

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

## General Information

|                        |                                                                                                                                                                                                           |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extended Product Type: | AF580-30-11-71                                                                                                                                                                                            |
| Product ID:            | 1SFL617001R7111                                                                                                                                                                                           |
| EAN:                   | 7320500250228                                                                                                                                                                                             |
| Catalog Description:   | AF580-30-11 250-500V 50/60Hz / 250-500V DC Contactor                                                                                                                                                      |
| Long Description:      | A 3-phase Contactor suitable for various applications such as Motor starting, Isolation, By-pass and Distribution application up to max 1000 V. Operated with wide control voltage range 250-500 V, AC/DC |

## Ordering

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

## Popular Downloads

|                                    |                 |
|------------------------------------|-----------------|
| Data Sheet, Technical Information: | 1SBC100122C0202 |
| Instructions and Manuals:          | 1SFC380023-en   |
| Dimension Diagram:                 | 53540919-60     |

## Dimensions

|                             |           |
|-----------------------------|-----------|
| Product Net Width:          | 210.0 mm  |
| Product Net Depth / Length: | 242.0 mm  |
| Product Net Height:         | 283.0 mm  |
| Product Net Weight:         | 15.000 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:                    | 1                                                                       |
| Rated Operational Voltage:                          | Main Circuit 1000 V                                                     |
| Rated Frequency (f):                                | Main Circuit 50/60 Hz                                                   |
| Conventional Free-air Thermal Current ( $I_{th}$ ): | acc. to IEC 60947-4-1, Open Contactors $\vartheta = 40\text{ °C}$ 800 A |

|                                                           |                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated Operational Current AC-1<br>(I <sub>e</sub> ):      | (690 V) 55 °C 700 A<br>(690 V) 40 °C 800 A<br>(1000 V) 40 °C 800 A<br>(1000 V) 55 °C 700 A<br>(690 V) 70 °C 580 A<br>(1000 V) 70 °C 580 A                                                                                                                                                                                                               |
| Rated Operational Current AC-3<br>(I <sub>e</sub> ):      | (1000 V) 55 °C 250 A<br>(690 V) 55 °C 500 A<br>(415 V) 55 °C 580 A<br>(220 / 230 / 240 V) 55 °C 580 A<br>(440 V) 55 °C 580 A<br>(380 / 400 V) 55 °C 580 A<br>(500 V) 55 °C 580 A                                                                                                                                                                        |
| Rated Operational Power AC-3<br>(P <sub>e</sub> ):        | (220 / 230 / 240 V) 160 kW<br>(380 / 400 V) 315 kW<br>(415 V) 355 kW<br>(440 V) 355 kW<br>(500 V) 400 kW<br>(690 V) 500 kW<br>(1000 V) 355 kW                                                                                                                                                                                                           |
| Rated Breaking Capacity AC-3<br>acc. to IEC 60947-4-1:    | 8 x I <sub>e</sub> AC-3                                                                                                                                                                                                                                                                                                                                 |
| Rated Making Capacity AC-3 acc.<br>to IEC 60947-4-1:      | 10 x I <sub>e</sub> AC-3                                                                                                                                                                                                                                                                                                                                |
| Short-Circuit Protective Devices:                         | gG Type Fuses 1000 A                                                                                                                                                                                                                                                                                                                                    |
| Rated Short-time Withstand<br>Current (I <sub>cw</sub> ): | 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 30 s 4500 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 s 7000 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 3500 A |
| Maximum Breaking Capacity:                                | cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 6000 A<br>cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 690 V 5000 A                                                                                                                                                                                                        |
| Maximum Electrical Switching<br>Frequency:                | AC-3 300 cycles per hour<br>AC-1 300 cycles per hour<br>AC-2 / AC-4 60 cycles per hour                                                                                                                                                                                                                                                                  |
| Rated Operational Current DC-1<br>(I <sub>e</sub> ):      | (850 V) 3 Poles in Series, 40 °C 800 A<br>(600 V) 3 Poles in Series, 40 °C 800 A<br>(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                                                                                                                                                     |
| Rated Operational Current DC-3<br>(I <sub>e</sub> ):      | (850 V) 3 Poles in Series, 40 °C 800 A<br>(600 V) 3 Poles in Series, 40 °C 800 A<br>(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                                                                                                                                                     |

