

AF116 ... AF146 3-pole contactors

55 to 75 kW

AC / DC operated



AF146-30-11

1SFC101007V0001



AF146-30-11B

1SFC101008V0001



CAL19-11

1SFC101071V0001



LT140-30L

1SFC101038V0001

Description

AF116 ... AF146 contactors are mainly used for controlling 3-phase motors and power circuits.

Ordering details

3-pole contactors for connection with built-in cable clamps

| IEC Rated operational power 400 V AC-3 kW | UL/CSA 3-phase motor rating 480 V General use rating 600 V AC A | 3-phase motor rating 480 V hp | General use rating 600 V AC A | Rated control circuit voltage Uc | | Auxiliary contacts fitted | | Type | Order code | Weight Pkg (1 pce) kg |
|--|--|---|---|--|-----------|---------------------------------|---|------------------------------|-----------------|--------------------------------|
| | | | | V 50/60 Hz | V DC | 1 | 2 | | | |
| 55 | 160 | 75 | 160 | 24...60 | 20...60 | 1 | 1 | AF116-30-11-11 | 1SFL427001R1111 | 1.750 |
| | | | | 48...130 | 48...130 | 1 | 1 | AF116-30-11-12 | 1SFL427001R1211 | 1.750 |
| | | | | 100...250 | 100...250 | 1 | 1 | AF116-30-11-13 | 1SFL427001R1311 | 1.750 |
| | | | | 250...500 | 250...500 | 1 | 1 | AF116-30-11-14 ¹⁾ | 1SFL427001R1411 | 1.750 |
| 75 | 200 | 100 | 200 | 24...60 | 20...60 | 1 | 1 | AF140-30-11-11 | 1SFL447001R1111 | 1.750 |
| | | | | 48...130 | 48...130 | 1 | 1 | AF140-30-11-12 | 1SFL447001R1211 | 1.750 |
| | | | | 100...250 | 100...250 | 1 | 1 | AF140-30-11-13 | 1SFL447001R1311 | 1.750 |
| | | | | 250...500 | 250...500 | 1 | 1 | AF140-30-11-14 ¹⁾ | 1SFL447001R1411 | 1.750 |
| 75 | 225 | 100 | 200 | 24...60 | 20...60 | 1 | 1 | AF146-30-11-11 | 1SFL467001R1111 | 1.750 |
| | | | | 48...130 | 48...130 | 1 | 1 | AF146-30-11-12 | 1SFL467001R1211 | 1.750 |
| | | | | 100...250 | 100...250 | 1 | 1 | AF146-30-11-13 | 1SFL467001R1311 | 1.750 |
| | | | | 250...500 | 250...500 | 1 | 1 | AF146-30-11-14 ¹⁾ | 1SFL467001R1411 | 1.750 |

3-pole contactors with bar connections

| | | | | | | | | | | |
|----|-----|-----|-----|-----------|-----------|---|---|-------------------------------|-----------------|-------|
| 55 | 160 | 75 | 160 | 24...60 | 20...60 | 1 | 1 | AF116-30-11B-11 | 1SFL427002R1111 | 1.500 |
| | | | | 48...130 | 48...130 | 1 | 1 | AF116-30-11B-12 | 1SFL427002R1211 | 1.500 |
| | | | | 100...250 | 100...250 | 1 | 1 | AF116-30-11B-13 | 1SFL427002R1311 | 1.500 |
| | | | | 250...500 | 250...500 | 1 | 1 | AF116-30-11B-14 ¹⁾ | 1SFL427002R1411 | 1.500 |
| 75 | 200 | 100 | 200 | 24...60 | 20...60 | 1 | 1 | AF140-30-11B-11 | 1SFL447002R1111 | 1.500 |
| | | | | 48...130 | 48...130 | 1 | 1 | AF140-30-11B-12 | 1SFL447002R1211 | 1.500 |
| | | | | 100...250 | 100...250 | 1 | 1 | AF140-30-11B-13 | 1SFL447002R1311 | 1.500 |
| | | | | 250...500 | 250...500 | 1 | 1 | AF140-30-11B-14 ¹⁾ | 1SFL447002R1411 | 1.500 |
| 75 | 225 | 100 | 200 | 24...60 | 20...60 | 1 | 1 | AF146-30-11B-11 | 1SFL467002R1111 | 1.500 |
| | | | | 48...130 | 48...130 | 1 | 1 | AF146-30-11B-12 | 1SFL467002R1211 | 1.500 |
| | | | | 100...250 | 100...250 | 1 | 1 | AF146-30-11B-13 | 1SFL467002R1311 | 1.500 |
| | | | | 250...500 | 250...500 | 1 | 1 | AF146-30-11B-14 ¹⁾ | 1SFL467002R1411 | 1.500 |

1) Coil 250...500 V, 50/60 Hz and DC available in April 2013

Note: AF contactors type -00 and -22 on request.

