MS165-42

MS165-42 Manual Motor Starter

General Information

Extended Product Type	MS165-42
Product ID	1SAM451000R1015
EAN	4013614486098
Catalog Description	MS165-42 Manual Motor Starter
Long Description	MS165 is a compact and powerful range for motor protection up to 45 kW (400 V) / 80 A in width of 55 mm. They offer a reliable protection for motors in the event of overload or phase failure. The devices have trip class 10. This type has also a clear and reliable indication of fault in a separate window in the event of short-circuit tripping. 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 (also known as motor protection circuit breaker or manual motor protector) 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, power in-feed blocks are available as accessory. These are suitable throughout the MS116/MS132/MS165 range.

Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85362010

Popular Downloads

Data Sheet, Technical Information	2CDC131083D0201
Data Sheet, Technical Information (Part 2)	1SAM400506F0001 1SAM400507F0001
Instructions and Manuals	2CDC131081M6801
Instructions and Manuals (Part 2)	2CDC131085M0201
Time-Current Characteristic Curve	1SAM400505F0005
Dimension Diagram	1SAM400401F0001

Dimensions

Product Net Width	55 mm
Product Net Height	142.65 mm
Product Net Depth / Length	122.1 mm
Product Net Weight	0.97 kg

Technical

Rated Service Short-Circuit Breaking Capacity (I_{cs})	(230 V AC) 50 kA (250 V DC) 3 Poles in Series 100 kA (400 V AC) 50 kA (440 V AC) 50 kA (500 V AC) 30 kA (690 V AC) 10 kA
Rated Ultimate Short-Circuit Breaking Capacity (I_{cu})	(230 V AC) 50 kA (250 V DC) 100 kA (400 V AC) 50 kA (440 V AC) 50 kA (500 V AC) 30 kA (690 V AC) 10 kA
Rated Instantaneous Short-Circuit Current Setting (I_i)	630 A
Setting Range	30 ... 42 A
Rated Operational Power AC-3 (P_e)	(400 V) Three Phase 22 kW
Rated Operational Voltage	Main Circuit 690 V AC Main Circuit 250 V DC
Rated Operational Current (I_e)	42 A
Rated Operational Current AC-3 (I_e)	42 A
Rated Operational Current DC-5 (I_e)	42 A
Rated Frequency (f)	Main Circuit 50 Hz Main Circuit 60 Hz
Rated Impulse Withstand Voltage (U_{imp})	Main Circuit 8 kV
Rated Insulation Voltage (U_i)	1000 V
Power Loss	at Rated Operating Conditions per Pole 2.79 ... 5.47 W
Number of Poles	3
Conventional Free-air Thermal Current (I_{th})	Main Circuit 42 A
Degree of Protection	Housing IP20 Main Circuit Terminals IP10
Pollution Degree	3
Electrical Durability	25000 cycle
Mechanical Durability	50000 cycle
Terminal Type	Screw Terminals
Connecting Capacity Main Circuit	Flexible with Ferrule 1/2x 1 ... 35 mm² Flexible with Insulated Ferrule 1/2x 1 ... 35 mm² Flexible 1/2x 1 ... 35 mm² Rigid 1/2x 1 ... 4 mm² Solid 1/2x 1 ... 4 mm² Stranded 1/2x 1 ... 50 mm²
Tightening Torque	Main Circuit 4 N·m
Wire Stripping Length	Main Circuit 16 mm
Recommended Screw Driver	Pozidriv 2
Mounting Position	Position 1 to 6
Mounting on DIN Rail	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
Minimum Mounting Distance	Electrical Conductive Board, Horizontal - Up to 1000 V 1.5 mm Electrical Conductive Board, Horizontal - Up to 400 V 0 mm Electrical Conductive Board, Horizontal - Up to 690 V 1.5 mm Electrical Conductive Board, Vertical 75 mm Other Device Same Type, Horizontal 0 mm Other Device Same Type, Vertical 150 mm
Actuator Type	Rotary Handle
Contact Position Indication	ON / OFF / TRIP
Standards	IEC/EN 60947-1 IEC/EN 60947-2 IEC/EN 60947-4-1 UL 60947-4-1 CSA 22.2 No. 14

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Technical UL/CSA

Short-Circuit Current Rating (SCCR)	Manual Self-Protected Combination Controllers (Type E), (480Y / 277 V AC) 65 kA Manual Self-Protected Combination Controllers (Type E), (600Y / 347 V AC) 30 kA Any UL Listed Fuses or Circuit-Breakers, Group Installations (480 V AC) 65 kA Any UL Listed Fuses or Circuit-Breakers, Group Installations (600 V AC) 30 kA Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (480 V AC) 65 kA Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (600 V AC) 30 kA Any UL Listed Fuses or Circuit-Breakers, Tap Conductor Protection in Group Installations (480 V AC) 65 kA Any UL Listed Fuses or Circuit-Breakers, Tap Conductor Protection in Group Installations (600 V AC) 30 kA
Maximum Operating Voltage UL/CSA	Main Circuit 600 V AC
Ampere Rating UL/CSA	42 A
Horsepower Rating UL/CSA	(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
Full Load Amps Motor Use	(200 V AC) Three Phase 32.2 A (208 V AC) Three Phase 30.8 A (220 ... 240 V AC) Three Phase 42 A (440 ... 480 V AC) Three Phase 40 A (550 ... 600 V AC) Three Phase 41 A
Locked Rotor Amps	(200 V AC) Three Phase 186.3 A (208 V AC) Three Phase 179 A (220 ... 240 V AC) Three Phase 232 A (440 ... 480 V AC) Three Phase 218 A (550 ... 600 V AC) Three Phase 232 A
General Use Rating UL/CSA	(600 V AC) 42 A
Connecting Capacity Main Circuit UL/CSA	Flexible 1/2x 16-0 AWG Stranded 1/2x 16-0 AWG
Tightening Torque UL/CSA	Main Circuit 35 in·lb

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Environmental

Ambient Air Temperature	Operation -25 ... +60 °C Operation Compensated -25 ... +60 °C 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
Resistance to Vibrations acc. to IEC 60068-2-6	5g / 3 ... 150 Hz
RoHS Status	Following EU Directive 2011/65/EU

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Certificates and Declarations (Document Number)

ABS Certificate	1SAA963002-0101
ATEX Certificate	1SAA918001-3901
BV Certificate	1SAA963002-0201
CB Certificate	1SAA918002-2002
CCC Certificate	1SAA918004-3801
cUL Certificate	cUL_E345003
Declaration of Conformity - CE	1SAD938505-0190
DNV GL Certificate	1SAA963002-0301
EAC Certificate	1SAA963002-2701
Instructions and Manuals	2CDC131081M6801