



PRODUCT-DETAILS

AF140-40-00-14

AF140-40-00-14 Contactor



General Information	
Extended Product Type	AF140-40-00-14
Product ID	1SFL447101R1400
EAN	7320500505298
Catalog Description	AF140-40-00-14 Contactor
Long Description	The AF140-40-00-14 is a 4 pole - 690 V IEC or 600 V UL contactor with double clamp, controlling motors up to 75 kW / 400 V AC (AC-3) / and switching power circuits up to 200 A (AC-1) or 175 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (250-500 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

EPLAN Data	9AAC174539_EPLAN
Data Sheet, Technical Information	1SBC100214C0202
Data Sheet, Technical Information (Part 2)	1SAC200017M0002
Instructions and Manuals	1SFC100003M0201
CAD Dimensional Drawing	2CDC001079B0201

Dimensions

Product Net Width	120 mm
Product Net Depth / Length	128 mm
Product Net Height	150 mm
Product Net Weight	2.05 kg
Dimension Diagram	1SFB535001G1121

Technical

Number of Main Contacts NO	4
Number of Main Contacts NC	0
Number of Auxiliary Contacts NO	0
Number of Auxiliary Contacts NC	0
Number of Poles	4P
Rated Operational Voltage	Main Circuit 690 V
Rated Frequency (f)	Main Circuit 60 Hz Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current (I_{th})	acc. to IEC 60947-4-1, Open Contactors $\Theta = 40^\circ\text{C}$ 200 A
Rated Operational Current AC-1 (I_e)	(690 V) 40 °C 200 A (690 V) 60 °C 175 A (690 V) 70 °C 160 A
Rated Operational Current AC-3 (I_e)	(415 V) 55 °C 140 A (440 V) 55 °C 140 A (380 / 400 V) 55 °C 140 A (220 / 230 / 240 V) 55 °C 140 A
Rated Operational Power AC-3 (P_e)	(415 V) 75 kW (440 V) 90 kW (380 / 400 V) 75 kW (220 / 230 / 240 V) 37 kW
Rated Breaking Capacity AC-3	8 x I_e AC-3
Rated Breaking Capacity AC-3e	8.5 x I_e AC-3e
Rated Making Capacity AC-3	10 x I_e AC-3
Rated Making Capacity AC-3e	12 x I_e AC-3e
Short-Circuit Protective Devices	gG Type Fuses 250 A

Rated Short-time Withstand Current Low Voltage (I_{cw})	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 200 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 674 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 1460 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1168 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 477 A
Maximum Breaking Capacity	$\cos \phi = 0.45$ ($\cos \phi = 0.35$ for $I_e > 100$ A) at 440 V 3000 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
Maximum Electrical Switching Frequency	(AC-1) 300 cycles per hour (AC-3) 300 cycles per hour
Mechanical Durability	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)
Rated Control Circuit Voltage (U_c)	50 Hz 250 ... 500 V 60 Hz 250 ... 500 V DC Operation 250 ... 500 V
Coil Consumption	Average Pull-in Value 50 Hz 260 V-A Average Pull-in Value 60 Hz 260 V-A Holding at Max. Rated Control Circuit Voltage 50 Hz 16.1 V-A Holding at Max. Rated Control Circuit Voltage 60 Hz 16.1 V-A Holding at Max. Rated Control Circuit Voltage DC 4 V-A Holding at Max. Rated Control Circuit Voltage DC 4 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 205 V-A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 205 V-A Pull-in at Max. Rated Control Circuit Voltage DC 230 V-A Pull-in at Max. Rated Control Circuit Voltage DC 230 W
Power Loss	18 W at Rated Operating Conditions per Pole 18 W
Operate Time	Between Coil De-energization and NO Contact Opening 40 ... 70 ms Between Coil Energization and NO Contact Closing 20 ... 55 ms
Connecting Capacity Main Circuit	Flexible 2 x 10 ... 70 mm ² Rigid Cu-Cable 1 x 10 ... 95 mm ² Rigid Cu-Cable 2 x 10 ... 95 mm ²
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm ² Flexible 2x0.75 ... 2.5 mm ² Solid 1 x 1 ... 4 mm ² Solid 2 x 1 ... 4 mm ² Stranded 2 x 1 ... 4 mm ²
Connecting Capacity	Flexible 2 x 10 ... 70 mm ² Rigid Cu-Cable 2 x 10 ... 95 mm ²
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 IP00
Tightening Torque	Cable Lug 9 N-m Main Circuit 8 N-m
Terminal Type	Double Clamp
Product Name	Block Contactor

