AF75-30-00RT 20-60V DC 1/6



PRODUCT-DETAILS

## **AF75-30-00RT 20-60V DC**AF75-30-00RT 20-60V DC Contactor



| General Information   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF75-30-00RT 20-60V DC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Product ID            | 1SBL417010R7200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| EAN                   | 3471522245328                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Catalog Description   | AF75-30-00RT 20-60V DC Contactor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Long Description      | AF75 contactors are mainly used for controlling 3-phase motors and generally for controlling power circuits up to 690 V AC and 220 V DC. The contactors can also be used for many other applications such as bypass, capacitor switching, lighting, DC power circuits The AF contactors are fitted with an electronic coil interface which accepts a wide control voltage range, on AC 50/60 Hz or DC supplies. The same contactor can accept various supply voltages according to the different countries where the electrical equipment will be installed, or some fluctuation in the control voltage due to the local supply or network. The AF contactors are also fully suitable for operation in AC or DC control circuit liable to voltage interruptions or voltage dip risks. Advantages: - Wide voltage range, e.g. 100 250 V AC and DC - Can manage large voltage variations - Reduced power consumption - Very distinct closing and opening - Noise free - Can withstand voltage interruptions or voltage dips in the control supply (≤ 20 ms). The AF series 1-stack 3-pole contactors are of the block type design Main poles and auxiliary contact blocks: 3 main poles, front and sidemounted add-on auxiliary contact blocks - Control circuit: AC or DC operated Accessories: a wide range of accessories is available. |

AF75-30-00RT 20-60V DC

| Ordering                                                                |                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Order Quantity                                                  | 1 piece                                                                                                                                                                                                                                                                                                                                               |
| Customs Tariff Number                                                   | 85364900                                                                                                                                                                                                                                                                                                                                              |
| Popular Downloads                                                       |                                                                                                                                                                                                                                                                                                                                                       |
| Data Sheet, Technical                                                   | 1SNC001003C0202                                                                                                                                                                                                                                                                                                                                       |
| Information Instructions and Manuals                                    | FPTC407767P0002                                                                                                                                                                                                                                                                                                                                       |
| CAD Dimensional Drawing                                                 | 2CDC001079B020                                                                                                                                                                                                                                                                                                                                        |
|                                                                         |                                                                                                                                                                                                                                                                                                                                                       |
| Dimensions                                                              |                                                                                                                                                                                                                                                                                                                                                       |
| Product Net Width                                                       | 70 mm                                                                                                                                                                                                                                                                                                                                                 |
| Product Net Depth /<br>Length                                           | 108 mm                                                                                                                                                                                                                                                                                                                                                |
| Product Net Height                                                      | 110 mm                                                                                                                                                                                                                                                                                                                                                |
| Product Net Weight                                                      | 1.18 kg                                                                                                                                                                                                                                                                                                                                               |
| <br>Technical                                                           |                                                                                                                                                                                                                                                                                                                                                       |
| Number of Main<br>Contacts NO                                           | 3                                                                                                                                                                                                                                                                                                                                                     |
| Number of Main<br>Contacts NC                                           |                                                                                                                                                                                                                                                                                                                                                       |
| Number of Auxiliary<br>Contacts NO                                      |                                                                                                                                                                                                                                                                                                                                                       |
| Number of Auxiliary<br>Contacts NC                                      |                                                                                                                                                                                                                                                                                                                                                       |
| Standards                                                               | IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60947-4-1, CSA C22.2 No. 60947-4-1 IEC 60077-1 (applicable parts), IEC 60077-2 (applicable parts), EN 50155 (applicable parts), TR CU 001/2011 (on request), IEC 61373, For compliance confirmation on applicable parts based on your application and combination, please consult your ABB sales representatives |
| Rated Operational<br>Voltage                                            | Main Circuit 690 V                                                                                                                                                                                                                                                                                                                                    |
| Rated Frequency (f)                                                     | Main Circuit 50 / 60 Hz                                                                                                                                                                                                                                                                                                                               |
| Rated Operational<br>Current AC-1 (I <sub>e</sub> )                     | (690 V) 40 °C 125 A<br>(690 V) 55 °C 105 A<br>(690 V) 70 °C 85 A                                                                                                                                                                                                                                                                                      |
| Rated Operational<br>Current AC-3 (I <sub>e</sub> )                     | (415 V) 55 °C 72 A<br>(440 V) 55 °C 70 A<br>(500 V) 55 °C 65 A<br>(690 V) 55 °C 46 A<br>(380 / 400 V) 55 °C 75 A                                                                                                                                                                                                                                      |
| Rated Operational Power<br>AC-3 (P <sub>e</sub> )                       | (220 / 230 / 240 V) 55 °C 75<br>(415 V) 40 kW<br>(440 V) 40 kW<br>(500 V) 45 kW<br>(690 V) 40 kW<br>(380 / 400 V) 37 kW<br>(220 / 230 / 240 V) 22 kW                                                                                                                                                                                                  |
| 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 650 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 135 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 250 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1000 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 370 A   |

