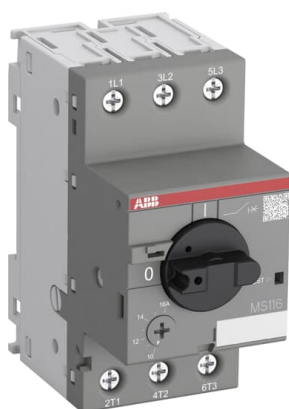


PRODUCT-DETAILS

# MS116-16

## MS116-16 Manual Motor Starter



### Información General

Tipo de producto extendido	MS116-16
Código de producto	1SAM250000R1011
EAN	4013614320347
Descripción corta	MS116-16 Manual Motor Starter

Descripción larga

The MS116-16 manual motor starter (also known as motor protection circuit breaker or manual motor protector) is a compact 45 mm width device with a rated operational current of  $I_e = 16.0$  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 phase failures. The manual motor starter offers a rated service short-circuit breaking capacity  $I_{cs} = 16$  kA at 400 VAC and trip class 10A. 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 is suitable for three- and single-phase applications. Auxiliary contacts, signaling contacts, undervoltage releases, shunt trips, 3-phase bus bars, power in-feed blocks and locking devices for protection against unauthorized changes are available as accessory.

### Clasificación

Cantidad mínima de pedido	1 piece
Código arancelario	85362010

### Descargas Populares

Ficha técnica, información técnica	2CDC131025D0201
Instrucciones y manuales	2CDC131011M6802
Instrucciones y manuales (parte 2)	2CDC131060M0202

Curva característica tiempo-corriente	1SAM200505F0011
I <sup>t</sup> Característica	1SAM200507F0001 1SAM200507F0002 1SAM200507F0003
Característica de la corriente de corte	1SAM200508F0001 1SAM200508F0002 1SAM200508F0003
Dibujo dimensional CAD	2CDC001079B0201
Diagrama de dimensiones	1SAM200422F0001

## Dimensiones

Ancho del product	45 mm
Alto del producto	90 mm
Largo del product	85.6 mm
Peso del product	0.265 kg

## Technical

Capacidad nominal de corte en cortocircuito en servicio (I <sub>CS</sub> )	(230 V AC) 16 kA (400 V AC) 16 kA (440 V AC) 6 kA (500 V AC) 4 kA (690 V AC) 2 kA
Capacidad nominal de corte en cortocircuito (I <sub>CU</sub> )	(230 V AC) 16 kA (400 V AC) 16 kA (440 V AC) 15 kA (500 V AC) 10 kA (690 V AC) 3 kA
Ajuste de la corriente de cortocircuito instantánea nominal (I <sub>i</sub> )	240 A
Rango de ajuste	10 ... 16 A
Potencia operativa nominal AC-3 (P <sub>e</sub> )	(400 V) Three Phase 7.5 kW
Potencia operativa nominal AC-3e (P <sub>e</sub> )	(400 V) Three Phase 7.5 kW
Tensión nominal de operación	Main Circuit 690 V AC
Corriente nominal de funcionamiento (I <sub>e</sub> )	16 A
Corriente nominal de funcionamiento AC-3 (I <sub>e</sub> )	16 A
Corriente nominal de funcionamiento AC-3e (I <sub>e</sub> )	16 A
Frecuencia nominal (f)	Main Circuit 50 Hz Main Circuit 60 Hz
Tensión nominal soportada por impulsos (U <sub>imp</sub> )	Main Circuit 6 kV
Tensión nominal de aislamiento (U <sub>i</sub> )	690 V
Pérdida de potencia	at Rated Operating Conditions per Pole 1.1 ... 2.8 W
Número de polos	3
Corriente térmica convencional de aire libre (I <sub>th</sub> )	Main Circuit 16 A
Grado de protección	Housing IP20 Main Circuit Terminals IP10
Grado de contaminación	3
Durabilidad eléctrica	100000 cycle
Durabilidad mecánica	100000 cycle
Tipo de terminal	Screw Terminals
Capacidad de conexión del circuito principal	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>

Par de apriete	Main Circuit 0.8 ... 1.2 N·m
Longitud de pelado del cable	Main Circuit 9 mm
Destornillador recomendado	Pozidriv 2
Posición de montaje	Any; 1 ... 6
Montaje en contactores	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
Distancia mínima de montaje	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
Tipo de actuador	Rotary Handle
Indicación de la posición del contacto	ON / OFF
Normas	IEC/EN 60947-1 IEC/EN 60947-2 IEC/EN 60947-4-1 UL 60947-1 UL 60947-4-1

