

## PRODUCT-DETAILS

# MS165-25

## MS165-25 Manual Motor Starter



### Общая информация

|                                 |                               |
|---------------------------------|-------------------------------|
| Тип расширенного изделия        | MS165-25                      |
| Идентификационный номер изделия | 1SAM451000R1013               |
| Европейский товарный код (EAN)  | 4013614486074                 |
| Описание в каталоге             | MS165-25 Manual Motor Starter |

### Длинное описание

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.

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.

### Ordering

|                          |          |
|--------------------------|----------|
| Минимальный объем заказа | 1 штука  |
| Номер таможенного тарифа | 85362010 |

## Popular Downloads

|                                    |                 |
|------------------------------------|-----------------|
| Технические данные                 | 2CDC131083D0201 |
| Инструкции и руководства           | 2CDC131081M6801 |
| Инструкции и руководства (часть 2) | 2CDC131060M0202 |
| Time-Current Characteristic Curve  | 1SAM400505F0003 |
| I <sup>2</sup> t Characteristic    | 1SAM400506F0001 |
| Cut-off Current Characteristic     | 1SAM400507F0001 |
| Схема размеров                     | 1SAM400401F0001 |

## Dimensions

|                        |           |
|------------------------|-----------|
| Чистая ширина изделия  | 55 mm     |
| Чистая высота изделия  | 142.65 mm |
| Чистая толщина изделия | 122.1 mm  |
| Чистый вес изделия     | 0.96 kg   |

## Technical

|                                                                                    |                                                                                                                                           |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Номинальная рабочая отключающая способность при коротком замыкании ( $I_{cs}$ )    | (230 В AC) 100 kA<br>(250 V DC) 3 Poles in Series 100 kA<br>(400 В AC) 100 kA<br>(440 В AC) 50 kA<br>(500 В AC) 30 kA<br>(690 В AC) 10 kA |
| Номинальная предельная отключающая способность при коротком замыкании ( $I_{cu}$ ) | (230 В AC) 100 kA<br>(250 V DC) 100 kA<br>(400 В AC) 100 kA<br>(440 В AC) 50 kA<br>(500 В AC) 30 kA<br>(690 В AC) 10 kA                   |
| Уставка номинального мгновенного тока короткого замыкания ( $I_p$ )                | 375 A                                                                                                                                     |
| Диапазон настройки                                                                 | 18 ... 25 A                                                                                                                               |
| Номинальная рабочая мощность, АС-3 ( $P_e$ )                                       | (400 V) Three Phase 11 kW                                                                                                                 |
| Номинальная рабочая мощность, АС-3е ( $P_e$ )                                      | (400 V) Three Phase 11 kW                                                                                                                 |
| Номинальное рабочее напряжение                                                     | Главная цепь 690 V AC<br>Главная цепь 250 V DC                                                                                            |
| Номинальный рабочий ток ( $I_e$ )                                                  | 25 A                                                                                                                                      |
| Номинальный рабочий ток, АС-3 ( $I_e$ )                                            | 25 A                                                                                                                                      |
| Номинальный рабочий ток, АС-3е ( $I_e$ )                                           | 25 A                                                                                                                                      |
| Номинальный рабочий ток, DC-5 ( $I_e$ )                                            | 25 A                                                                                                                                      |
| Номинальная частота (f)                                                            | Главная цепь 50 Hz<br>Главная цепь 60 Hz                                                                                                  |

