



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 33.2 V-A Holding at Max. Rated Control Circuit Voltage 60 Hz 33.2 V-A Holding at Max. Rated Control Circuit Voltage DC 4.3 V-A Holding at Max. Rated Control Circuit Voltage DC 4.3 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 275 V-A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 275 V-A Pull-in at Max. Rated Control Circuit Voltage DC 820 V-A Pull-in at Max. Rated Control Circuit Voltage DC 820 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 UL/CSA	(600 V AC) 200 A
Horsepower Rating UL/CSA	(200 ... 208 V AC) Three Phase 15 Hp (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 Temperature	Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 Uc) -25 ... 50 °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 Altitude Permissible	Without Derating 3000 m

Material Compliance

Conflict Minerals Reporting Template (CMRT)	9AKK108467A5658
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 Waste To Landfill Target	Non-hazardous waste is sent to a landfill, where there is no alternative option available within 100km of a facility UL 2799 Zero Waste To Landfill Validation available
End Of Life Disassembling Instructions	1SFC100112M0001
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 Product Efficiency - Product considered more energy-efficient 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 %

Certificates and Declarations

ABS Certificate	14-LD1092198-PDA 14-LD1092198-1-PDA-DUP
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
KC Certificate	9AKK107046A9911
LR Certificate	16-20064
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 >> lec 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

