

## PRODUCT-DETAILS

# AF12-30-22-14

## AF12-30-22-14 250-500V50/60HZ-DC Contactor



### Informations générales

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extension du type de produit | AF12-30-22-14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Code de produit              | 1SBL157001R1422                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| EAN                          | 3471523110540                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Description courte           | AF12-30-22-14 250-500V50/60HZ-DC Contactor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Description longue           | <p>The AF12-30-22-14 is a 3 pole - 690 V IEC or 600 UL contactor with pre-mounted auxiliary contacts 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 (250-500 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 |

### Downloads Préférés

|                         |                 |
|-------------------------|-----------------|
| Instructions et manuels | 1SBC101027M6801 |
| CAD Dimensional Drawing | 2CDC001079B0201 |

## Dimensions

|                      |          |
|----------------------|----------|
| Produit Largeur Net  | 45 mm    |
| Produit Longueur Net | 110.5 mm |
| Produit Hauteur Net  | 86 mm    |
| Poids net            | 0.36 kg  |

## Technique

|                                                                  |                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Main Contacts<br>NO                                    | 3                                                                                                                                                                                                                                                                                                                                                                                   |
| Number of Main Contacts<br>NC                                    | 0                                                                                                                                                                                                                                                                                                                                                                                   |
| Number of Auxiliary<br>Contacts NO                               | 2                                                                                                                                                                                                                                                                                                                                                                                   |
| Number of Auxiliary<br>Contacts NC                               | 2                                                                                                                                                                                                                                                                                                                                                                                   |
| 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<br>Circuit principal 690 V                                                                                                                                                                                                                                                                                                                                 |
| Fréquence assignée (f)                                           | Circuit auxiliaire 50 / 60 Hz<br>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 $\Theta = 40^\circ\text{C}$ 35 A<br>acc. to IEC 60947-5-1, $\Theta = 40^\circ\text{C}$ 16 A                                                                                                                                                                                                                                                  |
| Courant assignée<br>d'emploi AC-1 ( $I_e$ )                      | (690 V) 40 °C 28 A<br>(690 V) 60 °C 28 A<br>(690 V) 70 °C 24 A                                                                                                                                                                                                                                                                                                                      |
| Courant assignée<br>d'emploi AC-3 ( $I_e$ )                      | (415 V) 60 °C 12 A<br>(440 V) 60 °C 12 A<br>(500 V) 60 °C 12.5 A<br>(690 V) 60 °C 9 A<br>(380 / 400 V) 60 °C 12 A<br>(220 / 230 / 240 V) 60 °C 12 A                                                                                                                                                                                                                                 |
| Courant assignée<br>d'emploi AC-3e ( $I_e$ )                     | (415 V) 60 °C 12 A<br>(440 V) 60 °C 12 A<br>(500 V) 60 °C 12.5 A<br>(690 V) 60 °C 9 A<br>(380 / 400 V) 60 °C 12 A<br>(220 / 230 / 240 V) 60 °C 12 A                                                                                                                                                                                                                                 |
| Puissance assignée<br>d'emploi AC-3 ( $P_e$ )                    | (400 V) 5.5 kW<br>(415 V) 5.5 kW<br>(440 V) 5.5 kW<br>(500 V) 7.5 kW<br>(690 V) 7.5 kW<br>(380 / 400 V) 5.5 kW<br>(220 / 230 / 240 V) 3 kW                                                                                                                                                                                                                                          |
| Puissance assignée<br>d'emploi AC-3e ( $P_e$ )                   | (415 V) 5.5 kW<br>(440 V) 5.5 kW<br>(500 V) 7.5 kW<br>(690 V) 7.5 kW<br>(380 / 400 V) 5.5 kW<br>(220 / 230 / 240 V) 3 kW                                                                                                                                                                                                                                                            |
| Courant assignée<br>d'emploi AC-15 ( $I_e$ )                     | (500 V) 2 A<br>(690 V) 2 A<br>(24 / 127 V) 6 A<br>(220 / 240 V) 4 A<br>(400 / 440 V) 3 A                                                                                                                                                                                                                                                                                            |
| 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<br>for 0.1 s 140 A<br>for 1 s 100 A |

