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 PRODUCT-DETAILS

# AF140B-40-22RT-13

## AF140B-40-22RT-13 Contactor




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**General Information**

Extended Product Type	AF140B-40-22RT-13
Product ID	1SFL447262R1322
EAN	7320500510001
Catalog Description	AF140B-40-22RT-13 Contactor
Long Description	A 4-pole Contactor suitable for Railway applications such as Motor starting, Isolation, By-pass and Distribution application up to max 690 V. Operated with wide control voltage range 100-250 V, 50 /60 Hz and DC

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**Ordering**

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

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**Popular Downloads**

Data Sheet, Technical Information	1SBC100214C0202
Data Sheet, Technical	1SAC200017M0002

Information (Part 2)

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	1.95 kg

**Technical**

Number of Main Contacts NO	4
Number of Main Contacts NC	0
Number of Auxiliary Contacts NO	2
Number of Auxiliary Contacts NC	2
Number of Poles	4P
Rated Operational Voltage	Main Circuit 1000 V
Rated Frequency (f)	Main Circuit 50 / 60 Hz
Rated Operational Current AC-1 (I <sub>e</sub> )	(690 V) 40 °C 200 A (690 V) 60 °C 175 A (690 V) 70 °C 160 A
Rated Operational Current AC-3 (I <sub>e</sub> )	(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 Current DC-1 (I <sub>e</sub> )	(110 V) 2 Poles in Series, 40 °C 200 A (110 V) 2 Poles in Series, 60 °C 175 A (110 V) 2 Poles in Series, 70 °C 160 A (110 V) 3 Poles in Series, 40 °C 200 A (110 V) 3 Poles in Series, 60 °C 175 A (110 V) 3 Poles in Series, 70 °C 160 A (175 V) 2 Poles in Series, 40 °C 200 A (175 V) 2 Poles in Series, 60 °C 175 A (175 V) 2 Poles in Series, 70 °C 160 A (220 V) 3 Poles in Series, 40 °C 200 A (220 V) 3 Poles in Series, 60 °C 175 A (220 V) 3 Poles in Series, 70 °C 160 A (260 V) 3 Poles in Series, 40 °C 200 A (260 V) 3 Poles in Series, 60 °C 175 A (260 V) 3 Poles in Series, 70 °C 160 A (350 V) 4 Poles in Series, 40 °C 200 A (350 V) 4 Poles in Series, 60 °C 175 A (350 V) 4 Poles in Series, 70 °C 160 A (72 V) 1-Pole, 40 °C 200 A (72 V) 1-Pole, 60 °C 175 A (72 V) 1-Pole, 70 °C 160 A (72 V) 2 Poles in Series, 40 °C 200 A (72 V) 2 Poles in Series, 60 °C 175 A (72 V) 2 Poles in Series, 70 °C 160 A (72 V) 3 Poles in Series, 40 °C 200 A (72 V) 3 Poles in Series, 60 °C 175 A (72 V) 3 Poles in Series, 70 °C 160 A (90 V) 1 Pole, 40 °C 200 A

