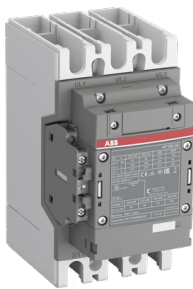




PRODUCT-DETAILS

# AF190-30-11-13

## AF190-30-11-13 Contactor



| General Information   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF190-30-11-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Product ID            | 1SFL487002R1311                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| EAN                   | 7320500480434                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Catalog Description   | AF190-30-11-13 Contactor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Long Description      | The AF190-30-11-13 is a 3 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) or 125 hp / 480 V UL and switching power circuits up to 275 A (AC-1) or 250 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 | 1SBC100214C0202 |
| Instructions and Manuals          | 1SFC100008M0201 |
| CAD Dimensional Drawing           | 2CDC001079B0201 |
| Dimension Diagram                 | 1SFB535001G1056 |

Dimensions

|                            |        |
|----------------------------|--------|
| Product Net Width          | 105 mm |
| Product Net Depth / Length | 152 mm |
| Product Net Height         | 196 mm |
| Product Net Weight         | 2.4 kg |

Technical

|                                                          |                                                                                                                                                                                          |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts NO                               | 3                                                                                                                                                                                        |
| 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 50 / 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>(500 V) 55 °C 156 A<br>(690 V) 55 °C 135 A<br>(1000 V) 55 °C 85 A<br>(380 / 400 V) 55 °C 190 A<br>(220 / 230 / 240 V) 55 °C 190 A          |
| Rated Operational Current AC-3e (I <sub>e</sub> )        | (415 V) 60 °C 190 A<br>(440 V) 60 °C 190 A<br>(500 V) 60 °C 135 A<br>(690 V) 60 °C 135 A<br>(1000 V) 60 °C 85 A<br>(380 / 400 V) 60 °C 190 A<br>(220 / 230 / 240 V) 60 °C 190 A          |
| Rated Operational Power AC-3 (P <sub>e</sub> )           | (415 V) 90 kW<br>(440 V) 110 kW<br>(500 V) 110 kW<br>(690 V) 132 kW<br>(1000 V) 110 kW<br>(380 / 400 V) 90 kW<br>(220 / 230 / 240 V) 55 kW                                               |

|                                                                         |                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated Operational Power<br>AC-3e (P <sub>e</sub> )                      | (415 V) 90 kW<br>(440 V) 110 kW<br>(500 V) 110 kW<br>(690 V) 132 kW<br>(1000 V) 110 kW<br>(380 / 400 V) 90 kW<br>(220 / 230 / 240 V) 55 kW                                                                                                                                                                                                                               |
| Rated Breaking Capacity<br>AC-3                                         | 8 x I <sub>e</sub> AC-3                                                                                                                                                                                                                                                                                                                                                  |
| Rated Breaking Capacity<br>AC-3e                                        | 8.5 x I <sub>e</sub> AC-3e                                                                                                                                                                                                                                                                                                                                               |
| Rated Making Capacity<br>AC-3                                           | 10 x I <sub>e</sub> AC-3                                                                                                                                                                                                                                                                                                                                                 |
| Rated Making Capacity<br>AC-3e                                          | 12 x I <sub>e</sub> AC-3e                                                                                                                                                                                                                                                                                                                                                |
| Short-Circuit Protective<br>Devices                                     | gG Type Fuses 355 A                                                                                                                                                                                                                                                                                                                                                      |
| Rated Short-time<br>Withstand Current Low<br>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<br>Capacity                                            | cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 3300 A<br>cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 690 V 2200 A                                                                                                                                                                                                                         |
| Maximum Electrical<br>Switching Frequency                               | (AC-1) 300 cycles per hour<br>(AC-2 / AC-4) 150 cycles per hour<br>(AC-3) 300 cycles per hour                                                                                                                                                                                                                                                                            |
| Rated Operational<br>Current DC-1 (I <sub>e</sub> )                     | (110 V) 2 Poles in Series, 40 °C 250 A<br>(220 V) 3 Poles in Series, 40 °C 250 A                                                                                                                                                                                                                                                                                         |
| Rated Operational<br>Current DC-3 (I <sub>e</sub> )                     | (110 V) 2 Poles in Series, 40 °C 250 A<br>(220 V) 3 Poles in Series, 40 °C 250 A                                                                                                                                                                                                                                                                                         |
| Rated Operational<br>Current DC-5 (I <sub>e</sub> )                     | (110 V) 2 Poles in Series, 40 °C 250 A<br>(220 V) 3 Poles in Series, 40 °C 250 A                                                                                                                                                                                                                                                                                         |
| Rated Insulation Voltage<br>(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<br>Withstand Voltage (U <sub>imp</sub> )                  | Main Circuit 8 kV                                                                                                                                                                                                                                                                                                                                                        |
| Mechanical Durability                                                   | 5 million                                                                                                                                                                                                                                                                                                                                                                |
| Maximum Mechanical<br>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<br>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 37 ... 47 ms<br>Between Coil Energization and NO Contact Closing 25 ... 55 ms                                                                                                                                                                                                                                        |
| Connecting Capacity<br>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<br>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 2 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) 250 A                                                                                                                                                                       |
| Horsepower Rating UL/CSA         | (200 V AC) Three Phase 50 hp<br>(208 V AC) Three Phase 50 hp<br>(220 ... 240 V AC) Three Phase 60 hp<br>(440 ... 480 V AC) Three Phase 125 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 Uc) -25 ... 50 °C<br>Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 Uc) -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<br>2TFP200018A1001 |

