



PRODUCT-DETAILS

**AF65-30-00-13**  
**AF65-30-00-13 100-250V50/60HZ-DC**  
**Contactors**



| General Information   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AF65-30-00-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Product ID            | 1SBL387001R1300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| EAN                   | 3471523132634                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Catalog Description   | AF65-30-00-13 100-250V50/60HZ-DC Contactors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Long Description      | The AF65-30-00-13 is a 3 pole - 690 V IEC or 600 UL contactor with screw terminals, controlling motors up to 30 kW / 400 V AC (AC-3) or 50 hp / 480 V UL and switching power circuits up to 105 A (AC-1) or 90 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (100-250 V 50/60 Hz and DC), managing large control voltage variations, reducing panel energy consumptions and ensuring distinct operations in unstable networks. Furthermore, surge protection is built-in, offering a compact solution. AF contactors have a block type design, can be easily extended with add-on auxiliary contact blocks and an additional wide range of accessories. |

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

| Popular Downloads        |                 |
|--------------------------|-----------------|
| Instructions and Manuals | 1SBC101036M6801 |
| CAD Dimensional Drawing  | 2CDC001079B0201 |

| Dimensions                 |          |
|----------------------------|----------|
| Product Net Width          | 55 mm    |
| Product Net Depth / Length | 111 mm   |
| Product Net Height         | 125.5 mm |
| Product Net Weight         | 0.95 kg  |

| Technical                                                |                                                                                                                                                    |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts NO                               | 3                                                                                                                                                  |
| Number of Main Contacts NC                               | 0                                                                                                                                                  |
| Number of Auxiliary Contacts NO                          | 0                                                                                                                                                  |
| Number of Auxiliary Contacts NC                          | 0                                                                                                                                                  |
| Standards                                                | IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60947-1, UL 60947-4-1, CSA C22.2 No. 60947-1:22, CSA C22.2 No. 60947-4-1:22                                   |
| Rated Operational Voltage                                | Main Circuit 690 V                                                                                                                                 |
| Rated Frequency (f)                                      | Control Circuit 50 / 60 Hz<br>Main Circuit 50 / 60 Hz                                                                                              |
| Conventional Free-air Thermal Current (I <sub>th</sub> ) | acc. to IEC 60947-4-1, Open Contactors Θ = 40 °C 105 A                                                                                             |
| Rated Operational Current AC-1 (I <sub>e</sub> )         | (690 V) 40 °C 105 A<br>(690 V) 60 °C 90 A<br>(690 V) 70 °C 80 A                                                                                    |
| Rated Operational Current AC-3 (I <sub>e</sub> )         | (415 V) 60 °C 65 A<br>(440 V) 60 °C 65 A<br>(500 V) 60 °C 55 A<br>(690 V) 60 °C 39 A<br>(380 / 400 V) 60 °C 65 A<br>(220 / 230 / 240 V) 60 °C 65 A |
| Rated Operational Current AC-3e (I <sub>e</sub> )        | (415 V) 60 °C 65 A<br>(440 V) 60 °C 65 A<br>(500 V) 60 °C 55 A<br>(690 V) 60 °C 39 A<br>(380 / 400 V) 60 °C 65 A<br>(220 / 230 / 240 V) 60 °C 65 A |
| Rated Operational Power AC-3 (P <sub>e</sub> )           | (400 V) 30 kW<br>(415 V) 37 kW<br>(440 V) 37 kW<br>(500 V) 37 kW<br>(690 V) 37 kW<br>(380 / 400 V) 30 kW<br>(220 / 230 / 240 V) 18.5 kW            |
| Rated Operational Power AC-3e (P <sub>e</sub> )          | (415 V) 37 kW<br>(440 V) 37 kW<br>(500 V) 37 kW<br>(690 V) 37 kW<br>(380 / 400 V) 30 kW<br>(220 / 230 / 240 V) 18.5 kW                             |
| Rated Short-time                                         | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 600 A                                                                                   |

