480 V AC) | 65 kA |
| | Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (600 V AC) | 30 kA |
| | Any UL Listed Fuses or Circuit-Breakers, Tap Conductor Protection in Group Installations (480Y / 277 V AC) | 65 kA |
| | Any UL Listed Fuses or Circuit-Breakers, Tap Conductor Protection in Group Installations (600Y / 347 V AC) | 30 kA |
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V AC | |
| Ampere Rating UL/CSA | 42 A | |
| Horsepower Rating UL/CSA | (200 V AC) Three Phase 10 Hp (208 V AC) Three Phase 10 Hp (220 ... 240 V AC) Three Phase 15 Hp (440 ... 480 V AC) Three Phase 30 Hp (550 ... 600 V AC) Three Phase 40 Hp | |
| Full Load Amps Motor Use | (200 V AC) Three Phase 32.2 A (208 V AC) Three Phase 30.8 A (220 ... 240 V AC) Three Phase 42 A (440 ... 480 V AC) Three Phase 40 A (550 ... 600 V AC) Three Phase 41 A | |
| Locked Rotor Amps | (200 V AC) Three Phase 186.3 A (208 V AC) Three Phase 179 A (220 ... 240 V AC) Three Phase 232 A (440 ... 480 V AC) Three Phase 218 A | |

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| | (550 ... 600 V AC) Three Phase 232 A |
| General Use Rating UL/CSA | (600 V AC) 42 A |
| Connecting Capacity Main Circuit UL/CSA | Flexible 1/2x 16-0 AWG Stranded 1/2x 16-0 AWG |
| Tightening Torque UL/CSA | Main Circuit 35 in-lb |

Environmental

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| Ambient Air Temperature | Operation -25 ... +60 °C Operation Compensated -25 ... +60 °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 |

Certificates and Declarations (Document Number)

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|--------------------------------------|----------------------------|
| ABS Certificate | 1SAA963002-0101 |
| ATEX Certificate | 1SAA918001-3901 |
| BV Certificate | 1SAA963002-0201 |
| CB Certificate | 1SAA918002-2002 |
| CQC Certificate | CQC2015010307760141 |
| cUL Certificate | cUL_E345003 cUL_E137861 |
| Cut-off Current Characteristic | 1SAM400507F0001 |
| Declaration of Conformity - CCC | 2020980307003042 |
| Declaration of Conformity - CE | 1SAD938507-0190 |
| Declaration of Conformity - UKCA | 1SAD938502-1190 |
| DNV GL Certificate | 1SAA963002-0301 |
| EAC Certificate | 1SAA963000-2701 |
| Environmental Information | 1SAC200051H0009 |
| I ² t Characteristic | 1SAM400506F0001 |
| IECEX Certificate | 1SAA918000-4001 |
| Instructions and Manuals | 2CDC131081M6801 |
| Instructions and Manuals (Part 2) | 2CDC131060M0202 |
| KC Certificate | 1SAA963001-1501 |
| LR Certificate | 1SAA918001-0501 |
| RMRS Certificate | 1SAA918000-0704 |
| RoHS Information | 1SAD938505-0190 |
| Time-Current Characteristic Curve | 1SAM400505F0005 |
| UL Certificate | UL_E137861 UL_345003 |

Container Information

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|--------------------------------|-----------------|
| Package Level 1 Units | box 1 piece |
| Package Level 1 Width | 78 mm |
| Package Level 1 Depth / Length | 155 mm |
| Package Level 1 Height | 155 mm |
| Package Level 1 Gross Weight | 1.1 kg |
| Package Level 1 EAN | 4013614486098 |
| Package Level 2 Units | carton 12 piece |
| Package Level 2 Width | 330 mm |
| Package Level 2 Depth / Length | 400 mm |
| Package Level 2 Height | 320 mm |
| Package Level 2 Gross Weight | 13 kg |
| Package Level 2 EAN | 4013614503955 |

Classifications

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|------------------------------------|---|
| Object Classification Code | F |
| ETIM 5 | EC000074 - Motor protective circuit-breaker |
| ETIM 6 | EC000074 - Motor protection circuit-breaker |
| ETIM 7 | EC000074 - Motor protection circuit-breaker |
| eClass | V11.0 : 27370401 |
| UNSPSC | 39121521 |
| IDEA Granular Category Code (IGCC) | 4845 >> 3 Pole Motor Circuit Protector Circuit Breakers |
| E-Number (Finland) | 3707288 |
| E-Number (Sweden) | 3110055 |