| Certificates and Declarations       |                                            |
|-------------------------------------|--------------------------------------------|
| A2L Certificate – UL                | 9AKK108468A6695                            |
| ABS Certificate                     | 14-LD1092198-PDA                           |
| BV Certificate                      | BV_36353_AOBV                              |
| CB Certificate                      | SE-82315                                   |
| CCS Certificate                     | GB14T00030                                 |
| CQC Certificate                     | CQC2014010304676685<br>CQC2014010304724672 |
| Declaration of<br>Conformity - CCC  | 2020980304001306<br>2020980304001071       |
| Declaration of<br>Conformity - CE   | 2CMT2015-005439                            |
| Declaration of<br>Conformity - UKCA | 2CMT2020-006118                            |
| DNV Certificate                     | DNV_E-14043                                |
| EAC Certificate                     | 9AKK107046A8618                            |
| GL Certificate                      | GL_95072-14HH                              |
| KC Certificate                      | 9AKK107046A9912                            |
| LR Certificate                      | LR_14_70011(E1)                            |
| PRS Certificate                     | TE_2092_880423_16                          |
| RINA Certificate                    | ELE060313XG_002                            |
| RMRS Certificate                    | 9AKK107045A6978                            |
| UL Certificate                      | 20121023-E36588                            |
| UL Listing Card                     | UL_E36588                                  |

| Container Information             |               |
|-----------------------------------|---------------|
| Package Level 1 Units             | box 1 piece   |
| Package Level 1 Width             | 160 mm        |
| Package Level 1 Depth /<br>Length | 258 mm        |
| Package Level 1 Height            | 235 mm        |
| Package Level 1 Gross<br>Weight   | 3 kg          |
| Package Level 1 EAN               | 7320500480434 |

| Classifications                       |                                          |
|---------------------------------------|------------------------------------------|
| Object Classification<br>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<br>Code (IGCC) | 4758 >> Iec Contactors                   |
| E-Number (Finland)                    | 3706394                                  |
| E-Number (Norway)                     | 4117637                                  |
| E-Number (Sweden)                     | 3210134                                  |

Accessories

| Identifier      | Description          | Type     | Quantity | Unit Of Measure |
|-----------------|----------------------|----------|----------|-----------------|
| 1SFN170801R1001 | RU19/120 LVRT-Module | RU19/120 | 1        | piece           |
| 1SFN170801R1002 | RU19/240 LVRT-Module | RU19/240 | 1        | piece           |

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF190

