



PRODUCT-DETAILS

# AF116-30-22-34

## AF116-30-22-34 Contactor



| General Information   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF116-30-22-34                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Product ID            | 1SFL427001R3422                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| EAN                   | 7320500478530                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Catalog Description   | AF116-30-22-34 Contactor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Long Description      | <p>The AF116-30-22-34 is a 3 pole - 690 V IEC or 600 V UL contactor with pre-mounted auxiliary contacts and double clamp, controlling motors up to 55 kW / 400 V AC (AC-3) or 75 hp / 480 V UL and switching power circuits up to 160 A (AC-1) or 160 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.</p> |

| Ordering               |          |
|------------------------|----------|
| Minimum Order Quantity | 1 piece  |
| Customs Tariff Number  | 85364900 |

## Popular Downloads

|                                            |                  |
|--------------------------------------------|------------------|
| EPLAN Data                                 | 9AAC174538_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          | 90 mm    |
| Product Net Depth / Length | 142.5 mm |
| Product Net Height         | 150 mm   |
| Product Net Weight         | 1.55 kg  |

## Technical

|                                                    |                                                                                                                                                         |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts NO                         | 3                                                                                                                                                       |
| Number of Main Contacts NC                         | 0                                                                                                                                                       |
| Number of Auxiliary Contacts NO                    | 2                                                                                                                                                       |
| Number of Auxiliary Contacts NC                    | 2                                                                                                                                                       |
| Number of Poles                                    | 3P                                                                                                                                                      |
| Rated Operational Voltage                          | Main Circuit 690 V                                                                                                                                      |
| Rated Frequency (f)                                | Main Circuit 60 Hz<br>Main Circuit 50 / 60 Hz                                                                                                           |
| Conventional Free-air Thermal Current ( $I_{th}$ ) | acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ °C}$ 160 A                                                                                    |
| Rated Operational Current AC-1 ( $I_e$ )           | (690 V) 40 °C 160 A<br>(690 V) 60 °C 145 A<br>(690 V) 70 °C 130 A                                                                                       |
| Rated Operational Current AC-3 ( $I_e$ )           | (415 V) 55 °C 116 A<br>(440 V) 55 °C 116 A<br>(500 V) 55 °C 110 A<br>(690 V) 55 °C 65 A<br>(380 / 400 V) 55 °C 116 A<br>(220 / 230 / 240 V) 55 °C 116 A |
| Rated Operational Current AC-3e ( $I_e$ )          | (415 V) 60 °C 116 A<br>(440 V) 60 °C 116 A<br>(500 V) 60 °C 110 A<br>(690 V) 60 °C 65 A<br>(380 / 400 V) 60 °C 116 A<br>(220 / 230 / 240 V) 60 °C 116 A |
| Rated Operational Current DC-1 ( $I_e$ )           | (110 V) 2 Poles in Series, 40 °C 145 A<br>(220 V) 3 Poles in Series, 40 °C 145 A                                                                        |
| Rated Operational Current DC-3 ( $I_e$ )           | (110 V) 2 Poles in Series, 40 °C 145 A<br>(220 V) 3 Poles in Series, 40 °C 145 A                                                                        |
| Rated Operational Current DC-5 ( $I_e$ )           | (110 V) 2 Poles in Series, 40 °C 145 A                                                                                                                  |
| Rated Operational Power AC-3 ( $P_e$ )             | (415 V) 55 kW<br>(440 V) 75 kW                                                                                                                          |

|                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                         | (500 V) 75 kW<br>(690 V) 55 kW<br>(380 / 400 V) 55 kW<br>(220 / 230 / 240 V) 30 kW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Rated Operational Power<br>AC-3e (P <sub>e</sub> )                      | (415 V) 55 kW<br>(440 V) 75 kW<br>(500 V) 75 kW<br>(690 V) 55 kW<br>(380 / 400 V) 55 kW<br>(220 / 230 / 240 V) 30 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 250 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 160 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 536 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 1160 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 928 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 379 A                                                                                                                                                                                                                                  |
| Maximum Breaking<br>Capacity                                            | cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 2000 A<br>cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 690 V 1000 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> )                  | 8 kV<br>Main Circuit 8 kV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 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 250 ... 500 V<br>60 Hz 250 ... 500 V<br>DC Operation 250 ... 500 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Coil Consumption                                                        | Average Pull-in Value 50 Hz 260 V-A<br>Average Pull-in Value 60 Hz 260 V-A<br>Holding at Max. Rated Control Circuit Voltage 50 Hz 33.2 V-A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 33.2 V-A<br>Holding at Max. Rated Control Circuit Voltage DC 4.3 V-A<br>Holding at Max. Rated Control Circuit Voltage DC 4.3 W<br>Pull-in at Max. Rated Control Circuit Voltage 50 Hz 275 V-A<br>Pull-in at Max. Rated Control Circuit Voltage 60 Hz 275 V-A<br>Pull-in at Max. Rated Control Circuit Voltage DC 820 V-A<br>Pull-in at Max. Rated Control Circuit Voltage DC 820 W |
| Power Loss                                                              | at Rated Operating Conditions per Pole 6 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 10 ... 70 mm <sup>2</sup><br>Rigid Cu-Cable 2 x 10 ... 95 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 2x 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>                                                                                                                                                                                                                                                                                                                                     |
| Connecting Capacity                                                     | Flexible 2 x 10 ... 70 mm <sup>2</sup><br>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<br>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 |
| Tightening Torque    | Cable Lug 9 N·m<br>Main Circuit 8 N·m                                                                                                                                                             |
| Terminal Type        | Double Clamp                                                                                                                                                                                      |
| Product Name         | Block Contactor                                                                                                                                                                                   |

