

# AF190-30-22-13



## AF190-30-22-13 Contactor

### General Information

|                       |                                                                                                                                                                                                                     |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF190-30-22-13                                                                                                                                                                                                      |
| Product ID            | 1SFL487002R1322                                                                                                                                                                                                     |
| EAN                   | 7320500480489                                                                                                                                                                                                       |
| Catalog Description   | AF190-30-22-13 Contactor                                                                                                                                                                                            |
| Long Description      | A 3-phase Contactor suitable for various applications such as Motor starting, Isolation, By-pass and Distribution application up to max 1000 V. Operated with wide control voltage range 100-250 V, 50/60 Hz and DC |

### Ordering

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

### Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SBC100192C0206 |
| Instructions and Manuals          | 1SFC100008M0201 |
| Dimension Diagram                 | 1SFB535001G1056 |

### Dimensions

|                            |          |
|----------------------------|----------|
| Product Net Width          | 105 mm   |
| Product Net Depth / Length | 152 mm   |
| Product Net Height         | 196 mm   |
| Product Net Weight         | 2.816 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                                                      |
| Rated Operational Voltage                          | Main Circuit 1000 V                                    |
| Rated Frequency (f)                                | Main Circuit 50/60 Hz                                  |
| Conventional Free-air Thermal Current ( $I_{th}$ ) | acc. to IEC 60947-4-1, Open Contactors q = 40 °C 275 A |
| Rated Operational Current AC-1 ( $I_e$ )           | (690 V) 55 °C 250 A                                    |

|                                                    |                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                    | (690 V) 40 °C 275 A<br>(1000 V) 40 °C 250 A<br>(1000 V) 55 °C 225 A<br>(690 V) 70 °C 200 A<br>(1000 V) 70 °C 185 A                                                                                                                                                                                                                                                       |
| Rated Operational Current AC-3 ( $I_e$ )           | (1000 V) 55 °C 85 A<br>(690 V) 55 °C 135 A<br>(220 / 230 / 240 V) 55 °C 190 A<br>(415 V) 55 °C 190 A<br>(440 V) 55 °C 190 A<br>(380 / 400 V) 55 °C 190 A<br>(500 V) 55 °C 135 A                                                                                                                                                                                          |
| Rated Operational Power AC-3 ( $P_e$ )             | (220 / 230 / 240 V) 55 kW<br>(380 / 400 V) 90 kW<br>(415 V) 90 kW<br>(440 V) 110 kW<br>(500 V) 90 kW<br>(690 V) 132 kW<br>(1000 V) 110 kW                                                                                                                                                                                                                                |
| Rated Breaking Capacity AC-3 acc. to IEC 60947-4-1 | 8 x $I_e$ AC-3                                                                                                                                                                                                                                                                                                                                                           |
| Rated Making Capacity AC-3 acc. to IEC 60947-4-1   | 10 x $I_e$ AC-3                                                                                                                                                                                                                                                                                                                                                          |
| Short-Circuit Protective Devices                   | gG Type Fuses 355 A                                                                                                                                                                                                                                                                                                                                                      |
| Rated Short-time Withstand Current ( $I_{cw}$ )    | 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 10 s 1520 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 878 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 1 min 621 A                     |
| Maximum Breaking Capacity                          | $\cos \phi=0.45$ ( $\cos \phi=0.35$ for $I_e > 100$ A) at 440 V 3300 A<br>$\cos \phi=0.45$ ( $\cos \phi=0.35$ for $I_e > 100$ A) at 690 V 2200 A                                                                                                                                                                                                                         |
| Maximum Electrical Switching Frequency             | AC-3 300 cycles per hour<br>AC-1 300 cycles per hour<br>AC-2 / AC-4 150 cycles per hour                                                                                                                                                                                                                                                                                  |
| Rated Operational Current DC-1 ( $I_e$ )           | (110 V) 2 Poles in Series, 40 °C 250 A<br>(220 V) 3 Poles in Series, 40 °C 250 A                                                                                                                                                                                                                                                                                         |
| Rated Operational Current DC-3 ( $I_e$ )           | (110 V) 2 Poles in Series, 40 °C 250 A<br>(220 V) 3 Poles in Series, 40 °C 250 A                                                                                                                                                                                                                                                                                         |
| Rated Operational Current DC-5 ( $I_e$ )           | (110 V) 2 Poles in Series, 40 °C 250 A<br>(220 V) 3 Poles in Series, 40 °C 250 A                                                                                                                                                                                                                                                                                         |
| Rated Insulation Voltage ( $U_i$ )                 | 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 $\theta \leq 70$ °C) °C                                                                                                                                                                                                                                                                               |
| Rated Control Circuit Voltage ( $U_c$ )            | 60 Hz 100 ... 250 V<br>50 Hz 100 ... 250 V<br>DC Operation 100 ... 250 V                                                                                                                                                                                                                                                                                                 |
| Coil Consumption                                   | Pull-in at Max. Rated Control Circuit Voltage 60 Hz 220 V·A<br>Holding at Max. Rated Control Circuit Voltage DC 2.5 W<br>Holding at Max. Rated Control Circuit Voltage 50 Hz 7 V·A<br>Pull-in at Max. Rated Control Circuit Voltage DC 190 W<br>Pull-in at Max. Rated Control Circuit Voltage 50 Hz 220 V·A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 7 V·A |
| 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                   | Rigid Al-Cable 1 x 95 ... 185 mm <sup>2</sup><br>Rigid Cu-Cable 2 x 50 ... 120 mm <sup>2</sup><br>Flexible 2 x 50 ... 95 mm <sup>2</sup>                                                                                                                                                                                                                                 |
| Connecting Capacity Auxiliary Circuit              | Solid 1 x 1 ... 4 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1 x 0.75 ... 2.5 mm <sup>2</sup><br>Stranded 1 x 1 ... 4 mm <sup>2</sup><br>Flexible 2x0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Ferrule 1 x 0.75 ... 2.5 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                                                                                                           |

