

# AFS16Z-30-22-30



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

## General Information

<b>Extended Product Type:</b>	AFS16Z-30-22-30
<b>Product ID:</b>	1SBL176082R3022
<b>EAN:</b>	3471523158399
<b>Catalog Description:</b>	AFS16Z-30-22-30 24VDC Contactor
<b>Long Description:</b>	AFS09Z ... AFS38Z contactors are designed for machine safety applications. They are delivered with fixed front-mounted auxiliary contact blocks making them ideal for monitoring and controlling circuits. Mechanically linked and mirror contacts make your system safer. - control circuit with electronic coil interface: - dedicated 24 V DC for direct control by PLC-output $\geq 250$ mA, low holding consumption up to 1.7 W - reduced panel energy consumption - mirror and mechanically linked contacts, with front marked symbol acc. to IEC60947-5-1, always guaranteeing the right contactor status - front-mounted auxiliary contact block: - permanently fixed - protective cover to prevent manual operation - yellow housing for easy identification - minimum switching capacity 12 V / 3 mA, with a failure rate $10^{-7}$ acc. to IEC 60947-5-4 - built-in surge suppression

## Ordering

<b>Minimum Order Quantity:</b>	1 piece
<b>Customs Tariff Number:</b>	85364900

## Popular Downloads

<b>Instructions and Manuals:</b>	1SBC101052M6801
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## Dimensions

<b>Product Net Width:</b>	45 mm
<b>Product Net Depth / Length:</b>	130.5 mm
<b>Product Net Height:</b>	86 mm

## Technical

<b>Number of Main Contacts NO:</b>	3
<b>Number of Main Contacts NC:</b>	0
<b>Number of Auxiliary Contacts NO:</b>	2
<b>Number of Auxiliary Contacts NC:</b>	2
<b>Standards:</b>	IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1, UL 508, CSA C22.2 N°14
<b>Rated Operational Voltage:</b>	Auxiliary Circuit 690 V Main Circuit 690 V

<b>Rated Frequency (f):</b>	Auxiliary Circuit 50 / 60 Hz Main Circuit 50 / 60 Hz
<b>Conventional Free-air Thermal Current (<math>I_{th}</math>):</b>	acc. to IEC 60947-4-1, Open Contactors $q = 40\text{ °C}$ 35 A acc. to IEC 60947-5-1, $q = 40\text{ °C}$ 16 A
<b>Rated Operational Current AC-1 (<math>I_e</math>):</b>	(690 V) $40\text{ °C}$ 30 A (690 V) $60\text{ °C}$ 30 A (690 V) $70\text{ °C}$ 26 A
<b>Rated Operational Current AC-3 (<math>I_e</math>):</b>	(220 / 230 / 240 V) $60\text{ °C}$ 18 A (380 / 400 V) $60\text{ °C}$ 18 A (415 V) $60\text{ °C}$ 18 A (440 V) $60\text{ °C}$ 18 A (500 V) $60\text{ °C}$ 15 A (690 V) $60\text{ °C}$ 10.5 A
<b>Rated Operational Power AC-3 (<math>P_e</math>):</b>	(220 / 230 / 240 V) 4 kW (380 / 400 V) 7.5 kW (400 V) 7.5 kW (415 V) 9 kW (440 V) 9 kW (500 V) 9 kW (690 V) 9 kW
<b>Rated Operational Current AC-15 (<math>I_e</math>):</b>	(220 / 240 V) 4 A (24 / 127 V) 6 A (400 / 440 V) 3 A (500 V) 2 A (690 V) 2 A
<b>Rated Short-time Withstand Current (<math>I_{cw}</math>):</b>	at $40\text{ °C}$ Ambient Temp, in Free Air, from a Cold State 10 s 150 A at $40\text{ °C}$ Ambient Temp, in Free Air, from a Cold State 15 min 35 A at $40\text{ °C}$ Ambient Temp, in Free Air, from a Cold State 1 min 60 A at $40\text{ °C}$ Ambient Temp, in Free Air, from a Cold State 1 s 300 A at $40\text{ °C}$ Ambient Temp, in Free Air, from a Cold State 30 s 80 A for 0.1 s 140 A for 1 s 100 A
<b>Maximum Breaking Capacity:</b>	$\cos\phi=0.45$ ( $\cos\phi=0.35$ for $I_e > 100\text{ A}$ ) at 440 V 250 A $\cos\phi=0.45$ ( $\cos\phi=0.35$ for $I_e > 100\text{ A}$ ) at 690 V 106 A
<b>Maximum Electrical Switching Frequency:</b>	AC-1 600 cycles per hour AC-15 1200 cycles per hour AC-2 / AC-4 300 cycles per hour AC-3 1200 cycles per hour DC-13 900 cycles per hour