Technical UL/CSA

NEMA Size	4
Horsepower Rating NEMA	(200 V AC) Three Phase 40 Hp (230 V AC) Three Phase 50 Hp (460 V AC) Three Phase 100 Hp (575 V AC) Three Phase 100 Hp
Maximum Operating Voltage UL/CSA	Main Circuit 600 V

General Use Rating	(600 V AC) 200 A
UL/CSA	
Horsepower Rating	(200 ... 208 V AC) Three Phase 15 Hp
UL/CSA	(200 V AC) Three Phase 40 hp
	(208 V AC) Three Phase 40 hp
	(220 ... 240 V AC) Three Phase 20 Hp
	(220 ... 240 V AC) Three Phase 50 hp
	(440 ... 480 V AC) Three Phase 40 Hp
	(440 ... 480 V AC) Three Phase 100 hp
	(550 ... 600 V AC) Three Phase 50 Hp
	(550 ... 600 V AC) Three Phase 125 hp

Environmental

Ambient Air	Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 Uc) -25 ... 50 °
Temperature	C
	Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 Uc) -25 ... 55 °
	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	Without Derating 3000 m
Altitude Permissible	

Material Compliance

Conflict Minerals	9AKK108467A5658
Reporting Template (CMRT)	
REACH Declaration	2CMT2021-006202
RoHS Declaration	2CMT2021-006277
RoHS Information	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019
Toxic Substances Control Act - TSCA	2CMT2023-006525
WEEE B2C / B2B	Business To Business
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)

ABB EcoSolutions

ABB EcoSolutions	Yes
ABB Site Meeting Group	Non-hazardous waste is sent to a landfill, where there is no alternative
Waste To Landfill Target	option available within 100km of a facility
End Of Life	1SFC100112M0001
Disassembling	
Instructions	
Environmental Product Declaration - EPD	1SFC100092D0201
Improved Energy Efficiency for Customers	Product Efficiency - Product requires less energy to operate compared to similar product on market or older products from the same line
Recyclability Rate of the Product acc. to EN45555	Design for Closing Resource Loops - Standard EN45555 - 87.8 %
Sustainable Material Content in Product (wt. %)	Recycled Metal - 37 %

Certificates and Declarations

ABS Certificate	14-LD1092198-PDA
BV Certificate	BV_36353_A0BV

CB Certificate	SEMKO_SE-77317
CQC Certificate	CQC2013010304604055
Declaration of Conformity - CCC	2020980304001304
Declaration of Conformity - CE	2CMT2015-005440
Declaration of Conformity - UKCA	2CMT2020-006118
DNV GL Certificate	DNV_E-14043
EAC Certificate	9AKK107046A8618
KC Certificate	9AKK107046A9911
LR Certificate	LR_14_70011(E1)
PRS Certificate	TE_2092_880423_16
RINA Certificate	ELE060313XG_002
RMRS Certificate	9AKK107045A6978
UL Certificate	E73397_20140710

Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	147 mm
Package Level 1 Depth / Length	197 mm
Package Level 1 Height	155 mm
Package Level 1 Gross Weight	2.25 kg
Package Level 1 EAN	7320500505298

External Classifications and Standards

Object Classification Code	Q
ETIM 7	EC000066 - Power contactor, AC switching
ETIM 8	EC000066 - Power contactor, AC switching
ETIM 9	EC000066 - Power contactor, AC switching
eClass	V11.0 : 27371003
UNSPSC	39121529
IDEA Granular Category Code (IGCC)	4758 >> Iec Contactors
E-Number (Finland)	3706090

Accessories

Identifier	Description	Type	Quantity	Unit Of Measure
1SFN010820R1011	CAL19-11 Auxiliary Contact Block	CAL19-11	1	piece
1SFN010820R3311	CAL19-11B Auxiliary Contact Block	CAL19-11B	1	piece
1SFN010832R1001	CEL19-01 Auxiliary Contact Block	CEL19-01	1	piece
1SFN010832R1010	CEL19-10 Auxiliary Contact Block	CEL19-10	1	piece
1SFN074208R2000	LD146-40 Connection Module	LD146-40	1	piece
1SFN124203R2000	LT140-40L Terminal Shroud	LT140-40L	1	piece
1SFN124801R2000	LT205-40C Terminal Shroud	LT205-40C	1	piece
1SFN074807R2000	LW205-40 Terminal Enlargement	LW205-40	1	piece
1SFN124803R2000	LT205-40L Terminal Shroud	LT205-40L	1	piece
1SFN075407R2000	LW370-40 Terminal Enlargement	LW370-40	1	piece
1SFN125401R2000	LT370-40C Terminal Shroud	LT370-40C	1	piece
1SFN125403R2000	LT370-40L Terminal Shroud	LT370-40L	1	piece

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF140

