



PRODUCT-DETAILS

AF12Z-30-01-23
AF12Z-30-01-23 100-250V50/60HZ-DC
Contactor



概要信息	
产品型号	AF12Z-30-01-23
产品ID	1SBL156001R2301
欧洲商品编号(EAN)	3471523113633
目录说明	AF12Z-30-01-23 100-250V50/60HZ-DC Contactor
详细描述	The AF12Z-30-01-23 is a 3 pole - 690 V IEC or 600 UL contactor with 1 built-in auxiliary contact and screw terminals, controlling motors up to 5.5 kW / 400 V AC (AC-3) or 7-1/2 hp / 480 V UL and switching power circuits up to 28 A (AC-1) or 28 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.

订货信息	
最小起订量	1 piece

Popular Downloads	
数据手册，技术资料	1SBC100214C0202
说明书和手册	1SBC101027M6801
CAD Dimensional Drawing	2CDC001079B0201

尺寸	
产品净宽	45 mm
产品净深	77 mm
产品净高	86 mm
产品净重	0.31 kg

技术参数	
主触点NO数量	3
主触点NC数量	0
辅助触点NO数量	0
辅助触点NC数量	1
标准	IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60947-4-1, CSA C22.2 No. 60947-4-1
额定工作电压	Auxiliary Circuit 690 V Main Circuit 690 V
额定频率 (f)	Auxiliary Circuit 50 / 60 Hz Control Circuit 50 / 60 Hz Main Circuit 50 / 60 Hz
额定发热电流（自由空气）(I _{th})	acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ }^{\circ}\text{C}$ 35 A acc. to IEC 60947-5-1, $\Theta = 40\text{ }^{\circ}\text{C}$ 16 A
额定工作电流 AC-1 (I _e)	(690 V) 40 °C 28 A (690 V) 60 °C 28 A (690 V) 70 °C 24 A
额定工作电流 AC-3 (I _e)	(415 V) 60 °C 12 A (440 V) 60 °C 12 A (500 V) 60 °C 12.5 A (690 V) 60 °C 9 A (380 / 400 V) 60 °C 12 A (220 / 230 / 240 V) 60 °C 12 A
额定工作电流 AC-3e (I _e)	(415 V) 60 °C 12 A (440 V) 60 °C 12 A (500 V) 60 °C 12.5 A (690 V) 60 °C 9 A (380 / 400 V) 60 °C 12 A (220 / 230 / 240 V) 60 °C 12 A
额定工作功率 AC-3 (P _e)	(400 V) 5.5 kW (415 V) 5.5 kW (440 V) 5.5 kW (500 V) 7.5 kW (690 V) 7.5 kW (380 / 400 V) 5.5 kW (220 / 230 / 240 V) 3 kW
额定工作功率 AC-3e (P _e)	(415 V) 5.5 kW (440 V) 5.5 kW (500 V) 7.5 kW (690 V) 7.5 kW (380 / 400 V) 5.5 kW (220 / 230 / 240 V) 3 kW
额定工作电流 AC-15 (I _e)	(500 V) 2 A (690 V) 2 A (24 / 127 V) 6 A (220 / 240 V) 4 A (400 / 440 V) 3 A

