

PRODUCT-DETAILS

# AF09-40-00-13

## AF09-40-00-13 100-250V50/60HZ-DC Contactor



### Informations générales

|                              |  |
|------------------------------|--|
| Extension du type de produit | AF09-40-00-13                              |
| Code de produit              | 1SBL137201R1300                            |
| EAN                          | 3471523115033                              |
| Description courte           | AF09-40-00-13 100-250V50/60HZ-DC Contactor |

|                    |  |
|--------------------|--|
| Description longue | <p>The AF09-40-00-13 is a 4 pole - 690 V IEC or 600 UL contactor with screw terminals, controlling motors up to 4 kW / 400 V AC (AC-3) and switching power circuits up to 25 A (AC-1) or 25 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.</p> |
|--------------------|--|

### Commande

|                  |          |
|------------------|----------|
| Quantité minimum | 1 pièce  |
| Code douanier    | 85364900 |

### Popular Downloads

|                         |                 |
|-------------------------|-----------------|
| Instructions et manuels | 1SBC101027M6801 |
|-------------------------|-----------------|

CAD Dimensional  
Drawing

2CDC001079B0201

---

## Dimensions

|                      |         |
|----------------------|---------|
| Produit Largeur Net  | 45 mm   |
| Produit Longueur Net | 77 mm   |
| Produit Hauteur Net  | 86 mm   |
| Poids net            | 0.27 kg |

---

## Technique

|  |   |
|--|---|
| Number of Main Contacts<br>NO                                    | 4   |
| Number of Main Contacts<br>NC                                    | 0   |
| Number of Auxiliary<br>Contacts NO                               | 0   |
| Number of Auxiliary<br>Contacts NC                               | 0   |
| Normes et standards  | IEC/EN 60947-1, IEC/EN 60947-4-1, UL 508, CSA C22.2 No. 60947-4-1   |
| Tension  | Circuit principal 690 V   |
| Fréquence assignée (f)   | Circuit de commande 50 / 60 Hz<br>Circuit principal 50 / 60 Hz  |
| Courant thermique<br>conventionnel à l'air libre<br>( $I_{th}$ ) | acc. to IEC 60947-4-1, Open Contactors $\Theta = 40\text{ °C}$ 35 A   |
| Courant assignée d'<br>emploi AC-1 ( $I_e$ )                     | (690 V) 40 °C 25 A<br>(690 V) 60 °C 25 A<br>(690 V) 70 °C 22 A  |
| Courant assignée d'<br>emploi AC-3 ( $I_e$ )                     | (415 V) 60 °C 9 A<br>(440 V) 60 °C 9 A<br>(500 V) 60 °C 9.5 A<br>(690 V) 60 °C 7 A<br>(380 / 400 V) 60 °C 9 A<br>(220 / 230 / 240 V) 60 °C 9 A  |
| Puissance assignée d'<br>emploi AC-3 ( $P_e$ )                   | (400 V) 4 kW<br>(415 V) 4 kW<br>(440 V) 4 kW<br>(500 V) 5.5 kW<br>(690 V) 5.5 kW<br>(380 / 400 V) 4 kW<br>(220 / 230 / 240 V) 2.2 kW  |
| Courant assigné de courte<br>durée admissible ( $I_{cw}$ )       | at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 150 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 35 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 60 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 300 A<br>at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 80 A |
| Maximum Breaking<br>Capacity                                     | cos phi=0.45 (cos phi=0.35 for $I_e > 100\text{ A}$ ) at 440 V 250 A<br>cos phi=0.45 (cos phi=0.35 for $I_e > 100\text{ A}$ ) at 690 V 106 A  |
| Maximum Electrical<br>Switching Frequency                        | (AC-1) 600 cycles per hour  |
| Courant assignée d'<br>emploi DC-1 ( $I_e$ )                     | (110 V) 1-Pole, 40 °C 10 A<br>(110 V) 1-Pole, 60 °C 10 A<br>(110 V) 1-Pole, 70 °C 10 A<br>(110 V) 2 Poles in Series, 40 °C 25 A   |

Courant assignée d'  
emploi DC-3 (I<sub>e</sub>)

