

PRODUCT-DETAILS

# AF146-30-22-11

## AF146-30-22-11 Contactor



### General Information

Extended Product Type	AF146-30-22-11
Product ID	1SFL467001R1122
EAN	7320500481998
Catalog Description	AF146-30-22-11 Contactor

### Long Description

The AF146-30-22-11 is a 3 pole - 1000 V IEC or 600 V UL contactor with pre-mounted auxiliary contacts and double clamp, controlling motors up to 75 kW / 400 V AC (AC-3) or 100 hp / 480 V UL and switching power circuits up to 225 A (AC-1) or 200 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (24-60 V 50/60 Hz and 20-60 V DC), managing large control voltage variations, reducing panel energy consumptions and ensuring distinct operations in unstable networks. Furthermore, surge protection is built-in, offering a compact solution. AF contactors have a block type design, can be easily extended with add-on auxiliary contact blocks and an additional wide range of accessories.

### Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

### Popular Downloads

Data Sheet, Technical Information	1SBC100192C0206
Instructions and Manuals	1SFC100003M0201
Dimension Diagram	1SFB535001G1051

## Dimensions

Product Net Width	90 mm
Product Net Depth / Length	126 mm
Product Net Height	150 mm
Product Net Weight	1.55 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
Rated Operational Voltage	Main Circuit 1000 V
Rated Frequency (f)	Main Circuit 50/60 Hz
Conventional Free-air Thermal Current ( $I_{th}$ )	acc. to IEC 60947-4-1, Open Contactors $q = 40^\circ\text{C}$ 225 A
Rated Operational Current AC-1 ( $I_e$ )	(1000 V) $40^\circ\text{C}$ 225 A (1000 V) $55^\circ\text{C}$ 200 A (1000 V) $60^\circ\text{C}$ 200 A (1000 V) $70^\circ\text{C}$ 175 A (690 V) $40^\circ\text{C}$ 225 A (690 V) $55^\circ\text{C}$ 200 A (690 V) $60^\circ\text{C}$ 200 A (690 V) $70^\circ\text{C}$ 175 A
Rated Operational Current AC-3 ( $I_e$ )	(415 V) $55^\circ\text{C}$ 146 A (440 V) $55^\circ\text{C}$ 146 A (500 V) $55^\circ\text{C}$ 130 A (690 V) $55^\circ\text{C}$ 93 A (1000 V) $55^\circ\text{C}$ 60 A (380 / 400 V) $55^\circ\text{C}$ 146 A (220 / 230 / 240 V) $55^\circ\text{C}$ 146 A
Rated Operational Power AC-3 ( $P_e$ )	(415 V) 75 kW (440 V) 90 kW (500 V) 90 kW (690 V) 90 kW (1000 V) 75 kW (380 / 400 V) 75 kW (220 / 230 / 240 V) 45 kW
Rated Breaking Capacity AC-3 acc. to IEC 60947-4-1	8 x $I_e$ AC-3
Rated Making Capacity AC-3 acc. to IEC 60947-4-1	10 x $I_e$ AC-3
Short-Circuit Protective Devices	gG Type Fuses 315 A
Rated Short-time Withstand Current ( $I_{cw}$ )	at $40^\circ\text{C}$ Ambient Temp, in Free Air, from a Cold State 10 s 1168 A at $40^\circ\text{C}$ Ambient Temp, in Free Air, from a Cold State 15 min 200 A at $40^\circ\text{C}$ Ambient Temp, in Free Air, from a Cold State 1 min 477 A at $40^\circ\text{C}$ Ambient Temp, in Free Air, from a Cold State 1 s 1460 A at $40^\circ\text{C}$ Ambient Temp, in Free Air, from a Cold State 30 s 674 A
Maximum Breaking Capacity	$\cos \phi = 0.45$ ( $\cos \phi = 0.35$ for $I_e > 100$ A) at 440 V 3000 A $\cos \phi = 0.45$ ( $\cos \phi = 0.35$ for $I_e > 100$ A) at 690 V 1500 A
Maximum Electrical Switching Frequency	(AC-1) 300 cycles per hour (AC-2 / AC-4) 150 cycles per hour (AC-3) 300 cycles per hour
Rated Insulation Voltage ( $U_i$ )	acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V acc. to UL/CSA 600 V
Rated Impulse Withstand Voltage ( $U_{imp}$ )	Main Circuit 8 kV

