

## PRODUCT-DETAILS

# MS132-0.16

## MS132-0.16 Manual Motor Starter



### Ogólne informacje

|                       |                                 |
|-----------------------|---------------------------------|
| Extended Product Type | MS132-0.16                      |
| ID Produktu           | 1SAM350000R1001                 |
| Numer EAN             | 4013614400018                   |
| Opis katalogowy       | MS132-0.16 Manual Motor Starter |

#### Opis

The MS132-0.16 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  $I_e = 0.16$  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 and terminal spacers are available as accessory.

### Charakterystyka zamówienia

|                            |          |
|----------------------------|----------|
| Minimalna ilość zamówienia | 1 sztuka |
| Kod taryfy celnej          | 85362010 |

### Najczęściej Pobierane

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Arkusz danych, informacja techniczna | 2CDC131021D0202                    |
| Instrukcje i podręczniki             | 2CDC131022M6802                    |
| Instructions and Manuals (Part 2)    | 2CDC131060M0202                    |
| Time-Current Characteristic Curve    | 1SAM300505F0101                    |
| I <sup>2</sup> t Characteristic      | 1SAM300507F0001<br>1SAM300507F0003 |
| Cut-off Current Characteristic       | 1SAM300508F0001<br>1SAM300508F0003 |
| Dimension Diagram                    | 1SAM300402F0001                    |
| Marketing Video                      | 9AKK107991A5158                    |

## Wymiary

|                          |          |
|--------------------------|----------|
| Szerokość produktu netto | 45 mm    |
| Wysokość produktu netto  | 90 mm    |
| Głębokość produktu netto | 86.75 mm |
| Waga produktu netto      | 0.215 kg |

## Dane techniczne

|                                                                     |                                                                                                                                             |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 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) 100 kA<br>(500 V AC) 100 kA<br>(690 V AC) 100 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) 100 kA<br>(500 V AC) 100 kA<br>(690 V AC) 100 kA                                       |
| Rated Instantaneous Short-Circuit Current Setting (I <sub>f</sub> ) | 2 A                                                                                                                                         |
| Setting Range                                                       | 0.10 ... 0.16 A                                                                                                                             |
| Moc znamionowa AC-3 (P <sub>e</sub> )                               | (400 V) Three Phase 0.03 kW                                                                                                                 |
| Moc znamionowa AC-3e (P <sub>e</sub> )                              | (400 V) Three Phase 0.03 kW                                                                                                                 |
| Znamionowe napięcie pracy                                           | Obwód główny 690 V AC<br>Obwód główny 250 V DC                                                                                              |
| Znamionowy prąd pracy (I <sub>e</sub> )                             | 0.16 A                                                                                                                                      |
| Znamionowy prąd pracy AC-3 (I <sub>e</sub> )                        | 0.16 A                                                                                                                                      |
| Znamionowy prąd pracy AC-3e (I <sub>e</sub> )                       | 0.16 A                                                                                                                                      |
| Znamionowy prąd pracy DC-5 (I <sub>e</sub> )                        | 0.16 A                                                                                                                                      |
| Częstotliwość znamionowa (f)                                        | Obwód główny 50 Hz<br>Obwód główny 60 Hz                                                                                                    |

