

PRODUCT-DETAILS

# MS165-16

## MS165-16 Manual Motor Starter 10 ... 16 A



### Informations générales

Extension du type de produit	MS165-16
Code de produit	1SAM451000R1011
EAN	4013614486050
Description courte	MS165-16 Manual Motor Starter 10 ... 16 A

**Description longue**

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.

### Commande

Quantité minimum	1 pièce
Code douanier	85362010

## Downloads Préférés

Fiche produit, informations techniques	2CDC131083D0201
Instructions et manuels	2CDC131081M6801
Instructions et manuels (Partie 2)	2CDC131060M0202
Ex Operating Instructions	2CDC131087M6801
Time-Current Characteristic Curve	1SAM400505F0001
I <sup>2</sup> t Characteristic	1SAM400506F0001
Cut-off Current Characteristic	1SAM400507F0001
CAD Dimensional Drawing	2CDC001079B0201
Schéma dimensionnel	1SAM400401F0001

## Dimensions

Produit Largeur Net	55 mm
Produit Hauteur Net	142.65 mm
Produit Longueur Net	122.1 mm
Poids net	0.95 kg

## Technique

Pouvoir assigné de coupure de service en court-circuit (I <sub>CS</sub> )	(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
Pouvoir assigné de coupure ultime en court-circuit (I <sub>CU</sub> )	(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
Courant assigné instantané de réglage de court-circuit (I <sub>I</sub> )	240 A
Setting Range	10 ... 16 A
Puissance assignée d'emploi AC-3 (P <sub>e</sub> )	(400 V) Three Phase 7.5 kW
Puissance assignée d'emploi AC-3e (P <sub>e</sub> )	(400 V) Three Phase 7.5 kW
Tension	Circuit principal 690 V AC Circuit principal 250 V DC
Courant nominal de fonctionnement (I <sub>e</sub> )	16 A
Courant assignée d'emploi AC-3 (I <sub>e</sub> )	16 A
Courant assignée d'	16 A

emploi AC-3e ( $I_e$ )

Courant assignée d'emploi DC-5 ( $I_e$ )	16 A
--	------

Fréquence assignée (f)	Circuit principal 50 Hz
	Circuit principal 60 Hz

Operating Frequency ( $f_{sw}$ )	0 ... 415 Hz
----------------------------------	--------------

Tension assignée de tenue aux chocs ( $U_{imp}$ )	Circuit principal 8 kV
---	------------------------

Tension assignée d'isolement ( $U_i$ )	1000 V
--	--------

Power Loss	at Rated Operating Conditions per Pole 1.49 ... 3.81 W
------------	--

Nombre de pôles	3
-----------------	---

Courant thermique conventionnel à l'air libre ( $I_{th}$ )	Main Circuit 16 A
--	-------------------

Indice de protection	Housing IP20
	Main Circuit Terminals IP10

Degré de pollution	3
--------------------	---

Electrical Durability	25000 cycle
-----------------------	-------------

Durabilité mécanique	50000 cycle
----------------------	-------------

Type de borne	Screw Terminals
---------------	-----------------

Connecting Capacity Main Circuit	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>	

Couple de serrage	Main Circuit 4 N·m
-------------------	--------------------

Wire Stripping Length	Main Circuit 16 mm
-----------------------	--------------------

Recommended Screw Driver	Pozidriv 2
--------------------------	------------

Type d'encastrement	1 ... 6
---------------------	---------

Montage sur rail DIN	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
-----------------------------	-----------------

Normes et standards	CSA 22.2 No. 14
	IEC/EN 60947-1
	IEC/EN 60947-2
	IEC/EN 60947-4-1
	UL 60947-4-1

## Technique 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 (480Y / 277 V AC) 65 kA
	Any UL Listed Fuses or Circuit-Breakers, Tap Conductor Protection in Group Installations (600Y / 347 V AC) 30 kA
Maximum Operating Voltage UL/CSA	Circuit principal 600 V AC
Puissance nominale UL/CSA	(200 V AC) Three Phase 3 Hp (208 V AC) Three Phase 3 Hp (220 ... 240 V AC) Three Phase 5 Hp (440 ... 480 V AC) Three Phase 10 Hp (550 ... 600 V AC) Three Phase 10 Hp
Full Load Amps Motor Use	(200 V AC) Three Phase 11 A (208 V AC) Three Phase 10.6 A (220 ... 240 V AC) Three Phase 15.2 A (440 ... 480 V AC) Three Phase 14 A (550 ... 600 V AC) Three Phase 11 A
Locked Rotor Amps	(200 V AC) Three Phase 73.6 A (208 V AC) Three Phase 71 A (220 ... 240 V AC) Three Phase 92 A (440 ... 480 V AC) Three Phase 81 A (550 ... 600 V AC) Three Phase 64.8 A
General Use Rating UL/CSA	(600 V AC) 16 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