## Technical UL/CSA

Capacidad de corriente de cortocircuito (SCCR)	Any UL Listed Fuses or Circuit-Breakers, Group Installations (480 V AC) 18 kA Any UL Listed Fuses or Circuit-Breakers, Group Installations (600 V AC) 5 kA Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (480 V AC) 18 kA Any UL Listed Fuses or Circuit-Breakers, Motor Disconnect (600 V AC) 5 kA
Tensión máxima de funcionamiento UL/CSA	Main Circuit 600 V AC
Potencia nominal 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
Amperios a plena carga Uso del motor	(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
Rotor bloqueado Amperios	(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
Clasificación de uso general UL/CSA	(600 V AC) 16 A
Capacidad de conexión del circuito principal UL/CSA	Flexible 1/2x 16-8 AWG Stranded 1/2x 16-8 AWG
Par de apriete UL/CSA	Main Circuit 10 in·lb

## Ambiente

Temperatura ambiente	Around the Enclosure 0 ... +40 °C Funcionamiento -25 ... +70 °C Operation Compensated -25 ... +55 °C Almacenamiento -50 ... +80 °C
Compensación de la temperatura del aire ambiente	Yes
Altitud máxima de funcionamiento permisible	2000 m
Resistencia a los golpes según IEC 60068-2-27	11 ms Pulse 25g
Resistencia a las vibraciones según IEC 60068-2-6	5g / 3 ... 150 Hz
Estado de RoHS	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019

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**Certificados y Declaraciones (Número de Documento)**


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Certificado ABS	1SAA963000-0104
Certificado BV	1SAA963000-0204
Certificado CB	1SAA963005-2003 1SAA963006-2001
Certificado CQC	CQC2011010307506570 CQC2014010307744794
Certificado cUL	cUL_E137861
Característica de la corriente de corte	1SAM200508F0001 1SAM200508F0002 1SAM200508F0003
Declaración de conformidad - CCC	2020980307003705 2020980307003043
Declaración de conformidad - CE	1SAD101100-3401
Declaración de conformidad - UKCA	1SAD201100-3401
Certificado DNV	1SAA963000-0304
Certificado DNV GL	1SAA963000-0304
Certificado EAC	1SAA963000-2701
Información medioambiental	1SAC200050H0009
Certificado GL	1SAA963000-0402
I <sup>t</sup> Característica	1SAM200507F0001 1SAM200507F0002 1SAM200507F0003
Instrucciones y manuales	2CDC131011M6802
Instrucciones y manuales (parte 2)	2CDC131060M0202
Certificado KC	1SAA963000-1501
Certificado LR	1SAA963000-0505
Certificado RMRS	1SAA918000-0704
Información sobre RoHS	1SAD101100-3401
Curva característica tiempo-corriente	1SAM200505F0011
Certificado UL	UL_E137861

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**Información de Embalaje**


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Embalaje Nivel 1 Unidades	box 1 piece
Embalaje Nivel 1 Ancho	92 mm
Embalaje Nivel 1 Largo	95 mm
Embalaje Nivel 1 Alto	50 mm
Embalaje Nivel 1 Peso	0.28 kg
Embalaje Nivel 1 EAN	4013614320347
Embalaje Nivel 2 Unidades	carton 40 piece
Embalaje Nivel 2 Ancho	280 mm
Embalaje Nivel 2 Largo	395 mm
Embalaje Nivel 2 Alto	210 mm
Embalaje Nivel 2 Peso	11.586 kg
Nivel de paquete 2 EAN	4013614408717

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**Clasificaciones**


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Código de clasificación de objetos	F
ETIM 4	EC000074 - Motor protective circuit-breaker
ETIM 5	EC000074 - Motor protective circuit-breaker
ETIM 6	EC000074 - Motor protection circuit-breaker
ETIM 7	EC000074 - Motor protection circuit-breaker
ETIM 8	EC000074 - Motor protection circuit-breaker
Clase electrónica	V11.0 : 27370401

UNSPSC	39121521
Código de categoría granular de IDEA (IGCC)	4845 >> 3 Pole Motor Circuit Protector Circuit Breakers
Número E (Finlandia)	3706011
Número E (Suecia)	3111950