|                                                                  |                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Znamionowa<br>wytrzymałość na impuls<br>napięciowy ( $U_{imp}$ ) | Obwód główny 6 kV                                                                                                                                                                                                                                               |
| Znamionowe napięcie<br>izolacji ( $U_i$ )                        | 690 V                                                                                                                                                                                                                                                           |
| Straty mocy                                                      | na biegun 0.7 W                                                                                                                                                                                                                                                 |
| Liczba biegunów                                                  | 3                                                                                                                                                                                                                                                               |
| Prąd przy chłodzeniu<br>konwencjonalnym ( $I_{th}$ )             | Obwód główny 0.16 A                                                                                                                                                                                                                                             |
| Stopień ochrony obudowy                                          | Housing IP20<br>Main Circuit Terminals IP10                                                                                                                                                                                                                     |
| Stopień zanieczyszczenia                                         | 3                                                                                                                                                                                                                                                               |
| Electrical Durability                                            | 50000 cycle                                                                                                                                                                                                                                                     |
| Wytrzymałość<br>mechaniczna                                      | 100000 cycle                                                                                                                                                                                                                                                    |
| Typ terminala                                                    | Screw Terminals                                                                                                                                                                                                                                                 |
| Dane montażowe-obwód<br>główny (roboczy)                         | Elastyczny z tulejką 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Elastyczny z izolowaną tulejką 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Elastyczny 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Sztwiny 1/2x 1 ... 4 mm <sup>2</sup>                                              |
| Momenty dokrecające                                              | Obwód główny (roboczy) 0.8 ... 1.2 N·m                                                                                                                                                                                                                          |
| Długość odizolowania<br>przewodu                                 | Obwód główny 9 mm                                                                                                                                                                                                                                               |
| Recommended Screw<br>Driver                                      | Pozidriv 2                                                                                                                                                                                                                                                      |
| Pozycja montażu                                                  | Position 1 to 6                                                                                                                                                                                                                                                 |
| Montaż na szynie DIN                                             | TH35-7.5 (Szyna montażowa 35 x 7.5 mm) wg IEC 60715<br>TH35-15 (Szyna montażowa 35 x 15 mm) wg 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 |
| Typ napędu                                                       | Rotary Handle                                                                                                                                                                                                                                                   |
| Contact Position<br>Indication                                   | ON / OFF / TRIP                                                                                                                                                                                                                                                 |
| Standardy                                                        | 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 combination<br>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) 65<br>kA<br>Manual Self-Protected Combination Controllers (Type E), (600Y / 347 V AC) 47<br>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) 47 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) 47 kA<br>Any UL Listed Fuses or Circuit-Breakers, Tap Conductor Protection in Group<br>Installations (480Y / 277 V AC) 65 kA<br>Any UL Listed Fuses or Circuit-Breakers, Tap Conductor Protection in Group<br>Installations (600Y / 347 V AC) 47 kA |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                              |                                                                                                                                                                  |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maksymalne napięcie robocze UL/CSA           | Obwód główny 600 V AC                                                                                                                                            |
| Napięcie znamionowe UL/CSA                   | 0.16 A                                                                                                                                                           |
| Full Load Amps Motor Use                     | 200V AC Trzy fazy 0.16 A<br>208V AC Trzy fazy 0.16 A<br>220 ... 240V AC Trzy fazy 0.16 A<br>440 ... 480V AC Trzy fazy 0.16 A<br>550 ... 600V AC Trzy fazy 0.16 A |
| Locked Rotor Amps                            | 200V AC Trzy fazy 0.96 A<br>208V AC Trzy fazy 0.96 A<br>220 ... 240V AC Trzy fazy 0.96 A<br>440 ... 480V AC Trzy fazy 0.96 A<br>550 ... 600V AC Trzy fazy 0.96 A |
| Znamionowe dane montażowe UL/CSA             | (600 V AC) 0.16 A                                                                                                                                                |
| Dane montażowe-obwód główny (roboczy) UL/CSA | Elastyczny 1/2x 16-12 AWG<br>Skrętka 1/2x 16-12 AWG                                                                                                              |
| Momenty dokrecające UL/CSA                   | Obwód główny (roboczy) 10 ... 12 in-lb                                                                                                                           |

## Normy środowiskowe

|                                             |                                                                                                                                        |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Temperatura powietrza otoczenia             | Wokół obudowy 0 ... +40 °C<br>Eksploatacja -25 ... +70 °C<br>Eksploatacja zrównoważona -25 ... +60 °C<br>Przechowywanie -50 ... +80 °C |
| Kompensacja temperatury powietrza otoczenia | Tak                                                                                                                                    |
| Maksymalna wysokość montażu m.n.p.m         | 2000 m                                                                                                                                 |
| Odporność na wstrząsy IEC 60068-2-27        | 11 ms Pulse 25g                                                                                                                        |
| Odporność na wibracje IEC 60068-2-6         | 5g / 3 ... 150 Hz                                                                                                                      |
| Status RoHS                                 | Following EU Directive 2011/65/EU                                                                                                      |

