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 PRODUCT-DETAILS

# AFS400-30-12-69

## AFS400-30-12-69




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**General Information**

|                       |                 |
|-----------------------|-----------------|
| Extended Product Type | AFS400-30-12-69 |
| Product ID            | 1SFL577081R6912 |
| EAN                   | 7320500540923   |
| Catalog Description   | AFS400-30-12-69 |

|                  |   |
|------------------|---|
| Long Description | <p>The AFS400-30-12-69 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 200 kW / 400 V AC (AC-3) or 350 hp / 480 V UL and switching power circuits up to 600 A (AC-1) or 550 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 (48-130 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.</p> |
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**Ordering**

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

## Popular Downloads

|  |                  |
|--|------------------|
| EPLAN Data                                 | 9AAC412764_EPLAN |
| Data Sheet, Technical Information          | 1SBC100214C0202  |
| Data Sheet, Technical Information (Part 2) | 1SAC200017M0002  |
| Instructions and Manuals                   | 1SFC380023-en    |
| CAD Dimensional Drawing                    | 2CDC001079B0201  |

## Dimensions

|                            |         |
|----------------------------|---------|
| Product Net Width          | 186 mm  |
| Product Net Depth / Length | 216 mm  |
| Product Net Height         | 278 mm  |
| Product Net Weight         | 10.6 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  |
| Number of Poles  | 3P   |
| 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 $\Theta = 40\text{ °C}$ 600 A   |
| Rated Operational Current AC-1 (I <sub>e</sub> )         | (1000 V) 40 °C 600 A<br>(1000 V) 55 °C 500 A<br>(1000 V) 70 °C 400 A<br>(690 V) 40 °C 600 A<br>(690 V) 55 °C 500 A<br>(690 V) 70 °C 400 A  |
| Rated Operational Current AC-3 (I <sub>e</sub> )         | (415 V) 55 °C 400 A<br>(440 V) 55 °C 400 A<br>(500 V) 55 °C 400 A<br>(690 V) 55 °C 350 A<br>(1000 V) 55 °C 155 A<br>(380 / 400 V) 55 °C 400 A<br>(220 / 230 / 240 V) 55 °C 400 A |
| Rated Operational Current DC-1 (I <sub>e</sub> )         | (110 V) 1-Pole, 40 °C 600 A<br>(110 V) 2 Poles in Series, 40 °C 600 A<br>(220 V) 3 Poles in Series, 40 °C 600 A<br>(600 V) 3 Poles in Series, 40 °C 600 A                        |
| Rated Operational Current DC-3 (I <sub>e</sub> )         | (110 V) 1-Pole, 40 °C 600 A<br>(110 V) 2 Poles in Series, 40 °C 600 A<br>(220 V) 3 Poles in Series, 40 °C 600 A  |

|   |   |
|---|---|
|   | (600 V) 3 Poles in Series, 40 °C 600 A  |
| Rated Operational Current DC-5 ( $I_e$ )                    | (110 V) 1-Pole, 40 °C 600 A<br>(110 V) 2 Poles in Series, 40 °C 600 A<br>(220 V) 3 Poles in Series, 40 °C 600 A<br>(600 V) 3 Poles in Series, 40 °C 600 A   |
| Rated Operational Power AC-3 ( $P_e$ )                      | (415 V) 220 kW<br>(440 V) 220 kW<br>(500 V) 250 kW<br>(690 V) 315 kW<br>(1000 V) 220 kW<br>(380 / 400 V) 200 kW<br>(220 / 230 / 240 V) 110 kW   |
| Rated Breaking Capacity AC-3                                | 8 x $I_e$ AC-3  |
| Rated Making Capacity AC-3                                  | 10 x $I_e$ AC-3   |
| Short-Circuit Protective Devices                            | gG Type Fuses 630 A   |
| Rated Short-time Withstand Current Low Voltage ( $I_{cw}$ ) | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 840 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 3100 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 4600 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 4400 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 2500 A                            |
| Maximum Breaking Capacity                                   | $\cos \phi=0.45$ ( $\cos \phi=0.35$ for $I_e > 100$ A) at 440 V 4000 A<br>$\cos \phi=0.45$ ( $\cos \phi=0.35$ for $I_e > 100$ A) at 690 V 3500 A  |
| Rated Insulation Voltage ( $U_i$ )                          | acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 1000 V<br>acc. to IEC 60947-5-1 and VDE 0110 (Gr. C) 1000 V<br>acc. to UL/CSA 600 V  |
| Rated Impulse Withstand Voltage ( $U_{imp}$ )               | Main Circuit 8 kV   |
| Maximum Electrical Switching Frequency                      | (AC-1) 300 cycles per hour<br>(AC-2 / AC-4) 60 cycles per hour<br>(AC-3) 300 cycles per hour  |
| Mechanical Durability                                       | 3 million   |
| Maximum Mechanical Switching Frequency                      | 300 cycles per hour   |
| Coil Operating Limits                                       | (acc. to IEC 60947-4-1) 0.85 x $U_c$ Min. ... 1.1 x $U_c$ Max. (at $\theta \leq 70$ °C)   |
| Rated Control Circuit Voltage ( $U_c$ )                     | 50 Hz 48 ... 130 V<br>60 Hz 48 ... 130 V<br>DC Operation 48 ... 130 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 7.5 V-A<br>Pull-in at Max. Rated Control Circuit Voltage 50 Hz 1215 V-A<br>Pull-in at Max. Rated Control Circuit Voltage 60 Hz 1215 V-A<br>Pull-in at Max. Rated Control Circuit Voltage DC 1150 V-A |
| Power Loss  | at Rated Operating Conditions per Pole 16 W   |
| Operate Time  | Between Coil De-energization and NC Contact Closing 45 ... 55 ms<br>Between Coil De-energization and NO Contact Opening 48 ... 58 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 Main Circuit                            | Bar 47 mm <sup>2</sup><br>Rigid Al-Cable 240 mm <sup>2</sup><br>Rigid Al-Cable 2x240 mm <sup>2</sup><br>Rigid Cu-Cable 240 mm <sup>2</sup><br>Rigid Cu-Cable 2x240 mm <sup>2</sup>  |
| Connecting Capacity Auxiliary Circuit                       | Flexible with Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup><br>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 1x0.75 ... 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 2 x 1 ... 4 mm <sup>2</sup>                              |
| Connecting Capacity   | Bar 47 mm <sup>2</sup>  |