## Environnement

Température de l'air ambiant	Operation -25 ... +60 °C Operation Compensated -25 ... +60 °C Storage -50 ... +80 °C
Ambient Air Temperature Compensation	Oui
Altitude de fonctionnement maximale autorisée	2000 m
REACH Declaration	1SAA963005-4502
Résistance aux chocs selon CEI 60068-2-27	11 ms Pulse 25g
Resistance to Vibrations acc. to IEC 60068-2-6	mounted on DIN-rail: 4g / 3 ... 150 Hz mounted on mounting plate: 5g / 3 ... 150 Hz 5g / 3 ... 150 Hz
Informations RoHS	1SAA963006-4502
Statut RoHS	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019

## Certificats et Déclarations (Numéro de document)

Certificat ABS	1SAA963002-0101
Certificat ATEX	1SAA918001-3901
Certificat BV	1SAA963002-0201

CB Certificate	1SAA918002-2002
CQC Certificate	CQC2015010307760141
Cut-off Current Characteristic	1SAM400507F0001
Declaration of Conformity - CCC	2020980307003042
Déclaration de Conformité - CE	1SAD101100-3408
Declaration of Conformity - UKCA	1SAD201100-3408
DNV GL Certificate	1SAA963002-0301
EAC Certificate	1SAA963000-2701
I <sub>pt</sub> Characteristic	1SAM400506F0001
IECEX Certificate	1SAA918000-4001
KC Certificate	1SAA963001-1501
Certificat LR	1SAA918001-0501
Certificat RMRS	1SAA918000-0704
Certificat UL	E137861-20150206 E345003-20150206

## Emballage

Emballage Niveau 1 Unités	box 1 pièce
Emballage Niveau 1 Largeur	64 mm
Emballage Niveau 1 Longueur	177 mm
Emballage Niveau 1 Hauteur	140 mm
Emballage Niveau 1 Poids	1.1 kg
Emballage Niveau 1 EAN	4013614486050
Emballage Niveau 2 Unités	carton 12 pièce
Emballage Niveau 2 Largeur	330 mm
Emballage Niveau 2 Longueur	400 mm
Emballage Niveau 2 Hauteur	320 mm
Emballage Niveau 2 Poids	13 kg
Emballage Niveau 2 EAN	4013614503917

## Classifications

Code de classification d'objet	F
ETIM 5	EC000074 - Motor protective circuit-breaker
ETIM 6	EC000074 - disjoncteur/démarrreur de moteur
ETIM 7	EC000074 - Motor protection circuit-breaker
ETIM 8	EC000074 - Motor protection circuit-breaker

eClass	V11.0 : 27370401
UNSPSC	39121521
Code de catégorie granulaire IDEA (IGCC)	4731 >> Manual Starters
E-Number (Finland)	3707284
E-Number (Sweden)	3110051