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Withstand Current Low Voltage ( $I_{cw}$ )    | at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 110 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 350 A                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Maximum Breaking Capacity                     | cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 950 A<br>cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 690 V 600 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Maximum Electrical Switching Frequency        | (AC-1) 600 cycles per hour<br>(AC-2 / AC-4) 150 cycles per hour<br>(AC-3) 1200 cycles per hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Rated Operational Current DC-1 ( $I_e$ )      | (110 V) 2 Poles in Series, 40 °C 105 A<br>(110 V) 2 Poles in Series, 60 °C 90 A<br>(110 V) 2 Poles in Series, 70 °C 80 A<br>(110 V) 3 Poles in Series, 40 °C 105 A<br>(110 V) 3 Poles in Series, 60 °C 90 A<br>(110 V) 3 Poles in Series, 70 °C 80 A<br>(220 V) 3 Poles in Series, 40 °C 105 A<br>(220 V) 3 Poles in Series, 60 °C 90 A<br>(220 V) 3 Poles in Series, 70 °C 80 A<br>(72 V) 1-Pole, 40 °C 105 A<br>(72 V) 1-Pole, 60 °C 90 A<br>(72 V) 1-Pole, 70 °C 80 A<br>(72 V) 2 Poles in Series, 40 °C 105 A<br>(72 V) 2 Poles in Series, 60 °C 90 A<br>(72 V) 2 Poles in Series, 70 °C 80 A<br>(72 V) 3 Poles in Series, 40 °C 105 A<br>(72 V) 3 Poles in Series, 60 °C 90 A<br>(72 V) 3 Poles in Series, 70 °C 80 A |
| Rated Operational Current DC-3 ( $I_e$ )      | (110 V) 2 Poles in Series, 40 °C 105 A<br>(110 V) 2 Poles in Series, 60 °C 90 A<br>(110 V) 2 Poles in Series, 70 °C 80 A<br>(110 V) 3 Poles in Series, 40 °C 105 A<br>(110 V) 3 Poles in Series, 60 °C 90 A<br>(110 V) 3 Poles in Series, 70 °C 80 A<br>(220 V) 3 Poles in Series, 40 °C 105 A<br>(220 V) 3 Poles in Series, 60 °C 90 A<br>(220 V) 3 Poles in Series, 70 °C 80 A<br>(72 V) 1-Pole, 40 °C 105 A<br>(72 V) 1-Pole, 60 °C 90 A<br>(72 V) 1-Pole, 70 °C 80 A<br>(72 V) 2 Poles in Series, 40 °C 105 A<br>(72 V) 2 Poles in Series, 60 °C 90 A<br>(72 V) 2 Poles in Series, 70 °C 80 A<br>(72 V) 3 Poles in Series, 40 °C 105 A<br>(72 V) 3 Poles in Series, 60 °C 90 A<br>(72 V) 3 Poles in Series, 70 °C 80 A |
| Rated Operational Current DC-5 ( $I_e$ )      | (110 V) 2 Poles in Series, 40 °C 105 A<br>(110 V) 2 Poles in Series, 60 °C 90 A<br>(110 V) 2 Poles in Series, 70 °C 80 A<br>(110 V) 3 Poles in Series, 40 °C 105 A<br>(110 V) 3 Poles in Series, 60 °C 90 A<br>(110 V) 3 Poles in Series, 70 °C 80 A<br>(220 V) 3 Poles in Series, 40 °C 105 A<br>(220 V) 3 Poles in Series, 60 °C 90 A<br>(220 V) 3 Poles in Series, 70 °C 80 A<br>(72 V) 1-Pole, 40 °C 105 A<br>(72 V) 1-Pole, 60 °C 90 A<br>(72 V) 1-Pole, 70 °C 80 A<br>(72 V) 2 Poles in Series, 40 °C 105 A<br>(72 V) 2 Poles in Series, 60 °C 90 A<br>(72 V) 2 Poles in Series, 70 °C 80 A<br>(72 V) 3 Poles in Series, 40 °C 105 A<br>(72 V) 3 Poles in Series, 60 °C 90 A<br>(72 V) 3 Poles in Series, 70 °C 80 A |
| Rated Insulation Voltage ( $U_i$ )            | acc. to IEC 60947-4-1 690 V<br>acc. to UL/CSA 600 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Rated Impulse Withstand Voltage ( $U_{imp}$ ) | 6 kV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Maximum Mechanical                            | 3600 cycles per hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Switching Frequency

