

PRODUCT-DETAILS

# AF110B-30-11-70

## AF110B-30-11 100-250V 50/60Hz / DC

### Contactors




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#### General Information

Extended Product Type	AF110B-30-11-70
Product ID	1SFL457063R7011
EAN	7320500356425
Catalog Description	AF110B-30-11 100-250V 50/60Hz / DC Contactor
Long Description	A 3-phase Contactor suitable for Rail way applications application. Operated with a wide voltage control voltage range 100-250 V, AC/DC

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#### Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900
Replacement Product ID (NEW)	1SFL427063R1322

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#### Popular Downloads

Data Sheet, Technical Information	1SBC100192C0206
Instructions and Manuals	5309660-60
Dimension Diagram	53540923-8

## Dimensions

Product Net Width	102 mm
Product Net Depth / Length	123.5 mm
Product Net Height	148 mm
Product Net Weight	1.9 kg

## Technical

Number of Main Contacts NO	3
Number of Main Contacts NC	0
Number of Auxiliary Contacts NO	1
Number of Auxiliary Contacts NC	1
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 $q = 40^\circ\text{C}$ 160 A
Rated Operational Current AC-1 ( $I_e$ )	(690 V) $40^\circ\text{C}$ 160 (690 V) $55^\circ\text{C}$ 145 (690 V) $70^\circ\text{C}$ 130
Rated Operational Current AC-3 ( $I_e$ )	(415 V) $55^\circ\text{C}$ 110 A (440 V) $55^\circ\text{C}$ 100 A (500 V) $55^\circ\text{C}$ 100 A (690 V) $55^\circ\text{C}$ 82 A (1000 V) $55^\circ\text{C}$ 30 A (380 / 400 V) $55^\circ\text{C}$ 110 A (220 / 230 / 240 V) $55^\circ\text{C}$ 110
Rated Operational Power AC-3 ( $P_e$ )	(415 V) 59 kW (440 V) 59 kW (500 V) 59 kW (690 V) 75 kW (1000 V) 40 kW (380 / 400 V) 55 kW (220 / 230 / 240 V) 30 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 160 A
Maximum Breaking Capacity	$\cos \phi = 0.45$ ( $\cos \phi = 0.35$ for $I_e > 100$ A) at 440 V 1160 A $\cos \phi = 0.45$ ( $\cos \phi = 0.35$ for $I_e > 100$ A) at 690 V 800 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 Operational Current DC-1 ( $I_e$ )	(110 V) 2 Poles in Series, $40^\circ\text{C}$ 160 A (220 V) 3 Poles in Series, $40^\circ\text{C}$ 160 A
Rated Operational Current DC-3 ( $I_e$ )	(110 V) 2 Poles in Series, $40^\circ\text{C}$ 160 A (220 V) 3 Poles in Series, $40^\circ\text{C}$ 160 A
Rated Operational Current	(110 V) 2 Poles in Series, $40^\circ\text{C}$ 160 A

DC-5 ( $I_e$ )	(220 V) 3 Poles in Series, 40 °C 160 A
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	10 million
Maximum Mechanical Switching Frequency	300 cycles per hour
Coil Operating Limits	(acc. to IEC 60947-4-1) 0.85 x $U_c$ Min. ... 1.1 x $U_c$ Max. (at $\theta \leq 70$ °C)
Rated Control Circuit Voltage ( $U_c$ )	50 Hz 48 ... 130 V 60 Hz 48 ... 130 V DC Operation 48 ... 130 V
Coil Consumption	Holding at Max. Rated Control Circuit Voltage 50 Hz 7 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 7 V·A Holding at Max. Rated Control Circuit Voltage DC 2 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 350 V·A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 350 V·A Pull-in at Max. Rated Control Circuit Voltage DC 400 W
Operate Time	Between Coil De-energization and NC Contact Closing 60 ... 130 ms Between Coil De-energization and NO Contact Opening 55 ... 125 ms Between Coil Energization and NC Contact Opening 27 ... 77 ms Between Coil Energization and NO Contact Closing 30 ... 80 ms
Connecting Capacity Main Circuit	Bar 30 mm <sup>2</sup> Flexible with Cable End 2 x 6 ... 35 mm <sup>2</sup> Rigid 2 x 6 ... 65 mm <sup>2</sup>
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm <sup>2</sup> Flexible 1x0.75 ... 2.5 mm <sup>2</sup> Solid 2 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 IP10
Connecting Terminals (delivered in open position) Main Poles	M8 hexagon socket screw with single connector
Terminal Type	Cable Clamp

## Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 600 V
General Use Rating UL/CSA	(600 V AC) 140 A
Horsepower Rating UL/CSA	(200 V AC) Three Phase 30 hp (208 V AC) Three Phase 30 hp (220 ... 240 V AC) Three Phase 40 hp (440 ... 480 V AC) Three Phase 75 hp (550 ... 600 V AC) Three Phase 100 hp

## Environmental

Ambient Air Temperature	Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 $U_c$ ) -25 ... +50 °C Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 $U_c$ ) -40 ... +70 °C Close to Contactor for Storage -60 ... +80 °C
Maximum Operating Altitude Permissible	3000 m
Resistance to Shock acc.	Half-sine Pulse for 11 ms, No Change in Contact Position, Open, Shock

to IEC 60068-2-27

Direction: A 20 K40  
 Half-sine Pulse for 11 ms, No Change in Contact Position, Closed, Shock  
 Direction: A 20 K40  
 Half-sine Pulse for 11 ms, No Change in Contact Position, Closed, Shock  
 Direction: B1 15 K40  
 Half-sine Pulse for 11 ms, No Change in Contact Position, Closed, Shock  
 Direction: C1 20 K40  
 Half-sine Pulse for 11 ms, No Change in Contact Position, Closed, Shock  
 Direction: C2 20 K40  
 Half-sine Pulse for 11 ms, No Change in Contact Position, Open, Shock  
 Direction: B1 5 K40  
 Half-sine Pulse for 11 ms, No Change in Contact Position, Open, Shock  
 Direction: B2 15 K40  
 Half-sine Pulse for 11 ms, No Change in Contact Position, Open, Shock  
 Direction: C1 20 K40  
 Half-sine Pulse for 11 ms, No Change in Contact Position, Open, Shock  
 Direction: C2 20 K40

RoHS Status Following EU Directive 2011/65/EU

**Certificates and Declarations (Document Number)**

BV Certificate	13409/C0 BV
CB Certificate	SE-73667
CCC Certificate	CQC_2002010304007860
CQC Certificate	CQC2002010304007860
Declaration of Conformity - CCC	2020980304001857
Declaration of Conformity - CE	2CMT2015-005436
EAC Certificate	9AKK107046A8618
Environmental Information	1SFC101006D0201
GL Certificate	GL_20260-04HH
Instructions and Manuals	5309660-60
LOVAG Certificate	SE-0145185
LR Certificate	LR_04-00015-E1
RINA Certificate	ELE060313XG/002
RMRS Certificate	RMRS_12-03683-315
RoHS Information	2CMT2015-005436

**Container Information**

Package Level 1 Units	box 1 piece
Package Level 1 Width	130 mm
Package Level 1 Depth / Length	265 mm
Package Level 1 Height	162 mm
Package Level 1 Gross Weight	2.1 kg
Package Level 1 EAN	7320500356425

**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

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## Categories

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