## 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 | 3000 m                                                                                                                                                                                                              |
| RoHS Status                            | Following EU Directive 2011/65/EU                                                                                                                                                                                   |

## Technical UL/CSA

|                                  |                                                                                                                                                                                        |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V                                                                                                                                                                     |
| General Use Rating UL/CSA        | (600 V AC) 250 A                                                                                                                                                                       |
| Horsepower Rating UL/CSA         | (208 V AC) Three Phase 50 Hp<br>(440 ... 480 V AC) Three Phase 125 Hp<br>(550 ... 600 V AC) Three Phase 150 Hp<br>(220 ... 240 V AC) Three Phase 60 Hp<br>(200 V AC) Three Phase 50 Hp |

## Certificates and Declarations (Document Number)

|                                |                      |
|--------------------------------|----------------------|
| ABS Certificate                | 14-LD1092198-PDA     |
| BV Certificate                 | BV_36353_A0BV        |
| CB Certificate                 | SE-82315             |
| CCC Certificate                | CQC_2014010304676685 |
| CCS Certificate                | GB14T00030           |
| cUL Certificate                | 20121023-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                 | GL_95072-14HH        |
| Instructions and Manuals       | 1SFC100008M0201      |
| KC Certificate                 | 9AKK107046A9912      |
| LR Certificate                 | LR_14_70011(E1)      |
| PRS Certificate                | TE_2092_880423_16    |
| RINA Certificate               | ELE060313XG_002      |
| RMRS Certificate               | 9AKK107045A6978      |
| RoHS Information               | 2CMT2016-006694      |
| UL Listing Card                | UL_E36588            |

## Container Information

|                                |             |
|--------------------------------|-------------|
| Package Level 1 Units          | box 1 piece |
| Package Level 1 Width          | 223 mm      |
| Package Level 1 Depth / Length | 133 mm      |
| Package Level 1 Height         | 186 mm      |

|                              |               |
|------------------------------|---------------|
| Package Level 1 Gross Weight | 3.266 kg      |
| Package Level 1 EAN          | 7320500480489 |

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                                  |

Categories

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