## Accessories

Identifiant	Description	Type	Quantity	Unit Of Measure
1SAM201901R1001	HKF1-11 Auxiliary Contact	HKF1-11	1	piece
1SAM201901R1201	HKF1-11K Auxiliary Contact	HKF1-11K	1	piece
1SAM201901R1002	HKF1-20 Auxiliary Contact	HKF1-20	1	piece
1SAM201901R1202	HKF1-20K Auxiliary Contact	HKF1-20K	1	piece
1SAM201901R1004	HKF1-01 Auxiliary Contact	HKF1-01	1	piece
1SAM201901R1003	HKF1-10 Auxiliary Contact	HKF1-10	1	piece
1SAM201902R1002	HK1-20 Auxiliary Contact	HK1-20	1	piece
1SAM201902R1202	HK1-20K Auxiliary Contact	HK1-20K	1	piece
1SAM201902R1001	HK1-11 Auxiliary Contact	HK1-11	1	piece
1SAM201902R1201	HK1-11K Auxiliary Contact	HK1-11K	1	piece
1SAM201902R1003	HK1-02 Auxiliary Contact	HK1-02	1	piece
1SAM201902R1203	HK1-02K Auxiliary Contact	HK1-02K	1	piece
1SAM201902R1004	HK1-20L Auxiliary Contact	HK1-20L	1	piece
1SAM201902R1204	HK1-20LK Auxiliary Contact	HK1-20LK	1	piece
1SAM201903R1002	SK1-20 Signaling Contact	SK1-20	1	piece
1SAM201903R1202	SK1-20K Signaling Contact	SK1-20K	1	piece
1SAM201903R1005	SK1-20AR Signaling Contact	SK1-20AR	1	piece
1SAM201903R1205	SK1-20ARK Signaling Contact	SK1-20ARK	1	piece
1SAM201903R1001	SK1-11 Signaling Contact	SK1-11	1	piece
1SAM201903R1201	SK1-11K Signaling Contact	SK1-11K	1	piece
1SAM201903R1004	SK1-11AR Signaling Contact	SK1-11AR	1	piece
1SAM201903R1204	SK1-11ARK Signaling Contact	SK1-11ARK	1	piece
1SAM201903R1003	SK1-02 Signaling Contact	SK1-02	1	piece
1SAM201903R1203	SK1-02K Signaling Contact	SK1-02K	1	piece
1SAM201903R1006	SK1-02AR Signaling Contact	SK1-02AR	1	piece
1SAM201903R1206	SK1-02ARK Signaling Contact	SK1-02ARK	1	piece
1SAM301901R1002	CK1-20 Short Circuit Signaling Contact	CK1-20	1	piece
1SAM301901R1001	CK1-11 Short Circuit Signaling Contact	CK1-11	1	piece
1SAM301901R1003	CK1-02 Short Circuit Signaling Contact	CK1-02	1	piece
1SAM201910R1001	AA1-24 Shunt Trip	AA1-24	1	piece
1SAM201910R1002	AA1-110 Shunt Trip	AA1-110	1	piece
1SAM201910R1003	AA1-230 Shunt Trip	AA1-230	1	piece
1SAM201910R1004	AA1-400 Shunt Trip	AA1-400	1	piece
1SAM201904R1010	UA1-20 Undervoltage Release	UA1-20	1	piece
1SAM201904R1001	UA1-24 Undervoltage Release	UA1-24	1	piece

1SAM201904R1002	UA1-48 Undervoltage Release	UA1-48	1	piece
1SAM201904R1003	UA1-60 Undervoltage Release	UA1-60	1	piece
1SAM201904R1004	UA1-110 Undervoltage Release	UA1-110	1	piece
1SAM201904R1008	UA1-208 Undervoltage Release	UA1-208	1	piece
1SAM201904R1005	UA1-230 Undervoltage Release	UA1-230	1	piece
1SAM201904R1006	UA1-400 Undervoltage Release	UA1-400	1	piece
1SAM201904R1007	UA1-415 Undervoltage Release	UA1-415	1	piece
1SAM201904R1009	UA1-575 Undervoltage Release	UA1-575	1	piece
1SAM401923R1003	S2-M3-50 Power Infeed Block	S2-M3-50	1	piece
1SAM401920R1002	PS2-2-0-125 Busbar	PS2-2-0-125	1	piece
1SAM401920R1003	PS2-3-0-125 Busbar	PS2-3-0-125	1	piece
1SAM401920R1004	PS2-4-0-125 Busbar	PS2-4-0-125	1	piece
1SAM401920R1022	PS2-2-2-125 Busbar	PS2-2-2-125	1	piece
1SAM401920R1023	PS2-3-2-125 Busbar	PS2-3-2-125	1	piece
1SAM401920R1024	PS2-4-2-125 Busbar	PS2-4-2-125	1	piece
1SAM401921R1001	BS2-3 Protection Cover	BS2-3	1	piece
1SAM401922R1001	KA165 Terminal Shroud	KA165	1	piece
GJF1101903R0002	SA2 Terminals and Installation Material	SA2	1	piece
1SAM201920R1011	MSHD-LTB Handles	MSHD-LTB	1	piece
1SAM201920R1012	MSHD-LTY Handles	MSHD-LTY	1	piece
1SAM201920R1000	MSH-AR Shaft Alignment Ring	MSH-AR	1	piece
1SAM101923R0002	MSMN Driver	MSMN	1	piece
1SAM101923R0012	MSMNO Driver	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

## Catégories

Produits basse tension → Disjoncteurs de puissance → Disjoncteurs-moteurs

Produits basse tension → Produits de Contrôle, Protection et sécurité machines → Disjoncteurs-moteurs → Disjoncteurs-moteurs

