

PRODUCT-DETAILS

# MO165-16

## MO165-16 Manual Motor Starter Magnetic Only 16 A



### Informations générales

|                              |  |
|------------------------------|--|
| Extension du type de produit | MO165-16   |
| Code de produit              | 1SAM461000R1011                                  |
| EAN                          | 4013614486128                                    |
| Description courte           | MO165-16 Manual Motor Starter Magnetic Only 16 A |

|                    |  |
|--------------------|--|
| Description longue | <p>The MO165 manual motor starter magnetic only is a compact and powerful range for motor protection up to 45 kW (400 V) in width of 55 mm. The devices are used to manually switch on and off loads/motors and to protect them reliably and without the need for a fuse from short-circuits. The manual motor starter offers a rated service short-circuit breaking capacity up to 100 kA at 400 V AC. A combination together with overload relays or motor controllers allows the protection of motors. Further features are the built-in disconnect function, trip-free mechanism and a rotary handle with a clear switch position indication. The manual motor starters magnetic only are 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 and power in-feed blocks are available as accessory.</p> |
|--------------------|--|

### Commande

|                  |          |
|------------------|----------|
| Quantité minimum | 1 pièce  |
| Code douanier    | 85362010 |

### Downloads Préférés

|  |                 |
|--|-----------------|
| Fiche produit, informations techniques | 2CDC131084D0201 |
|--|-----------------|

|                                       |                 |
|---------------------------------------|-----------------|
| Instructions et manuels               | 2CDC131082M6801 |
| Instructions et manuels<br>(Partie 2) | 2CDC131060M0202 |
| Time-Current<br>Characteristic Curve  | 1SAM400515F0001 |
| I <sup>t</sup> Characteristic         | 1SAM400506F0001 |
| Cut-off Current<br>Characteristic     | 1SAM400507F0001 |
| CAD Dimensional<br>Drawing            | 2CDC001079B0201 |
| Schéma dimensionnel                   | 1SAM400402F0001 |

## Dimensions

|                      |           |
|----------------------|-----------|
| Produit Largeur Net  | 55 mm     |
| Produit Hauteur Net  | 142.65 mm |
| Produit Longueur Net | 122.1 mm  |
| Poids net            | 0.95 kg   |

## Technique

|   |  |
|---|--|
| Pouvoir assigné de<br>coupure de service en<br>court-circuit ( $I_{CS}$ ) | (230 V AC) 100 kA<br>(250 V DC) 3 Poles in Series 100 kA<br>(400 V AC) 100 kA<br>(440 V AC) 75 kA<br>(500 V AC) 40 kA<br>(690 V AC) 8 kA |
| Pouvoir assigné de<br>coupure ultime en court-<br>circuit ( $I_{CU}$ )    | (230 V AC) 100 kA<br>(250 V DC) 100 kA<br>(400 V AC) 100 kA<br>(440 V AC) 75 kA<br>(500 V AC) 40 kA<br>(690 V AC) 8 kA                   |
| Courant assigné<br>instantané de réglage de<br>court-circuit ( $I_I$ )    | 240 A  |
| Setting Range   | None   |
| Puissance assignée<br>d'emploi AC-3 ( $P_e$ )                             | (400 V) Three Phase 7.5 kW   |
| Puissance assignée<br>d'emploi AC-3e ( $P_e$ )                            | (400 V) Three Phase 7.5 kW   |
| Tension   | Circuit principal 690 V AC<br>Circuit principal 250 V DC   |
| Courant nominal de<br>fonctionnement ( $I_e$ )                            | 16 A   |
| Courant assignée<br>d'emploi AC-3 ( $I_e$ )                               | 16 A   |
| Courant assignée<br>d'emploi AC-3e ( $I_e$ )                              | 16 A   |
| Courant assignée<br>d'emploi DC-5 ( $I_e$ )                               | 16 A   |
| Fréquence assignée (f)  | Circuit principal 50 Hz<br>Circuit principal 60 Hz   |
| Operating Frequency ( $f_{sw}$ )  | 0 ... 415 Hz   |
| Tension assignée de<br>tenue aux chocs ( $U_{imp}$ )                      | Circuit principal 8 kV   |
| Tension assignée<br>d'isolement ( $U_i$ )                                 | 1000 V   |
| Power Loss  | 3.81 W   |

