

# AF1650-30-11-70



AF1650-30-11 100-250V 50/60Hz / 100-250V DC Contactor

## General Information

Extended Product Type	AF1650-30-11-70
Product ID	1SFL677001R7011
EAN	7320500249703
Catalog Description	AF1650-30-11 100-250V 50/60Hz / 100-250V DC Contactor
Long Description	A 3-phase Contactor suitable for various applications such as Motor starting, Isolation, By-pass and Distribution application up to max 1000 V. Operated with wide control voltage range 100-250 V, AC/DC

## Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

## Popular Downloads

Data Sheet, Technical Information	1SBC100192C0206
Instructions and Manuals	1SFC101002M5501
Dimension Diagram	53540930-7

## Dimensions

Product Net Width	438 mm
Product Net Depth / Length	244 mm
Product Net Height	392 mm
Product Net Weight	33 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 $q = 40$ °C 1650 A
Rated Operational Current AC-1 ( $I_e$ )	(690 V) 55 °C 1450 A (690 V) 40 °C 1650 A

	(1000 V) 40 °C 1650 A (1000 V) 55 °C 1450 A (690 V) 70 °C 1270 A (1000 V) 70 °C 1270 A
Rated Operational Current AC-3 ( $I_e$ )	(690 V) 55 °C 970 A (500 V) 55 °C 970 A (440 V) 55 °C 1060 A (415 V) 55 °C 1060 A (380 / 400 V) 55 °C 1060 A (220 / 230 / 240 V) 55 °C 1060 A
Rated Operational Power AC-3 ( $P_e$ )	(220 / 230 / 240 V) 315 kW (380 / 400 V) 560 kW (415 V) 630 kW (440 V) 710 kW (500 V) 710 kW (690 V) 1000 kW (1000 V) 600 kW
Rated Making Capacity AC-3 acc. to IEC 60947-4-1	10 x $I_e$ AC-3
Rated Short-time Withstand Current ( $I_{cw}$ )	at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 7500 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 2200 A at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 10000 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 12000 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 5500 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 12000 A
Maximum Electrical Switching Frequency	AC-3 60 cycles per hour AC-1 60 cycles per hour AC-2 / AC-4 60 cycles per hour
Rated Operational Current DC-1 ( $I_e$ )	(850 V) 3 Poles in Series, 40 °C 1650 A (600 V) 3 Poles in Series, 40 °C 1650 A (220 V) 3 Poles in Series, 40 °C 1650 A
Rated Operational Current DC-3 ( $I_e$ )	(850 V) 3 Poles in Series, 40 °C 1650 A (600 V) 3 Poles in Series, 40 °C 1650 A (220 V) 3 Poles in Series, 40 °C 1650 A
Rated Operational Current DC-5 ( $I_e$ )	(850 V) 3 Poles in Series, 40 °C 1650 A (600 V) 3 Poles in Series, 40 °C 1650 A (220 V) 3 Poles in Series, 40 °C 1650 A
Rated Insulation Voltage ( $U_i$ )	acc. to UL/CSA 600 V acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V
Rated Impulse Withstand Voltage ( $U_{imp}$ )	Main Circuit 8 kV
Mechanical Durability	0.5 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) °C
Rated Control Circuit Voltage ( $U_c$ )	60 Hz 100 ... 250 V 50 Hz 100 ... 250 V DC Operation 100 ... 250 V
Coil Consumption	Pull-in at Max. Rated Control Circuit Voltage 60 Hz 2450 V·A Holding at Max. Rated Control Circuit Voltage DC 20.5 V·A Holding at Max. Rated Control Circuit Voltage 50 Hz 48 V·A Pull-in at Max. Rated Control Circuit Voltage DC 2290 V·A Pull-in at Max. Rated Control Circuit Voltage 50 Hz 2450 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 48 V·A
Operate Time	Between Coil Energization and NO Contact Closing 50 ... 80 ms Between Coil De-energization and NO Contact Opening 35 ... 55 ms Between Coil De-energization and NC Contact Closing 35 ... 55 ms Between Coil Energization and NC Contact Opening 50 ... 80 ms
Connecting Capacity Main Circuit	Bar 100 mm
Connecting Capacity Auxiliary Circuit	Solid 2 x 1 ... 4 mm <sup>2</sup> Flexible with Insulated Ferrule 1 x 0.75 ... 2.5 mm <sup>2</sup> Stranded 2 x 1 ... 4 mm <sup>2</sup> Flexible 2x0.75 ... 2.5 mm <sup>2</sup> Flexible with Ferrule 2 x 0.75 ... 2.5 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	Main Circuit: Bars

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## 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

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## Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 600 V
General Use Rating UL/CSA	(600 V AC) 1650 A
Horsepower Rating UL/CSA	(440 ... 480 V AC) Three Phase 900 Hp (550 ... 600 V AC) Three Phase 1150 Hp (220 ... 240 V AC) Three Phase 450 Hp

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## Certificates and Declarations (Document Number)

ABS Certificate	15-LD1408622-PDA
BV Certificate	BV_13409-C0BV
CB Certificate	SEMKO_SE-74013
CCC Certificate	CQC_2003010304101933
CCS Certificate	GB14T00030
cUL Certificate	UL_20130904-E73397
Declaration of Conformity - CE	2CMT2015-005436
DNV GL Certificate	TAE00001W1
EAC Certificate	9AKK107046A8618
Environmental Information	1SFC101014D0201
GL Certificate	GL_20263-04HH
Instructions and Manuals	1SFC101002M5501
LOVAG Certificate	SE-201993
LR Certificate	16-20064
PRS Certificate	TE_2092_880423_16
RINA Certificate	ELE060313XG_002
RMRS Certificate	9AKK107045A6978
RoHS Information	2CMT2016-007400
UL Listing Card	UL_E73397

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## Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	250 mm
Package Level 1 Depth / Length	440 mm
Package Level 1 Height	430 mm
Package Level 1 Gross Weight	38 kg
Package Level 1 EAN	7320500249703
Package Level 2 Units	1 piece

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## Classifications

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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
UNSPSC	39121529
E-Number (Norway)	4115390
E-Number (Sweden)	4115390

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## Categories

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

