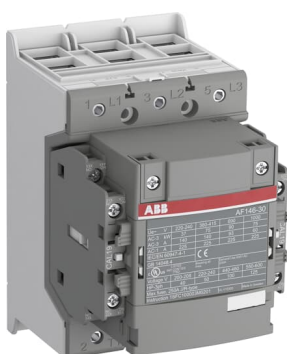


## PRODUCT-DETAILS

# AF146-30-22-12

## AF146-30-22-12 Contactor



### General Information

|                       |                                                                                                                                                                                                                   |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF146-30-22-12                                                                                                                                                                                                    |
| Product ID            | 1SFL467001R1222                                                                                                                                                                                                   |
| EAN                   | 7320500476277                                                                                                                                                                                                     |
| Catalog Description   | AF146-30-22-12 Contactor                                                                                                                                                                                          |
| Long Description      | A 3-phase Contactor suitable for various applications such as Motor starting, Isolation, Bypass and Distribution application up to max 1000 V. Operated with wide control voltage range 48-130 V, 50/60 Hz and DC |

### 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  |
| UNSPSC                             | 39121529                                  |
| IDEA Granular Category Code (IGCC) | 4755 >> Contactors                        |

### Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 207 mm        |
| Package Level 1 Depth / Length | 216 mm        |
| Package Level 1 Height         | 150 mm        |
| Package Level 1 Gross Weight   | 1.75 kg       |
| Package Level 1 EAN            | 7320500476277 |

## Certificates and Declarations (Document Number)

|                                |                   |
|--------------------------------|-------------------|
| ABS Certificate                | 14-LD1092198-PDA  |
| BV Certificate                 | BV_36353_A0BV     |
| CB Certificate                 | SEMKO_SE-70479M1  |
| CCC Certificate                | 2013010304604055  |
| CCS Certificate                | GB14T00030        |
| cUL Certificate                | 20120925-E36588   |
| Declaration of Conformity - CE | 2CMT2015-005439   |
| DNV Certificate                | DNV_E-14043       |
| DNV GL Certificate             | DNV_E-14043       |
| EAC Certificate                | 9AKK107046A8618   |
| Environmental Information      | 2CMT004732        |
| GL Certificate                 | DNV_E-14043       |
| Instructions and Manuals       | 1SFC100003M0201   |
| KC Certificate                 | 9AKK107046A9910   |
| LR Certificate                 | LR_14_70011(E1)   |
| PRS Certificate                | TE_2092_880423_16 |
| RINA Certificate               | ELE060313XG_002   |
| RMRS Certificate               | 9AKK107045A6978   |
| RoHS Information               | 2CMT2015-005439   |
| UL Listing Card                | UL_E36588         |

## Technical UL/CSA

|                                  |                                                                                                                                                                                        |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V                                                                                                                                                                     |
| General Use Rating UL/CSA        | (600 V AC) 200 A                                                                                                                                                                       |
| Horsepower Rating UL/CSA         | (200 V AC) Three Phase 40 hp<br>(208 V AC) Three Phase 40 hp<br>(220 ... 240 V AC) Three Phase 50 hp<br>(440 ... 480 V AC) Three Phase 100 hp<br>(550 ... 600 V AC) Three Phase 125 hp |

## Environmental

|                         |                                                                                                                                                                                                                     |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Air Temperature | Close to Contactor for Storage -40 ... +70 °C<br>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 |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                           |                                   |
|-------------------------------------------|-----------------------------------|
| Maximum Operating<br>Altitude Permissible | 3000 m                            |
| RoHS Status                               | Following EU Directive 2011/65/EU |