|                                                                        |                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Номинальное<br>выдерживаемое<br>импульсное напряжение<br>( $U_{imp}$ ) | Главная цепь 8 kV                                                                                                                                                                                                                                                                                                                |
| Номинальное<br>напряжение изоляции ( $U_i$ )                           | 1000 V                                                                                                                                                                                                                                                                                                                           |
| Потери мощности                                                        | at Rated Operating Conditions per Pole 1.88 W                                                                                                                                                                                                                                                                                    |
| Количество полюсов                                                     | 3                                                                                                                                                                                                                                                                                                                                |
| Условный тепловой ток<br>на открытом воздухе ( $I_{th}$ )              | Main Circuit 25 A                                                                                                                                                                                                                                                                                                                |
| Степень защиты                                                         | Housing IP20<br>Main Circuit Terminals IP10                                                                                                                                                                                                                                                                                      |
| Степень загрязнения                                                    | степень загрязнения 3                                                                                                                                                                                                                                                                                                            |
| Коммутационная<br>износостойкость                                      | 25000 цикл                                                                                                                                                                                                                                                                                                                       |
| Механическая<br>износостойкость                                        | 50000 цикл                                                                                                                                                                                                                                                                                                                       |
| Тип клемм                                                              | Клеммы с винтовым зажимом                                                                                                                                                                                                                                                                                                        |
| Сечение подключаемого<br>кабеля-главная цепь                           | Гибкий с зажимом 1/2x 1 ... 35 mm <sup>2</sup><br>Гибкий с изолированным зажимом 1/2x 1 ... 35 mm <sup>2</sup><br>Гибкий 1/2x 1 ... 35 mm <sup>2</sup><br>Жесткий 1/2x 1 ... 4 mm <sup>2</sup><br>Одножильный 1/2x 1 ... 4 mm <sup>2</sup><br>Многожильный 1/2x 1 ... 50 mm <sup>2</sup>                                         |
| Крутящие моменты<br>затяжки                                            | Главная цепь 4 N·m                                                                                                                                                                                                                                                                                                               |
| Длина зачистки провода                                                 | Главная цепь 16 mm                                                                                                                                                                                                                                                                                                               |
| Рекомендуемый<br>инструмент (отвертка)                                 | Pozidriv 2                                                                                                                                                                                                                                                                                                                       |
| Монтажное положение                                                    | Position 1 to 6                                                                                                                                                                                                                                                                                                                  |
| Монтаж на DIN-рейке                                                    | Монтажная рейка 35 x 15 mm<br>Монтажная рейка 35 x 7,5 mm                                                                                                                                                                                                                                                                        |
| Minimum Mounting<br>Distance                                           | Electrical Conductive Board, Horizontal - Up to 1000 V 1.5 mm<br>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 |
| Тип исполнительного<br>элемента (рабочая<br>головка)                   | Rotary Handle                                                                                                                                                                                                                                                                                                                    |
| Contact Position<br>Indication                                         | ON / OFF / TRIP                                                                                                                                                                                                                                                                                                                  |
| Стандарты                                                              | CSA 22.2 No. 14<br>IEC/EN 60947-1<br>IEC/EN 60947-2<br>IEC/EN 60947-4-1<br>UL 60947-4-1                                                                                                                                                                                                                                          |

## Technical UL/CSA

|                                        |                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Short-Circuit Current<br>Rating (SCCR) | Manual Self-Protected Combination Controllers (Type E), (480Y / 277 V AC) 65 kA<br>Manual Self-Protected Combination Controllers (Type E), (600Y / 347 V AC) 30 kA<br>Any UL Listed Fuses or Circuit-Breakers, Group Installations (480 V AC) 65 kA<br>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        | Главная цепь 600 V AC                                                                                                                                                                  |
| Номинальный ток UL                      | 25 A                                                                                                                                                                                   |
| Номинальная мощность в л.с.             | (200 V AC) Three Phase 5 Hp<br>(208 V AC) Three Phase 7.5 Hp<br>(220 ... 240 V AC) Three Phase 7.5 Hp<br>(440 ... 480 V AC) Three Phase 15 Hp<br>(550 ... 600 V AC) Three Phase 20 Hp  |
| Full Load Amps Motor Use                | (200 V AC) Three Phase 17.5 A<br>(208 V AC) Three Phase 24.2 A<br>(220 ... 240 V AC) Three Phase 22 A<br>(440 ... 480 V AC) Three Phase 21 A<br>(550 ... 600 V AC) Three Phase 22 A    |
| Locked Rotor Amps                       | (200 V AC) Three Phase 105.8 A<br>(208 V AC) Three Phase 140 A<br>(220 ... 240 V AC) Three Phase 127 A<br>(440 ... 480 V AC) Three Phase 116 A<br>(550 ... 600 V AC) Three Phase 116 A |
| General Use Rating UL/CSA               | (600 V AC) 25 A                                                                                                                                                                        |
| Connecting Capacity Main Circuit UL/CSA | Гибкий 1/2x 16-0 AWG<br>Многожильный 1/2x 16-0 AWG                                                                                                                                     |
| Tightening Torque UL/CSA                | Главная цепь 35 in-lb                                                                                                                                                                  |

## Environmental

|                                                             |                                                                                          |
|-------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Температура окружающей среды                                | Работа с компенсацией -25 ... +60 °C<br>Работа -25 ... +60 °C<br>Хранение -50 ... +80 °C |
| Компенсация температуры окружающей среды                    | Да                                                                                       |
| Максимально допустимая рабочая высота                       | 2000 m                                                                                   |
| Ударопрочность согласно МЭК 60068-2-27                      | Импульс 11 мс 25g                                                                        |
| Вибропрочность согласно МЭК 60068-2-6                       | 5g / 3 ... 150 Hz                                                                        |
| Правила ограничения содержания вредных веществ. RoHS статус | Following EU Directive 2011/65/EU                                                        |