|                                                 |                                                                          |
|-------------------------------------------------|--------------------------------------------------------------------------|
| 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

Average Holding Value 50 / 60 Hz 4 V·A  
 Average Holding Value 50 Hz 4 V·A  
 Average Holding Value 60 Hz 4 V·A  
 Average Holding Value DC 2 W  
 Average Holding Value, from Warm State 2 W

## Operate Time

Between Coil De-energization and NC Contact Closing 19 ... 105 ms  
 Between Coil De-energization and NO Contact Opening 17 ... 100 ms  
 Between Coil Energization and NC Contact Opening 38 ... 95 ms  
 Between Coil Energization and NO Contact Closing 42 ... 100 ms

## Mounting on DIN Rail

TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715  
 TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715

## Mounting by Screws (not supplied)

2 x M4 or 2 x M6 screws placed diagonally

## Connecting Capacity Main Circuit

Flexible with Ferrule 1/2x 4 ... 35 mm<sup>2</sup>  
 Flexible with Insulated Ferrule 1/2x 4 ... 35 mm<sup>2</sup>  
 Rigid Stranded 1/2x 6 ... 35 mm<sup>2</sup>

## Connecting Capacity Control Circuit

Flexible with Ferrule 1/2x 0.75 ... 2.5 mm<sup>2</sup>  
 Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm<sup>2</sup>  
 Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm<sup>2</sup>  
 Rigid Solid 1/2x 1 ... 2.5 mm<sup>2</sup>  
 Rigid Stranded 1/2x 1 ... 2.5 mm<sup>2</sup>

## Wire Stripping Length

Control Circuit 10 mm  
 Main Circuit 16 mm

## Degree of Protection

acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20  
 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP10

## Terminal Type

Screw Terminals

## Technical UL/CSA

## Maximum Operating Voltage UL/CSA

Main Circuit 600 V

## General Use Rating UL/CSA

(600 V AC) 90 A

## Horsepower Rating UL/CSA

(120 V AC) Single Phase 5 hp  
 (200 ... 208 V AC) Three Phase 20 hp  
 (220 ... 240 V AC) Three Phase 25 hp  
 (240 V AC) Single Phase 15 hp  
 (440 ... 480 V AC) Three Phase 50 hp  
 (550 ... 600 V AC) Three Phase 60 hp

## Connecting Capacity Main Circuit UL/CSA

Rigid Stranded 1/2x 10-2 AWG

## Connecting Capacity Control Circuit UL/CSA

Rigid Solid 1/2x 18-14 AWG  
 Rigid Stranded 1/2x 18-14 AWG

## Tightening Torque UL/CSA

Control Circuit 11 in·lb  
 Main Circuit 35 in·lb

## Environmental

## Ambient Air Temperature

Close to Contactor Fitted with Thermal O/L Relay -40 ... 70 °C  
 Close to Contactor without Thermal O/L Relay -40 ... 70 °C  
 Close to Contactor for Storage -60 ... +80 °C