|  |  |
|--|--|
|  | Rigid Al-Cable 2x240 mm <sup>2</sup><br>Rigid Cu-Cable 2x240 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 |
| Connecting Terminals<br>(delivered in open<br>position) Main Poles | M 3.5 (+,-) pozidriv 2 screw with cable clamp  |
| Recommended Screw<br>Driver  | Main Circuit M10<br>Control Circuit 5.5<br>Control Circuit M3.5<br>Control Circuit Pozidriv 2                                |
| Tightening Torque  | Cable Lug 35 N-m<br>Main Circuit 35 N-m  |
| Terminal Type  | Main Circuit: Bars   |
| Suitable for Product<br>Class                                      | Block Contactors Block Contactors  |
| Product Name   | Block Contactor  |

## Technical UL/CSA

|                                     |  |
|-------------------------------------|--|
| Maximum Operating<br>Voltage UL/CSA | Main Circuit 1000 V  |
| General Use Rating<br>UL/CSA        | (1000 V AC) 550 A<br>(600 V AC) 550 A  |
| Horsepower Rating<br>UL/CSA         | (200 ... 208 V AC) Three Phase 125 Hp<br>(200 ... 208 V AC) Three Phase 125 hp<br>(200 V AC) Three Phase 125 hp<br>(208 V AC) Three Phase 125 hp<br>(220 ... 240 V AC) Three Phase 150 Hp<br>(220 ... 240 V AC) Three Phase 150 hp<br>(440 ... 480 V AC) Three Phase 350 Hp<br>(440 ... 480 V AC) Three Phase 350 hp<br>(550 ... 600 V AC) Three Phase 400 Hp<br>(550 ... 600 V AC) Three Phase 400 hp |
| Full Load Amps Motor<br>Use         | (200 ... 208 V AC) Three Phase 358.8 A<br>(220 ... 240 V AC) Three Phase 360 A<br>(440 ... 480 V AC) Three Phase 414 A<br>(550 ... 600 V AC) Three Phase 382 A   |

## Environmental

|   |   |
|---|---|
| Ambient Air<br>Temperature                    | Close to Contactor Fitted with Thermal O/L Relay (0.85 ... 1.1 Uc) -25 ... 50 °<br>C<br>Close to Contactor without Thermal O/L Relay (0.85 ... 1.1 Uc) -40 ... 70 °C<br>Close to Contactor for Storage -40 ... 70 °C<br>Operation -40 ... 70 °C<br>Storage -40 ... +70 °C |
| Maximum Operating<br>Altitude Permissible     | Without Derating 3000 m   |
| Resistance to Shock acc.<br>to IEC 60068-2-27 | Shock Direction: A 5 g<br>Shock Direction: B1 5 g<br>Shock Direction: B2 5 g<br>Shock Direction: C1 5 g<br>Shock Direction: C2 5 g  |

## Material Compliance

|   |                 |
|---|-----------------|
| Conflict Minerals<br>Reporting Template<br>(CMRT) | 9AKK108467A5658 |
| REACH Declaration                                 | 2CMT2021-006202 |

|                                     |  |
|-------------------------------------|--|
| RoHS Declaration                    | 2CMT2021-006277  |
| RoHS Information                    | 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)             |

## ABB EcoSolutions

|   |  |
|---|--|
| ABB EcoSolutions                                  | Yes  |
| ABB Site Meeting Group Waste To Landfill Target   | Non-hazardous waste is sent to a landfill, where there is no alternative option available within 100km of a facility                     |
| Environmental Product Declaration - EPD           | 1SFC100105D0201  |
| Improved Energy Efficiency for Customers          | Product Efficiency - Product considered more energy-efficient compared to similar product on market or older products from the same line |
| Recyclability Rate of the Product acc. to EN45555 | Design for Closing Resource Loops - Standard EN45555 - 63.1 %  |
| Sustainable Material Content in Product (wt. %)   | Recycled Metal - 37 %  |

## Certificates and Declarations

|                                  |                     |
|----------------------------------|---------------------|
| CB Certificate                   | SE-82316            |
| CQC Certificate                  | CQC2007010304256683 |
| Declaration of Conformity - CCC  | 2020980304001300    |
| Declaration of Conformity - CE   | 2CMT2018-005695     |
| Declaration of Conformity - UKCA | 2CMT2020-006125     |
| EAC Certificate                  | 1SFC101360D1101     |
| SUVA Certificate                 | 2CMT2019-005859     |
| UL Certificate                   | 20121207-E36588     |

## Container Information

|                                |               |
|--------------------------------|---------------|
| Package Level 1 Units          | box 1 piece   |
| Package Level 1 Width          | 280 mm        |
| Package Level 1 Depth / Length | 375 mm        |
| Package Level 1 Height         | 310 mm        |
| Package Level 1 Gross Weight   | 12 kg         |
| Package Level 1 EAN            | 7320500540923 |

## External Classifications and Standards

|                            |  |
|----------------------------|--|
| Object Classification 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 Code (IGCC) | 4755 >> Contactors |
| E-Number (Finland)                 | 3709037            |

### 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 → AFS400

