



PRODUCT-DETAILS

AFS580-30-12-68

AFS580-30-12-68



| General Information   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type | AFS580-30-12-68                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Product ID            | 1SFL617081R6812                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| EAN                   | 7320500540855                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Catalog Description   | AFS580-30-12-68                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Long Description      | <p>The AFS580-30-12-68 is a 3 pole - 1000 V IEC or 600 V UL contactor with pre-mounted 1 left (1 N.O + 1 N.C.) and fixed 1 right (1 N.C.) side mounted auxiliary contact blocks with Main Circuit Bars connections, controlling motors up to 315 kW / 400 V AC (AC-3) or 500 hp / 480 V UL and switching power circuits up to 800 A (AC-1) or 750 A UL general use. AFS contactors can be easily integrated in machine manufacturer's systems complying with main standards EN ISO 13849 and EN 62061 - guaranteeing the safe use of your machinery and equipment. An easily identifiable yellow low energy auxiliary contact block ensures the status feedback circuits required in machine safety applications. Thanks to the AF technology, the contactor has a wide control voltage range (24-60 V 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.</p> |

Ordering

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

Popular Downloads

|                                   |                 |
|-----------------------------------|-----------------|
| Data Sheet, Technical Information | 1SBC100208C02__ |
| Instructions and Manuals          | 1SFC380023-en   |
| CAD Dimensional Drawing           | 2CDC001079B0201 |

Dimensions

|                            |        |
|----------------------------|--------|
| Product Net Width          | 210 mm |
| Product Net Depth / Length | 242 mm |
| Product Net Height         | 283 mm |
| Product Net Weight         | 10 kg  |

Technical

|                                                          |                                                                                                                                                                                  |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts NO                               | 3                                                                                                                                                                                |
| Number of Main Contacts NC                               | 0                                                                                                                                                                                |
| Number of Auxiliary Contacts NO                          | 1                                                                                                                                                                                |
| 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 <sub>th</sub> ) | acc. to IEC 60947-4-1, Open Contactors Θ = 40 °C 800 A                                                                                                                           |
| Rated Operational Current AC-1 (I <sub>e</sub> )         | (1000 V) 40 °C 800 A<br>(1000 V) 55 °C 700 A<br>(1000 V) 70 °C 580 A<br>(690 V) 40 °C 800 A<br>(690 V) 55 °C 700 A<br>(690 V) 70 °C 580 A                                        |
| Rated Operational Current AC-3 (I <sub>e</sub> )         | (415 V) 55 °C 580 A<br>(440 V) 55 °C 580 A<br>(500 V) 55 °C 580 A<br>(690 V) 55 °C 500 A<br>(1000 V) 55 °C 250 A<br>(380 / 400 V) 55 °C 580 A<br>(220 / 230 / 240 V) 55 °C 580 A |
| Rated Operational Power AC-3 (P <sub>e</sub> )           | (415 V) 355 kW<br>(440 V) 355 kW<br>(500 V) 400 kW<br>(690 V) 500 kW<br>(1000 V) 355 kW<br>(380 / 400 V) 315 kW<br>(220 / 230 / 240 V) 160 kW                                    |
| Rated Breaking Capacity AC-3                             | 8 x I <sub>e</sub> AC-3                                                                                                                                                          |
| Rated Making Capacity AC-3                               | 10 x I <sub>e</sub> AC-3                                                                                                                                                         |

