

## PRODUCT-DETAILS

# AF750-30-22-70

## AF750-30-22 100-250V 50/60Hz / 100-250V DC Contactor



### General Information

|                       |                                                                                                                                                                                                          |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF750-30-22-70                                                                                                                                                                                           |
| Product ID            | 1SFL637001R7022                                                                                                                                                                                          |
| EAN                   | 7320500222072                                                                                                                                                                                            |
| Catalog Description   | AF750-30-22 100-250V 50/60Hz / 100-250V DC 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 100-250 V, AC/DC |

### Ordering

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

### Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SBC100192C0206 |
| Instructions and Manuals          | 1SFC380023-en   |
| Dimension Diagram                 | 53540919-60     |

## Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Width          | 210 mm  |
| Product Net Depth / Length | 242 mm  |
| Product Net Height         | 283 mm  |
| Product Net Weight         | 13.6 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 1050 A                                                                                                                                                                                                                                                                                                 |
| Rated Operational Current AC-1 ( $I_e$ )           | (1000 V) 40 °C 1000 A<br>(1000 V) 55 °C 875 A<br>(1000 V) 70 °C 720 A<br>(690 V) 40 °C 1050<br>(690 V) 55 °C 875<br>(690 V) 70 °C 720                                                                                                                                                                                                                   |
| Rated Operational Current AC-3 ( $I_e$ )           | (415 V) 55 °C 750 A<br>(440 V) 55 °C 750 A<br>(500 V) 55 °C 750 A<br>(690 V) 55 °C 650 A<br>(1000 V) 55 °C 300 A<br>(380 / 400 V) 55 °C 750 A<br>(220 / 230 / 240 V) 55 °C 750                                                                                                                                                                          |
| Rated Operational Power AC-3 ( $P_e$ )             | (415 V) 425 kW<br>(440 V) 450 kW<br>(500 V) 520 kW<br>(690 V) 600 kW<br>(1000 V) 400 kW<br>(380 / 400 V) 400 kW<br>(220 / 230 / 240 V) 220 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 1000 A                                                                                                                                                                                                                                                                                                                                    |
| Rated Short-time Withstand Current ( $I_{cw}$ )    | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 6400 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 1300 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 3500 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 7000 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 4500 A |
| Maximum Breaking Capacity                          | cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 7500 A<br>cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 690 V 7000 A                                                                                                                                                                                                                          |
| Maximum Electrical Switching Frequency             | (AC-1) 300 cycles per hour<br>(AC-2 / AC-4) 60 cycles per hour                                                                                                                                                                                                                                                                                          |

|                                                  |                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                  | (AC-3) 300 cycles per hour                                                                                                                                                                                                                                                                                                                                                   |
| Rated Operational Current<br>DC-1 ( $I_e$ )      | (110 V) 1-Pole, 40 °C 1050 A<br>(110 V) 2 Poles in Series, 40 °C 1050 A<br>(220 V) 3 Poles in Series, 40 °C 1050 A<br>(600 V) 3 Poles in Series, 40 °C 1050 A<br>(850 V) 3 Poles in Series, 40 °C 1050 A                                                                                                                                                                     |
| Rated Operational Current<br>DC-3 ( $I_e$ )      | (110 V) 1-Pole, 40 °C 1050 A<br>(110 V) 2 Poles in Series, 40 °C 1050 A<br>(220 V) 3 Poles in Series, 40 °C 1050 A<br>(600 V) 3 Poles in Series, 40 °C 1050 A<br>(850 V) 3 Poles in Series, 40 °C 1050 A                                                                                                                                                                     |
| Rated Operational Current<br>DC-5 ( $I_e$ )      | (110 V) 1-Pole, 40 °C 1050 A<br>(110 V) 2 Poles in Series, 40 °C 1050 A<br>(220 V) 3 Poles in Series, 40 °C 1050 A<br>(600 V) 3 Poles in Series, 40 °C 1050 A<br>(850 V) 3 Poles in Series, 40 °C 1050 A                                                                                                                                                                     |
| Rated Insulation Voltage<br>( $U_i$ )            | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V<br>acc. to UL/CSA 600 V                                                                                                                                                                                                                                                                                                    |
| Rated Impulse Withstand<br>Voltage ( $U_{imp}$ ) | Main Circuit 8 kV                                                                                                                                                                                                                                                                                                                                                            |
| Mechanical Durability                            | 3 million                                                                                                                                                                                                                                                                                                                                                                    |
| Maximum Mechanical<br>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)                                                                                                                                                                                                                                                                                      |
| Rated Control Circuit<br>Voltage ( $U_c$ )       | 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 12 V·A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 12 V·A<br>Holding at Max. Rated Control Circuit Voltage DC 5 V·A<br>Pull-in at Max. Rated Control Circuit Voltage 50 Hz 880 V·A<br>Pull-in at Max. Rated Control Circuit Voltage 60 Hz 880 V·A<br>Pull-in at Max. Rated Control Circuit Voltage DC 880 V·A |
| Operate Time                                     | Between Coil De-energization and NC Contact Closing 50 ... 70 ms<br>Between Coil De-energization and NO Contact Opening 53 ... 73 ms<br>Between Coil Energization and NC Contact Opening 45 ... 115 ms<br>Between Coil Energization and NO Contact Closing 50 ... 120 ms                                                                                                     |
| Connecting Capacity Main<br>Circuit              | Bar 52 mm <sup>2</sup><br>Rigid Al-Cable 3x185 mm <sup>2</sup><br>Rigid Cu-Cable 300 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 1x0.75 ... 2.5 mm <sup>2</sup><br>Solid 1 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<br>Voltage UL/CSA | Main Circuit 1000 V                                                                                                                                                                       |
| General Use Rating<br>UL/CSA        | (1000 V AC) 900 A<br>(600 V AC) 900 A                                                                                                                                                     |
| Horsepower Rating<br>UL/CSA         | (200 V AC) Three Phase 250 hp<br>(208 V AC) Three Phase 250 hp<br>(220 ... 240 V AC) Three Phase 300 hp<br>(440 ... 480 V AC) Three Phase 600 hp<br>(550 ... 600 V AC) Three Phase 700 hp |