|                                                         |                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated Operational Current DC-5<br>(I <sub>e</sub> ):    | (850 V) 3 Poles in Series, 40 °C 800 A<br>(600 V) 3 Poles in Series, 40 °C 800 A<br>(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                                                                                                                                                                            |
| Rated Insulation Voltage (U <sub>i</sub> ):             | acc. to UL/CSA 600 V<br>acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V                                                                                                                                                                                                                                                                                                      |
| Rated Impulse Withstand Voltage<br>(U <sub>imp</sub> ): | Main Circuit 8 kV                                                                                                                                                                                                                                                                                                                                                              |
| Mechanical Durability:                                  | 3 million                                                                                                                                                                                                                                                                                                                                                                      |
| Maximum Mechanical Switching<br>Frequency:              | 300 cycles per hour                                                                                                                                                                                                                                                                                                                                                            |
| Coil Operating Limits:                                  | (acc. to IEC 60947-4-1) 0.85 x U <sub>c</sub> Min. ... 1.1 x U <sub>c</sub> Max. (at $\theta \leq 70$ °C) °C                                                                                                                                                                                                                                                                   |
| Rated Control Circuit Voltage (U <sub>c</sub> ):        | 60 Hz 250 ... 500 V<br>50 Hz 250 ... 500 V<br>DC Operation 250 ... 500 V                                                                                                                                                                                                                                                                                                       |
| Coil Consumption:                                       | Pull-in at Max. Rated Control Circuit Voltage 60 Hz 985 V·A<br>Holding at Max. Rated Control Circuit Voltage DC 7.5 V·A<br>Holding at Max. Rated Control Circuit Voltage 50 Hz 12 V·A<br>Pull-in at Max. Rated Control Circuit Voltage DC 910 V·A<br>Pull-in at Max. Rated Control Circuit Voltage 50 Hz 985 V·A<br>Holding at Max. Rated Control Circuit Voltage 60 Hz 12 V·A |
| Operate Time:                                           | Between Coil Energization and NO Contact Closing 50 ... 120 ms<br>Between Coil De-energization and NO Contact Opening 53 ... 73 ms<br>Between Coil De-energization and NC Contact Closing 50 ... 70 ms<br>Between Coil Energization and NC Contact Opening 45 ... 115 ms                                                                                                       |
| Connecting Capacity Main Circuit:                       | Rigid Al-Cable 3x185 mm <sup>2</sup><br>Bar 52 mm<br>Rigid Cu-Cable 300 mm <sup>2</sup>                                                                                                                                                                                                                                                                                        |
| Connecting Capacity Auxiliary<br>Circuit:               | Solid 2 x 1 ... 4 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2 x 0.75 ... 2.5 mm <sup>2</sup><br>Stranded 1 x 1 ... 4 mm <sup>2</sup><br>Flexible 2x0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Ferrule 2 x 0.75 ... 2.5 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                                                                                                                                                                                                                                                                                                                                                             |

## 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>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<br>Permissible: | 3000 m                                                                                                                                                                                                                                        |

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

Shock Direction: A 5 g  
Shock Direction: C2 5 g  
Shock Direction: C1 5 g  
Shock Direction: B2 5 g  
Shock Direction: B1 5 g

## Technical UL/CSA

Maximum Operating Voltage  
UL/CSA:

Main Circuit 600 V

General Use Rating UL/CSA:

(600 V AC) 750 A

Horsepower Rating UL/CSA:

(208 V AC) Three Phase 200 Hp  
(440 ... 480 V AC) Three Phase 500 Hp  
(550 ... 600 V AC) Three Phase 600 Hp  
(220 ... 240 V AC) Three Phase 250 Hp  
(200 V AC) Three Phase 200 Hp

## Certificates and Declarations (Document Number)

ABS Certificate:

15-LD1408622-PDA

BV Certificate:

BV\_13409-C0BV

CB Certificate:

SE-82863

CCC Certificate:

CQC\_2007010304256684

CCS Certificate:

GB14T00030

cUL Certificate:

UL\_20111101-E36588

Declaration of Conformity - CE:

1SFA1-65

DNV Certificate:

DNV\_E-10966

DNV GL Certificate:

TAE00001W1

EAC Certificate:

EAC\_RUC-SE.ME77.B.01005

Environmental Information:

1SFC101005D0201

GL Certificate:

GL\_42988-02HH

Instructions and Manuals:

1SFC380023-en

LOVAG Certificate:

SE-0146175

LR Certificate:

16-20064

PRS Certificate:

TE\_2092\_880423\_16

RINA Certificate:

ELE060313XG\_002

RMRS Certificate:

9AKK107045A6978

RoHS Information:

1SFC101034D0203

UL Listing Card:

UL\_E36588

## Container Information

Package Level 1 Units:

1 piece

Package Level 1 Width:

290 mm

|                                 |               |
|---------------------------------|---------------|
| Package Level 1 Depth / Length: | 270 mm        |
| Package Level 1 Height:         | 350 mm        |
| Package Level 1 Gross Weight:   | 15 kg         |
| Package Level 1 EAN:            | 7320500250228 |

## Classifications

|                             |                                           |
|-----------------------------|-------------------------------------------|
| Object Classification Code: | Q                                         |
| E-nummer:                   | 3228355                                   |
| ETIM 4:                     | EC000066 - Magnet contactor, AC-switching |
| ETIM 5:                     | EC000066 - Magnet contactor, AC-switching |
| ETIM 6:                     | EC000066 - Power contactor, AC switching  |
| UNSPSC:                     | 39121529                                  |

