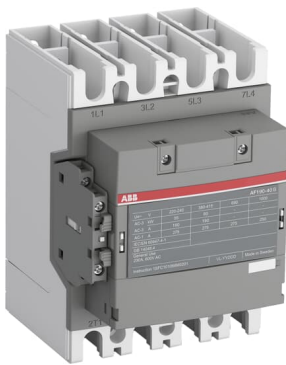




PRODUCT-DETAILS

# AF190-40-11-13

## AF190-40-11-13 Contactor



| General Information   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF190-40-11-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Product ID            | 1SFL487102R1311                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| EAN                   | 7320500504277                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Catalog Description   | AF190-40-11-13 Contactor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Long Description      | The AF190-40-11-13 is a 4 pole - 1000 V IEC or 600 V UL contactor with pre-mounted auxiliary contacts and Main Circuit Bars, controlling motors up to 90 kW / 400 V AC (AC-3) / and switching power circuits up to 275 A (AC-1) or 230 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          | 1SFC100008M0201 |
| CAD Dimensional Drawing           | 2CDC001079B0201 |
| Dimension Diagram                 | 1SFB535001G1122 |

| Dimensions                 |        |
|----------------------------|--------|
| Product Net Width          | 140 mm |
| Product Net Depth / Length | 153 mm |
| Product Net Height         | 196 mm |
| Product Net Weight         | 3.3 kg |

| Technical                                                         |                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts NO                                        | 4                                                                                                                                                                                                                                                                                                                                                    |
| 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 60 Hz                                                                                                                                                                                                                                                                                                                                   |
| Conventional Free-air Thermal Current (I <sub>th</sub> )          | acc. to IEC 60947-4-1, Open Contactors $\Theta$ = 40 °C 275 A                                                                                                                                                                                                                                                                                        |
| Rated Operational Current AC-1 (I <sub>e</sub> )                  | (1000 V) 40 °C 250 A<br>(1000 V) 55 °C 225 A<br>(1000 V) 60 °C 225 A<br>(1000 V) 70 °C 185 A<br>(690 V) 40 °C 275 A<br>(690 V) 55 °C 250 A<br>(690 V) 60 °C 250 A<br>(690 V) 70 °C 200 A                                                                                                                                                             |
| Rated Operational Current AC-3 (I <sub>e</sub> )                  | (415 V) 55 °C 190 A<br>(440 V) 55 °C 190 A<br>(380 / 400 V) 55 °C 190 A<br>(220 / 230 / 240 V) 55 °C 190 A                                                                                                                                                                                                                                           |
| Rated Operational Power AC-3 (P <sub>e</sub> )                    | (415 V) 90 kW<br>(440 V) 110 kW<br>(380 / 400 V) 90 kW<br>(220 / 230 / 240 V) 55 kW                                                                                                                                                                                                                                                                  |
| Rated Breaking Capacity AC-3                                      | 8 x I <sub>e</sub> AC-3                                                                                                                                                                                                                                                                                                                              |
| Rated Making Capacity AC-3                                        | 10 x I <sub>e</sub> AC-3                                                                                                                                                                                                                                                                                                                             |
| Short-Circuit Protective Devices                                  | gG Type Fuses 355 A                                                                                                                                                                                                                                                                                                                                  |
| 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 1520 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 275 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 621 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1900 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 878 A |
| Maximum Breaking                                                  | cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 3300 A                                                                                                                                                                                                                                                                               |

