

## PRODUCT-DETAILS

# AF140-40-22-13

## AF140-40-22-13 Contactor



### General Information

|                       |                                                                                                                                                                                                                   |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF140-40-22-13                                                                                                                                                                                                    |
| Product ID            | 1SFL447101R1322                                                                                                                                                                                                   |
| EAN                   | 7320500505304                                                                                                                                                                                                     |
| Catalog Description   | AF140-40-22-13 Contactor                                                                                                                                                                                          |
| Long Description      | A 3-phase Contactor suitable for various applications such as Motor starting, Isolation, Bypass and Distribution application up to max 690 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          | 1SFC101065M0201 |

### Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Width          | 120 mm  |
| Product Net Depth / Length | 128 mm  |
| Product Net Height         | 150 mm  |
| Product Net Weight         | 2.05 kg |

## Technical

|                                                       |                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts<br>NO                         | 4                                                                                                                                                                                                                                                                                                                                                    |
| 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 690 V                                                                                                                                                                                                                                                                                                                                   |
| Rated Frequency (f)                                   | Main Circuit 60 Hz                                                                                                                                                                                                                                                                                                                                   |
| Conventional Free-air<br>Thermal Current ( $I_{th}$ ) | acc. to IEC 60947-4-1, Open Contactors q = 40 °C 200 A                                                                                                                                                                                                                                                                                               |
| Rated Operational Current<br>AC-1 ( $I_e$ )           | (690 V) 40 °C 200<br>(690 V) 60 °C 175 A<br>(690 V) 70 °C 160                                                                                                                                                                                                                                                                                        |
| Rated Operational Current<br>AC-3 ( $I_e$ )           | (415 V) 55 °C 140 A<br>(440 V) 55 °C 140 A<br>(380 / 400 V) 55 °C 140 A<br>(220 / 230 / 240 V) 55 °C 140                                                                                                                                                                                                                                             |
| Rated Operational Power<br>AC-3 ( $P_e$ )             | (415 V) 75 kW<br>(440 V) 90 kW<br>(380 / 400 V) 75 kW<br>(220 / 230 / 240 V) 37 kW                                                                                                                                                                                                                                                                   |
| 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 250 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                                                                                                                                                                                                                                                                                        |
| Maximum Electrical<br>Switching Frequency             | (AC-1) 300 cycles per hour                                                                                                                                                                                                                                                                                                                           |
| 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                                 | 5 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 Voltage (U <sub>c</sub> ) | 50 Hz 100 ... 250 V<br>60 Hz 100 ... 250 V<br>DC Operation 100 ... 250 V                                                                                                                                                                                                                                                                                               |
| Coil Consumption                                | Holding at Max. Rated Control Circuit Voltage 50 Hz 6 V·A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 6 V·A<br>Holding at Max. Rated Control Circuit Voltage DC 3 W<br>Pull-in at Max. Rated Control Circuit Voltage 50 Hz 130 V·A<br>Pull-in at Max. Rated Control Circuit Voltage 60 Hz 130 V·A<br>Pull-in at Max. Rated Control Circuit Voltage DC 135 W |
| Operate Time                                    | Between Coil De-energization and NO Contact Opening 40 ... 70 ms<br>Between Coil Energization and NO Contact Closing 20 ... 55 ms                                                                                                                                                                                                                                      |
| Connecting Capacity 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 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 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                                   | Double Clamp                                                                                                                                                                                                                                                                                                                                                           |

## Technical UL/CSA

|                                  |                    |
|----------------------------------|--------------------|
| Maximum Operating Voltage UL/CSA | Main Circuit 600 V |
| General Use Rating UL/CSA        | (600 V AC) 200 A   |

## Environmental

|                                        |                                                                                                                                                                                                                                                   |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Air Temperature                | Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 U <sub>c</sub> ) -25 ... +50 °C<br><br>Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 U <sub>c</sub> ) -40 ... +70 °C<br>Close to Contactor for Storage -40 ... +70 °C |
| Maximum Operating Altitude Permissible | 3000 m                                                                                                                                                                                                                                            |
| RoHS Status                            | Following EU Directive 2015/863 July 22, 2019 (RoHS 3)                                                                                                                                                                                            |

## Certificates and Declarations (Document Number)

|                                |                   |
|--------------------------------|-------------------|
| ABS Certificate                | 14-LD1092198-PDA  |
| BV Certificate                 | BV_36353_A0BV     |
| CB Certificate                 | SEMKO_SE-70479M1  |
| CCC Certificate                | 2013010304604055  |
| cUL Certificate                | E73397_20140710   |
| Declaration of Conformity - CE | 2CMT2015-005440   |
| DNV GL Certificate             | DNV_E-14043       |
| EAC Certificate                | 9AKK107046A8618   |
| Instructions and Manuals       | 1SFC101065M0201   |
| KC Certificate                 | 9AKK107046A9911   |
| LR Certificate                 | LR_14_70011(E1)   |
| PRS Certificate                | TE_2092_880423_16 |

|                  |                 |
|------------------|-----------------|
| RINA Certificate | ELE060313XG_002 |
| RMRS Certificate | 9AKK107045A6978 |
| RoHS Information | 2CMT2015-005440 |

## Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 147 mm        |
| Package Level 1 Depth / Length | 197 mm        |
| Package Level 1 Height         | 155 mm        |
| Package Level 1 Gross Weight   | 2.25 kg       |
| Package Level 1 EAN            | 7320500505304 |

## 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)                 | 3706089                                   |

## Categories

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

