



 PRODUCT-DETAILS

MS165-80

MS165-80 Manual Motor Starter 70 ... 80 A



General Information

Extended Product Type:	MS165-80
Product ID:	1SAM451000R1019
EAN:	4013614536632
Catalog Description:	MS165-80 Manual Motor Starter 70 ... 80 A
Long Description:	<p>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.</p> <p>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.</p>
Display Name:	MS165-80

Ordering

Minimum Order Quantity:	1 piece
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Customs Tariff Number: 85362090

Popular Downloads

Data Sheet, Technical Information:	2CDC131083D0201
Instructions and Manuals:	2CDC131081M6801
Instructions and Manuals (Part 2):	2CDC131060M0202
Ex Operating Instructions:	2CDC131087M6801
Time-Current Characteristic Curve:	1SAM400505F0009
I ² t Characteristic:	1SAM400506F0001
Cut-off Current Characteristic:	1SAM400507F0001
CAD Dimensional Drawing:	2CDC001079B0201
Dimension Diagram:	1SAM400401F0001

Dimensions

Product Net Width:	55 mm
Product Net Height:	142.65 mm
Product Net Depth / Length:	122 mm
Product Net Weight:	1 kg

Technical

Rated Service Short-Circuit Breaking Capacity (I _{cs}):	(230 V AC) 30 kA (250 V DC) 3 Poles in Series 100 kA (400 V AC) 30 kA (440 V AC) 18 kA (500 V AC) 10 kA (690 V AC) 6 kA
Rated Ultimate Short-Circuit Breaking Capacity (I _{cu}):	(230 V AC) 30 kA (250 V DC) 100 kA (400 V AC) 30 kA (440 V AC) 18 kA (500 V AC) 10 kA (690 V AC) 8 kA
Rated Instantaneous Short-Circuit Current Setting (I _i):	1120 A
Setting Range:	70 ... 80 A
Rated Operational Power AC-3 (P _e):	(400 V) Three Phase 45 kW
Rated Operational Power AC-3e (P _e):	(400 V) Three Phase 45 kW
Rated Operational Voltage:	Main Circuit 690 V AC Main Circuit 250 V DC
Rated Operational Current (I _e):	80 A
Rated Operational Current AC-3 (I _e):	80 A
Rated Operational Current AC-3e (I _e):	80 A
Rated Operational Current DC-5 (I _e):	80 A

Rated Frequency (f):	Main Circuit 50 Hz Main Circuit 60 Hz
Operating Frequency (f_{sw}):	0 ... 415 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 6.27 ... 8.33 W
Number of Poles:	3P
Conventional Free-air Thermal Current (I_{th}):	Main Circuit 80 A
Degree of Protection:	Housing IP20 Main Circuit Terminals IP10
Pollution Degree:	3
Electrical Durability:	20000 cycle
Mechanical Durability:	Nr. Operations 50000 cycle
Terminal Type:	Screw Terminals
Connecting Capacity Main Circuit:	Flexible with Ferrule 1/2x 1 ... 35 mm ² Flexible with Insulated Ferrule 1/2x 1 ... 35 mm ² Flexible 1/2x 1 ... 35 mm ² Rigid 1/2x 1 ... 4 mm ² Solid 1/2x 1 ... 4 mm ² Stranded 1/2x 1 ... 50 mm ²
Tightening Torque:	Main Circuit 4 N·m
Wire Stripping Length:	Main Circuit 16 mm
Recommended Screw Driver:	Pozidriv 2
Mounting Position:	1 ... 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:	CSA 22.2 No. 14 IEC/EN 60947-1 IEC/EN 60947-2 IEC/EN 60947-4-1 UL 60947-4-1