## Environmental

|                                               |                                                                                                                                              |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Air Temperature                       | Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 Uc) -25 ... +50 °C                                                            |
|                                               | Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 Uc) -40 ... +70 °C                                                                |
|                                               | Close to Contactor for Storage -40 ... +70 °C                                                                                                |
| Maximum Operating<br>Altitude Permissible     | 3000 m                                                                                                                                       |
| Resistance to Shock acc.<br>to IEC 60068-2-27 | Shock Direction: A 5 K40<br>Shock Direction: B1 5 K40<br>Shock Direction: B2 5 K40<br>Shock Direction: C1 5 K40<br>Shock Direction: C2 5 K40 |
| RoHS Status                                   | Following EU Directive 2015/863 July 22, 2019 (RoHS 3)                                                                                       |

## Certificates and Declarations (Document Number)

|                                   |                                    |
|-----------------------------------|------------------------------------|
| ABS Certificate                   | 15-LD1408622-PDA                   |
| BV Certificate                    | BV_13409-C0BV                      |
| CB Certificate                    | SE-82863                           |
| CCC Certificate                   | CQC_2007010304256684               |
| CCS Certificate                   | GB14T00030                         |
| CSA Certificate                   | 306712-1                           |
| cUL Certificate                   | UL_20111101-E36588                 |
| Declaration of Conformity<br>- CE | 2CMT2019-005796                    |
| DNV Certificate                   | DNV_E-10966                        |
| DNV GL Certificate                | TAE00001W1                         |
| EAC Certificate                   | 9AKK107046A8618                    |
| Environmental Information         | 1SFC101005D0201<br>1SAC200044H0006 |
| GL Certificate                    | GL_42988-02HH                      |
| Instructions and Manuals          | 1SFC380023-en                      |
| LOVAG Certificate                 | FI105                              |
| LR Certificate                    | 16-20064                           |
| PRS Certificate                   | TE_2092_880423_16                  |
| RINA Certificate                  | ELE060313XG_002                    |
| RMRS Certificate                  | 9AKK107045A6978                    |
| RoHS Information                  | 2CMT2019-005796                    |
| UL Listing Card                   | UL_E36588                          |

## Container Information

|                                   |             |
|-----------------------------------|-------------|
| Package Level 1 Units             | box 1 piece |
| Package Level 1 Width             | 280 mm      |
| Package Level 1 Depth /<br>Length | 375 mm      |
| Package Level 1 Height            | 310 mm      |
| Package Level 1 Gross<br>Weight   | 15 kg       |

Package Level 1 EAN

7320500222072

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                        |
| E-Number (Finland)                 | 3707173                                   |

Categories

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