AF75-30-00RT 20-60V DC 3/6

| Maximum Breaking<br>Capacity                                                 | cos phi=0.45 (cos phi=0.35 for le > 100 A) at 440 V 1300 A<br>cos phi=0.45 (cos phi=0.35 for le > 100 A) at 690 V 630 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated Operational<br>Current DC-1 (I <sub>e</sub> )                          | (110 V) 2 Poles in Series, 40 °C 120 A<br>(110 V) 2 Poles in Series, 55 °C 105 A<br>(110 V) 2 Poles in Series, 70 °C 85 A<br>(110 V) 3 Poles in Series, 40 °C 120 A<br>(110 V) 3 Poles in Series, 55 °C 105 A<br>(110 V) 3 Poles in Series, 70 °C 85 A<br>(220 V) 3 Poles in Series, 40 °C 120 A<br>(220 V) 3 Poles in Series, 55 °C 105 A<br>(220 V) 3 Poles in Series, 70 °C 85 A                                                                                                                                                                                                                                                                                                                                   |
|                                                                              | (72 V) 1-Pole, 40 °C 120 A<br>(72 V) 1-Pole, 55 °C 105 A<br>(72 V) 1-Pole, 70 °C 85 A<br>(72 V) 2 Poles in Series, 40 °C 120 A<br>(72 V) 2 Poles in Series, 55 °C 105 A<br>(72 V) 2 Poles in Series, 70 °C 85 A<br>(72 V) 3 Poles in Series, 40 °C 120 A<br>(72 V) 3 Poles in Series, 55 °C 105 A<br>(72 V) 3 Poles in Series, 70 °C 85 A                                                                                                                                                                                                                                                                                                                                                                             |
| Rated Operational<br>Current DC-3 (I <sub>e</sub> )                          | (110 V) 2 Poles in Series, 40 °C 120 A (110 V) 2 Poles in Series, 55 °C 105 A (110 V) 2 Poles in Series, 70 °C 85 A (110 V) 3 Poles in Series, 40 °C 120 A (110 V) 3 Poles in Series, 40 °C 120 A (110 V) 3 Poles in Series, 55 °C 105 A (110 V) 3 Poles in Series, 70 °C 85 A (220 V) 3 Poles in Series, 40 °C 120 A (220 V) 3 Poles in Series, 55 °C 105 A (220 V) 3 Poles in Series, 70 °C 85 A (72 V) 1-Pole, 40 °C 120 A (72 V) 1-Pole, 55 °C 105 A (72 V) 1-Pole, 70 °C 85 A (72 V) 2 Poles in Series, 55 °C 105 A (72 V) 2 Poles in Series, 55 °C 105 A (72 V) 2 Poles in Series, 55 °C 105 A (72 V) 3 Poles in Series, 70 °C 85 A (72 V) 3 Poles in Series, 40 °C 120 A (72 V) 3 Poles in Series, 55 °C 105 A |
| Rated Operational<br>Current DC-5 (I <sub>e</sub> )                          | (110 V) 2 Poles in Series, 40 °C 100 A (110 V) 2 Poles in Series, 55 °C 100 A (110 V) 2 Poles in Series, 70 °C 85 A (110 V) 3 Poles in Series, 40 °C 120 A (110 V) 3 Poles in Series, 55 °C 105 A (110 V) 3 Poles in Series, 70 °C 85 A (220 V) 3 Poles in Series, 40 °C 75 A (220 V) 3 Poles in Series, 50 °C 75 A (220 V) 3 Poles in Series, 70 °C 75 A (220 V) 3 Poles in Series, 70 °C 75 A (72 V) 1-Pole, 40 °C 75 A (72 V) 1-Pole, 70 °C 75 A (72 V) 2 Poles in Series, 40 °C 120 A (72 V) 2 Poles in Series, 55 °C 105 A (72 V) 3 Poles in Series, 55 °C 105 A (72 V) 3 Poles in Series, 40 °C 120 A (72 V) 3 Poles in Series, 55 °C 105 A                                                                     |
| Rated Insulation Voltage $(U_i)$ Rated Impulse Withstand Voltage $(U_{imp})$ | acc. to IEC 60947-4-1 1000 V<br>acc. to UL/CSA 600 V<br>8 kV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Rated Control Circuit                                                        | DC Operation 20 60 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Voltage (U <sub>c</sub> )  Mounting on DIN Rail                              | TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715<br>TH75-25 (75 x 25 mm Mounting Rail) acc. to IEC 60715                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Mounting by Screws (not supplied)                                            | 2 x M6 screws placed diagonally                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Degree of Protection                                                         | acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP10