Capacity

|                                                     |                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum Electrical Switching Frequency              | (AC-1) 300 cycles per hour                                                                                                                                                                                                                                                                                                                                               |
| Rated Insulation Voltage (U <sub>i</sub> )          | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V<br>acc. to UL/CSA 600 V                                                                                                                                                                                                                                                                                                |
| Rated Impulse Withstand Voltage (U <sub>imp</sub> ) | Main Circuit 8 kV                                                                                                                                                                                                                                                                                                                                                        |
| 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 100 ... 250 V<br>60 Hz 100 ... 250 V<br>DC Operation 100 ... 250 V                                                                                                                                                                                                                                                                                                 |
| Coil Consumption                                    | Holding at Max. Rated Control Circuit Voltage 50 Hz 7 V·A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 7 V·A<br>Holding at Max. Rated Control Circuit Voltage DC 2.5 W<br>Pull-in at Max. Rated Control Circuit Voltage 50 Hz 220 V·A<br>Pull-in at Max. Rated Control Circuit Voltage 60 Hz 220 V·A<br>Pull-in at Max. Rated Control Circuit Voltage DC 190 W |
| Operate Time                                        | Between Coil De-energization and NO Contact Opening 45 ... 80 ms<br>Between Coil Energization and NO Contact Closing 25 ... 60 ms                                                                                                                                                                                                                                        |
| Connecting Capacity Main Circuit                    | Flexible 2 x 50 ... 95 mm <sup>2</sup><br>Rigid Al-Cable 1 x 95 ... 185 mm <sup>2</sup><br>Rigid Cu-Cable 1 x 6 ... 150 mm <sup>2</sup>                                                                                                                                                                                                                                  |
| Connecting Capacity Auxiliary Circuit               | Flexible with Ferrule 2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible 2x0.75 ... 2.5 mm <sup>2</sup><br>Solid 2 x 1 ... 4 mm <sup>2</sup><br>Stranded 1 x 1 .... 4 mm <sup>2</sup>                                                                                                                        |
| Degree of Protection                                | acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20<br>acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP00                                                                                                                                                                                                                                             |
| Terminal Type                                       | Main Circuit: Bars                                                                                                                                                                                                                                                                                                                                                       |

## Technical UL/CSA

|                                  |                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum Operating Voltage UL/CSA | Main Circuit 1000 V                                                                                                                                                                                                                                                                                                                                    |
| General Use Rating UL/CSA        | (600 V AC) 230 A                                                                                                                                                                                                                                                                                                                                       |
| Horsepower Rating UL/CSA         | (200 ... 208 V AC) Three Phase 20 Hp<br>(200 V AC) Three Phase 50 hp<br>(208 V AC) Three Phase 50 hp<br>(220 ... 240 V AC) Three Phase 25 Hp<br>(220 ... 240 V AC) Three Phase 60 hp<br>(440 ... 480 V AC) Three Phase 60 Hp<br>(440 ... 480 V AC) Three Phase 125 hp<br>(550 ... 600 V AC) Three Phase 75 Hp<br>(550 ... 600 V AC) Three Phase 150 hp |

## Environmental

|                                        |                                                                                                                                                                                                                                            |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Air Temperature                | Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 U <sub>c</sub> ) -25 ... 50 °C<br>Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 U <sub>c</sub> ) -40 ... 70 °C<br>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 Information                            | 2CMT2021-006277                                                        |
| RoHS Status                                 | 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)             |

| Circular Value                                |                                                                                                                                         |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| ABB EcoSolutions                              | Yes                                                                                                                                     |
| Circular Design Principles Recyclability Rate | Design for Closing Resource Loops - Standard EN45555 - 79.2 %                                                                           |
| End of Life Instructions                      | 1SFC100112M0001                                                                                                                         |
| 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                    |
| Improved Resource Efficiency for Customers    | Product Efficiency - Product requires less energy to operate compared to similar product on market or older products from the same line |
| Sustainable Material Content                  | Recycled Metal - 35 %                                                                                                                   |

| Eco Transparency                        |                 |
|-----------------------------------------|-----------------|
| Environmental Product Declaration - EPD | 1SFC100095D0201 |

| Certificates and Declarations    |                     |
|----------------------------------|---------------------|
| ABS Certificate                  | 14-LD1092198-PDA    |
| BV Certificate                   | BV_36353_A0BV       |
| CB Certificate                   | SE-82315            |
| CQC Certificate                  | CQC2014010304676685 |
| Declaration of Conformity - CCC  | 2020980304001306    |
| Declaration of Conformity - CE   | 2CMT2015-005440     |
| Declaration of Conformity - UKCA | 2CMT2020-006118     |
| EAC Certificate                  | 9AKK107046A8618     |
| LR Certificate                   | LR_14_70011(E1)     |
| PRS Certificate                  | TE_2092_880423_16   |
| RINA Certificate                 | ELE060313XG_002     |
| RMRS Certificate                 | 9AKK107045A6978     |
| UL Certificate                   | 20140925-E73397     |

| Container Information |             |
|-----------------------|-------------|
| Package Level 1 Units | box 1 piece |
| Package Level 1 Width | 166 mm      |

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Depth / Length | 238 mm        |
| Package Level 1 Height         | 180 mm        |
| Package Level 1 Gross Weight   | 3.9 kg        |
| Package Level 1 EAN            | 7320500504277 |

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) | 4758 >> lec Contactors                    |
| E-Number (Finland)                 | 3707186                                   |
| E-Number (Norway)                  | 4117783                                   |
| E-Number (Sweden)                  | 3210327                                   |

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 → AF190