额定不间断电流 (I_{CW})	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 150 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 35 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 60 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 300 A at 40 °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
最大分断容量	cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 250 A cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 690 V 106 A
最高电气切换频率	(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
额定工作电流 DC-1 (I_e)	(110 V) 1-Pole, 40 °C 15 A (110 V) 1-Pole, 60 °C 15 A (110 V) 1-Pole, 70 °C 15 A (110 V) 2 Poles in Series, 40 °C 27 A (110 V) 2 Poles in Series, 60 °C 27 A (110 V) 2 Poles in Series, 70 °C 24 A (110 V) 3 Poles in Series, 40 °C 27 A (110 V) 3 Poles in Series, 60 °C 27 A (110 V) 3 Poles in Series, 70 °C 24 A (220 V) 2 Poles in Series, 40 °C 15 A (220 V) 2 Poles in Series, 60 °C 15 A (220 V) 2 Poles in Series, 70 °C 15 A (220 V) 3 Poles in Series, 40 °C 27 A (220 V) 3 Poles in Series, 60 °C 27 A (220 V) 3 Poles in Series, 70 °C 24 A (72 V) 1-Pole, 40 °C 27 A (72 V) 1-Pole, 60 °C 27 A (72 V) 1-Pole, 70 °C 24 A (72 V) 2 Poles in Series, 40 °C 27 A (72 V) 2 Poles in Series, 60 °C 27 A (72 V) 2 Poles in Series, 70 °C 24 A (72 V) 3 Poles in Series, 40 °C 27 A (72 V) 3 Poles in Series, 60 °C 27 A (72 V) 3 Poles in Series, 70 °C 24 A
额定工作电流 DC-3 (I_e)	(110 V) 1-Pole, 40 °C 7 A (110 V) 1-Pole, 60 °C 7 A (110 V) 1-Pole, 70 °C 7 A (110 V) 2 Poles in Series, 40 °C 27 A (110 V) 2 Poles in Series, 60 °C 27 A (110 V) 2 Poles in Series, 70 °C 24 A (110 V) 3 Poles in Series, 40 °C 27 A (110 V) 3 Poles in Series, 60 °C 27 A (110 V) 3 Poles in Series, 70 °C 24 A (220 V) 2 Poles in Series, 40 °C 7 A (220 V) 2 Poles in Series, 60 °C 7 A (220 V) 2 Poles in Series, 70 °C 7 A (220 V) 3 Poles in Series, 40 °C 27 A (220 V) 3 Poles in Series, 60 °C 27 A (220 V) 3 Poles in Series, 70 °C 24 A (72 V) 1-Pole, 40 °C 27 A (72 V) 1-Pole, 60 °C 27 A (72 V) 1-Pole, 70 °C 24 A (72 V) 2 Poles in Series, 40 °C 27 A (72 V) 2 Poles in Series, 60 °C 27 A (72 V) 2 Poles in Series, 70 °C 24 A (72 V) 3 Poles in Series, 40 °C 27 A (72 V) 3 Poles in Series, 60 °C 27 A (72 V) 3 Poles in Series, 70 °C 24 A
额定工作电流 DC-5 (I_e)	(110 V) 1-Pole, 40 °C 4 A (110 V) 1-Pole, 60 °C 4 A (110 V) 1-Pole, 70 °C 4 A (110 V) 2 Poles in Series, 40 °C 15 A (110 V) 2 Poles in Series, 60 °C 15 A (110 V) 2 Poles in Series, 70 °C 15 A (110 V) 3 Poles in Series, 40 °C 27 A (110 V) 3 Poles in Series, 60 °C 27 A

	(110 V) 3 Poles in Series, 70 °C 24 A (220 V) 2 Poles in Series, 40 °C 4 A (220 V) 2 Poles in Series, 60 °C 4 A (220 V) 2 Poles in Series, 70 °C 4 A (220 V) 3 Poles in Series, 40 °C 12 A (220 V) 3 Poles in Series, 60 °C 12 A (220 V) 3 Poles in Series, 70 °C 12 A (72 V) 1-Pole, 40 °C 12 A (72 V) 1-Pole, 60 °C 12 A (72 V) 1-Pole, 70 °C 12 A (72 V) 2 Poles in Series, 40 °C 27 A (72 V) 2 Poles in Series, 60 °C 27 A (72 V) 2 Poles in Series, 70 °C 24 A (72 V) 3 Poles in Series, 40 °C 27 A (72 V) 3 Poles in Series, 60 °C 27 A (72 V) 3 Poles in Series, 70 °C 24 A
额定工作电流 DC-13 (I _e)	(24 V) 6 A / 144 W (48 V) 2.8 A / 134 W (72 V) 1 A / 72 W (110 V) 0.55 A / 60 W (125 V) 0.55 A / 69 W (220 V) 0.27 A / 60 W (250 V) 0.27 A / 68 W (400 V) 0.15 A / 60 W (500 V) 0.13 A / 65 W (600 V) 0.1 A / 60 W
额定绝缘电压 (U _i)	acc. to IEC 60947-4-1 690 V acc. to IEC 60947-5-1 690 V acc. to UL/CSA 600 V
额定冲击耐受电压 (U _{imp})	6 kV
最高机械切换频率	3600 cycles per hour
额定控制电路电压 (U _c)	50 Hz 100 ... 250 V 60 Hz 100 ... 250 V DC Operation 100 ... 250 V
工作时间	Between Coil De-energization and NC Contact Closing 13 ... 98 ms Between Coil De-energization and NO Contact Opening 11 ... 95 ms Between Coil Energization and NC Contact Opening 38 ... 90 ms Between Coil Energization and NO Contact Closing 40 ... 95 ms
安装到DIN导轨上	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
螺钉安装（螺钉须自备）	2 x M4 screws placed diagonally
主电路连接容量	Flexible with Ferrule 1/2x 0.75 ... 6 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 4 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm ² Rigid Solid 1/2x 1 ... 4 mm ² Rigid Stranded 1/2x 1 ... 6 mm ²
辅助电路连接容量	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm ² Rigid Solid 1/2x 1 ... 2.5 mm ² Rigid Stranded 1/2x 1 ... 2.5 mm ²
控制电路连接容量	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm ² Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm ² Rigid Solid 1/2x 1 ... 2.5 mm ² Rigid Stranded 1/2x 1 ... 2.5 mm ²
剥线长度	Auxiliary Circuit 10 mm Control Circuit 10 mm Main Circuit 10 mm
防护等级	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
端子类型	Screw Terminals