- (110 V) 2 Poles in Series, 60 °C 25 A
- (110 V) 2 Poles in Series, 70 °C 22 A
- (110 V) 3 Poles in Series, 40 °C 25 A
- (110 V) 3 Poles in Series, 60 °C 25 A
- (110 V) 3 Poles in Series, 70 °C 22 A
- (110 V) 4 Poles in Series, 40 °C 25 A
- (110 V) 4 Poles in Series, 60 °C 25 A
- (110 V) 4 Poles in Series, 70 °C 22 A
- (220 V) 2 Poles in Series, 40 °C 10 A
- (220 V) 2 Poles in Series, 60 °C 10 A
- (220 V) 2 Poles in Series, 70 °C 10 A
- (220 V) 3 Poles in Series, 40 °C 25 A
- (220 V) 3 Poles in Series, 60 °C 25 A
- (220 V) 3 Poles in Series, 70 °C 22 A
- (220 V) 4 Poles in Series, 40 °C 25 A
- (220 V) 4 Poles in Series, 60 °C 25 A
- (220 V) 4 Poles in Series, 70 °C 22 A
- (440 V) 4 Poles in Series, 40 °C 10 A
- (440 V) 4 Poles in Series, 60 °C 10 A
- (440 V) 4 Poles in Series, 70 °C 10 A
- (72 V) 1-Pole, 40 °C 25 A
- (72 V) 1-Pole, 60 °C 25 A
- (72 V) 1-Pole, 70 °C 22 A
- (72 V) 2 Poles in Series, 40 °C 25 A
- (72 V) 2 Poles in Series, 60 °C 25 A
- (72 V) 2 Poles in Series, 70 °C 22 A
- (72 V) 3 Poles in Series, 40 °C 25 A
- (72 V) 3 Poles in Series, 60 °C 25 A
- (72 V) 3 Poles in Series, 70 °C 22 A
- (72 V) 4 Poles in Series, 40 °C 25 A
- (72 V) 4 Poles in Series, 60 °C 25 A
- (72 V) 4 Poles in Series, 70 °C 22 A
- (110 V) 1-Pole, 40 °C 6 A
- (110 V) 1-Pole, 60 °C 6 A
- (110 V) 1-Pole, 70 °C 6 A
- (110 V) 2 Poles in Series, 40 °C 25 A
- (110 V) 2 Poles in Series, 60 °C 25 A
- (110 V) 2 Poles in Series, 70 °C 22 A
- (110 V) 3 Poles in Series, 40 °C 25 A
- (110 V) 3 Poles in Series, 60 °C 25 A
- (110 V) 3 Poles in Series, 70 °C 22 A
- (110 V) 4 Poles in Series, 40 °C 25 A
- (110 V) 4 Poles in Series, 60 °C 25 A
- (110 V) 4 Poles in Series, 70 °C 22 A
- (220 V) 2 Poles in Series, 40 °C 6 A
- (220 V) 2 Poles in Series, 60 °C 6 A
- (220 V) 2 Poles in Series, 70 °C 6 A
- (220 V) 3 Poles in Series, 40 °C 25 A
- (220 V) 3 Poles in Series, 60 °C 25 A
- (220 V) 3 Poles in Series, 70 °C 22 A
- (220 V) 4 Poles in Series, 40 °C 25 A
- (220 V) 4 Poles in Series, 60 °C 25 A
- (220 V) 4 Poles in Series, 70 °C 22 A
- (440 V) 4 Poles in Series, 40 °C 6 A
- (440 V) 4 Poles in Series, 60 °C 6 A
- (440 V) 4 Poles in Series, 70 °C 6 A
- (72 V) 1-Pole, 40 °C 25 A
- (72 V) 1-Pole, 60 °C 25 A
- (72 V) 1-Pole, 70 °C 22 A
- (72 V) 2 Poles in Series, 40 °C 25 A
- (72 V) 2 Poles in Series, 60 °C 25 A
- (72 V) 2 Poles in Series, 70 °C 22 A
- (72 V) 3 Poles in Series, 40 °C 25 A
- (72 V) 3 Poles in Series, 60 °C 25 A
- (72 V) 3 Poles in Series, 70 °C 22 A
- (72 V) 4 Poles in Series, 40 °C 25 A
- (72 V) 4 Poles in Series, 60 °C 25 A
- (72 V) 4 Poles in Series, 70 °C 22 A