|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum Breaking Capacity                        | cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 440 V 250 A<br>cos phi=0.45 (cos phi=0.35 for I <sub>e</sub> > 100 A) at 690 V 106 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Maximum Electrical Switching Frequency           | (AC-1) 600 cycles per hour<br>(AC-15) 1200 cycles per hour<br>(AC-2 / AC-4) 300 cycles per hour<br>(AC-3) 1200 cycles per hour<br>(DC-13) 900 cycles per hour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Courant assignée d'emploi DC-1 (I <sub>g</sub> ) | (110 V) 1-Pole, 40 °C 15 A<br>(110 V) 1-Pole, 60 °C 15 A<br>(110 V) 1-Pole, 70 °C 15 A<br>(110 V) 2 Poles in Series, 40 °C 27 A<br>(110 V) 2 Poles in Series, 60 °C 27 A<br>(110 V) 2 Poles in Series, 70 °C 24 A<br>(110 V) 3 Poles in Series, 40 °C 27 A<br>(110 V) 3 Poles in Series, 60 °C 27 A<br>(110 V) 3 Poles in Series, 70 °C 24 A<br>(220 V) 2 Poles in Series, 40 °C 15 A<br>(220 V) 2 Poles in Series, 60 °C 15 A<br>(220 V) 2 Poles in Series, 70 °C 15 A<br>(220 V) 3 Poles in Series, 40 °C 27 A<br>(220 V) 3 Poles in Series, 60 °C 27 A<br>(220 V) 3 Poles in Series, 70 °C 24 A<br>(72 V) 1-Pole, 40 °C 27 A<br>(72 V) 1-Pole, 60 °C 27 A<br>(72 V) 1-Pole, 70 °C 24 A<br>(72 V) 2 Poles in Series, 40 °C 27 A<br>(72 V) 2 Poles in Series, 60 °C 27 A<br>(72 V) 2 Poles in Series, 70 °C 24 A<br>(72 V) 3 Poles in Series, 40 °C 27 A<br>(72 V) 3 Poles in Series, 60 °C 27 A<br>(72 V) 3 Poles in Series, 70 °C 24 A |
| Courant assignée d'emploi DC-3 (I <sub>g</sub> ) | (110 V) 1-Pole, 40 °C 7 A<br>(110 V) 1-Pole, 60 °C 7 A<br>(110 V) 1-Pole, 70 °C 7 A<br>(110 V) 2 Poles in Series, 40 °C 27 A<br>(110 V) 2 Poles in Series, 60 °C 27 A<br>(110 V) 2 Poles in Series, 70 °C 24 A<br>(110 V) 3 Poles in Series, 40 °C 27 A<br>(110 V) 3 Poles in Series, 60 °C 27 A<br>(110 V) 3 Poles in Series, 70 °C 24 A<br>(220 V) 2 Poles in Series, 40 °C 7 A<br>(220 V) 2 Poles in Series, 60 °C 7 A<br>(220 V) 2 Poles in Series, 70 °C 7 A<br>(220 V) 3 Poles in Series, 40 °C 27 A<br>(220 V) 3 Poles in Series, 60 °C 27 A<br>(220 V) 3 Poles in Series, 70 °C 24 A<br>(72 V) 1-Pole, 40 °C 27 A<br>(72 V) 1-Pole, 60 °C 27 A<br>(72 V) 1-Pole, 70 °C 24 A<br>(72 V) 2 Poles in Series, 40 °C 27 A<br>(72 V) 2 Poles in Series, 60 °C 27 A<br>(72 V) 2 Poles in Series, 70 °C 24 A<br>(72 V) 3 Poles in Series, 40 °C 27 A<br>(72 V) 3 Poles in Series, 60 °C 27 A<br>(72 V) 3 Poles in Series, 70 °C 24 A       |
