

## General Information

Extended Product Type:	MS450-40
Product ID:	1SAM450000R1005
EAN:	4013614265174
Catalog Description:	MS450-40 Manual Motor Starter
Long Description:	The MS450-40 manual motor starter is a 55 mm width devices with a rated operational current of $I_e = 40.0$ 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 $I_{cs} = 25$ 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, shunt trips, 3-phase bus bars, power in-feed blocks are available as accessory.

## Categories

Products » Low Voltage Products and Systems » Circuit Breakers » Manual Motor Starters
Products » Low Voltage Products and Systems » Control Products » Manual Motor Starters » Manual Motor Starters

## Ordering

EAN:	4013614265174
Minimum Order Quantity:	1 piece
Customs Tariff Number:	85362010

## Container Information

Package Level 1 Units:	1 piece
Package Level 1 Width:	62.5 mm
Package Level 1 Length:	165 mm
Package Level 1 Height:	147 mm
Package Level 1 Gross Weight:	1.067 kg

## Dimensions

Product Net Width:	55 mm
Product Net Height:	140 mm
Product Net Depth:	149 mm
Product Net Weight:	1.047 kg

## Technical

Rated Service Short-Circuit Breaking Capacity ( $I_{cs}$ ):	(230 V AC) 100 kA (400 V AC) 25 kA (440 V AC) 15 kA (500 V AC) 5 kA (690 V AC) 2 kA
Rated Ultimate Short-Circuit Breaking Capacity ( $I_{cu}$ ):	(230 V AC) 100 kA (400 V AC) 50 kA (440 V AC) 50 kA (500 V AC) 10 kA (690 V AC) 4 kA
Rated Instantaneous Short-Circuit Current Setting ( $I_i$ ):	520 A
Setting Range:	28 ... 40 A
Rated Operational Power AC-3 ( $P_e$ ):	(400 V) Three Phase 18.5 kW
Rated Operational Voltage:	Main Circuit 690 V AC Main Circuit 450 V DC
Rated Operational Current ( $I_e$ ):	40 A
Rated Operational Current AC-3 ( $I_e$ ):	40 A
Rated Frequency (f):	Main Circuit 50 Hz 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 3.2 ... 6.7 W
Number of Poles:	3
Conventional Free-air Thermal	Main Circuit 40 A

<b>Current (I<sub>th</sub>):</b>	
<b>Degree of Protection:</b>	Housing IP20 Main Circuit Terminals IP00
<b>Pollution Degree:</b>	3
<b>Electrical Durability:</b>	25000 cycle
<b>Mechanical Durability:</b>	50000 cycle
<b>Connecting Capacity Main Circuit:</b>	Flexible with Ferrule 1x 0.75 ... 25 mm <sup>2</sup> Flexible with Ferrule 2x 0.75 ... 16 mm <sup>2</sup> Solid 1/2x 0.75 ... 16 mm <sup>2</sup> Stranded 1x 0.75 ... 35 mm <sup>2</sup> Stranded 2x 0.75 ... 25 mm <sup>2</sup>
<b>Tightening Torque:</b>	Main Circuit 3 ... 4.5 N·m
<b>Wire Stripping Length:</b>	Main Circuit 13 mm
<b>Recommended Screw Driver:</b>	M5 Pozidriv 2
<b>Mounting Position:</b>	Position 1 to 6
<b>Actuator Type:</b>	Rotary Handle
<b>Contact Position Indication:</b>	ON / OFF / TRIP
<b>Mounting on DIN Rail:</b>	TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715 TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715
<b>Standards:</b>	IEC/EN 60947-1 IEC/EN 60947-2 IEC/EN 60947-4-1 UL 508 CSA 22.2 No. 14

## Environmental

<b>Ambient Air Temperature:</b>	Operation -20 ... +70 °C Operation Compensated -20 ... +60 °C Storage -50 ... +80 °C
<b>Ambient Air Temperature Compensation:</b>	Yes
<b>Maximum Operating Altitude Permissible:</b>	2000 m
<b>Resistance to Shock acc. to IEC 60068-2-27:</b>	11 ms Pulse 25g
<b>Resistance to Vibrations acc. to IEC 60068-2-6:</b>	2g / 5 ... 150 Hz
<b>RoHS Status:</b>	Following EU Directive 2002/95/EC August 18, 2005 and amendment

## Technical UL/CSA

<b>Maximum Operating Voltage UL/CSA:</b>	Main Circuit 600 V AC
<b>Horsepower Rating UL/CSA:</b>	(200 V AC) Three Phase 10 Hp (208 V AC) Three Phase 10 Hp (220 ... 240 V AC) Three Phase 15 Hp (440 ... 480 V AC) Three Phase 30 Hp (550 ... 600 V AC) Three Phase 40 Hp
<b>Ampere Rating UL/CSA:</b>	40 A
<b>General Use Rating UL/CSA:</b>	(600 V AC) 40 A
<b>Connecting Capacity Main Circuit UL/CSA:</b>	Flexible 2x 18-2 AWG Stranded 2x 18-2 AWG
<b>Tightening Torque UL/CSA:</b>	Main Circuit 27 ... 40 in·lb

## Certificates and Declarations (Document Number)

<b>ATEX Certificate:</b>	<a href="#">1SAA937000-3901</a>
<b>BV Certificate:</b>	<a href="#">1SAA937000-0202</a>
<b>CCC Certificate:</b>	<a href="#">1SAA937000-3803</a>
<b>cUL Certificate:</b>	<a href="#">cUL_E195536</a>
<b>Data Sheet, Technical Information:</b>	<a href="#">1SBC100173C0201</a>
<b>Declaration of Conformity - CE:</b>	<a href="#">1SAD938504-0050</a>
<b>DNV Certificate:</b>	<a href="#">1SAA937000-0302</a>
<b>EAC Certificate:</b>	<a href="#">1SAA937001-2703</a>
<b>GL Certificate:</b>	<a href="#">1SAA937000-0404</a>
<b>GOST Certificate:</b>	<a href="#">1SAA963001-2702</a>
<b>LR Certificate:</b>	<a href="#">1SAA937000-0504</a>
<b>RMRS Certificate:</b>	<a href="#">1SAA918000-0703</a>
<b>RoHS Information:</b>	<a href="#">1SAA918002-4401</a>
<b>UL Certificate:</b>	<a href="#">UL_E167205</a> <a href="#">UL_E195536</a>

Data Sheet, Technical Information (Part 2): [1SAM400501F0005](#)

Data Sheet, Technical Information (Part 3): [9AKK105713A1100](#)

Instructions and Manuals: [1SAM407001R1001](#)

Instructions and Manuals (Part 2): [2CDC131017M5701](#)

## Classifications

Object Classification Code:	F
E-nummer:	3112210
ETIM 4:	EC000074 - Motor protective circuit-breaker
ETIM 5:	EC000074 - Motor protective circuit-breaker
ETIM 6:	EC000074 - Motor protection circuit-breaker
eClass:	7.0 27370401
UNSPSC:	39121521