Courant assignée d'

(110 V) 1-Pole, 40 °C 4 A

|   |  |
|---|--|
| emploi DC-5 ( $I_e$ )                             | (110 V) 1-Pole, 60 °C 4 A  |
|   | (110 V) 1-Pole, 70 °C 4 A  |
|   | (110 V) 2 Poles in Series, 40 °C 10 A  |
|   | (110 V) 2 Poles in Series, 60 °C 10 A  |
|   | (110 V) 2 Poles in Series, 70 °C 10 A  |
|   | (110 V) 3 Poles in Series, 40 °C 25 A  |
|   | (110 V) 3 Poles in Series, 60 °C 25 A  |
|   | (110 V) 3 Poles in Series, 70 °C 22 A  |
|   | (110 V) 4 Poles in Series, 40 °C 25 A  |
|   | (110 V) 4 Poles in Series, 60 °C 25 A  |
|   | (110 V) 4 Poles in Series, 70 °C 22 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 9 A   |
|   | (220 V) 3 Poles in Series, 60 °C 9 A   |
|   | (220 V) 3 Poles in Series, 70 °C 9 A   |
|   | (220 V) 4 Poles in Series, 40 °C 10 A  |
|   | (220 V) 4 Poles in Series, 60 °C 10 A  |
|   | (220 V) 4 Poles in Series, 70 °C 10 A  |
|   | (440 V) 4 Poles in Series, 40 °C 4 A   |
|   | (440 V) 4 Poles in Series, 60 °C 4 A   |
|   | (440 V) 4 Poles in Series, 70 °C 4 A   |
|   | (72 V) 1-Pole, 40 °C 9 A   |
|   | (72 V) 1-Pole, 60 °C 9 A   |
|   | (72 V) 1-Pole, 70 °C 9 A   |
|   | (72 V) 2 Poles in Series, 40 °C 25 A   |
|   | (72 V) 2 Poles in Series, 60 °C 25 A   |
|   | (72 V) 2 Poles in Series, 70 °C 22 A   |
|   | (72 V) 3 Poles in Series, 40 °C 25 A   |
|   | (72 V) 3 Poles in Series, 60 °C 25 A   |
|   | (72 V) 3 Poles in Series, 70 °C 22 A   |
|   | (72 V) 4 Poles in Series, 40 °C 25 A   |
|   | (72 V) 4 Poles in Series, 60 °C 25 A   |
|   | (72 V) 4 Poles in Series, 70 °C 22 A   |
| Tension assignée d'isolement ( $U_i$ )            | acc. to IEC 60947-4-1 690 V<br>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 100 ... 250 V<br>60 Hz 100 ... 250 V<br>DC Operation 100 ... 250 V   |
| Durée de fonctionnement nominale                  | Entre la mise hors tension de la bobine et la fermeture du contact NC (normally closed) 13 ... 98 ms<br>Entre la mise hors tension de la bobine et l'ouverture du contact NO (normally open) 11 ... 95 ms<br>Entre la mise sous tension de la bobine et l'ouverture du contact NC 38 ... 90 ms<br>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<br>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 0.75 ... 6 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 4 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 2.5 mm <sup>2</sup><br>Rigid Solid 1/2x 1 ... 4 mm <sup>2</sup><br>Rigid Stranded 1/2x 1 ... 6 mm <sup>2</sup>   |
| Connecting Capacity Auxiliary Circuit             | Rigid Solid 1/2x 1 ... 2.5 mm <sup>2</sup><br>Rigid Stranded 1/2x 1 ... 2.5 mm <sup>2</sup>  |
| Connecting Capacity                               | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup>  |

|                       |   |
|-----------------------|---|
| Control Circuit       | Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup><br>Rigid Solid 1/2x 1 ... 2.5 mm <sup>2</sup><br>Rigid Stranded 1/2x 1 ... 2.5 mm <sup>2</sup> |
| Wire Stripping Length | Control Circuit 10 mm<br>Main Circuit 10 mm   |
| Indice de 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 IP20  |
| Type de borne         | Screw Terminals   |

