## MS116-1.6



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

Parts & Services Drives Medium voltage AC drives Industrial drives ACS2000

Parts & Services Drives Medium voltage AC drives Special purpose drives ACS1000

General Information

Extended Product Type: MS116-1.6

**Product ID:** 1SAM250000R1006 **EAN:** 4013614320293

Catalog Description: MS116-1.6 Manual Motor Starter

Long Description: The MS116-1.6 manual motor starter is a compact 45 mm width devices with a rated operat

ional current of le = 1.6 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 phas e failures. The manual motor starter offers a rated service short-circuit breaking capacity lc s = 50 kA at 400 VAC and the trip class 10A. Further features are the build-in disconnect f unction, temperature compensation, trip-free mechanism and a rotary handle with a clear s witch position indication. The manual motor starter is suitable for three- and single-phase a pplications. Auxiliary contacts, signalling contacts, undervoltage releases, shunt trips, 3-ph ase bus bars, power in-feed blocks and locking devices for protection against unauthorized

changes are available as accessory.

## Additional Information

ABS Certificate:	1SAA963000-0104		
Actuator Type:	Rotary Handle		
Ambient Air Temperature:	Around the Enclosure 0 +40 °C		
	Operation -25 +70 °C		
	Operation Compensated -25 +55 °C Storage -50 +80 °C		
Ambient Air Temperature Compensation:	•		
	Yes		
Ampere Rating UL/CSA:	1.6 A		
BV Certificate:	1SAA963000-0204		
CB Certificate:	1SAA963000-2003		
CCC Certificate:	1SAA963000-3804		
Connecting Capacity Main Circuit UL/CSA:	Flexible 1/2x 16-12 AWG		
	Stranded 1/2x 16-12 AWG		
Connecting Capacity Main Circuit:	Flexible with Ferrule 1/2x 0.75 2.5 mm <sup>2</sup>		
	Flexible with Insulated Ferrule 1/2x 0.75 2.5 mm <sup>2</sup>		
	Flexible 1/2x 0.75 2.5 mm <sup>2</sup>		
	Rigid 1/2x 1 4 mm <sup>2</sup>		
Contact Position Indication:	ON/ OFF		
Conventional Free-air Thermal Current	Main Circuit 1.6 A		
(I <sub>th</sub> ):			
Core Credit:	0.00		
Country of Origin:	Germany (DE)		
Customs Tariff Number:	85362010		
DNV Certificate:	1SAA963000-0303		
Data Sheet, Technical Information:	2CDC131025D0201		
Data Sheet, Technical Information (Part 2):	1SAM200505F0006		
Data Sheet, Technical Information (Part 3):	1SAM200507F0001		
	1SAM200507F0002		
	1SAM200507F0003		
	1SAM200508F0001		

