

# MO165-20



Products → Low Voltage Products and Systems → Circuit Breakers → Manual Motor Starters

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→ Manual Motor Starters

## General Information

<b>Extended Product Type:</b>	MO165-20
<b>Product ID:</b>	1SAM461000R1012
<b>EAN:</b>	4013614486135
<b>Catalog Description:</b>	MO165-20 Manual Motor Starter Magnetic Only
<b>Long Description:</b>	MO165-20 Manual motor starter Magnetic only, 20 A

## Ordering

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

## Popular Downloads

<b>Data Sheet, Technical Information:</b>	2CDC131084D0201
<b>Data Sheet, Technical Information (Part 2):</b>	1SAM400506F0001 1SAM400507F0001
<b>Instructions and Manuals:</b>	2CDC131082M6801
<b>Dimension Diagram:</b>	1SAM400402F0001

## Dimensions

<b>Product Net Width:</b>	55 mm
<b>Product Net Height:</b>	142.65 mm
<b>Product Net Depth:</b>	122.1 mm
<b>Product Net Weight:</b>	0.95 kg

## Technical

<b>Rated Service Short-Circuit Breaking Capacity (<math>I_{cs}</math>):</b>	(230 V AC) 100 kA (250 V DC) 3 Poles in Series 100 kA (400 V AC) 100 kA (440 V AC) 75 kA (500 V AC) 40 kA (690 V AC) 10 kA
<b>Rated Ultimate Short-Circuit Breaking Capacity (<math>I_{cu}</math>):</b>	(230 V AC) 100 kA (250 V DC) 100 kA (400 V AC) 100 kA (440 V AC) 75 kA (500 V AC) 40 kA (690 V AC) 10 kA

<b>Rated Instantaneous Short-Circuit Current Setting (<math>I_i</math>):</b>	300 A
<b>Setting Range:</b>	None
<b>Rated Operational Power AC-3 (<math>P_e</math>):</b>	(400 V) Three Phase 7.5 kW
<b>Rated Operational Voltage:</b>	Main Circuit 690 V AC Main Circuit 250 V DC
<b>Rated Operational Current (<math>I_e</math>):</b>	20 A
<b>Rated Operational Current AC-3 (<math>I_e</math>):</b>	20 A
<b>Rated Operational Current DC-5 (<math>I_e</math>):</b>	20 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 8 kV
<b>Rated Insulation Voltage (<math>U_i</math>):</b>	1000 V
<b>Power Loss:</b>	3.72 W
<b>Number of Poles:</b>	3
<b>Conventional Free-air Thermal Current (<math>I_{th}</math>):</b>	Main Circuit 20 A
<b>Degree of Protection:</b>	Housing IP20 Main Circuit Terminals IP10
<b>Pollution Degree:</b>	3
<b>Electrical Durability:</b>	25000 cycle
<b>Mechanical Durability:</b>	50000 cycle
<b>Terminal Type:</b>	Screw Terminals
<b>Connecting Capacity Main Circuit:</b>	Flexible with Ferrule 1/2x 1 ... 35 mm <sup>2</sup> Flexible with Insulated Ferrule 1/2x 1 ... 35 mm <sup>2</sup> Flexible 1/2x 1 ... 35 mm <sup>2</sup> Rigid 1/2x 1 ... 4 mm <sup>2</sup> Solid 1/2x 1 ... 4 mm <sup>2</sup> Stranded 1/2x 1 ... 50 mm <sup>2</sup>
<b>Tightening Torque:</b>	Main Circuit 4 N·m
<b>Wire Stripping Length:</b>	Main Circuit 16 mm
<b>Recommended Screw Driver:</b>	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

**Standards:** IEC/EN 60947-1  
IEC/EN 60947-2  
IEC/EN 60947-4-1  
UL 60947-4-1  
CSA 22.2 No. 14

**Remarks:** For overload protection of the motors, an appropriate thermal or electronic overload relays must be used

## Environmental

**Ambient Air Temperature:** Operation -25 ... +60 °C  
Operation Compensated -25 ... +60 °C  
Storage -50 ... +80 °C

**Ambient Air Temperature Compensation:** No

**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

## Technical UL/CSA

**Maximum Operating Voltage UL/CSA:** Main Circuit 600 V AC

**Horsepower Rating UL/CSA:** (200 V AC) Three Phase 5 Hp  
(208 V AC) Three Phase 5 Hp  
(220 ... 240 V AC) Three Phase 5 Hp  
(440 ... 480 V AC) Three Phase 10 Hp  
(550 ... 600 V AC) Three Phase 15 Hp

**Ampere Rating UL/CSA:** 20 A

**General Use Rating UL/CSA:** (600 V AC) 20 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

## Certificates and Declarations (Document Number)

**ABS Certificate:** 1SAA963002-0101

**BV Certificate:** 1SAA963002-0201

**CB Certificate:** 1SAA918002-2002

**CCC Certificate:** 1SAA918004-3801

**Declaration of Conformity - CE:** 1SAD938502-0191

**DNV GL Certificate:** 1SAA963002-0301

<b>EAC Certificate:</b>	1SAA963002-2701
<b>Instructions and Manuals:</b>	2CDC131082M6801
<b>LR Certificate:</b>	1SAA918001-0501
<b>RMRS Certificate:</b>	1SAA918000-0704
<b>RoHS Information:</b>	1SAD938502-0191
<b>UL Certificate:</b>	cUL_E137861 UL_E137861 cUL_E345003 UL_345003

## Container Information

<b>Package Level 1 Units:</b>	1 piece
<b>Package Level 1 Width:</b>	78 mm
<b>Package Level 1 Length:</b>	155 mm
<b>Package Level 1 Height:</b>	155 mm
<b>Package Level 1 Gross Weight:</b>	1.1 kg
<b>Package Level 1 EAN:</b>	4013614486135
<b>Package Level 2 Units:</b>	12 piece
<b>Package Level 2 Width:</b>	330 mm
<b>Package Level 2 Length:</b>	400 mm
<b>Package Level 2 Height:</b>	320 mm
<b>Package Level 2 Gross Weight:</b>	13 kg
<b>Package Level 2 EAN:</b>	4013614503993

## Classifications

<b>Object Classification Code:</b>	F
<b>E-nummer:</b>	3110059
<b>ETIM 5:</b>	EC000074 - Motor protective circuit-breaker
<b>ETIM 6:</b>	EC000074 - Motor protection circuit-breaker
<b>ETIM 7:</b>	EC000074 - Motor protection circuit-breaker
<b>eClass:</b>	7.0 27370401
<b>UNSPSC:</b>	39121521