| Courant assignée d'emploi DC-5 (I <sub>g</sub> ) | (110 V) 1-Pole, 40 °C 4 A<br>(110 V) 1-Pole, 60 °C 4 A<br>(110 V) 1-Pole, 70 °C 4 A<br>(110 V) 2 Poles in Series, 40 °C 15 A<br>(110 V) 2 Poles in Series, 60 °C 15 A<br>(110 V) 2 Poles in Series, 70 °C 15 A<br>(110 V) 3 Poles in Series, 40 °C 27 A<br>(110 V) 3 Poles in Series, 60 °C 27 A<br>(110 V) 3 Poles in Series, 70 °C 24 A<br>(220 V) 2 Poles in Series, 40 °C 4 A<br>(220 V) 2 Poles in Series, 60 °C 4 A<br>(220 V) 2 Poles in Series, 70 °C 4 A<br>(220 V) 3 Poles in Series, 40 °C 12 A<br>(220 V) 3 Poles in Series, 60 °C 12 A<br>(220 V) 3 Poles in Series, 70 °C 12 A<br>(72 V) 1-Pole, 40 °C 12 A<br>(72 V) 1-Pole, 60 °C 12 A<br>(72 V) 1-Pole, 70 °C 12 A<br>(72 V) 2 Poles in Series, 40 °C 27 A<br>(72 V) 2 Poles in Series, 60 °C 27 A<br>(72 V) 2 Poles in Series, 70 °C 24 A<br>(72 V) 3 Poles in Series, 40 °C 27 A<br>(72 V) 3 Poles in Series, 60 °C 27 A<br>(72 V) 3 Poles in Series, 70 °C 24 A       |
| Courant assignée                                 | (24 V) 6 A / 144 W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| d'emploi DC-13 ( $I_e$ )                          | (48 V) 2.8 A / 134 W<br>(72 V) 1 A / 72 W<br>(110 V) 0.55 A / 60 W<br>(125 V) 0.55 A / 69 W<br>(220 V) 0.27 A / 60 W<br>(250 V) 0.27 A / 68 W<br>(400 V) 0.15 A / 60 W<br>(500 V) 0.13 A / 65 W<br>(600 V) 0.1 A / 60 W                                                                                                                                                              |
| Tension assignée d'isolement ( $U_i$ )            | acc. to IEC 60947-4-1 690 V<br>acc. to IEC 60947-5-1 690 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 250 ... 500 V<br>60 Hz 250 ... 500 V<br>DC Operation 250 ... 500 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             | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup><br>Flexible with Insulated Ferrule 1x 0.75 ... 2.5 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>                                                                                         |
| Connecting Capacity Control Circuit               | Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup><br>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                             | Auxiliary Circuit 10 mm<br>Control Circuit 10 mm<br>Main Circuit 10 mm                                                                                                                                                                                                                                                                                                               |
| Indice de protection                              | acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP20<br>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