|  |  |
|--|--|
| Nombre de pôles  | 3  |
| Courant thermique conventionnel à l'air libre ( $I_{th}$ ) | Main Circuit 16 A  |
| Indice de protection                                       | Housing IP20<br>Main Circuit Terminals IP10  |
| Degré de pollution   | 3  |
| Electrical Durability                                      | 25000 cycle  |
| Durabilité mécanique                                       | 50000 cycle  |
| Type de borne  | Screw Terminals  |
| Connecting Capacity Main Circuit                           | Flexible with Ferrule 1/2x 1 ... 35 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1/2x 1 ... 35 mm <sup>2</sup><br>Flexible 1/2x 1 ... 35 mm <sup>2</sup><br>Rigid 1/2x 1 ... 4 mm <sup>2</sup><br>Solid 1/2x 1 ... 4 mm <sup>2</sup><br>Stranded 1/2x 1 ... 50 mm <sup>2</sup>   |
| Couple de serrage  | Main Circuit 4 N·m   |
| Wire Stripping Length                                      | Main Circuit 16 mm   |
| Recommended Screw Driver                                   | Pozidriv 2   |
| Type d'encastrement  | 1 ... 6  |
| Montage sur rail DIN                                       | 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   |
| Minimum Mounting 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 |
| Actuator Type  | Rotary Handle  |
| Contact Position Indication                                | ON / OFF / TRIP  |
| Normes et standards  | 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  |
| Remarques  | For overload protection of the motors, an appropriate thermal or electronic overload relays must be used   |

## Technique UL/CSA

|                                     |  |
|-------------------------------------|--|
| Short-Circuit Current 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<br>Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (480 V AC) 65 kA<br>Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (600 V AC) 30 kA<br>Any UL Listed Fuses or Circuit-Breakers, Tap Conductor Protection in Group Installations (480Y / 277 V AC) 65 kA<br>Any UL Listed Fuses or Circuit-Breakers, Tap Conductor Protection in Group Installations (600Y / 347 V AC) 30 kA |
| Maximum Operating Voltage UL/CSA    | Circuit principal 600 V AC   |
| Puissance nominale 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 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 Main<br>Circuit UL/CSA | Flexible 1/2x 16-0 AWG<br>Stranded 1/2x 16-0 AWG  |
| Tightening Torque<br>UL/CSA                | Main Circuit 35 in-lb   |

## Environnement

|   |   |
|---|---|
| Température de l'air<br>ambiant                     | Operation -25 ... +60 °C<br>Operation Compensated -25 ... +60 °C<br>Storage -50 ... +80 °C                  |
| Ambient Air Temperature<br>Compensation             | Non   |
| Altitude de<br>fonctionnement maximale<br>autorisée | 2000 m  |
| REACH Declaration                                   | 1SAA963005-4502   |
| Résistance aux chocs<br>selon CEI 60068-2-27        | 11 ms Pulse 25g   |
| Resistance to Vibrations<br>acc. to IEC 60068-2-6   | mounted on DIN-rail: 4g / 3 ... 150 Hz<br>mounted on mounting plate: 5g / 3 ... 150 Hz<br>5g / 3 ... 150 Hz |
| Informations RoHS                                   | 1SAA963006-4502   |
| Statut RoHS   | Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019                                      |

