

## PRODUCT-DETAILS

# MS497-100

## MS497-100 Manual Motor Starter



### General Information

|                       |                                |
|-----------------------|--------------------------------|
| Extended Product Type | MS497-100                      |
| Product ID            | 1SAM580000R1010                |
| EAN                   | 4013614265662                  |
| Catalog Description   | MS497-100 Manual Motor Starter |

#### Long Description

The MS497-100 manual motor starter is a 70 mm width devices with a rated operational current of  $I_e = 100.0$  A. This device is used to manually switch on and off motors and to protect them reliably and without the need for a fuse from short-circuits, overload and phase failures. The manual motor starter offers a rated service short-circuit breaking capacity  $I_{cs} = 50$  kA at 400 VAC and the 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, signalling contacts, undervoltage releases and shunt trips are available as accessory.

### Ordering

|                        |          |
|------------------------|----------|
| Minimum Order Quantity | 1 piece  |
| Customs Tariff Number  | 85362090 |

### Popular Downloads

|                                            |                 |
|--------------------------------------------|-----------------|
| Data Sheet, Technical Information          | 1SBC100173C0201 |
| Data Sheet, Technical Information (Part 3) | 9AKK105713A1104 |

|                                   |                 |
|-----------------------------------|-----------------|
| Instructions and Manuals          | 1SAM507001R1001 |
| Instructions and Manuals (Part 2) | 2CDC131017M5701 |
| Time-Current Characteristic Curve | 1SAM500503F0010 |

## Dimensions

|                            |          |
|----------------------------|----------|
| Product Net Width          | 70 mm    |
| Product Net Height         | 165 mm   |
| Product Net Depth / Length | 174 mm   |
| Product Net Weight         | 2.275 kg |

## Technical

|                                                             |                                                                                                                                                                                                                                       |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated Service Short-Circuit Breaking Capacity ( $I_{cs}$ )  | (230 V AC) 100 kA<br>(400 V AC) 50 kA<br>(440 V AC) 50 kA<br>(500 V AC) 5 kA<br>(690 V AC) 3 kA                                                                                                                                       |
| Rated Ultimate Short-Circuit Breaking Capacity ( $I_{cu}$ ) | (230 V AC) 100 kA<br>(400 V AC) 100 kA<br>(440 V AC) 70 kA<br>(500 V AC) 10 kA<br>(690 V AC) 10 kA                                                                                                                                    |
| Rated Instantaneous Short-Circuit Current Setting ( $I_i$ ) | 1235 A                                                                                                                                                                                                                                |
| Setting Range                                               | 80 ... 100 A                                                                                                                                                                                                                          |
| Rated Operational Power AC-3 ( $P_e$ )                      | (400 V) Three Phase 55 kW                                                                                                                                                                                                             |
| Rated Operational Voltage                                   | Main Circuit 690 V AC<br>Main Circuit 450 V DC                                                                                                                                                                                        |
| Rated Operational Current ( $I_e$ )                         | 100 A                                                                                                                                                                                                                                 |
| Rated Operational Current AC-3 ( $I_e$ )                    | 100 A                                                                                                                                                                                                                                 |
| Rated Frequency (f)                                         | Main Circuit 50 Hz<br>Main Circuit 60 Hz                                                                                                                                                                                              |
| Rated Impulse Withstand Voltage ( $U_{imp}$ )               | Main Circuit 6 kV                                                                                                                                                                                                                     |
| Rated Insulation Voltage ( $U_i$ )                          | 690 V                                                                                                                                                                                                                                 |
| Power Loss                                                  | at Rated Operating Conditions per Pole 8.1 W                                                                                                                                                                                          |
| Number of Poles                                             | 3                                                                                                                                                                                                                                     |
| Conventional Free-air Thermal Current ( $I_{th}$ )          | Main Circuit 100 A                                                                                                                                                                                                                    |
| Degree of Protection                                        | Housing IP20<br>Main Circuit Terminals IP00                                                                                                                                                                                           |
| Pollution Degree                                            | 3                                                                                                                                                                                                                                     |
| Electrical Durability                                       | 25000 cycle                                                                                                                                                                                                                           |
| Mechanical Durability                                       | 50000 cycle                                                                                                                                                                                                                           |
| Terminal Type                                               | Screw Terminals                                                                                                                                                                                                                       |
| Connecting Capacity Main Circuit                            | Flexible with Ferrule 1x 2.5 ... 50 mm <sup>2</sup><br>Flexible with Ferrule 2x 2.5 ... 35 mm <sup>2</sup><br>Solid 1/2x 2.5 ... 16 mm <sup>2</sup><br>Stranded 1x 10 ... 70 mm <sup>2</sup><br>Stranded 2x 10 ... 50 mm <sup>2</sup> |
| Tightening Torque                                           | Main Circuit 4 ... 6 N·m                                                                                                                                                                                                              |
| Wire Stripping Length                                       | Main Circuit 17 mm                                                                                                                                                                                                                    |

