

PRODUCT-DETAILS

AFS16-30-22-11

AFS16-30-22-11 24-60V50/60HZ 20-60VDC Contactor



General Information

Extended Product Type	AFS16-30-22-11
Product ID	1SBL177082R1122
EAN	3471523005464
Catalog Description	AFS16-30-22-11 24-60V50/60HZ 20-60VDC Contactor

Long Description	AFS09 ... AFS38 contactors are designed for machine safety applications. They are delivered with fixed front-mounted auxiliary contact blocks making them ideal for monitoring and controlling circuits. Mechanically linked and mirror contacts make your system safer. - control circuit with electronic coil interface: - 24...60 V AC, 20...60 V DC and 100...250 V AC / DC operated accepting a wide control voltage range - reduced panel energy consumption - mirror and mechanically linked contacts, with front marked symbol acc. to IEC60947-5-1, always guaranteeing the right contactor status - front-mounted auxiliary contact block: - permanently fixed - protective cover to prevent manual operation - yellow housing for easy identification - minimum switching capacity 12 V / 3 mA, with a failure rate 10⁻⁷ acc. to IEC 60947-5-4 - built-in surge suppression
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Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

Popular Downloads

Instructions and Manuals	1SBC101052M6801
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Dimensions

Product Net Width	45 mm
Product Net Depth / Length	110.5 mm
Product Net Height	86 mm
Product Net Weight	0.32 kg

Technical

Number of Main Contacts NO	3
Number of Main Contacts NC	0
Number of Auxiliary Contacts NO	2
Number of Auxiliary Contacts NC	2
Standards	IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1, UL 508, CSA C22.2 N° 14
Rated Operational Voltage	Auxiliary Circuit 690 V Main Circuit 690 V
Rated Frequency (f)	Auxiliary Circuit 50 / 60 Hz Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current (I_{th})	acc. to IEC 60947-4-1, Open Contactors $q = 40^\circ\text{C}$ 35 A acc. to IEC 60947-5-1, $q = 40^\circ\text{C}$ 16 A
Rated Operational Current AC-1 (I_e)	(690 V) 40°C 30 A (690 V) 60°C 30 A (690 V) 70°C 26 A
Rated Operational Current AC-3 (I_e)	(415 V) 60°C 18 A (440 V) 60°C 18 A (500 V) 60°C 15 A (690 V) 60°C 10.5 A (380 / 400 V) 60°C 18 A (220 / 230 / 240 V) 60°C 18 A
Rated Operational Power AC-3 (P_e)	(400 V) 7.5 kW (415 V) 9 kW (440 V) 9 kW (500 V) 9 kW (690 V) 9 kW (380 / 400 V) 7.5 kW (220 / 230 / 240 V) 4 kW
Rated Operational Current AC-15 (I_e)	(500 V) 2 A (690 V) 2 A (24 / 127 V) 6 A (220 / 240 V) 4 A (400 / 440 V) 3 A
Rated Short-time Withstand Current (I_{cw})	at 40°C Ambient Temp, in Free Air, from a Cold State 10 s 150 A at 40°C Ambient Temp, in Free Air, from a Cold State 15 min 35 A at 40°C Ambient Temp, in Free Air, from a Cold State 1 min 60 A at 40°C Ambient Temp, in Free Air, from a Cold State 1 s 300 A at 40°C Ambient Temp, in Free Air, from a Cold State 30 s 80 A for 0.1 s 140 A for 1 s 100 A
Maximum Breaking Capacity	$\cos \phi = 0.45$ ($\cos \phi = 0.35$ for $I_e > 100$ A) at 440 V 250 A $\cos \phi = 0.45$ ($\cos \phi = 0.35$ for $I_e > 100$ A) at 690 V 106 A
Maximum Electrical Switching Frequency	(AC-1) 600 cycles per hour (AC-15) 1200 cycles per hour (AC-2 / AC-4) 300 cycles per hour (AC-3) 1200 cycles per hour (DC-13) 900 cycles per hour
Rated Operational Current DC-13 (I_e)	(24 V) 6 A / 144 W (48 V) 2.8 A / 134 W (72 V) 1 A / 72 W (110 V) 0.55 A / 60 W (125 V) 0.55 A / 69 W (220 V) 0.27 A / 60 W