## Certyfikaty i deklaracje (Numer dokumentu)

|                                 |                                            |
|---------------------------------|--------------------------------------------|
| Certyfikat ABS                  | 1SAA963001-0101                            |
| Certyfikat ATEX                 | 1SAA963000-3902                            |
| Certyfikat BV                   | 1SAA963001-0202                            |
| Certyfikat CB                   | 1SAA963002-2002                            |
| Certyfikat CQC                  | CQC2010010307387700<br>CQC2019010307243864 |
| cUL Certificate                 | cUL_E137861<br>cUL_E345003                 |
| cULus Certificate               | cUL_E137861                                |
| Cut-off Current Characteristic  | 1SAM300508F0001<br>1SAM300508F0003         |
| Declaration of Conformity - CCC | 2020980307003526<br>2020980307003041       |
| Deklaracja zgodności - CE       | 1SAD938516-0125                            |
| DNV GL Certificate              | 1SAA963001-0304                            |
| Certyfikat EAC                  | 1SAA963000-2701                            |

|                                      |                                    |
|--------------------------------------|------------------------------------|
| Informacje środowiskowe              | 1SAC200049H0009                    |
| Certyfikat GOST                      | 1SAA963001-2702                    |
| I <sup>2</sup> t Characteristic      | 1SAM300507F0001<br>1SAM300507F0003 |
| Instrukcje i podręczniki             | 2CDC131022M6802                    |
| Instructions and Manuals<br>(Part 2) | 2CDC131060M0202                    |
| KC Certificate                       | 1SAA963002-1502                    |
| Certyfikat LR                        | 1SAA963001-0502                    |
| Certyfikat RINA                      | 1SAA963002-0802                    |
| Certyfikat RMRS                      | 1SAA918000-0704                    |
| Dane RoHS                            | 1SAD938511-0125                    |
| Time-Current<br>Characteristic Curve | 1SAM300505F0101                    |
| UL Certificate                       | UL_E137861<br>UL_E345003           |

## Informacje o pakowaniu

|                                      |                  |
|--------------------------------------|------------------|
| Jednostka opakowania<br>(poziom 1)   | box 1 sztuka     |
| Szerokość opakowania<br>(poziom 1)   | 92 mm            |
| Długość opakowania<br>(poziom 1)     | 95 mm            |
| Wysokość opakowania<br>(poziom 1)    | 50 mm            |
| Waga opakowania brutto<br>(poziom 1) | 0.23 kg          |
| EAN opakowania (poziom<br>1)         | 4013614400018    |
| Jednostka opakowania<br>(poziom 2)   | carton 40 sztuka |
| Szerokość opakowania<br>(poziom 2)   | 280 mm           |
| Długość opakowania<br>(poziom 2)     | 395 mm           |
| Wysokość opakowania<br>(poziom 2)    | 210 mm           |
| Waga opakowania brutto<br>(poziom 2) | 9.586 kg         |
| EAN opakowania (poziom<br>2)         | 4013614408915    |

## Klasyfikacje

|                  |                                             |
|------------------|---------------------------------------------|
| Kod klasyfikacji | 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           | V11.0 : 27370401                            |

|                                    |                                                         |
|------------------------------------|---------------------------------------------------------|
| UNSPSC                             | 39121521                                                |
| IDEA Granular Category Code (IGCC) | 4845 >> 3 Pole Motor Circuit Protector Circuit Breakers |
| E-Number (Finland)                 | 3705985                                                 |
| E-Number (Sweden)                  | 3112117                                                 |