Mechanical Durability	5 million
Maximum Mechanical Switching Frequency	300 cycles per hour
Coil Operating Limits	(acc. to IEC 60947-4-1) 0.85 x Uc Min. ... 1.1 x Uc Max. (at $\theta \leq 70^\circ\text{C}$ )
Rated Control Circuit Voltage ( $U_c$ )	50 Hz 24 ... 60 V 60 Hz 24 ... 60 V DC Operation 20 ... 60 V
Coil Consumption	Holding at Max. Rated Control Circuit Voltage 50 Hz 5.5 V-A Holding at Max. Rated Control Circuit Voltage 60 Hz 5.5 V-A Holding at Max. Rated Control Circuit Voltage DC 2.5 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 225 V-A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 225 V-A Pull-in at Max. Rated Control Circuit Voltage DC 210 W
Operate Time	Between Coil De-energization and NO Contact Opening 37 ... 47 ms Between Coil Energization and NO Contact Closing 25 ... 55 ms
Connecting Capacity Main Circuit	Flexible 2 x 10 ... 70 mm <sup>2</sup> Rigid Cu-Cable 1 x 10 ... 95 mm <sup>2</sup>
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible 2x0.75 ... 2.5 mm <sup>2</sup> Solid 1 x 1 ... 4 mm <sup>2</sup> Stranded 2 x 1 ... 4 mm <sup>2</sup>
Degree of Protection	acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP00
Terminal Type	Double Clamp

## Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 1000 V
General Use Rating UL/CSA	(600 V AC) 200 A
Horsepower Rating UL/CSA	(200 V AC) Three Phase 40 hp (208 V AC) Three Phase 40 hp (220 ... 240 V AC) Three Phase 50 hp (440 ... 480 V AC) Three Phase 100 hp (550 ... 600 V AC) Three Phase 125 hp

## Environmental

Ambient Air Temperature	Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 Uc) -25 ... +50 °C Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 Uc) -40 ... +70 °C Close to Contactor for Storage -40 ... +70 °C
Maximum Operating Altitude Permissible	3000 m
RoHS Status	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019

## Certificates and Declarations (Document Number)

ABS Certificate	14-LD1092198-PDA
BV Certificate	BV_36353_A0BV
CB Certificate	SEMKO_SE-70479M1
CCC Certificate	2013010304604055
CCS Certificate	GB14T00030
CQC Certificate	CQC2013010304604055
cUL Certificate	20120925-E36588
Declaration of Conformity - CCC	2020980304001304
Declaration of Conformity - CE	2CMT2015-005439
DNV Certificate	DNV_E-14043
DNV GL Certificate	DNV_E-14043

EAC Certificate	9AKK107046A8618
Environmental Information	2CMT004732 1SAC200032H0002
GL Certificate	DNV_E-14043
Instructions and Manuals	1SFC100003M0201
KC Certificate	9AKK107046A9910
LR Certificate	LR_14_70011(E1)
PRS Certificate	TE_2092_880423_16
RINA Certificate	ELE060313XG_002
RMRS Certificate	9AKK107045A6978
RoHS Information	2CMT2015-005439
UL Listing Card	UL_E36588

## Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	207 mm
Package Level 1 Depth / Length	216 mm
Package Level 1 Height	150 mm
Package Level 1 Gross Weight	1.75 kg
Package Level 1 EAN	7320500481998

## 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
IDEA Granular Category Code (IGCC)	4755 >> Contactors
E-Number (Finland)	3706365

## Categories

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