| Terminal Type | Ring-Tongue Terminals |
|---------------|-----------------------|
|               |                       |

| Technical UL/CSA                    |                                                                                                                                                                                                                   |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NEMA Size                           | 3                                                                                                                                                                                                                 |
| Continuous Current<br>Rating NEMA   | 90 A                                                                                                                                                                                                              |
| Horsepower Rating<br>NEMA           | (200 V AC) Three Phase 25 Hp<br>(230 V AC) Three Phase 30 Hp<br>(460 V AC) Three Phase 50 Hp<br>(575 V AC) Three Phase 50 Hp                                                                                      |
| Maximum Operating<br>Voltage UL/CSA | Main Circuit 600 V                                                                                                                                                                                                |
| General Use Rating<br>UL/CSA        | (600 V AC) 105 A                                                                                                                                                                                                  |
| Horsepower Rating<br>UL/CSA         | (120 V AC) Single Phase 7-1/2 hp<br>(200 208 V AC) Three Phase 25 hp<br>(220 240 V AC) Three Phase 30 hp<br>(240 V AC) Single Phase 15 hp<br>(440 480 V AC) Three Phase 60 hp<br>(550 600 V AC) Three Phase 75 hp |

| Environmental                                         |                                                                                                                                                                   |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient Air<br>Temperature                            | Close to Contactor Fitted with Thermal O/L Relay -25 55 °C<br>Close to Contactor without Thermal O/L Relay -40 70 °C<br>Close to Contactor for Storage -60 +80 °C |
| Maximum Operating Altitude Permissible                | Without Derating 3000 m                                                                                                                                           |
| Shock and Vibration<br>Withstand acc. to IEC<br>61373 | Category 1, Class B                                                                                                                                               |

| Material Compliance                               |                                                                        |
|---------------------------------------------------|------------------------------------------------------------------------|
| Conflict Minerals<br>Reporting Template<br>(CMRT) | 9AKK108467A5658                                                        |
| REACH Declaration                                 | 2CMT2021-006202                                                        |
| RoHS Information                                  | 2CMT2021-006277                                                        |
| RoHS Status                                       | Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019 |
| WEEE B2C / B2B                                    | Business To Business                                                   |
| WEEE Category                                     | 5. Small Equipment (No External Dimension More Than 50 cm)             |

| Certificates and Declarations     |                                            |
|-----------------------------------|--------------------------------------------|
| CCC Certificate                   | CCC_2018010304134049                       |
| CQC Certificate                   | CQC2018010304134049<br>CQC2010010304402983 |
| Declaration of Conformity - CCC   | 2020980304001624<br>2020980304001225       |
| Declaration of<br>Conformity - CE | 1SBD250803U1000                            |
| Declaration of Conformity - UKCA  | 1SBD250820U1000                            |
| GOST Certificate                  | GOST_POCCFRME77B07175                      |

AF75-30-00RT 20-60V DC 5/6

| KC Certificate | KC_HW02032-21002B            |
|----------------|------------------------------|
| UL Certificate | UL-US-L312527-291-50119991-3 |
|                | III -CA-2305459-0            |

| Container Information             |               |
|-----------------------------------|---------------|
| Package Level 1 Units             | 1 piece       |
| Package Level 1 Width             | 140 mm        |
| Package Level 1 Depth /<br>Length | 146 mm        |
| Package Level 1 Height            | 96 mm         |
| Package Level 1 Gross<br>Weight   | 1.18 kg       |
| Package Level 1 EAN               | 3471522245328 |
| Package Level 2 Units             | box 20 piece  |
| Package Level 2 Gross<br>Weight   | 23.6 kg       |

| Classifications                       |                                          |
|---------------------------------------|------------------------------------------|
| 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) | 4756 >> Capacitor magnet contactor       |

## Categories

 $Low\ Voltage\ Products\ \rightarrow\ Contactors\ \rightarrow\ Block\ Contactors\ \rightarrow\ AF\ Contactors\ \rightarrow\ AF\$ 

AF75-30-00RT 20-60V DC 6/6

