

# MS450-45



## General Information

<b>Extended Product Type:</b>	MS450-45
<b>Product ID:</b>	1SAM45000R1006
<b>EAN:</b>	4013614265181
<b>Catalog Description:</b>	MS450-45 Manual Motor Starter
<b>Long Description:</b>	The MS450-45 manual motor starter is a 55 mm width devices with a rated operational current of $I_e = 45.0$ 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

## Accessories [Show accessory images](#)

Identifier	Type	Description	Qty
<a href="#">1SAM401911R1006</a>	PS4-4-2	PS4-4-2 3-Phase Busbar	1
<a href="#">1SAM401907R1003</a>	AA4-230	AA4-230 Shunt Trip	1
<a href="#">1SAM401907R1002</a>	AA4-110	AA4-110 Shunt Trip	1
<a href="#">1SAM401907R1001</a>	AA4-24	AA4-24 Shunt Trip	1
<a href="#">1SAM401911R1008</a>	BS4-3	BS4-3 Protection Cover	1
<a href="#">1SAM401901R1002</a>	HK4-W	HK4-W Auxiliary Contact	1
<a href="#">1SAM401901R1001</a>	HK4-11	HK4-11 Auxiliary Contact	1
<a href="#">1SAM401902R1003</a>	HKS4-02	HKS4-02 Auxiliary Contact	1
<a href="#">1SAM401902R1002</a>	HKS4-20	HKS4-20 Auxiliary Contact	1
<a href="#">1SAM401902R1001</a>	HKS4-11	HKS4-11 Auxiliary Contact	1
<a href="#">1SAM401908R1001</a>	KA450	KA450 Terminal Shroud	1
<a href="#">1SAM401905R1001</a>	UA4-110	UA4-110 Undervoltage Release	1
<a href="#">1SAM401911R1005</a>	PS4-3-2	PS4-3-2 3-Phase Busbar	1
<a href="#">1SAM401911R1004</a>	PS4-2-2	PS4-2-2 3-Phase Busbar	1
<a href="#">1SAM401911R1003</a>	PS4-4-0	PS4-4-0 3-Phase Busbar	1
<a href="#">1SAM401911R1002</a>	PS4-3-0	PS4-3-0 3-Phase Busbar	1
<a href="#">1SAM401911R1001</a>	PS4-2-0	PS4-2-0 3-Phase Busbar	1
<a href="#">1SAM401911R1007</a>	S4-M1	S4-M1 3-Phase Power Infeed Block	1
<a href="#">1SAM401904R1001</a>	SK4-11	SK4-11 Signal Contact	1
<a href="#">1SAM401906R1002</a>	UA4-HK-400	UA4-HK-400 Undervoltage Release	1
<a href="#">1SAM401906R1001</a>	UA4-HK-230	UA4-HK-230 Undervoltage Release	1
<a href="#">1SAM401905R1004</a>	UA4-24	UA4-24 Undervoltage Release	1
<a href="#">1SAM401905R1003</a>	UA4-400	UA4-400 Undervoltage Release	1
<a href="#">1SAM401905R1002</a>	UA4-230	UA4-230 Undervoltage Release	1
<a href="#">1SAM401907R1004</a>	AA4-400	AA4-400 Shunt Trip	1
<a href="#">1SAM201920R1001</a>	MSHD-LB	MSHD-LB Handles	1
<a href="#">1SAM201920R1002</a>	MSHD-LY	MSHD-LY Handles	1

1SAM201920R1011	MSHD-LTB	MSHD-LTB Handles	1
1SAM201920R1012	MSHD-LTY	MSHD-LTY Handles	1

## Ordering

<b>EAN:</b>	4013614265181
<b>Minimum Order Quantity:</b>	1 piece
<b>Customs Tariff Number:</b>	85362010

## Container Information

<b>Package Level 1 Units:</b>	1 piece
<b>Package Level 1 Width:</b>	62.5 mm
<b>Package Level 1 Length:</b>	165.0 mm
<b>Package Level 1 Height:</b>	147.0 mm
<b>Package Level 1 Gross Weight:</b>	1.071 kg

## Dimensions

<b>Product Net Width:</b>	55.0 mm
<b>Product Net Height:</b>	140.0 mm
<b>Product Net Depth:</b>	149.0 mm
<b>Product Net Weight:</b>	1.039 kg

## Technical

<b>Rated Service Short-Circuit Breaking Capacity (<math>I_{CS}</math>):</b>	(230V AC) 100.0 kA (400V AC) 25.0 kA (440V AC) 15.0 kA (500V AC) 5.0 kA (690V AC) 2.0 kA
<b>Rated Ultimate Short-Circuit Breaking Capacity (<math>I_{CU}</math>):</b>	(230V AC) 100.0 kA (400V AC) 50.0 kA (440V AC) 50.0 kA (500V AC) 10.0 kA (690V AC) 4.0 kA
<b>Rated Instantaneous Short-Circuit Current Setting (<math>I_i</math>):</b>	585.0 A
<b>Setting Range:</b>	36 ... 45 A
<b>Rated Operational Power AC-3 (<math>P_e</math>):</b>	(400V) Three Phase 22.00 kW
<b>Rated Operational Voltage:</b>	Main Circuit 690 V AC Main Circuit 450 V DC
<b>Rated Operational Current (<math>I_e</math>):</b>	45 A
<b>Rated Operational Current AC-3 (<math>I_e</math>):</b>	45.00 A
<b>Rated Frequency (f):</b>	Main Circuit 50 Hz Main Circuit 60 Hz
<b>Rated Impulse Withstand Voltage (<math>U_{imp}</math>):</b>	Main Circuit 6 kV
<b>Rated Insulation Voltage (<math>U_i</math>):</b>	690 V
<b>Power Loss:</b>	Per Pole 4.3 ... 6.7 W
<b>Number of Poles:</b>	3
<b>Conventional Free-air Thermal Current (<math>I_{th}</math>):</b>	Main Circuit 45.00 A
<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
<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 250 m/s <sup>2</sup>
<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>Horse Power Rating UL/CSA:</b>	200V AC Three Phase 15.00 Hp 208V AC Three Phase 15.00 Hp 220 ... 240V AC Three Phase 15.00 Hp 440 ... 480V AC Three Phase 30.00 Hp 550 ... 600V AC Three Phase 40.00 Hp
<b>Ampere Rating UL/CSA:</b>	45.00 A
<b>General Use Rating UL/CSA:</b>	600V AC 45.00 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>	1SAA937000-3901
<b>BV Certificate:</b>	1SAA937000-0202
<b>CCC Certificate:</b>	1SAA937000-3803
<b>cUL Certificate:</b>	cUL_E195536
<b>Declaration of Conformity - CE:</b>	1SAD938503-0050
<b>DNV Certificate:</b>	1SAA937000-0302
<b>GL Certificate:</b>	1SAA937000-0404
<b>GOST Certificate:</b>	1SAA937000-2703
<b>LR Certificate:</b>	1SAA937000-0504
<b>RMRS Certificate:</b>	1SAA918000-0703

**RoHS Information:** 1SAA918002-4401  
**UL Certificate:** UL\_E167205  
UL\_E195536

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### Classifications

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**Object Classification Code:** F  
**E-nummer:** 3112212  
**UNSPSC:** 39121521

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