PRODUCT-DETAILS

AF1650-30-22-70

AF1650-30-22 100-250V 50/60Hz / 100-250V DC Contactor

General Information

Extended Product Type	AF1650-30-22-70
Product ID	1SFL677001R7022
EAN	7320500249710
Catalog Description	AF1650-30-22 100-250V 50/60Hz / 100-250V DC Contactor
Long Description	The AF1650-30-22-70 is a 3 pole - 1000 V IEC or 1000 V UL contactor pre-mounted auxiliary contacts and and Main Circuit Bars, controlling motors up to 560 kW / 400 V AC (AC-3) or 900 hp / 480 V UL and switching power circuits up to 1650 A (AC-1) or 1650 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (100-250 V 50/60 Hz and 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	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	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 °C 1650 A
Rated Operational Current AC-1 (I_e)	(1000 V) 40 °C 1650 A (1000 V) 55 °C 1450 A (1000 V) 70 °C 1270 A (690 V) 40 °C 1650 A (690 V) 55 °C 1450 A (690 V) 70 °C 1270 A
Rated Operational Current AC-3 (I_e)	(415 V) 55 °C 1060 A (440 V) 55 °C 1060 A (500 V) 55 °C 970 A (690 V) 55 °C 970 A (1000 V) 55 °C 400 A (380 / 400 V) 55 °C 1060 A (220 / 230 / 240 V) 55 °C 1060
Rated Operational Power AC-3 (P_e)	(415 V) 630 kW (440 V) 710 kW (500 V) 710 kW (690 V) 1000 kW (1000 V) 600 kW (380 / 400 V) 560 kW (220 / 230 / 240 V) 315 kW
Rated Making Capacity AC-3	10 x Ie AC-3
Rated Short-time Withstand Current Low Voltage (I_{cw})	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 15 min 2200 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 5500 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 30 s 7500 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for Ie > 100 A) at 440 V 12000 A
Maximum Electrical Switching Frequency	(AC-1) 60 cycles per hour (AC-2 / AC-4) 60 cycles per hour (AC-3) 60 cycles per hour
Rated Operational Current	(110 V) 1-Pole, 40 °C 1650 A

DC-1 (I_e)	(110 V) 2 Poles in Series, 40 °C 1650 A (220 V) 3 Poles in Series, 40 °C 1650 A (600 V) 3 Poles in Series, 40 °C 1650 A (850 V) 3 Poles in Series, 40 °C 1650 A
Rated Insulation Voltage (U_i)	acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V acc. to UL/CSA 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 Uc Min. ... 1.1 x Uc Max. (at θ ≤ 70 °C)
Rated Control Circuit Voltage (U_c)	50 Hz 100 ... 250 V 60 Hz 100 ... 250 V DC Operation 100 ... 250 V
Coil Consumption	Holding at Max. Rated Control Circuit Voltage 50 Hz 48 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 48 V·A Holding at Max. Rated Control Circuit Voltage DC 20.5 V·A Pull-in at Max. Rated Control Circuit Voltage 50 Hz 2450 V·A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 2450 V·A Pull-in at Max. Rated Control Circuit Voltage DC 2290 V·A
Operate Time	Between Coil De-energization and NC Contact Closing 35 ... 55 ms Between Coil De-energization and NO Contact Opening 35 ... 55 ms Between Coil Energization and NC Contact Opening 50 ... 80 ms Between Coil Energization and NO Contact Closing 50 ... 80 ms
Connecting Capacity Main Circuit	Bar 100 mm²
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 2x 0.75 ... 2.5 mm² Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm² Flexible 2x0.75 ... 2.5 mm² Solid 2 x 1 ... 4 mm² Stranded 2 x 1 .... 4 mm²
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

Technical UL/CSA

NEMA Size	8
Horsepower Rating NEMA	(230 V AC) Three Phase 450 Hp (460 V AC) Three Phase 900 Hp (575 V AC) Three Phase 900 Hp
Maximum Operating Voltage UL/CSA	Main Circuit 1000 V
General Use Rating UL/CSA	(1000 V AC) 1650 A (600 V AC) 1650 A
Horsepower Rating UL/CSA	(220 ... 240 V AC) Three Phase 450 hp (440 ... 480 V AC) Three Phase 900 hp (550 ... 600 V AC) Three Phase 1150 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	Without Derating 3000 m
RoHS Status	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019

Certificates and Declarations (Document Number)

ABS Certificate	15-LD1408622-PDA
BV Certificate	BV_13409-C0BV
CB Certificate	SEMKO_SE-74013
CCS Certificate	GB14T00030
CQC Certificate	CQC2003010304101933 CQC2015010304752548
cUL Certificate	UL_20130904-E73397
Declaration of Conformity - CCC	2020980304001303 2020980304001043
Declaration of Conformity - CE	2CMT2019-005796
DNV GL Certificate	TAE00001W1
EAC Certificate	9AKK107046A8618
Environmental Information	1SFC101014D0201 1SAC200046H0008
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	2CMT2019-005796
UL Listing Card	UL_E73397

Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	555 mm
Package Level 1 Depth / Length	365 mm
Package Level 1 Height	500 mm
Package Level 1 Gross Weight	35 kg
Package Level 1 EAN	7320500249710
Package Level 2 Units	1 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
ETIM 8	EC000066 - Power contactor, AC switching
eClass	V11.0 : 27371003

UNSPSC	39121529
IDEA Granular Category Code (IGCC)	4755 >> Contactors
E-Number (Finland)	3707165

Categories

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