## Accessories

Identifier	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
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
1SAM201906R1102	PS1-2-0-65 Busbar	PS1-2-0-65	1	piece
1SAM201906R1112	PS1-2-1-65 Busbar	PS1-2-1-65	1	piece
1SAM201906R1122	PS1-2-2-65 Busbar	PS1-2-2-65	1	piece
1SAM201916R1103	PS1-3-0-100 Busbar	PS1-3-0-100	1	piece
1SAM201906R1103	PS1-3-0-65 Busbar	PS1-3-0-65	1	piece
1SAM201916R1113	PS1-3-1-100 Busbar	PS1-3-1-100	1	piece
1SAM201906R1113	PS1-3-1-65 Busbar	PS1-3-1-65	1	piece
1SAM201916R1123	PS1-3-2-100 Busbar	PS1-3-2-100	1	piece
1SAM201906R1123	PS1-3-2-65 Busbar	PS1-3-2-65	1	piece
1SAM201916R1104	PS1-4-0-100 Busbar	PS1-4-0-100	1	piece
1SAM201906R1104	PS1-4-0-65 Busbar	PS1-4-0-65	1	piece
1SAM201916R1114	PS1-4-1-100 Busbar	PS1-4-1-100	1	piece

1SAM201906R1114	PS1-4-1-65 Busbar	PS1-4-1-65	1	piece
1SAM201906R1124	PS1-4-2-65 Busbar	PS1-4-2-65	1	piece
1SAM201916R1105	PS1-5-0-100 Busbar	PS1-5-0-100	1	piece
1SAM201906R1105	PS1-5-0-65 Busbar	PS1-5-0-65	1	piece
1SAM201916R1115	PS1-5-1-100 Busbar	PS1-5-1-100	1	piece
1SAM201906R1115	PS1-5-1-65 Busbar	PS1-5-1-65	1	piece
1SAM201906R1125	PS1-5-2-65 Busbar	PS1-5-2-65	1	piece
1SAM201907R1101	S1-M1-25 Power Infeed Block	S1-M1-25	1	piece
1SAM201907R1102	S1-M2-25 Power Infeed Block	S1-M2-25	1	piece
1SAM201907R1103	S1-M3-25 Power Infeed Block	S1-M3-25	1	piece
1SAM201913R1103	S1-M3-35 Power Infeed Block	S1-M3-35	1	piece
1SAM201914R1002	S1-PB1-25 Power Infeed Block	S1-PB1-25	1	piece
1SAM201914R1001	PB1-1-32 Connecting Link	PB1-1-32	1	piece
1SAM201908R1001	BS1-3 Protection Cover	BS1-3	1	piece
1SAM201909R1001	FS116 Screw Fixing Kit	FS116	1	piece
GJF1101903R0001	SA1 Dispositivo enclavamiento	SA1	1	piece
GJF1101903R0002	SA2 Dispositivo enclavamiento	SA2	1	piece
GJF1101903R0003	SA3 Terminals and Installation Material	SA3	1	piece
1SAM201911R1012	IB132-F Enclosure	IB132-F	1	piece
1SAM201911R1010	IB132-G Enclosure	IB132-G	1	piece
1SAM201911R1011	IB132-Y Enclosure	IB132-Y	1	piece
1SAM201912R1010	DMS132-G Door Mounting Kit	DMS132-G	1	piece
1SAM201912R1011	DMS132-Y Door Mounting Kit	DMS132-Y	1	piece
1SAM201909R1021	MSAH1 Shaft Supporter	MSAH1	1	piece
1SAM201920R1001	MSHD-LB Handles	MSHD-LB	1	piece
1SAM201920R1002	MSHD-LY Handles	MSHD-LY	1	piece
1SAM201920R1000	MSH-AR Shaft Alignment Ring	MSH-AR	1	piece
1SAM101923R0002	MSMN Driver	MSMN	1	piece
1SCA101655R1001	OXS6X130 SHAFT	OXS6X130	1	piece
1SAM101923R0012	MSMNO Driver	MSMNO	1	piece
1SCA101659R1001	OXS6X180 SHAFT	OXS6X180	1	piece
1SCA101647R1001	OXS6X85 SHAFT	OXS6X85	1	piece
1SCA108043R1001	OXS6X105 SHAFT	OXS6X105	1	piece

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## Categorías

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Productos y sistemas de baja tensión → Aparatos de control → Guardamotores → Guardamotores

Productos y sistemas de baja tensión → Interruptores automáticos → Guardamotores