## Certificates and Declarations (Document Number)

|                 |                     |
|-----------------|---------------------|
| Сертификат ABS  | 1SAA963002-0101     |
| Сертификат ATEX | 1SAA918001-3901     |
| Сертификат BV   | 1SAA963002-0201     |
| Сертификат CB   | 1SAA918002-2002     |
| CQC Certificate | CQC2015010307760141 |

|                                                                         |                            |
|-------------------------------------------------------------------------|----------------------------|
| Сертификат cUL                                                          | cUL_E345003<br>cUL_E137861 |
| Cut-off Current<br>Characteristic                                       | 1SAM400507F0001            |
| Declaration of Conformity<br>- CCC                                      | 2020980307003042           |
| Декларация о<br>соответствии - CE                                       | 1SAD938507-0190            |
| DNV GL Certificate                                                      | 1SAA963002-0301            |
| EAC Certificate                                                         | 1SAA963000-2701            |
| Экологическая<br>информация                                             | 1SAC200051H0009            |
| I <sup>2</sup> t Characteristic                                         | 1SAM400506F0001            |
| Инструкции и<br>руководства                                             | 2CDC131081M6801            |
| Инструкции и<br>руководства (часть 2)                                   | 2CDC131060M0202            |
| KC Certificate                                                          | 1SAA963001-1501            |
| Сертификат LR                                                           | 1SAA918001-0501            |
| Сертификат RMRS                                                         | 1SAA918000-0704            |
| Правила ограничения<br>содержания вредных<br>веществ.RoHS<br>информация | 1SAD938505-0190            |
| Time-Current<br>Characteristic Curve                                    | 1SAM400505F0003            |
| Сертификат UL                                                           | UL_E137861<br>UL_345003    |

## Container Information

|                                   |                 |
|-----------------------------------|-----------------|
| Package Level 1 Units             | box 1 штука     |
| Package Level 1 Width             | 78 mm           |
| Package Level 1 Depth /<br>Length | 155 mm          |
| Package Level 1 Height            | 155 mm          |
| Package Level 1 Gross<br>Weight   | 1.1 kg          |
| Package Level 1 EAN               | 4013614486074   |
| Package Level 2 Units             | carton 12 штука |
| Package Level 2 Width             | 330 mm          |
| Package Level 2 Depth /<br>Length | 400 mm          |
| Package Level 2 Height            | 320 mm          |
| Package Level 2 Gross<br>Weight   | 13 kg           |
| Package Level 2 EAN               | 4013614503931   |

## Classifications

|                              |                                             |
|------------------------------|---------------------------------------------|
| Код классификации<br>объекта | F                                           |
| ETIM 5                       | EC000074 - Motor protective circuit-breaker |

|                                                                  |                                                         |
|------------------------------------------------------------------|---------------------------------------------------------|
| ETIM 6                                                           | EC000074 - Motor protection circuit-breaker             |
| ETIM 7                                                           | EC000074 - Motor protection circuit-breaker             |
| е-класс                                                          | V11.0 : 27370401                                        |
| Универсальная стандартная классификация товаров и услуг (UNSPSC) | 39121521                                                |
| IDEA Granular Category Code (IGCC)                               | 4845 >> 3 Pole Motor Circuit Protector Circuit Breakers |
| E-Number (Finland)                                               | 3707286                                                 |
| E-Number (Sweden)                                                | 3110053                                                 |

## 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 Signal Contact                  | SK1-20   | 1        | piece           |
| 1SAM201903R1202 | SK1-20K Signal Contact                 | SK1-20K  | 1        | piece           |
| 1SAM201903R1001 | SK1-11 Signal Contact                  | SK1-11   | 1        | piece           |
| 1SAM201903R1201 | SK1-11K Signal Contact                 | SK1-11K  | 1        | piece           |
| 1SAM201903R1003 | SK1-02 Signal Contact                  | SK1-02   | 1        | piece           |
| 1SAM201903R1203 | SK1-02K Signal Contact                 | SK1-02K  | 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 |

Категории

Низковольтное оборудование → Пускорегулирующая аппаратура → Мотор-автоматы → Мотор-автоматы

Низковольтное оборудование → Силовые автоматические выключатели → Мотор-автоматы