## 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           |
| 1SAM201906R1102 | PS1-2-0-65 Busbar                      | PS1-2-0-65 | 1        | piece           |

|                 |                                           |             |   |       |
|-----------------|-------------------------------------------|-------------|---|-------|
| 1SAM201906R1112 | PS1-2-1-65 Busbar                         | PS1-2-1-65  | 1 | piece |
| 1SAM201906R1122 | PS1-2-2-65 Busbar                         | PS1-2-2-65  | 1 | piece |
| 1SAM201916R1103 | PS1-3-0-100 Busbar                        | PS1-3-0-100 | 1 | piece |
| 1SAM201906R1103 | PS1-3-0-65 Busbar                         | PS1-3-0-65  | 1 | piece |
| 1SAM201916R1113 | PS1-3-1-100 Busbar                        | PS1-3-1-100 | 1 | piece |
| 1SAM201906R1113 | PS1-3-1-65 Busbar                         | PS1-3-1-65  | 1 | piece |
| 1SAM201916R1123 | PS1-3-2-100 Busbar                        | PS1-3-2-100 | 1 | piece |
| 1SAM201906R1123 | PS1-3-2-65 Busbar                         | PS1-3-2-65  | 1 | piece |
| 1SAM201916R1104 | PS1-4-0-100 Busbar                        | PS1-4-0-100 | 1 | piece |
| 1SAM201906R1104 | PS1-4-0-65 Busbar                         | PS1-4-0-65  | 1 | piece |
| 1SAM201916R1114 | PS1-4-1-100 Busbar                        | PS1-4-1-100 | 1 | piece |
| 1SAM201906R1114 | PS1-4-1-65 Busbar                         | PS1-4-1-65  | 1 | piece |
| 1SAM201906R1124 | PS1-4-2-65 Busbar                         | PS1-4-2-65  | 1 | piece |
| 1SAM201916R1105 | PS1-5-0-100 Busbar                        | PS1-5-0-100 | 1 | piece |
| 1SAM201906R1105 | PS1-5-0-65 Busbar                         | PS1-5-0-65  | 1 | piece |
| 1SAM201916R1115 | PS1-5-1-100 Busbar                        | PS1-5-1-100 | 1 | piece |
| 1SAM201906R1115 | PS1-5-1-65 Busbar                         | PS1-5-1-65  | 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 |
| 1SAM201913R1103 | S1-M3-35 Power Infeed Block               | S1-M3-35    | 1 | piece |
| 1SAM201914R1002 | S1-PB1-25 Power Infeed Block              | S1-PB1-25   | 1 | piece |
| 1SAM301911R1001 | TS1-M3-S1 Terminal Spacer                 | TS1-M3-S1   | 1 | piece |
| 1SAM301912R1001 | TS1-M3-S2 Terminal Spacer                 | S1-M3-S2    | 1 | piece |
| 1SAM201908R1001 | BS1-3 Protection Cover                    | BS1-3       | 1 | piece |
| 1SAM201909R1001 | FS116 Screw Fixing Kit                    | FS116       | 1 | piece |
| 1SAM201914R1001 | PB1-1-32 Connecting Link                  | PB1-1-32    | 1 | piece |
| GJF1101903R0002 | SA2 - Terminals and Installation Material | SA2         | 1 | piece |
| 1SAM201911R1012 | IB132-F Enclosure                         | IB132-F     | 1 | piece |
| 1SAM201911R1010 | IB132-G Enclosure                         | IB132-G     | 1 | piece |
| 1SAM201911R1011 | IB132-Y Enclosure                         | IB132-Y     | 1 | piece |
| 1SAM201912R1010 | DMS132-G Door Mounting Kit                | DMS132-G    | 1 | piece |
| 1SAM201912R1011 | DMS132-Y Door Mounting Kit                | DMS132-Y    | 1 | piece |
| 1SAM201909R1021 | MSAH1 Shaft Supporter                     | MSAH1       | 1 | piece |
| 1SAM201920R1011 | MSHD-LTB Handles                          | MSHD-LTB    | 1 | piece |
| 1SAM201920R1012 | MSHD-LTY Handles                          | MSHD-LTY    | 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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## Kategorie

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Produkty niskiego napięcia i systemy → Aparatura sterownicza → Wyłączniki silnikowe → Wyłączniki silnikowe

Produkty niskiego napięcia i systemy → Wyłączniki → Wyłączniki silnikowe