1SAM200508F0002
1SAM200508F0003

	1SAM200508F0003		
Declaration of Conformity - CE:	1SAD938516-0060		
Degree of Protection:	Housing IP20 Main Circuit Terminals IP10		
Dimension Diagram:	1SAM200422F0001		
E-nummer:	3111940		
EAC Certificate:	1SAA963000-2701		
EAN:	4013614320293		
EPLAN Catalog Tree:	Electrical engineering / Protection devices / Motor overload switch		
EPLAN Function Definition:	Motor overload switch / Motor overload switch, 6 connection points / Motor overload switch thr ee-pole 1_2_3_4_5_6		
ETIM 4:	EC000074 - Motor protective circuit-breaker		
ETIM 5:	EC000074 - Motor protective circuit-breaker		
ETIM 6:	EC000074 - Motor protection circuit-breaker		
Electrical Durability:	100000 cycle		
Environmental Information:	1SAA963001-2401		
GL Certificate:	1SAA963000-0402		
GOST Certificate:	1SAA963001-2702		
General Use Rating UL/CSA:	(600 V AC) 1.6 A		
Horsepower Rating UL/CSA:	(440 480 V AC) Three Phase 0.75 Hp (550 600 V AC) Three Phase 0.75 Hp		
IIT Publishing Status:	Level 0 - Information enabled		
Industrial IT Certification Level:	0		
Instructions and Manuals:	2CDC131011M6802		
Invoice Description:	MS116-1.6 Manual Motor Starter Trip class 10A, 1.0 1.6A		
	1SAA963000-0505		
LR Certificate:	1SAA963000-0505		
LR Certificate:  Maximum Operating Altitude Permissible:	1SAA963000-0505 2000 m		
Maximum Operating Altitude Permissible:	2000 m		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:	2000 m Main Circuit 600 V AC		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:	2000 m  Main Circuit 600 V AC  100000 cycle		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:  Number of Poles:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:  Number of Poles:  Number of Protected Poles:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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 3 3		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:  Number of Poles:  Number of Protected Poles:  Object Classification Code:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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 3  F		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:  Number of Poles:  Number of Protected Poles:  Object Classification Code:  Package Level 1 EAN:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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  3  3  F  4013614320293		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:  Number of Poles:  Number of Protected Poles:  Object Classification Code:  Package Level 1 EAN:  Package Level 1 Gross Weight:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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  3  6  F  4013614320293  0.28 kg		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:  Number of Poles:  Number of Protected Poles:  Object Classification Code:  Package Level 1 EAN:  Package Level 1 Height:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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 3 3 F  4013614320293 0.28 kg 50 mm		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:  Number of Poles:  Number of Protected Poles:  Object Classification Code:  Package Level 1 EAN:  Package Level 1 Height:  Package Level 1 Length:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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  3  3  F  4013614320293  0.28 kg  50 mm  95 mm		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:  Number of Poles:  Number of Protected Poles:  Object Classification Code:  Package Level 1 EAN:  Package Level 1 Height:  Package Level 1 Length:  Package Level 1 Units:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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 3 3 F  4013614320293 0.28 kg 50 mm 95 mm 1 piece		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:  Number of Poles:  Number of Protected Poles:  Object Classification Code:  Package Level 1 EAN:  Package Level 1 Height:  Package Level 1 Length:  Package Level 1 Units:  Package Level 1 Width:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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 3 3 F  4013614320293 0.28 kg 50 mm 95 mm 1 piece 92 mm		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:  Number of Poles:  Number of Protected Poles:  Object Classification Code:  Package Level 1 EAN:  Package Level 1 Height:  Package Level 1 Length:  Package Level 1 Units:  Package Level 1 Width:  Package Level 2 EAN:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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  3  3  F  4013614320293  0.28 kg  50 mm  95 mm  1 piece  92 mm  4013614408663		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:  Number of Poles:  Number of Protected Poles:  Object Classification Code:  Package Level 1 EAN:  Package Level 1 Height:  Package Level 1 Length:  Package Level 1 Units:  Package Level 2 EAN:  Package Level 2 Gross Weight:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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  3  3  F  4013614320293  0.28 kg  50 mm  95 mm  1 piece  92 mm  4013614408663  11.586 kg		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:  Number of Poles:  Number of Protected Poles:  Object Classification Code:  Package Level 1 EAN:  Package Level 1 Height:  Package Level 1 Length:  Package Level 1 Units:  Package Level 2 Width:  Package Level 2 EAN:  Package Level 2 Height:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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  3  3  F  4013614320293  0.28 kg  50 mm  95 mm  1 piece  92 mm  4013614408663  11.586 kg  210 mm		
Maximum Operating Altitude Permissible:  Maximum Operating Voltage UL/CSA:  Mechanical Durability:  Minimum Order Quantity:  Mounting Position:  Mounting on DIN Rail:  Number of Poles:  Number of Protected Poles:  Object Classification Code:  Package Level 1 EAN:  Package Level 1 Height:  Package Level 1 Length:  Package Level 1 Units:  Package Level 2 Width:  Package Level 2 Height:  Package Level 2 Height:  Package Level 2 Height:  Package Level 2 Height:  Package Level 2 Height:	2000 m  Main Circuit 600 V AC  100000 cycle  1 piece  Position 1 to 6  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 3 3 F  4013614320293 0.28 kg 50 mm 95 mm 1 piece 92 mm 4013614408663 11.586 kg 210 mm 395 mm		