Technical UL/CSA

Short-Circuit Current Rating (SCCR):	Manual Self-Protected Combination Controllers (Type E), (480Y / 277 V AC) 50 kA Any UL Listed Fuses or Circuit-Breakers, Group Installations (480 V AC) 50 kA Any UL Listed Fuses or Circuit-Breakers, Group Installations (600 V AC) 10 kA Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (480 V AC) 50 kA Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (600 V AC) 10 kA Any UL Listed Fuses or Circuit-Breakers, Tap Conductor Protection in Group Installations (480Y / 277 V AC) 50 kA Any UL Listed Fuses or Circuit-Breakers, Tap Conductor Protection in Group Installations (600Y / 347 V AC) 10 kA
Maximum Operating Voltage UL/CSA:	Main Circuit 600 V AC

Horsepower Rating UL/CSA:	(200 V AC) Three Phase 25 Hp (208 V AC) Three Phase 25 Hp (220 ... 240 V AC) Three Phase 30 Hp (440 ... 480 V AC) Three Phase 60 Hp (550 ... 600 V AC) Three Phase 75 Hp
Full Load Amps Motor Use:	(110 ... 120 V AC) Three Phase 56 A (200 V AC) Three Phase 78.2 A (208 V AC) Three Phase 74.8 A (220 ... 240 V AC) Three Phase 80 A (440 ... 480 V AC) Three Phase 77 A (550 ... 600 V AC) Three Phase 77 A
Locked Rotor Amps:	(200 V AC) Three Phase 420 A (208 V AC) Three Phase 404 A (220 ... 240 V AC) Three Phase 435 A (440 ... 480 V AC) Three Phase 435 A (550 ... 600 V AC) Three Phase 434 A
General Use Rating UL/CSA:	(600 V AC) 80 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

Environmental

Ambient Air Temperature:	Operation -25 ... +70 °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:	Mounted on Mounting Plate: 5g 3 ... 150 Hz Mounted on DIN-Rail: 4g 3 ... 150 Hz

Material Compliance

Conflict Minerals Reporting Template (CMRT):	9AKK108467A5658
REACH Declaration:	1SAA963005-4502
RoHS Declaration:	1SAA963006-4501
RoHS Information:	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019
Toxic Substances Control Act - TSCA:	2CMT2023-006539
WEEE B2C / B2B:	Business To Business
WEEE Category:	5. Small Equipment (No External Dimension More Than 50 cm)

ABB EcoSolutions

ABB EcoSolutions:	Yes
ABB Site Meeting Group Waste To Landfill Target:	UL 2799 Zero Waste To Landfill Validation available
EcoSolutions Profile:	1SFC100125C0353

End Of Life Disassembling Instructions:	1SAC200284H0001
Environmental Product Declaration - EPD:	1SAC200253H0001
Improved Energy Efficiency for Customers:	Product Efficiency - Product considered more energy-efficient compared to similar product on market or older products from the same line
Recyclability Rate of the Product acc. to EN45555:	Design for Closing Resource Loops - Standard EN45555 - 93.1 %

Certificates and Declarations

ATEX Certificate:	1SAA918001-3901
CB Certificate:	1SAA918002-2002
CCC Certificate:	2024010307654703
CQC Certificate:	CQC2015010307760141
Declaration of Conformity - CCC:	2020980307003042
Declaration of Conformity - CE:	1SAD101100-3408
Declaration of Conformity - UKCA:	1SAD201100-3408
EAC Certificate:	1SAA963000-2701
IECEX Certificate:	1SAA918000-4001
KC Certificate:	1SAA963001-1501
UL Certificate:	E137861-20150206 E345003-20150206

Container Information

Package Level 1 Units:	box 1 piece
Package Level 1 Width:	64 mm
Package Level 1 Depth / Length:	177 mm
Package Level 1 Height:	140 mm
Package Level 1 Gross Weight:	1.1 kg
Package Level 1 EAN:	4013614536632
Package Level 2 Units:	carton 12 piece
Package Level 2 Width:	330 mm
Package Level 2 Depth / Length:	400 mm
Package Level 2 Height:	320 mm
Package Level 2 Gross Weight:	13 kg
Package Level 2 EAN:	4013614537820