<b>Rated Operational Current DC-13 (I<sub>e</sub>):</b>	(110 V) 0.55 A / 60 W (220 V) 0.27 A / 60 W (400 V) 0.15 A / 60 W (500 V) 0.13 A / 65 W (600 V) 0.1 A / 60 W (125 V) 0.55 A / 69 W (24 V) 6 A / 144 W (250 V) 0.27 A / 68 W (48 V) 2.8 A / 134 W (72 V) 1 A / 72 W
<b>Rated Insulation Voltage (U<sub>i</sub>):</b>	acc. to UL/CSA 600 V acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V
<b>Rated Impulse Withstand Voltage (U<sub>imp</sub>):</b>	6 kV
<b>Maximum Mechanical Switching Frequency:</b>	3600 cycles per hour
<b>Rated Control Circuit Voltage (U<sub>c</sub>):</b>	50 Hz - 60 Hz - DC Operation 24 V
<b>Operate Time:</b>	Between Coil De-energization and NC Contact Closing 22 ... 57 ms Between Coil De-energization and NO Contact Opening 17 ... 29 ms Between Coil Energization and NC Contact Opening 20 ... 35 ms Between Coil Energization and NO Contact Closing 27 ... 53 ms
<b>Connecting Capacity Main Circuit:</b>	Flexible with Insulated Ferrule 1x 0.75 ... 4 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Ferrule 1/2x 0.75 ... 6 mm <sup>2</sup> Rigid 1/2x 1 ... 6 mm <sup>2</sup>
<b>Connecting Capacity Auxiliary Circuit:</b>	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 1/2x 1 ... 2.5 mm <sup>2</sup>
<b>Connecting Capacity Control Circuit:</b>	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 1/2x 1 ... 2.5 mm <sup>2</sup>
<b>Wire Stripping Length:</b>	Auxiliary Circuit 10 mm Control Circuit 10 mm Main Circuit 10 mm
<b>Degree of Protection:</b>	acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP20
<b>Terminal Type:</b>	Screw Terminals

## Environmental

<b>Ambient Air Temperature:</b>	Close to Contactor for Storage -60 ... +80 °C Close to Contactor Fitted with Thermal O/L Relay -25 ... +60 °C Close to Contactor without Thermal O/L Relay -40 ... +70 °C
<b>Climatic Withstand:</b>	Category B according to IEC 60947-1 Annex Q
<b>Maximum Operating Altitude Permissible:</b>	3000 m
<b>Resistance to Vibrations acc. to IEC 60068-2-6:</b>	5 ... 300 Hz 4 g closed position / 2 g open position
<b>Resistance to Shock acc. to IEC 60068-2-27:</b>	Closed, Shock Direction: A 30 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

## Technical UL/CSA

<b>General Use Rating UL/CSA:</b>	(600 V AC) 30 A
<b>Tightening Torque UL/CSA:</b>	Auxiliary Circuit 11 in·lb Control Circuit 11 in·lb Main Circuit 13 in·lb

## Certificates and Declarations (Document Number)

<b>CB Certificate:</b>	CB_SE-80871M3
<b>cUL Certificate:</b>	UL_20180227_E312527_7_1
<b>Declaration of Conformity - CE:</b>	1SBD250022U1000
<b>Instructions and Manuals:</b>	1SBC101052M6801
<b>UL Listing Card:</b>	E312527

## Container Information

<b>Package Level 1 Units:</b>	1 piece
<b>Package Level 1 Width:</b>	96 mm
<b>Package Level 1 Depth / Length:</b>	145 mm
<b>Package Level 1 Height:</b>	50 mm
<b>Package Level 1 Gross Weight:</b>	0.54 kg
<b>Package Level 1 EAN:</b>	3471523158399
<b>Package Level 2 Units:</b>	12 piece
<b>Package Level 2 Width:</b>	51 mm
<b>Package Level 2 Depth / Length:</b>	98 mm
<b>Package Level 2 Height:</b>	148 mm
<b>Package Level 2 Gross Weight:</b>	6.48 kg
<b>Package Level 3 Units:</b>	576 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