## Technical

|                                                       |                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts<br>NO                         | 3                                                                                                                                                                                                                                                                                                                                                    |
| Number of Main Contacts<br>NC                         | 0                                                                                                                                                                                                                                                                                                                                                    |
| Number of Auxiliary<br>Contacts NO                    | 2                                                                                                                                                                                                                                                                                                                                                    |
| Number of Auxiliary<br>Contacts NC                    | 2                                                                                                                                                                                                                                                                                                                                                    |
| Rated Operational Voltage                             | Main Circuit 1000 V                                                                                                                                                                                                                                                                                                                                  |
| Rated Frequency (f)                                   | Main Circuit 50/60 Hz                                                                                                                                                                                                                                                                                                                                |
| Conventional Free-air<br>Thermal Current ( $I_{th}$ ) | acc. to IEC 60947-4-1, Open Contactors q = 40 °C 225 A                                                                                                                                                                                                                                                                                               |
| Rated Operational Current<br>AC-1 ( $I_e$ )           | (1000 V) 40 °C 225 A<br>(1000 V) 55 °C 200 A<br>(1000 V) 60 °C 200 A<br>(1000 V) 70 °C 175 A<br>(690 V) 40 °C 225 A<br>(690 V) 55 °C 200 A<br>(690 V) 60 °C 200 A<br>(690 V) 70 °C 175 A                                                                                                                                                             |
| Rated Operational Current<br>AC-3 ( $I_e$ )           | (1000 V) 55 °C 60 A<br>(220 / 230 / 240 V) 55 °C 146 A<br>(380 / 400 V) 55 °C 146 A<br>(415 V) 55 °C 146 A<br>(440 V) 55 °C 146 A<br>(500 V) 55 °C 93 A<br>(690 V) 55 °C 93 A                                                                                                                                                                        |
| Rated Operational Power<br>AC-3 ( $P_e$ )             | (1000 V) 75 KWT<br>(220 / 230 / 240 V) 45 KWT<br>(380 / 400 V) 75 KWT<br>(415 V) 75 KWT<br>(440 V) 90 KWT<br>(500 V) 90 KWT<br>(690 V) 90 KWT                                                                                                                                                                                                        |
| Rated Breaking Capacity<br>AC-3 acc. to IEC 60947-4-1 | 8 x $I_e$ AC-3                                                                                                                                                                                                                                                                                                                                       |
| Rated Making Capacity<br>AC-3 acc. to IEC 60947-4-1   | 10 x $I_e$ AC-3                                                                                                                                                                                                                                                                                                                                      |
| Short-Circuit Protective<br>Devices                   | gG Type Fuses 315 A                                                                                                                                                                                                                                                                                                                                  |
| Rated Short-time<br>Withstand Current ( $I_{cw}$ )    | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 1168 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 200 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 477 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1460 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 674 A |
| Maximum Breaking<br>Capacity                          | cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 3000 A<br>cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 690 V 1500 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 Insulation Voltage<br>( $U_i$ )                 | acc. to UL/CSA 600 V<br>acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V                                                                                                                                                                                                                                                                            |

|                                               |                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated Impulse Withstand Voltage ( $U_{imp}$ ) | 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 $U_c$ Min. ... 1.1 x $U_c$ Max. (at $\theta \leq 70^\circ\text{C}$ )                                                                                                                                                                                                                                                                      |
| Rated Control Circuit Voltage ( $U_c$ )       | 50 Hz 48 ... 130 V<br>60 Hz 48 ... 130 V<br>DC Operation 48 ... 130 V                                                                                                                                                                                                                                                                                                    |
| Coil Consumption                              | Holding at Max. Rated Control Circuit Voltage 50 Hz 4 V·A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 4 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 170 V·A<br>Pull-in at Max. Rated Control Circuit Voltage 60 Hz 170 V·A<br>Pull-in at Max. Rated Control Circuit Voltage DC 130 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 Main Circuit              | Flexible 2 x 10 ... 70 m <sup>2</sup><br>Rigid Cu-Cable 2 x 10 ... 95 m <sup>2</sup>                                                                                                                                                                                                                                                                                     |
| Connecting Capacity Auxiliary Circuit         | Flexible with Ferrule 2x 0.75 ... 2.5<br>Flexible with Insulated Ferrule 2x 0.75 ... 2.5<br>Flexible 1x0.75 ... 2.5 m <sup>2</sup><br>Solid 1 x 1 ... 4 m <sup>2</sup><br>Stranded 2 x 1 ... 4 m <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                                 | Double Clamp                                                                                                                                                                                                                                                                                                                                                             |

## Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Width          | 90 mm   |
| Product Net Depth / Length | 126 mm  |
| Product Net Height         | 150 mm  |
| Product Net Weight         | 1.55 kg |

## Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SBC100192C0206 |
| Instructions and Manuals          | 1SFC100003M0201 |
| Dimension Diagram                 | 1SFB535001G1051 |

## Ordering

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

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## Categories

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