External Classifications and Standards

Object Classification Code:	F
ETIM 9:	EC000074 - Motor protection circuit-breaker
ETIM 10:	EC000074 - Motor protection circuit-breaker
eClass:	V11.0 : 27370401

UNSPSC:	39121521
IDEA Granular Category Code (IGCC):	4731 >> Manual Starters
E-Number (Finland):	3708084
E-Number (Norway):	4364128
E-Number (Sweden):	3110789

Accessories

Identifier	Description	Type	Qty	Unit Of Measure
1SAM201901R1001	HKF1-11 Aux.-contact for front mounting	HKF1-11	1	piece
1SAM201901R1201	HKF1-11K Aux.-contact for frontmounting with Push-In terminals	HKF1-11K	1	piece
1SAM201901R1002	HKF1-20 Aux.-contact 2NO, front mounting	HKF1-20	1	piece
1SAM201901R1202	HKF1-20K Aux.-contact for frontmounting with Push-In terminals	HKF1-20K	1	piece
1SAM201901R1004	HKF1-01 Aux.-contact for front mounting	HKF1-01	1	piece
1SAM201901R1003	HKF1-10 Aux.-contact for front mounting	HKF1-10	1	piece
1SAM201902R1002	HK1-20 Aux.-contact 2 NO	HK1-20	1	piece
1SAM201902R1202	HK1-20K Aux.-contact 2 NO with Push-In terminals	HK1-20K	1	piece
1SAM201902R1001	HK1-11 Aux.-contact 1 NO + 1 NC	HK1-11	1	piece
1SAM201902R1201	HK1-11K Aux.-contact 1 NO + 1 NC with Push-In terminals	HK1-11K	1	piece
1SAM201902R1003	HK1-02 Aux.-contact 2 NC	HK1-02	1	piece
1SAM201902R1203	HK1-02K Aux.-contact 2 NC with Push-In terminals	HK1-02K	1	piece
1SAM201902R1004	HK1-20L Aux.-cont. w. 2 lead contacts 2 NO	HK1-20L	1	piece
1SAM201902R1204	HK1-20LK Aux.-cont. w. 2 leading contacts 2 NO, with Push-In terminals	HK1-20LK	1	piece
1SAM201903R1002	SK1-20 Signaling Contact 2 NO	SK1-20	1	piece
1SAM201903R1202	SK1-20K Signaling Contact 2 NO with Push-In terminals	SK1-20K	1	piece
1SAM201903R1005	SK1-20AR Signaling Contact, 2NO with screw terminals	SK1-20AR	1	piece
1SAM201903R1205	SK1-20ARK Signaling Contact, 2NO with Push-in Spring terminals	SK1-20ARK	1	piece
1SAM201903R1001	SK1-11 Signaling Contact 1SK1-11 NO + 1 NC	SK1-11	1	piece