## Technical UL/CSA

|                                  |                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V                                                                                                                                                                                                                                                                                                                                    |
| General Use Rating UL/CSA        | (600 V AC) 160 A                                                                                                                                                                                                                                                                                                                                      |
| Horsepower Rating UL/CSA         | (200 ... 208 V AC) Three Phase 15 Hp<br>(200 V AC) Three Phase 30 hp<br>(208 V AC) Three Phase 30 hp<br>(220 ... 240 V AC) Three Phase 20 Hp<br>(220 ... 240 V AC) Three Phase 40 hp<br>(440 ... 480 V AC) Three Phase 40 Hp<br>(440 ... 480 V AC) Three Phase 75 hp<br>(550 ... 600 V AC) Three Phase 50 Hp<br>(550 ... 600 V AC) Three Phase 100 hp |
| Full Load Amps Motor Use         | (440 ... 480 V AC) Three Phase 96 A<br>(550 ... 600 V AC) Three Phase 99 A                                                                                                                                                                                                                                                                            |

## Environmental

|                                        |                                                                                                                                                                                                                  |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Air Temperature                | Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 Uc) -25 ... 55 °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 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 |
| 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 %

## Certificates and Declarations

|                                     |                     |
|-------------------------------------|---------------------|
| A2L Certificate – UL                | 9AKK108468A6693     |
| ABS Certificate                     | 14-LD1092198-PDA    |
| BV Certificate                      | BV_36353_A0BV       |
| CB Certificate                      | SEMKO_SE-70479M1    |
| CCS Certificate                     | GB14T00030          |
| CQC Certificate                     | CQC2013010304604055 |
| Declaration of<br>Conformity - CCC  | 2020980304001304    |
| Declaration of<br>Conformity - CE   | 2CMT2015-005439     |
| Declaration of<br>Conformity - UKCA | 2CMT2020-006118     |
| DNV Certificate                     | DNV_E-14043         |
| LR Certificate                      | 16-20064            |
| PRS Certificate                     | TE_2092_880423_16   |
| RINA Certificate                    | ELE060313XG_002     |
| RMRS Certificate                    | 9AKK107045A6978     |
| UL Certificate                      | 20120925-E36588     |
| UL Listing Card                     | UL_E36588           |

## Container Information

|                                   |               |
|-----------------------------------|---------------|
| Package Level 1 Units             | box 1 piece   |
| Package Level 1 Width             | 207 mm        |
| Package Level 1 Depth /<br>Length | 216 mm        |
| Package Level 1 Height            | 150 mm        |
| Package Level 1 Gross<br>Weight   | 1.75 kg       |
| Package Level 1 EAN               | 7320500478530 |

## External Classifications and Standards

|                                       |                                          |
|---------------------------------------|------------------------------------------|
| 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)                    | 3707489                                  |

## Accessories

| Identifier      | Description                         | Type       | Quantity | Unit Of Measure |
|-----------------|-------------------------------------|------------|----------|-----------------|
| 1SFN074207R1000 | LW140 Terminal Enlargement          | LW140      | 1        | piece           |
| 1SFN074210R1000 | LX140 Terminal Extension            | LX140      | 1        | piece           |
| 1SFN084206R1000 | BEA140/XT2 Connection Set           | BEA140/XT2 | 1        | piece           |
| 1SFN084206R1001 | BEA140/XT4 Connection Set           | BEA140/XT4 | 1        | piece           |
| 1SFN084211R1000 | BER140-4 Connection Set             | BER140-4   | 1        | piece           |
| 1SFN084214R1000 | BEP140-30 Connection Set            | BEP140-30  | 1        | piece           |
| 1SFN084214R2000 | BEP140-40 Connection Set            | BEP140-40  | 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           |
| 1SFN010832R1001 | CEL19-01 Auxiliary Contact Block    | CEL19-01   | 1        | piece           |
| 1SFN010832R1010 | CEL19-10 Auxiliary Contact Block    | CEL19-10   | 1        | piece           |
| 1SFN124203R1000 | LT140-30L Terminal Shroud           | LT140-30L  | 1        | piece           |
| 1SFN084413R1000 | BEY140-4 Connection Set             | BEY140-4   | 1        | piece           |
| 1SFN084813R1000 | BEY190-4 Connection Set             | BEY190-4   | 1        | piece           |

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF116