## Climatic Withstand

Category B according to IEC 60947-1 Annex Q

## Maximum Operating Altitude Permissible

Without Derating 3000 m

## Resistance to Shock acc. to IEC 60068-2-27

Closed, Shock Direction: A 25 g  
 Closed, Shock Direction: B1 25 g  
 Closed, Shock Direction: B2 15 g  
 Closed, Shock Direction: C1 25 g

|                          |                                                    |
|--------------------------|----------------------------------------------------|
|                          | Closed, Shock Direction: C2 25 g                   |
|                          | Open, Shock Direction: B1 5 g                      |
| Resistance to Vibrations | 3g Closed Position & 3g Open Position 5 ... 300 Hz |

Material Compliance

|                                             |                                                                        |
|---------------------------------------------|------------------------------------------------------------------------|
| Conflict Minerals Reporting Template (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 |
| Toxic Substances Control Act - TSCA         | 2CMT2023-006525                                                        |
| WEEE B2C / B2B                              | Business To Business                                                   |
| WEEE Category                               | 5. Small Equipment (No External Dimension More Than 50 cm)             |

Circular Value

|                          |                 |
|--------------------------|-----------------|
| End of Life Instructions | 1SBC101081M6801 |
|--------------------------|-----------------|

Eco Transparency

|                                         |                                    |
|-----------------------------------------|------------------------------------|
| Environmental Product Declaration - EPD | 2TFP200016A1001<br>1SBD250584E1000 |
|-----------------------------------------|------------------------------------|

Certificates and Declarations

|                                  |                                                                |
|----------------------------------|----------------------------------------------------------------|
| ABS Certificate                  | ABS_20-2060694-PDA                                             |
| BV Certificate                   | BV_2634H36994B1                                                |
| CB Certificate                   | CB_SE-113324                                                   |
| CCC Certificate                  | CCC_2012010304589737<br>CCC_2015010304824714                   |
| CQC Certificate                  | CQC2015010304824714<br>CQC2012010304589737                     |
| Declaration of Conformity - CCC  | 2020980304001256<br>2020980304001074                           |
| Declaration of Conformity - CE   | 1SBD250000U1000                                                |
| Declaration of Conformity - UKCA | 1SBD250031U1000                                                |
| DNV Certificate                  | DNV_TAE00001AF-4                                               |
| EAC Certificate                  | EAC_RU_FRME77B03447                                            |
| KC Certificate                   | KC_HW02016-15003C                                              |
| LR Certificate                   | LRS_LR23403517TA-02                                            |
| RINA Certificate                 | RINA_ELE084013XG                                               |
| RMRS Certificate                 | RMRS_1802705280                                                |
| UL Certificate                   | UL-US-L312527-1141-10303102-9<br>UL-CA-L312527-4141-10303102-9 |
| UL Listing Card                  | UL_E312527                                                     |

Container Information

|                       |             |
|-----------------------|-------------|
| Package Level 1 Units | box 1 piece |
|-----------------------|-------------|

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Width          | 150 mm        |
| Package Level 1 Depth / Length | 150 mm        |
| Package Level 1 Height         | 97 mm         |
| Package Level 1 Gross Weight   | 1.05 kg       |
| Package Level 1 EAN            | 3471523132634 |
| Package Level 2 Units          | box 10 piece  |
| Package Level 2 Width          | 250 mm        |
| Package Level 2 Depth / Length | 300 mm        |
| Package Level 2 Height         | 300 mm        |
| Package Level 2 Gross Weight   | 10.5 kg       |
| Package Level 3 Units          | 240 piece     |

| 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  |                  |
| ETIM 8                             | EC000066 - Power contactor, AC switching  |                  |
| eClass                             |                                           | V11.0 : 27371003 |
| UNSPSC                             |                                           | 39121529         |
| IDEA Granular Category Code (IGCC) | 4758 >> Iec Contactors                    |                  |
| E-Number (Finland)                 |                                           | 3707048          |
| E-Number (Sweden)                  |                                           | 3210045          |

| Categories                                                                                                 |
|------------------------------------------------------------------------------------------------------------|
| Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF65 |