1SAM201903R1201	SK1-11K Signaling Contact 1 NO + 1 NC with Push-In terminals	SK1-11K	1	piece
1SAM201903R1004	SK1-11AR Signaling Contact, 1NO+1NC with screw terminals	SK1-11AR	1	piece
1SAM201903R1204	SK1-11ARK Signaling Contact, 1NO+1NC with Push-in Spring terminals	SK1-11ARK	1	piece
1SAM201903R1003	SK1-02 Signaling Contact 2 NC	SK1-02	1	piece
1SAM201903R1203	SK1-02K Signaling Contact 2 NC with Push-In terminals	SK1-02K	1	piece
1SAM201903R1006	SK1-02AR Signaling Contact, 2NC with screw terminals	SK1-02AR	1	piece
1SAM201903R1206	SK1-02ARK Signaling Contact, 2NC with Push-in Spring terminals	SK1-02ARK	1	piece
1SAM301901R1002	CK1-20 Short-Circuit Signaling Contact 2 NO	CK1-20	1	piece
1SAM301901R1001	CK1-11 Short-Circuit Signaling Contact 1 NO + 1 NC	CK1-11	1	piece
1SAM301901R1003	CK1-02 Short-Circuit Signaling Contact 2 NC	CK1-02	1	piece
1SAM201910R1001	AA1-24 Shunt Trip 20-24V	AA1-24	1	piece
1SAM201910R1002	AA1-110 Shunt Trip 110V	AA1-110	1	piece
1SAM201910R1003	AA1-230 Shunt Trip 200- 240V	AA1-230	1	piece
1SAM201910R1004	AA1-400 Shunt Trip 350- 415V	AA1-400	1	piece
1SAM201904R1010	UA1-20 Undervoltage release 20V 50Hz / 24V 60 Hz	UA1-20	1	piece
1SAM201904R1001	UA1-24 Undervoltage release 24 V	UA1-24	1	piece
1SAM201904R1002	UA1-48 Undervoltage release 48V	UA1-48	1	piece
1SAM201904R1003	UA1-60 Undervoltage release 60V	UA1-60	1	piece
1SAM201904R1004	UA1-110 Undervoltage release 110V 110V 50Hz/120V 60Hz	UA1-110	1	piece
1SAM201904R1008	UA1-208 Undervoltage release 208V 60Hz	UA1-208	1	piece
1SAM201904R1005	UA1-230 Undervoltage release 230 V 50 Hz / 240 V 60 Hz	UA1-230	1	piece
1SAM201904R1006	UA1-400 Undervoltage release 400V	UA1-400	1	piece
1SAM201904R1007	UA1-415 Undervoltage release 415V 415V 50Hz/480V 60Hz	UA1-415	1	piece

1SAM201904R1009	UA1-575 Undervoltage release 575V 60Hz	UA1-575	1	piece
1SAM401923R1003	S2-M3-50 3-phase Power infeed Block for MS165, 50 mm ²	S2-M3-50	1	piece
1SAM401920R1002	PS2-2-0-125 3-phase busbar for 2 MS165, le=125A	PS2-2-0-125	1	piece
1SAM401920R1003	PS2-3-0-125 3-phase busbar for 3 MS165, le=125A	PS2-3-0-125	1	piece
1SAM401920R1004	PS2-4-0-125 3-phase busbar for 4 MS165, le=125A	PS2-4-0-125	1	piece
1SAM401920R1022	PS2-2-2-125 3-phase busbar for 2 MS165 with 2 HK/SK, le=125A	PS2-2-2-125	1	piece
1SAM401920R1023	PS2-3-2-125 3-phase busbar for 3 MS165 with 2 HK/SK, le=125A	PS2-3-2-125	1	piece
1SAM401920R1024	PS2-4-2-125 3-phase busbar for 4 MS165 with 2 HK/SK, le=125A	PS2-4-2-125	1	piece
1SAM401921R1001	BS2-3 Protection Cover for busbars	BS2-3	1	piece
1SAM401922R1001	KA165 Terminal Shroud for MS165/MO165	KA165	1	piece
GJF1101903R0002	SA 2 Padlock with 2 keys	SA2	1	piece
1SAM201920R1011	MSHD-LTB Handle, IP64, black, 3 times lockable, defeatable, 0-TRIP-I	MSHD-LTB	1	piece
1SAM201920R1012	MSHD-LTY Handle, IP64, red/yellow, 3 times lockable, defeatable, 0-TRIP-I	MSHD-LTY	1	piece
1SAM201920R1000	MSH-AR Shaft alignment ring suitable for MSHD and MSH handles	MSH-AR	1	piece
1SAM101923R0002	MSMN Driver w. screw for manual motor starters, 6x6	MSMN	1	piece
1SAM101923R0012	MSMNO Driver w/o coding w. screw for manual motor starters, 6x6	MSMNO	1	piece
1SCA101647R1001	OXS6X85 SHAFT	OXS6X85	1	piece
1SCA108043R1001	OXS6X105 SHAFT	OXS6X105	1	piece
1SCA101655R1001	OXS6X130 SHAFT	OXS6X130	1	piece
1SCA101659R1001	OXS6X180 SHAFT	OXS6X180	1	piece

Categories

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