Accessories

| Identifier | Description | Type | Quantity | Unit Of Measure |
|-----------------|-----------------------------|-----------|----------|-----------------|
| 1SAM201901R1001 | HKF1-11 Auxiliary Contact | HKF1-11 | 1 | piece |
| 1SAM201901R1201 | HKF1-11K Auxiliary Contact | HKF1-11K | 1 | piece |
| 1SAM201901R1002 | HKF1-20 Auxiliary Contact | HKF1-20 | 1 | piece |
| 1SAM201901R1202 | HKF1-20K Auxiliary Contact | HKF1-20K | 1 | piece |
| 1SAM201901R1004 | HKF1-01 Auxiliary Contact | HKF1-01 | 1 | piece |
| 1SAM201901R1003 | HKF1-10 Auxiliary Contact | HKF1-10 | 1 | piece |
| 1SAM201902R1002 | HK1-20 Auxiliary Contact | HK1-20 | 1 | piece |
| 1SAM201902R1202 | HK1-20K Auxiliary Contact | HK1-20K | 1 | piece |
| 1SAM201902R1001 | HK1-11 Auxiliary Contact | HK1-11 | 1 | piece |
| 1SAM201902R1201 | HK1-11K Auxiliary Contact | HK1-11K | 1 | piece |
| 1SAM201902R1003 | HK1-02 Auxiliary Contact | HK1-02 | 1 | piece |
| 1SAM201902R1203 | HK1-02K Auxiliary Contact | HK1-02K | 1 | piece |
| 1SAM201902R1004 | HK1-20L Auxiliary Contact | HK1-20L | 1 | piece |
| 1SAM201902R1204 | HK1-20LK Auxiliary Contact | HK1-20LK | 1 | piece |
| 1SAM201903R1002 | SK1-20 Signaling Contact | SK1-20 | 1 | piece |
| 1SAM201903R1202 | SK1-20K Signaling Contact | SK1-20K | 1 | piece |
| 1SAM201903R1005 | SK1-20AR Signaling Contact | SK1-20AR | 1 | piece |
| 1SAM201903R1205 | SK1-20ARK Signaling Contact | SK1-20ARK | 1 | piece |
| 1SAM201903R1001 | SK1-11 Signaling Contact | SK1-11 | 1 | piece |
| 1SAM201903R1201 | SK1-11K Signaling Contact | SK1-11K | 1 | piece |
| 1SAM201903R1004 | SK1-11AR Signaling Contact | SK1-11AR | 1 | piece |

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|-----------------|---|-------------|---|-------|
| 1SAM201903R1204 | SK1-11ARK Signaling Contact | SK1-11ARK | 1 | piece |
| 1SAM201903R1003 | SK1-02 Signaling Contact | SK1-02 | 1 | piece |
| 1SAM201903R1203 | SK1-02K Signaling Contact | SK1-02K | 1 | piece |
| 1SAM201903R1006 | SK1-02AR Signaling Contact | SK1-02AR | 1 | piece |
| 1SAM201903R1206 | SK1-02ARK Signaling Contact | SK1-02ARK | 1 | piece |
| 1SAM301901R1002 | CK1-20 Short Circuit Signaling Contact | CK1-20 | 1 | piece |
| 1SAM301901R1001 | CK1-11 Short Circuit Signaling Contact | CK1-11 | 1 | piece |
| 1SAM301901R1003 | CK1-02 Short Circuit Signaling Contact | CK1-02 | 1 | piece |
| 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 |
| 1SAM201904R1010 | UA1-20 Undervoltage Release | UA1-20 | 1 | piece |
| 1SAM201904R1001 | UA1-24 Undervoltage Release | UA1-24 | 1 | piece |
| 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 |
| 1SAM201904R1008 | UA1-208 Undervoltage Release | UA1-208 | 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 |
| 1SAM201904R1009 | UA1-575 Undervoltage Release | UA1-575 | 1 | piece |
| 1SAM401923R1003 | S2-M3-50 Power Infeed Block | S2-M3-50 | 1 | piece |
| 1SAM401920R1002 | PS2-2-0-125 Busbar | PS2-2-0-125 | 1 | piece |
| 1SAM401920R1003 | PS2-3-0-125 Busbar | PS2-3-0-125 | 1 | piece |
| 1SAM401920R1004 | PS2-4-0-125 Busbar | PS2-4-0-125 | 1 | piece |
| 1SAM401920R1022 | PS2-2-2-125 Busbar | PS2-2-2-125 | 1 | piece |
| 1SAM401920R1023 | PS2-3-2-125 Busbar | PS2-3-2-125 | 1 | piece |
| 1SAM401920R1024 | PS2-4-2-125 Busbar | PS2-4-2-125 | 1 | piece |
| 1SAM401921R1001 | BS2-3 Protection Cover | BS2-3 | 1 | piece |
| 1SAM401922R1001 | KA165 Terminal Shroud | KA165 | 1 | piece |
| GJF1101903R0002 | SA2 Terminals and Installation Material | SA2 | 1 | piece |
| 1SAM201920R1011 | MSHD-LTB Handles | MSHD-LTB | 1 | piece |
| 1SAM201920R1012 | MSHD-LTY Handles | MSHD-LTY | 1 | piece |
| 1SAM201920R1000 | MSH-AR Shaft Alignment Ring | MSH-AR | 1 | piece |
| 1SAM101923R0002 | MSMN Driver | MSMN | 1 | piece |
| 1SAM101923R0012 | MSMNO Driver | MSMNO | 1 | piece |
| 1SCA101647R1001 | OXS6X85 SHAFT | OXS6X85 | 1 | piece |
| 1SCA108043R1001 | OXS6X105 SHAFT | OXS6X105 | 1 | piece |
| 1SCA101655R1001 | OXS6X130 SHAFT | OXS6X130 | 1 | piece |
| 1SCA101659R1001 | OXS6X180 SHAFT | 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