## Technique UL/CSA

|  |   |
|--|---|
| Maximum Operating Voltage UL/CSA             | Circuit principal 600 V                                     |
| General Use Rating UL/CSA                    | (600 V AC) 25 A   |
| Connecting Capacity Main Circuit UL/CSA      | Rigid Solid 1/2x 16-10 AWG<br>Rigid Stranded 1/2x 16-10 AWG |
| Connecting Capacity Auxiliary Circuit UL/CSA | Rigid Solid 1/2x 18-14 AWG<br>Rigid Stranded 1/2x 18-14 AWG |
| Connecting Capacity Control Circuit UL/CSA   | Rigid Solid 1/2x 18-14 AWG<br>Rigid Stranded 1/2x 18-14 AWG |
| Tightening Torque UL/CSA                     | Control Circuit 11 in-lb<br>Main Circuit 13 in-lb           |

## Environnement

|  |  |
|--|--|
| Température de l'air ambiant                   | Close to Contactor for Storage -60 ... +80 °C<br>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  |
| Resistance to Vibrations acc. to IEC 60068-2-6 | 5 ... 300 Hz 4 g closed position / 2 g open position   |
| Résistance aux chocs selon CEI 60068-2-27      | Closed, Shock Direction: B1 25 g<br>Open, Shock Direction: B1 5 g<br>Shock Direction: A 30 g<br>Shock Direction: B2 15 g<br>Shock Direction: C1 25 g<br>Shock Direction: C2 25 g |
| Statut RoHS                                    | Following EU Directive 2011/65/EU  |

## Certificats et Déclarations (Numéro de document)

|                                 |  |
|---------------------------------|--|
| Certificat ABS                  | ABS_20-2060694-PDA                         |
| Certificat BV                   | BV_2634H24898C0                            |
| CB Certificate                  | CB_SE-108879                               |
| CCC Certificate                 | CCC_2010010304445624                       |
| CQC Certificate                 | CQC2010010304445624<br>CQC2020010304298240 |
| Declaration of Conformity - CCC | 2020980304001253<br>2020980304001082       |

|                                     |  |
|-------------------------------------|--|
| Déclaration de Conformité<br>- CE   | 1SBD250001U1000  |
| Declaration of Conformity<br>- UKCA | 1SBD250032U1000  |
| Certificat DNV                      | DNV_TAE00001AF-4   |
| EAC Certificate                     | EAC_RU_FRME77B03447  |
| Certificat GOST                     | GOST_POCCFR.ME77.B07175.pdf                                |
| KC Certificate                      | KC_HW02016-15007C  |
| Certificat LR                       | LRS_LR2002723TA-02   |
| Certificat RINA                     | RINA_ELE240318XG   |
| Certificat RMRS                     | RMRS_1802705280  |
| Certificat UL                       | UL-US-L319322-13-72119002-3<br>UL-CA-L319322-43-72119002-3 |
| UL Listing Card                     | UL_E319322   |

## Emballage

|                                |               |
|--------------------------------|---------------|
| Emballage Niveau 1<br>Unités   | box 1 pièce   |
| Emballage Niveau 1<br>Largeur  | 87 mm         |
| Emballage Niveau 1<br>Longueur | 79 mm         |
| Emballage Niveau 1<br>Hauteur  | 47 mm         |
| Emballage Niveau 1 Poids       | 0.27 kg       |
| Emballage Niveau 1 EAN         | 3471523115033 |
| Emballage Niveau 2<br>Unités   | box 27 pièce  |
| Emballage Niveau 2<br>Largeur  | 250 mm        |
| Emballage Niveau 2<br>Longueur | 300 mm        |
| Emballage Niveau 2<br>Hauteur  | 315 mm        |
| Emballage Niveau 2 Poids       | 14.58 kg      |
| Emballage Niveau 3<br>Unités   | 1296 pièce    |

## Classifications

|                                   |   |
|-----------------------------------|---|
| Code de classification<br>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)

3706330

E-Number (Sweden)

3211390

---

## Catégories

---

Produits basse tension → Produits de Contrôle, Protection et sécurité machines → Contacteurs → Contacteurs monoblocs