Phase Loss Sensitive:	Yes		
Pollution Degree:	3		
Power Loss:	at Rated Operating Conditions per Pole 0.7 1.7 W		
Product Main Type:	MS116		
Product Name:	Manual Motor Starter		
Product Net Depth:	85.6 mm		
Product Net Height:	90 mm		
Product Net Weight:	0.265 kg		
Product Net Width:	45 mm		
RMRS Certificate:	1SAA918000-0703		
Rated Current (I <sub>n</sub> ):	1.6 A		
Rated Frequency (f):	Main Circuit 50 Hz		
	Main Circuit 60 Hz		
Rated Impulse Withstand Voltage (U <sub>imp</sub> ):	Main Circuit 6 kV		
Rated Instantaneous Short-Circuit Current Setting $(I_i)$ :	20 A		
Rated Insulation Voltage (U <sub>i</sub> ):	690 V		
Rated Operational Current (I <sub>e</sub> ):	1.6 A		
Rated Operational Current AC-3 (I <sub>e</sub> ):	1.6 A		
Rated Operational Power AC-3 (P <sub>e</sub> ):	(400 V) Three Phase 0.55 kW		
Rated Operational Voltage:	Main Circuit 690 V AC		
Rated Service Short-Circuit Breaking Capacity (I <sub>cs</sub> ):	(230 V AC) 50 kA (400 V AC) 50 kA (440 V AC) 30 kA (500 V AC) 30 kA (690 V AC) 30 kA		
Rated Service Short-Circuit Breaking Capacity, in %of Icu (I <sub>cs</sub> ):	100 %		
Rated Ultimate Short-Circuit Breaking Capacity (Icu):	(230 V AC) 50 kA (400 V AC) 50 kA (440 V AC) 30 kA (500 V AC) 30 kA (690 V AC) 30 kA		
Rated Uninterrupted Current (I <sub>u</sub> ):	1.6 A		
Recommended Screw Driver:	Pozidriv 2		
Resistance to Shock acc. to IEC 60068-2-27:	11 ms Pulse 25g		
Resistance to Vibrations acc. to IEC 60068-2-6:	5g / 3 150 Hz		
RoHS Date:	1105		
RoHS Information:	1SAA963001-4409		
Selectivity Category:	A		
Selling Unit of Measure:	piece		
Setting Range:	1 1.6 A		
Short Description:	MS116-1.6 Manual Motor Starter		
Standards:	IEC/EN 60947-1 IEC/EN 60947-2 IEC/EN 60947-4-1		
	UL 60947-1 UL 60947-4-1		
Suitable for Isolation:			
Suitable for Isolation: Terminal Type:	UL 60947-4-1		

Tightening Torque UL/CSA:  Main Circuit 10 in·lb  Trip Class:  10A  UL_Certificate:  UL_E137861  UNSPSC:  39121521  Utilization:  Motor Protection  Wire Stripping Length:  cUL_Certificate:  cUL_E137861  eClass:  7.0 27370401		
UL_Certificate:         UL_E137861           UNSPSC:         39121521           Utilization:         Motor Protection           Wire Stripping Length:         Main Circuit 9 mm           cUL_Certificate:         cUL_E137861	Main Circuit 10 in·lb	
UNSPSC: 39121521  Utilization: Motor Protection  Wire Stripping Length: Main Circuit 9 mm  cUL Certificate: cUL_E137861	10A	
Utilization: Motor Protection  Wire Stripping Length: Main Circuit 9 mm  cUL Certificate: cUL_E137861	UL_E137861	
Wire Stripping Length: Main Circuit 9 mm  cUL Certificate: cUL_E137861	39121521	
cUL Certificate: cUL_E137861	Motor Protection	
	Main Circuit 9 mm	
eClass: 7.0 27370401	cUL_E137861	
	7.0 27370401	
<b>DNV GL Certificate:</b> 1SAA963000-0303	1SAA963000-0303	

Where Used (as a spare part for "Products")

## 2 Products

Identifier	Description	Qty	Unit Of Measure
ACS 1000	No Description Available	1	piece
ACS 2000	No Description Available	1	piece

Filter

Product specific part data

## 2 Products Filter

Product	Category	Drive Part Category
ACS 2000	ACS2000	Switches, Relays, Contactors
ACS 1000	ACS1000	Switches, Relays, Contactors