	(90 V) 1 Pole, 60 °C 175 A (90 V) 1 Pole, 70 °C 160 A
Rated Operational Current DC-3 (I <sub>e</sub> )	(110 V) 2 Poles in Series, 40 °C 160 A (110 V) 2 Poles in Series, 60 °C 160 A (110 V) 2 Poles in Series, 70 °C 160 A (110 V) 3 Poles in Series, 40 °C 160 A (110 V) 3 Poles in Series, 60 °C 160 A (110 V) 3 Poles in Series, 70 °C 160 A (220 V) 3 Poles in Series, 40 °C 160 A (220 V) 3 Poles in Series, 60 °C 160 A (220 V) 3 Poles in Series, 70 °C 160 A (72 V) 2 Poles in Series, 40 °C 160 A (72 V) 2 Poles in Series, 60 °C 160 A (72 V) 2 Poles in Series, 70 °C 160 A (72 V) 3 Poles in Series, 40 °C 160 A (72 V) 3 Poles in Series, 60 °C 160 A (72 V) 3 Poles in Series, 70 °C 160 A
Rated Operational Current DC-5 (I <sub>e</sub> )	(110 V) 2 Poles in Series, 40 °C 160 A (110 V) 2 Poles in Series, 60 °C 160 A (110 V) 2 Poles in Series, 70 °C 160 A (110 V) 3 Poles in Series, 40 °C 160 A (110 V) 3 Poles in Series, 60 °C 160 A (110 V) 3 Poles in Series, 70 °C 160 A (220 V) 3 Poles in Series, 40 °C 160 A (220 V) 3 Poles in Series, 60 °C 160 A (220 V) 3 Poles in Series, 70 °C 160 A (72 V) 2 Poles in Series, 40 °C 160 A (72 V) 2 Poles in Series, 60 °C 160 A (72 V) 2 Poles in Series, 70 °C 160 A (72 V) 3 Poles in Series, 40 °C 160 A (72 V) 3 Poles in Series, 60 °C 160 A (72 V) 3 Poles in Series, 70 °C 160 A
Rated Operational Power AC-3 (P <sub>e</sub> )	(415 V) 75 kW (440 V) 90 kW (500 V) 90 kW (690 V) 75 kW (380 / 400 V) 75 kW (220 / 230 / 240 V) 37 kW
Rated Breaking Capacity AC-3e	8.5 x I <sub>e</sub> AC-3e
Rated Making Capacity AC-3	10 x I <sub>e</sub> AC-3
Rated Making Capacity AC-3e	12 x I <sub>e</sub> AC-3e
Rated Short-time Withstand Current Low Voltage (I <sub>cw</sub> )	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
Rated Insulation Voltage (U <sub>i</sub> )	acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V acc. to UL/CSA 600 V
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 <sub>c</sub> Min. ... 1.1 x U <sub>c</sub> Max. (at θ ≤ 70 °C)
Rated Control Circuit Voltage (U <sub>c</sub> )	50 Hz / 60 Hz 100 ... 250 V DC Operation 100 ... 250 V
Coil Consumption	Holding at Max. Rated Control Circuit Voltage 50 Hz 30.7 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 30.7 V·A Holding at Max. Rated Control Circuit Voltage DC 2.8 V·A Holding at Max. Rated Control Circuit Voltage DC 2.8 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 220 V·A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 220 V·A Pull-in at Max. Rated Control Circuit Voltage DC 275 V·A Pull-in at Max. Rated Control Circuit Voltage DC 275 W

Power Loss	18 W at Rated Operating Conditions per Pole 18 W
Connecting Capacity Main Circuit	Flexible 2 x 10 ... 70 mm <sup>2</sup> Rigid Cu-Cable 2 x 10 ... 95 mm <sup>2</sup>
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 2x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm <sup>2</sup> Flexible 2x0.75 ... 2.5 mm <sup>2</sup> Solid 2 x 1 ... 4 mm <sup>2</sup> Stranded 2 x 1 .... 4 mm <sup>2</sup>
Connecting Capacity	Flexible 2 x 10 ... 70 mm <sup>2</sup> Rigid Cu-Cable 2 x 10 ... 95 mm <sup>2</sup>
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
Terminal Type	Main Circuit: Bars
Product Name	Block Contactor

## Technical UL/CSA

NEMA Size	4
Continuous Current Rating NEMA	135 A
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) 175 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 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	No declaration needed
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
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
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

CB Certificate	SEMKO_SE-77317
CQC Certificate	CQC2013010304604055
Declaration of Conformity - CCC	2020980304001304
Declaration of Conformity - CE	2CMT2015-005440
Declaration of Conformity - UKCA	2CMT2020-006124
UR Certificate	20150602-E73397

### 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	2.15 kg
Package Level 1 EAN	7320500510001

### 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)	4755 >> Contactors

**Accessories**

Identifier	Description	Type	Quantity	Unit Of Measure
1SFN074207R1000	LW140 Terminal Enlargement	LW140	1	piece
1SFN074210R1000	LX140 Terminal Extension	LX140	1	piece
1SFN084211R1000	BER140-4 Connection Set	BER140-4	1	piece
1SFN010820R1011	CAL19-11 Auxiliary Contact Block	CAL19-11	1	piece
1SFN010820R3311	CAL19-11B Auxiliary Contact Block	CAL19-11B	1	piece
1SFN030300R1000	VM19 Mechanical Interlock Unit	VM19	1	piece
1SFN034403R1000	VM140/190 Mechanical Interlock Unit	VM140/190	1	piece
1SFN010829R1011	CAL19-11-RT Auxiliary Contact Block	CAL19-11-RT	1	piece
1SFN010829R3311	CAL19-11B-RT Auxiliary Contact Block	CAL19-11B-RT	1	piece
1SFN124203R1000	LT140-30L Terminal Shroud	LT140-30L	1	piece

**Categories**

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