|                             |                                                                                                                |
|-----------------------------|----------------------------------------------------------------------------------------------------------------|
| Recommended Screw Driver    | Hexagon 4                                                                                                      |
| Mounting Position           | Position 1 to 6                                                                                                |
| Mounting on DIN Rail        | 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 |
| Actuator Type               | Rotary Handle                                                                                                  |
| Contact Position Indication | ON / OFF / TRIP                                                                                                |
| Standards                   | CSA 22.2 No. 14<br>IEC/EN 60947-1<br>IEC/EN 60947-2<br>IEC/EN 60947-4-1<br>UL 508                              |

## Technical UL/CSA

|                                         |                                                                                                                                                                                       |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum Operating Voltage UL/CSA        | Main Circuit 600 V AC                                                                                                                                                                 |
| Ampere Rating UL/CSA                    | 99 A                                                                                                                                                                                  |
| Horsepower Rating UL/CSA                | (200 V AC) Three Phase 30 Hp<br>(208 V AC) Three Phase 30 Hp<br>(220 ... 240 V AC) Three Phase 40 Hp<br>(440 ... 480 V AC) Three Phase 75 Hp<br>(550 ... 600 V AC) Three Phase 100 Hp |
| General Use Rating UL/CSA               | (600 V AC) 99 A                                                                                                                                                                       |
| Connecting Capacity Main Circuit UL/CSA | Flexible 1x 10-2/0 AWG<br>Flexible 1/2x 10-1/0 AWG<br>Stranded 1x 10-2/0 AWG<br>Stranded 1/2x 10-1/0 AWG                                                                              |
| Tightening Torque UL/CSA                | Main Circuit 35 ... 53 in-lb                                                                                                                                                          |

## Environmental

|                                            |                                                                                            |
|--------------------------------------------|--------------------------------------------------------------------------------------------|
| Ambient Air Temperature                    | Operation -20 ... +70 °C<br>Operation Compensated -20 ... +60 °C<br>Storage -50 ... +80 °C |
| Ambient Air Temperature Compensation       | Yes                                                                                        |
| Maximum Operating Altitude Permissible     | 2000 m                                                                                     |
| Resistance to Shock acc. to IEC 60068-2-27 | 11 ms Pulse 25g                                                                            |
| RoHS Status                                | Following EU Directive 2011/65/EU                                                          |

## Certificates and Declarations (Document Number)

|                                  |                     |
|----------------------------------|---------------------|
| ATEX Certificate                 | 1SAA937000-3901     |
| BV Certificate                   | 1SAA937000-0202     |
| CQC Certificate                  | CQC2013010307604042 |
| cUL Certificate                  | cUL_E195536         |
| Declaration of Conformity - CCC  | 2020980307003525    |
| Declaration of Conformity - CE   | 1SAD938506-0050     |
| Declaration of Conformity - UKCA | 1SAD938500-1050     |
| DNV Certificate                  | 1SAA937000-0301     |
| EAC Certificate                  | 1SAA937001-2703     |
| GL Certificate                   | 1SAA937000-0404     |

|                                   |                          |
|-----------------------------------|--------------------------|
| GOST Certificate                  | 1SAA963001-2702          |
| Instructions and Manuals          | 1SAM507001R1001          |
| Instructions and Manuals (Part 2) | 2CDC131017M5701          |
| LR Certificate                    | 1SAA937000-0504          |
| RMRS Certificate                  | 1SAA918000-0704          |
| RoHS Information                  | 1SAD938506-0050          |
| Time-Current Characteristic Curve | 1SAM500503F0010          |
| UL Certificate                    | UL_E167205<br>UL_E195536 |

## Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | 1 piece       |
| Package Level 1 Width          | 76.5 mm       |
| Package Level 1 Depth / Length | 190 mm        |
| Package Level 1 Height         | 171 mm        |
| Package Level 1 Gross Weight   | 2.277 kg      |
| Package Level 1 EAN            | 4013614265662 |

## Classifications

|                                    |                                                         |
|------------------------------------|---------------------------------------------------------|
| Object Classification Code         | F                                                       |
| ETIM 4                             | EC000074 - Motor protective circuit-breaker             |
| ETIM 5                             | EC000074 - Motor protective circuit-breaker             |
| ETIM 6                             | EC000074 - Motor protection circuit-breaker             |
| ETIM 7                             | EC000074 - Motor protection circuit-breaker             |
| eClass                             | V11.0 : 27370401                                        |
| UNSPSC                             | 39121521                                                |
| IDEA Granular Category Code (IGCC) | 4845 >> 3 Pole Motor Circuit Protector Circuit Breakers |
| E-Number (Finland)                 | 3707089                                                 |

## Categories

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

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