|                                  |                                                                                                                                                                                          |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NEMA Size                        | 0                                                                                                                                                                                        |
| Continuous Current Rating NEMA   | 18 A                                                                                                                                                                                     |
| Horsepower Rating NEMA           | (115 V AC) Single Phase 1 Hp<br>(200 V AC) Three Phase 3 Hp<br>(230 V AC) Single Phase 2 Hp<br>(230 V AC) Three Phase 3 Hp<br>(460 V AC) Three Phase 5 Hp<br>(575 V AC) Three Phase 5 Hp |
| Maximum Operating Voltage UL/CSA | Circuit principal 600 V                                                                                                                                                                  |
| General Use Rating UL/CSA        | (600 V AC) 28 A                                                                                                                                                                          |

|                                                 |                                                                                                                                                                                                                               |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Puissance nominale<br>UL/CSA                    | (120 V AC) Single Phase 1 hp<br>(200 ... 208 V AC) Three Phase 3 hp<br>(220 ... 240 V AC) Three Phase 3 hp<br>(240 V AC) Single Phase 2 hp<br>(440 ... 480 V AC) Three Phase 7-1/2 hp<br>(550 ... 600 V AC) Three Phase 10 hp |
| Connecting Capacity Main<br>Circuit UL/CSA      | Rigid Solid 1/2x 16-10 AWG<br>Rigid Stranded 1/2x 16-10 AWG                                                                                                                                                                   |
| Connecting Capacity<br>Auxiliary Circuit UL/CSA | Rigid Solid 1/2x 18-14 AWG<br>Rigid Stranded 1/2x 18-14 AWG                                                                                                                                                                   |
| Connecting Capacity<br>Control Circuit UL/CSA   | Rigid Solid 1/2x 18-14 AWG<br>Rigid Stranded 1/2x 18-14 AWG                                                                                                                                                                   |
| Tightening Torque<br>UL/CSA                     | Auxiliary Circuit 11 in-lb<br>Control Circuit 11 in-lb<br>Main Circuit 13 in-lb                                                                                                                                               |

## Environnement

|                                                     |                                                                                                                                                                                  |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Température de l'air<br>ambiant                     | Close to Contactor Fitted with Thermal O/L Relay -25 ... 60 °C<br>Close to Contactor without Thermal O/L Relay -40 ... 70 °C<br>Close to Contactor for Storage -60 ... +80 °C    |
| Climatic Withstand                                  | Category B according to IEC 60947-1 Annex Q                                                                                                                                      |
| Altitude de<br>fonctionnement maximale<br>autorisée | Without Derating 3000 m                                                                                                                                                          |
| REACH Declaration                                   | 2CMT2021-006202                                                                                                                                                                  |
| Résistance aux chocs<br>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 |
| Resistance to Vibrations<br>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                         |
| Certificat BV                       | BV_2634H24898C0                            |
| CB Certificate                      | CB_SE-108879                               |
| CCC Certificate                     | CCC_2010010304445624                       |
| CQC Certificate                     | CQC2010010304445624<br>CQC2020010304298240 |
| Declaration of Conformity<br>- CCC  | 2020980304001253<br>2020980304001082       |
| Déclaration de Conformité<br>- CE   | 1SBD250000U1000                            |
| Declaration of Conformity<br>- UKCA | 1SBD250031U1000                            |
| Certificat DNV                      | DNV_TAE00001AF-4                           |
| EAC Certificate                     | EAC_RU_FRME77B03447                        |
| Certificat GOST                     | GOST_POCCFR.ME77.B07175.pdf                |
| KC Certificate                      | KC_HW02016-15005C                          |
| Certificat LR                       | LRS_LR2002723TA-02                         |
| Certificat RINA                     | RINA_ELE240318XG                           |
| Certificat RMRS                     | RMRS_1802705280                            |
| Certificat UL                       | UL-US-2150887-5<br>UL-CA-2142658-5         |

UL Listing Card

E312527

## Emballage

|                             |               |
|-----------------------------|---------------|
| Emballage Niveau 1 Unités   | box 1 pièce   |
| Emballage Niveau 1 Largeur  | 87 mm         |
| Emballage Niveau 1 Longueur | 113 mm        |
| Emballage Niveau 1 Hauteur  | 47 mm         |
| Emballage Niveau 1 Poids    | 0.36 kg       |
| Emballage Niveau 1 EAN      | 3471523110540 |
| Emballage Niveau 2 Unités   | box 18 pièce  |
| Emballage Niveau 2 Largeur  | 250 mm        |
| Emballage Niveau 2 Longueur | 300 mm        |
| Emballage Niveau 2 Hauteur  | 315 mm        |
| Emballage Niveau 2 Poids    | 6.48 kg       |
| Emballage Niveau 3 Unités   | 864 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 >> lec Contactors                                                    |