## Certificats et Déclarations (Numéro de document)

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| Certificat ABS                      | 1SAA963002-0101                      |
| Certificat BV                       | 1SAA963002-0201                      |
| CB Certificate                      | 1SAA918002-2002                      |
| CQC Certificate                     | CQC2015010307760141                  |
| Cut-off Current<br>Characteristic   | 1SAM400507F0001                      |
| Declaration of Conformity<br>- CCC  | 2020980307003042                     |
| Déclaration de Conformité<br>- CE   | 1SAD101100-3409                      |
| Declaration of Conformity<br>- UKCA | 1SAD201100-3409                      |
| DNV GL Certificate                  | 1SAA963002-0301                      |
| EAC Certificate                     | 1SAA963000-2701                      |
| I <sub>p</sub> t Characteristic     | 1SAM400506F0001                      |
| IECEX Certificate                   | 1SAA918000-4001                      |
| Certificat LR                       | 1SAA918001-0501                      |
| Certificat RMRS                     | 1SAA918000-0704                      |
| Certificat UL                       | E137861-20150206<br>E345003-20150206 |

## Emballage

|                              |             |
|------------------------------|-------------|
| Emballage Niveau 1<br>Unités | box 1 pièce |
|------------------------------|-------------|

|                                |                 |
|--------------------------------|-----------------|
| Emballage Niveau 1<br>Largeur  | 64 mm           |
| Emballage Niveau 1<br>Longueur | 177 mm          |
| Emballage Niveau 1<br>Hauteur  | 140 mm          |
| Emballage Niveau 1 Poids       | 1.1 kg          |
| Emballage Niveau 1 EAN         | 4013614486128   |
| Emballage Niveau 2<br>Unités   | carton 12 pièce |
| Emballage Niveau 2<br>Largeur  | 330 mm          |
| Emballage Niveau 2<br>Longueur | 400 mm          |
| Emballage Niveau 2<br>Hauteur  | 320 mm          |
| Emballage Niveau 2 Poids       | 13 kg           |
| Emballage Niveau 2 EAN         | 4013614503986   |

## Classifications

|   |   |
|---|---|
| Code de classification<br>d'objet           | F   |
| ETIM 5                                      | EC000074 - Motor protective circuit-breaker |
| ETIM 6                                      | EC000074 - disjoncteur/démarrreur de moteur |
| ETIM 7                                      | EC000074 - Motor protection circuit-breaker |
| ETIM 8                                      | EC000074 - Motor protection circuit-breaker |
| eClass                                      | V11.0 : 27370401                            |
| UNSPSC                                      | 39121521                                    |
| Code de catégorie<br>granulaire IDEA (IGCC) | 4731 >> Manual Starters                     |
| E-Number (Finland)                          | 3707291                                     |
| E-Number (Sweden)                           | 3110058                                     |

## Accessories

| Identifiant     | 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           |
| 1SAM201903R1002 | SK1-20 Signaling Contact   | SK1-20   | 1        | piece           |
| 1SAM201903R1202 | SK1-20K Signaling Contact  | SK1-20K  | 1        | piece           |
| 1SAM201903R1001 | SK1-11 Signaling Contact   | SK1-11   | 1        | piece           |
| 1SAM201903R1201 | SK1-11K Signaling Contact  | SK1-11K  | 1        | piece           |

|                 |   |             |   |       |
|-----------------|---|-------------|---|-------|
| 1SAM201903R1003 | SK1-02 Signaling Contact                | SK1-02      | 1 | piece |
| 1SAM201903R1203 | SK1-02K Signaling Contact               | SK1-02K     | 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 |
| 1SAM401922R1001 | KA165 Terminal Shroud                   | KA165       | 1 | piece |
| 1SAM401921R1001 | BS2-3 Protection Cover                  | BS2-3       | 1 | piece |
| GJF1101903R0002 | SA2 Terminals and Installation Material | SA2         | 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 |
| 1SAM201913R1103 | S1-M3-35 Power Infeed Block             | S1-M3-35    | 1 | piece |
| 1SAM201914R1002 | S1-PB1-25 Power Infeed Block            | S1-PB1-25   | 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 |

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## Catégories

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Produits basse tension → Disjoncteurs de puissance → Disjoncteurs-moteurs

Produits basse tension → Produits de Contrôle, Protection et sécurité machines → Disjoncteurs-moteurs → Disjoncteurs-moteurs