UL/CSA适用的技术参数	
NEMA尺寸	0
Continuous Current Rating NEMA	18 A
Horsepower Rating NEMA	(115 V AC) Single Phase 1 Hp (200 V AC) Three Phase 3 Hp (230 V AC) Single Phase 2 Hp (230 V AC) Three Phase 3 Hp (460 V AC) Three Phase 5 Hp (575 V AC) Three Phase 5 Hp
最高工作电压UL/CSA	Main Circuit 600 V
通用等级UL/CSA	(600 V AC) 28 A
额定功率UL/CSA	(120 V AC) Single Phase 1 hp (200 ... 208 V AC) Three Phase 3 hp (220 ... 240 V AC) Three Phase 3 hp (240 V AC) Single Phase 2 hp (440 ... 480 V AC) Three Phase 7-1/2 hp (550 ... 600 V AC) Three Phase 10 hp
主电路连接容量 UL/CSA	Rigid Solid 1/2x 16-10 AWG Rigid Stranded 1/2x 16-10 AWG
辅助电路连接容量 UL/CSA	Rigid Solid 1/2x 18-14 AWG Rigid Stranded 1/2x 18-14 AWG
控制电路连接容量 UL/CSA	Rigid Solid 1/2x 18-14 AWG Rigid Stranded 1/2x 18-14 AWG
拧紧力矩UL/CSA	Auxiliary Circuit 11 in-lb Control Circuit 11 in-lb Main Circuit 13 in-lb

环境条件	
周围环境温度	Close to Contactor Fitted with Thermal O/L Relay -25 ... 60 °C Close to Contactor without Thermal O/L Relay -40 ... 70 °C Close to Contactor for Storage -60 ... +80 °C
耐候	Category B according to IEC 60947-1 Annex Q
允许的最高工作海拔	Without Derating 3000 m
抗机械冲击符合IEC 60068-2-27标准	Closed, Shock Direction: B1 25 g Open, Shock Direction: B1 5 g Shock Direction: A 30 g Shock Direction: B2 15 g Shock Direction: C1 25 g Shock Direction: C2 25 g
耐振动符合IEC 60068-2-6标准	4g Closed Position & 2g Open position 5 ... 300 Hz

Material Compliance	
Conflict Minerals Reporting Template (CMRT)	9AKK108467A5658
REACH Declaration	2CMT2021-006202
RoHS信息	2CMT2021-006277
RoHS状态	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 类别	5. Small Equipment (No External Dimension More Than 50 cm)

ABB EcoSolutions	
产品环境声明 - EPD	1SBD250584E3000 2TFP200035A1001
产品中可持续材料含量 (重量%)	Recycled Metal - 28 %
包装中的可持续材料含量 (重量%)	Recycled Cardboard - 86 %
产品寿命终止后的拆解指南	1SBC101080M6801

认证及声明（文件编码）	
ABS认证	ABS_20-2060694-PDA
BV认证	BV_2634H24898C0
CB认证	CB_SE-113345
CCC认证	CCC_2010010304445624
CQC认证	CQC2010010304445624 CQC2020010304298240
Declaration of Conformity - CCC	2020980304001253 2020980304001082
符合性声明 - CE	1SBD250000U1000
Declaration of Conformity - UKCA	1SBD250031U1000
DNV认证	DNV_TAE00001AF-4
GOST认证	GOST_POCCFR.ME77.B07175.pdf
KC认证	KC_HW02016-15005C
LR认证	LRS_LR23403517TA-02
RINA认证	RINA_ELE142224XG
RMRS认证	RMRS_1802705280
UL认证	UL-US-2150887-5 UL-CA-2142658-5
UL列表卡	E312527

包装信息	
1级包装单元	box 1 piece
1级包装宽度	87 mm
1级包装长度	79 mm
1级包装高度	47 mm
1级包装 总重	0.31 kg
1级包装 EAN	3471523113633
2级包装单元	box 27 piece
2级包装宽度	250 mm
2级包装长度	300 mm
2级包装高度	315 mm
2级包装 总重	8.37 kg
3级包装单元	1296 piece

分类	
对象分类代码	Q
ETIM 7	EC000066 - Power contactor, AC switching
ETIM 8	EC000066 - Power contactor, AC switching
ETIM 9	EC000066 - Power contactor, AC switching

e级	V11.0 : 27371003
UNSPSC	39121529
IDEA 粒度分类代码 (IGCC)	4758 >> Iec Contactors
E-Number (Finland)	3706237

分类

低压产品及系统 → 控制产品 → 接触器 → 模块化接触器 → AF Contactors → AF12