Short-Circuit Protective  
Devices

gG Type Fuses 1000 A

|                                                                   |                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated Short-time<br>Withstand Current Low<br>Voltage ( $I_{cw}$ ) | 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<br>Capacity                                      | $\cos \phi=0.45$ ( $\cos \phi=0.35$ for $I_e > 100$ A) at 440 V 6000 A<br>$\cos \phi=0.45$ ( $\cos \phi=0.35$ for $I_e > 100$ A) at 690 V 5000 A                                                                                                                                                                                                                             |
| Maximum Electrical<br>Switching Frequency                         | (AC-1) 300 cycles per hour<br>(AC-2 / AC-4) 60 cycles per hour<br>(AC-3) 300 cycles per hour                                                                                                                                                                                                                                                                                 |
| Rated Operational<br>Current DC-1 ( $I_e$ )                       | (110 V) 1-Pole, 40 °C 800 A<br>(110 V) 2 Poles in Series, 40 °C 800 A<br>(220 V) 3 Poles in Series, 40 °C 800 A<br>(600 V) 3 Poles in Series, 40 °C 800 A<br>(850 V) 3 Poles in Series, 40 °C 800 A                                                                                                                                                                          |
| Rated Operational<br>Current DC-3 ( $I_e$ )                       | (110 V) 1-Pole, 40 °C 800 A<br>(110 V) 2 Poles in Series, 40 °C 800 A<br>(220 V) 3 Poles in Series, 40 °C 800 A<br>(600 V) 3 Poles in Series, 40 °C 800 A<br>(850 V) 3 Poles in Series, 40 °C 800 A                                                                                                                                                                          |
| Rated Operational<br>Current DC-5 ( $I_e$ )                       | (110 V) 1-Pole, 40 °C 800 A<br>(110 V) 2 Poles in Series, 40 °C 800 A<br>(220 V) 3 Poles in Series, 40 °C 800 A<br>(600 V) 3 Poles in Series, 40 °C 800 A<br>(850 V) 3 Poles in Series, 40 °C 800 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<br>Withstand 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<br>Voltage ( $U_c$ )                        | DC Operation 24 ... 60 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 780 V-A<br>Pull-in at Max. Rated Control Circuit Voltage 60 Hz 780 V-A<br>Pull-in at Max. Rated Control Circuit Voltage DC 785 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<br>Main Circuit                               | Bar 52 mm <sup>2</sup><br>Rigid Al-Cable 300 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 2x0.75 ... 2.5 mm <sup>2</sup><br>Solid 2 x 1 ... 4 mm <sup>2</sup><br>Stranded 1 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

Main Circuit 600 V

|                              |                                       |
|------------------------------|---------------------------------------|
| Voltage UL/CSA               |                                       |
| General Use Rating<br>UL/CSA | (600 V AC) 750 A                      |
| Horsepower Rating<br>UL/CSA  | (200 ... 208 V AC) Three Phase 200 hp |
|                              | (220 ... 240 V AC) Three Phase 250 hp |
|                              | (440 ... 480 V AC) Three Phase 500 hp |
|                              | (550 ... 600 V AC) Three Phase 600 hp |

Environmental

|                                           |                                                                                  |
|-------------------------------------------|----------------------------------------------------------------------------------|
| Ambient Air<br>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 | Without Derating 3000 m                                                          |

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

Certificates and Declarations

|                                     |                     |
|-------------------------------------|---------------------|
| CB Certificate                      | SE-82863            |
| CQC Certificate                     | CQC2007010304256684 |
| Declaration of<br>Conformity - CCC  | 2020980304001301    |
| Declaration of<br>Conformity - CE   | 2CMT2018-005695     |
| Declaration of<br>Conformity - UKCA | 2CMT2020-006125     |
| EAC Certificate                     | 1SFC101360D1101     |
| SUVA Certificate                    | 2CMT2019-005860     |
| UL Certificate                      | UL_20111101-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   | 12 kg         |
| Package Level 1 EAN               | 7320500540855 |

| 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) | 4755 >> Contactors                        |
| E-Number (Finland)                 | 3709045                                   |

| Accessories     |                                  |          |          |                 |
|-----------------|----------------------------------|----------|----------|-----------------|
| Identifier      | Description                      | Type     | Quantity | Unit Of Measure |
| 1SFN010716R1010 | CEL18-10 Auxiliary Contact Block | CEL18-10 | 1        | piece           |
| 1SFN010716R1001 | CEL18-01 Auxiliary Contact Block | CEL18-01 | 1        | piece           |
| 1SFN010720R1011 | CAL18-11 Auxiliary Contact Block | CAL18-11 | 1        | piece           |
| 1SFN125703R1000 | LT460-AL Terminal shroud         | LT460-AL | 1        | piece           |
| 1SFN125701R1000 | LT460-AC Terminal shroud         | LT460-AC | 1        | piece           |
| 1SFN075710R1000 | LX460 Terminal Extension         | LX460    | 1        | piece           |
| 1SFN075707R1000 | LW460 Terminal Enlargement       | LW460    | 1        | piece           |
| 1SFN075703R1000 | LY460 Connecting Strip           | LY460    | 1        | piece           |
| 1SFN126103R1000 | LT750-AL Terminal shroud         | LT750-AL | 1        | piece           |
| 1SFN126101R1000 | LT750-AC Terminal shroud         | LT750-AC | 1        | piece           |
| 1SFN076110R1000 | LX750 Terminal Extension         | LX750    | 1        | piece           |
| 1SFN076107R1000 | LW750 Terminal Enlargement       | LW750    | 1        | piece           |
| 1SFN076103R1000 | LY750 Connecting Strip           | LY750    | 1        | piece           |

| Categories                                                                                                    |
|---------------------------------------------------------------------------------------------------------------|
| Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AFS Contactors → AFS580 |