	(250 V) 0.27 A / 68 W (400 V) 0.15 A / 60 W (500 V) 0.13 A / 65 W (600 V) 0.1 A / 60 W
Rated Insulation Voltage (U _i)	acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V acc. to UL/CSA 600 V
Rated Impulse Withstand Voltage (U _{imp})	6 kV
Maximum Mechanical Switching Frequency	3600 cycles per hour
Rated Control Circuit Voltage (U _c)	50 Hz 24 ... 60 V 50 Hz / 60 Hz 24 ... 60 V 60 Hz 24 ... 60 V DC Operation 20 ... 60 V
Operate Time	Between Coil De-energization and NC Contact Closing 13 ... 98 ms Between Coil De-energization and NO Contact Opening 11 ... 95 ms Between Coil Energization and NC Contact Opening 38 ... 90 ms Between Coil Energization and NO Contact Closing 40 ... 95 ms
Connecting Capacity Main Circuit	Flexible with Ferrule 1/2x 0.75 ... 6 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 4 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm ² Rigid 1/2x 1 ... 6 mm ²
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm ² Rigid 1/2x 1 ... 2.5 mm ²
Connecting Capacity Control Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm ² Rigid 1/2x 1 ... 2.5 mm ²
Wire Stripping Length	Auxiliary Circuit 10 mm Control Circuit 10 mm Main Circuit 10 mm
Degree of Protection	acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP40 acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP20
Terminal Type	Screw Terminals

Technical UL/CSA

General Use Rating UL/CSA	(600 V AC) 30 A
Horsepower Rating UL/CSA	(120 V AC) Single Phase 1-1/2 hp (200 ... 208 V AC) Three Phase 5 hp (220 ... 240 V AC) Three Phase 5 hp (240 V AC) Single Phase 3 hp (440 ... 480 V AC) Three Phase 10 hp (550 ... 600 V AC) Three Phase 15 hp
Tightening Torque UL/CSA	Auxiliary Circuit 11 IA Control Circuit 11 IA Main Circuit 13 IA

Environmental

Ambient Air Temperature	Close to Contactor Fitted with Thermal O/L Relay -25 ... +60 °C Close to Contactor without Thermal O/L Relay -40 ... +70 °C Close to Contactor for Storage -60 ... +80 °C
Climatic Withstand	Category B according to IEC 60947-1 Annex Q
Maximum Operating Altitude Permissible	3000 m
Resistance to Vibrations acc. to IEC 60068-2-6	5 ... 300 Hz 4 g closed position / 2 g open position
Resistance to Shock acc. to IEC 60068-2-27	Closed, Shock Direction: A 30 K40 Closed, Shock Direction: B1 25 K40 Closed, Shock Direction: B2 15 K40

Closed, Shock Direction: C1 25 K40

Closed, Shock Direction: C2 25 K40

RoHS Status

Following EU Directive 2011/65/EU

Certificates and Declarations (Document Number)

CB Certificate	CB_SE-96551
CCC Certificate	CCC_2010010304445624
CQC Certificate	CQC2010010304445624
cUL Certificate	UL_20180227_E312527_7_1
Declaration of Conformity - CCC	2020980304001253
Declaration of Conformity - CE	1SBD250022U1000
DNV Certificate	DNV-GL_TAE00001AF-3
DNV GL Certificate	DNV-GL_TAE00001AF-3
EAC Certificate	EAC_RUC-FRME77B03199
GL Certificate	DNV-GL_TAE00001AF-3
Instructions and Manuals	1SBC101052M6801
RINA Certificate	RINA_ELE240318XG
RMRS Certificate	RMRS_1802705280
RoHS Information	1SBD250022U1000
UL Listing Card	E312527

Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	87 mm
Package Level 1 Depth / Length	113 mm
Package Level 1 Height	47 mm
Package Level 1 Gross Weight	0.32 kg
Package Level 1 EAN	3471523005464
Package Level 2 Units	box 18 piece
Package Level 2 Width	250 mm
Package Level 2 Depth / Length	300 mm
Package Level 2 Height	315 mm
Package Level 2 Gross Weight	11.52 kg
Package Level 3 Units	864 piece

Classifications

Object Classification Code	Q
ETIM 4	EC000066 - Magnet contactor, AC-switching
ETIM 5	EC000066 - Magnet contactor, AC-switching
ETIM 6	EC000066 - Power contactor, AC switching
ETIM 7	EC000066 - Power contactor, AC switching
eClass	V11.0 : 27371003
UNSPSC	39121529
E-Number (Finland)	3708053

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors

