

PRODUCT-DETAILS

# AF16Z-30-01K-21

## AF16Z-30-01K-21 24-60V50/60HZ 20-60VDC

### Contacteur



#### Informations générales

Extension du type de produit	AF16Z-30-01K-21
Code de produit	1SBL176005R2101
EAN	3471523156210
Description courte	AF16Z-30-01K-21 24-60V50/60HZ 20-60VDC Contacteur

Description longue	<p>The AF16Z-30-01K-21 is a 3 pole - 690 V IEC or 600 UL contactor with 1 built-in auxiliary contact and Push-in spring terminals, controlling motors up to 7.5 kW / 400 V AC (AC-3) or 10 hp / 480 V UL and switching power circuits up to 30 A (AC-1) or 30 A UL general use. Thanks to the AF technology, the contactor has a wide control voltage range (24-60 V 50/60 Hz and 20-60 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>
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#### Commande

Quantité minimum	1 pièce
Code douanier	85364900

#### Downloads Préférés

Instructions et manuels	1SBC101054M6801
CAD Dimensional Drawing	2CDC001079B0201

## Dimensions

Produit Largeur Net	45 mm
Produit Longueur Net	77 mm
Produit Hauteur Net	92.3 mm
Poids net	0.315 kg

## Technique

Number of Main Contacts NO	3
Number of Main Contacts NC	0
Number of Auxiliary Contacts NO	0
Number of Auxiliary Contacts NC	1
Normes et standards	IEC/EN 60947-1, IEC/EN 60947-4-1, UL 60947-4-1, CSA C22.2 No. 60947-4-1
Tension	Circuit auxiliaire 690 V Circuit principal 690 V
Fréquence assignée (f)	Circuit auxiliaire 50 / 60 Hz Circuit de commande 50 / 60 Hz Circuit principal 50 / 60 Hz
Courant thermique conventionnel à l'air libre ( $I_{th}$ )	acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ °C}$ 35 A acc. to IEC 60947-5-1, $\Theta = 40\text{ °C}$ 16 A
Courant assignée d'emploi AC-1 ( $I_e$ )	(1000 V) 60 °C 30 A (690 V) 40 °C 30 A (690 V) 60 °C 30 A (690 V) 70 °C 26 A
Courant assignée d'emploi AC-3 ( $I_e$ )	(415 V) 60 °C 18 A (440 V) 60 °C 18 A (500 V) 60 °C 15 A (690 V) 60 °C 10.5 A (380 / 400 V) 60 °C 18 A (220 / 230 / 240 V) 60 °C 18 A
Courant assignée d'emploi AC-3e ( $I_e$ )	(415 V) 60 °C 18 A (440 V) 60 °C 18 A (500 V) 60 °C 15 A (690 V) 60 °C 10.5 A (380 / 400 V) 60 °C 18 A (220 / 230 / 240 V) 60 °C 18 A
Puissance assignée d'emploi AC-3 ( $P_e$ )	(415 V) 9 kW (440 V) 9 kW (500 V) 9 kW (690 V) 9 kW (380 / 400 V) 7.5 kW (220 / 230 / 240 V) 4 kW
Puissance assignée d'emploi AC-3e ( $P_e$ )	(415 V) 9 kW (440 V) 9 kW (500 V) 9 kW (690 V) 9 kW (380 / 400 V) 7.5 kW

	(220 / 230 / 240 V) 4 kW
Courant assignée d'emploi 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
Courant assigné de courte durée admissible ( $I_{cw}$ )	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
Maximum Breaking Capacity	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
Maximum Electrical Switching Frequency	(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
Courant assignée d'emploi DC-1 ( $I_e$ )	(110 V) 1-Pole, 40 °C 20 A (110 V) 1-Pole, 60 °C 20 A (110 V) 1-Pole, 70 °C 20 A (110 V) 2 Poles in Series, 40 °C 30 A (110 V) 2 Poles in Series, 60 °C 30 A (110 V) 2 Poles in Series, 70 °C 26 A (110 V) 3 Poles in Series, 40 °C 30 A (110 V) 3 Poles in Series, 60 °C 30 A (110 V) 3 Poles in Series, 70 °C 26 A (220 V) 2 Poles in Series, 40 °C 20 A (220 V) 2 Poles in Series, 60 °C 20 A (220 V) 2 Poles in Series, 70 °C 20 A (220 V) 3 Poles in Series, 40 °C 30 A (220 V) 3 Poles in Series, 60 °C 30 A (220 V) 3 Poles in Series, 70 °C 26 A (72 V) 1-Pole, 40 °C 30 A (72 V) 1-Pole, 60 °C 30 A (72 V) 1-Pole, 70 °C 26 A (72 V) 2 Poles in Series, 40 °C 30 A (72 V) 2 Poles in Series, 60 °C 30 A (72 V) 2 Poles in Series, 70 °C 26 A (72 V) 3 Poles in Series, 40 °C 30 A (72 V) 3 Poles in Series, 60 °C 30 A (72 V) 3 Poles in Series, 70 °C 26 A
Courant assignée d'emploi DC-3 ( $I_e$ )	(110 V) 1-Pole, 40 °C 8 A (110 V) 1-Pole, 60 °C 8 A (110 V) 1-Pole, 70 °C 8 A (110 V) 2 Poles in Series, 40 °C 30 A (110 V) 2 Poles in Series, 60 °C 30 A (110 V) 2 Poles in Series, 70 °C 26 A (110 V) 3 Poles in Series, 40 °C 30 A (110 V) 3 Poles in Series, 60 °C 30 A (110 V) 3 Poles in Series, 70 °C 26 A (220 V) 2 Poles in Series, 40 °C 8 A (220 V) 2 Poles in Series, 60 °C 8 A (220 V) 2 Poles in Series, 70 °C 8 A (220 V) 3 Poles in Series, 40 °C 30 A (220 V) 3 Poles in Series, 60 °C 30 A (220 V) 3 Poles in Series, 70 °C 26 A (72 V) 1-Pole, 40 °C 30 A (72 V) 1-Pole, 60 °C 30 A (72 V) 1-Pole, 70 °C 26 A (72 V) 2 Poles in Series, 40 °C 30 A (72 V) 2 Poles in Series, 60 °C 30 A (72 V) 2 Poles in Series, 70 °C 26 A (72 V) 3 Poles in Series, 40 °C 30 A (72 V) 3 Poles in Series, 60 °C 30 A

	(72 V) 3 Poles in Series, 70 °C 26 A
Courant assignée d'emploi 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 20 A (110 V) 2 Poles in Series, 60 °C 20 A (110 V) 2 Poles in Series, 70 °C 20 A (110 V) 3 Poles in Series, 40 °C 30 A (110 V) 3 Poles in Series, 60 °C 30 A (110 V) 3 Poles in Series, 70 °C 26 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 16 A (220 V) 3 Poles in Series, 60 °C 16 A (220 V) 3 Poles in Series, 70 °C 16 A (72 V) 1-Pole, 40 °C 16 A (72 V) 1-Pole, 60 °C 16 A (72 V) 1-Pole, 70 °C 16 A (72 V) 2 Poles in Series, 40 °C 30 A (72 V) 2 Poles in Series, 60 °C 30 A (72 V) 2 Poles in Series, 70 °C 26 A (72 V) 3 Poles in Series, 40 °C 30 A (72 V) 3 Poles in Series, 60 °C 30 A (72 V) 3 Poles in Series, 70 °C 26 A
Courant assignée d'emploi 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
Tension assignée d'isolement ( $U_i$ )	acc. to IEC 60947-4-1 690 V acc. to IEC 60947-5-1 690 V acc. to UL/CSA 600 V
Tension assignée de tenue aux chocs ( $U_{imp}$ )	6 kV
Maximum Mechanical Switching Frequency	3600 cycles per hour
Rated Control Circuit Voltage ( $U_c$ )	50 Hz 24 ... 60 V 60 Hz 24 ... 60 V DC Operation 20 ... 60 V
Durée de fonctionnement nominale	Entre la mise hors tension de la bobine et la fermeture du contact NC (normally closed) 13 ... 98 ms Entre la mise hors tension de la bobine et l'ouverture du contact NO (normally open) 11 ... 95 ms Entre la mise sous tension de la bobine et l'ouverture du contact NC 38 ... 90 ms Entre la mise sous tension de la bobine et la fermeture du contact NO 40 ... 95 ms
Montage sur rail DIN	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
Mounting by Screws (not supplied)	2 x M4 screws placed diagonally
Connecting Capacity Main Circuit	Flexible with Ferrule 1/2x 0.5 ... 4 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 0.5 ... 4 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 0.5 ... 2.5 mm <sup>2</sup> Flexible 1/2x 0.5 ... 4 mm <sup>2</sup> Rigid Solid 1/2x 1 ... 2.5 mm <sup>2</sup> Rigid Stranded 1/2x 4 ... 6 mm <sup>2</sup>
Connecting Capacity	Flexible with Ferrule 1/2x 0.5 ... 2.5 mm <sup>2</sup>

Auxiliary Circuit	Flexible with Insulated Ferrule 1/2x 0.5 ... 1.5 mm <sup>2</sup> Flexible 1/2x 0.5 ... 2.5 mm <sup>2</sup> Rigid Solid 1/2x 1 ... 2.5 mm <sup>2</sup>
Connecting Capacity Control Circuit	Flexible with Ferrule 1/2x 0.5 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 1/2x 0.5 ... 1.5 mm <sup>2</sup> Flexible 1/2x 0.5 ... 2.5 mm <sup>2</sup> Rigid Solid 1/2x 1 ... 2.5 mm <sup>2</sup>
Wire Stripping Length	Auxiliary Circuit 10 mm Control Circuit 10 mm Main Circuit 10 mm
Indice de protection	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
Type de borne	Push-in Spring Terminals

## Technique UL/CSA

Maximum Operating Voltage UL/CSA	Circuit principal 600 V
General Use Rating UL/CSA	(600 V AC) 30 A
Puissance nominale UL/CSA	(120 V AC) Single Phase 1-1/2 hp (200 ... 208 V AC) Three Phase 5 hp (220 ... 240 V AC) Three Phase 5 hp (240 V AC) Single Phase 3 hp (440 ... 480 V AC) Three Phase 10 hp (550 ... 600 V AC) Three Phase 15 hp
Connecting Capacity Main Circuit UL/CSA	Rigid Solid 1/2x 18-14 AWG Rigid Stranded 1/2x 18-10 AWG
Connecting Capacity Auxiliary Circuit UL/CSA	Rigid Solid 1/2x 18-14 AWG
Connecting Capacity Control Circuit UL/CSA	Rigid Solid 1/2x 18-14 AWG

## Environnement

Température de l'air ambiant	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 Near Contactor for Operation in Free Air -40 ... 70 °C
Climatic Withstand	Category B according to IEC 60947-1 Annex Q
Altitude de fonctionnement maximale autorisée	Without Derating 3000 m
REACH Declaration	2CMT2021-006202
Resistance to Vibrations acc. to IEC 60068-2-6	5 ... 300 Hz 4 g closed position / 2 g open position
Informations RoHS	2CMT2021-006277
Statut RoHS	Following EU Directive 2011/65/EU

## Certificats et Déclarations (Numéro de document)

Certificat ABS	ABS_20-2060694-PDA
CB Certificate	CB_SE-108879

CCC Certificate	CCC_2010010304445624
CQC Certificate	CQC2010010304445624 CQC2020010304298240
Declaration of Conformity - CCC	2020980304001253 2020980304001082
Déclaration de Conformité - CE	1SBD250000U1000
Declaration of Conformity - UKCA	1SBD250031U1000
Certificat DNV	DNV_TAE00001AF-4
Certificat LR	LRS_LR2002723TA-02
Certificat RINA	RINA_ELE240318XG
Certificat RMRS	RMRS_1802705280
Certificat UL	UL-US-2150887-5 UL-CA-2142658-5

## Emballage

Emballage Niveau 1 Unités	box 1 pièce
Emballage Niveau 1 Largeur	93 mm
Emballage Niveau 1 Longueur	86 mm
Emballage Niveau 1 Hauteur	45 mm
Emballage Niveau 1 Poids	0.33 kg
Emballage Niveau 1 EAN	3471523156210
Emballage Niveau 2 Unités	box 21 pièce
Emballage Niveau 2 Largeur	250 mm
Emballage Niveau 2 Longueur	300 mm
Emballage Niveau 2 Hauteur	315 mm
Emballage Niveau 2 Poids	14.85 kg
Emballage Niveau 3 Unités	1080 pièce

## Classifications

Code de classification d'objet	Q
ETIM 4	EC000066 - Magnet contactor, AC-switching
ETIM 5	EC000066 - Magnet contactor, AC-switching
ETIM 6	EC000066 - contacteur de puissance pour commutation de courant alternatif
ETIM 7	EC000066 - Power contactor, AC switching
ETIM 8	EC000066 - Power contactor, AC switching
eClass	V11.0 : 27371003
UNSPSC	39121529

Code de catégorie  
granulaire IDEA (IGCC)

4758 >> Iec Contactors

E-Number (Finland)

3707886

E-Number (Sweden)

3210611