Auxiliary contact blocks

| | Auxiliary contacts | Type | Order code | Pkg qty | Weight (1 pce) kg |
|---|--------------------|-----------|-----------------|------------|-------------------------|
| Side mounted instantaneous contact blocks | 1 1 - - | CAL19-11 | 1SFN010820R1011 | 2 | 0.040 |
| Side mounted instantaneous contact blocks mounting outside other block | 1 1 - - | CAL19-11B | 1SFN010820R3311 | 2 | 0.040 |

Terminal shrouds

| | Type | Order code | Pkg qty | Weight (1 pce) kg |
|--------------------------------------|-----------|-----------------|------------|-------------------------|
| For connection with compression lugs | LT140-30L | 1SFN124203R1000 | 2 | 0.070 |

Overload relays for AF116 ... AF146 3-pole contactors



EF146



TF140DU

Description

Ordering details Electronic overload relays

| Setting range | Short-circuit protective device | Trip class | Type | Order code | Weight (1 pce) kg |
|---------------|---------------------------------|---------------|-------|-----------------|-------------------|
| A | | | | | |
| 54...150 | 315 A, Fuse type gG | E10, E20, E30 | EF146 | 1SAX351001R1101 | 0.890 |



Ordering details Thermal overload relays

| Setting range | Short-circuit protective device | Trip class | Type | Order code | Weight (1 pce) kg |
|---------------|---------------------------------|------------|-------------|-----------------|-------------------|
| A | | | | | |
| 66...90 | 125 A, Fuse type gG | 10 A | TF140DU-90 | 1SAZ431201R1001 | 0.880 |
| 80...110 | 160 A, Fuse type gG | 10 A | TF140DU-110 | 1SAZ431201R1002 | 0.820 |
| 100...135 | 200 A, Fuse type gG | 10 A | TF140DU-135 | 1SAZ431201R1003 | 0.820 |
| 110...142 | 200 A, Fuse type gG | 10 A | TF140DU-142 | 1SAZ431201R1004 | 0.820 |

AF116 ... AF146 3-pole contactors

Technical data

Main pole - Utilization characteristics according to IEC

| Contactor types | AC / DC operated | AF116 | AF140 | AF146 |
|--|----------------------|--------------------------------|--------------------|--------------------|
| Standards | | IEC 60947-4-1 and EN 60947-4-1 | | |
| Rated operational voltage U _e max. | | 690 V | 690 V | 1000 V |
| Rated frequency (without derating) | | 50 / 60 Hz | | |
| AC-1 Utilization category | | | | |
| For air temperature close to contactor | | | | |
| I_e / Rated operational current AC-1 | θ ≤ 40 °C | 160 A | 200 A | 225 A |
| U _e max. ≤ 690 V, 50/60 Hz | θ ≤ 60 °C | 145 A | 175 A | 200 A |
| | θ ≤ 70 °C | 130 A | 160 A | 175 A |
| With conductor cross-sectional area | | 70 mm ² | 70 mm ² | 95 mm ² |
| AC-3 Utilization category | | | | |
| For air temperature close to contactor θ ≤ 55 °C | | | | |
| I_e / Max. rated operational current AC-3 | | | | |
|  3-phase motors | 220-230-240 V | 116 A | 140 A | 146 A |
| | 380-400 V | 116 A | 140 A | 146 A |
| | 415 V | 116 A | 140 A | 146 A |
| | 440 V | 116 A | 140 A | 146 A |
| | 500 V | 110 A | 130 A | 130 A |
| | 690 V | 65 A | 80 A | 93 A |
| | 1000 V | – | – | 60 A |
| | | | | |
| Rated operational power AC-3 | | | | |
|  1500 r.p.m. 50 Hz 1800 r.p.m. 60 Hz 3-phase motors | 220-230-240 V | 30 kW | 37 kW | 45 kW |
| | 380-400 V | 55 kW | 75 kW | 75 kW |
| | 415 V | 55 kW | 75 kW | 75 kW |
| | 440 V | 75 kW | 90 kW | 90 kW |
| | 500 V | 75 kW | 90 kW | 90 kW |
| | 690 V | 55 kW | 75 kW | 90 kW |
| | 1000 V | – | – | 75 kW |
| | | | | |
| Short-circuit protection device for contactors | | | | |
| without thermal overload relay - Motor protection excluded | | | | |
| U _e ≤ 500 V AC - gG type fuse | | 200 A | 315 A | 315 A |
| Max. electrical switching frequency | AC-1 | 300 cycles/h | | |
| | AC-3 | 300 cycles/h | | |
| Connection capacity (min. ... max.) | | | | |
| Main conductors (poles) | | | | |
| Stranded | 1 or 2 x | 10 ... 95 mm ² | | |
| Flexible | 1 or 2 x | 10 ... 70 mm ² | | |

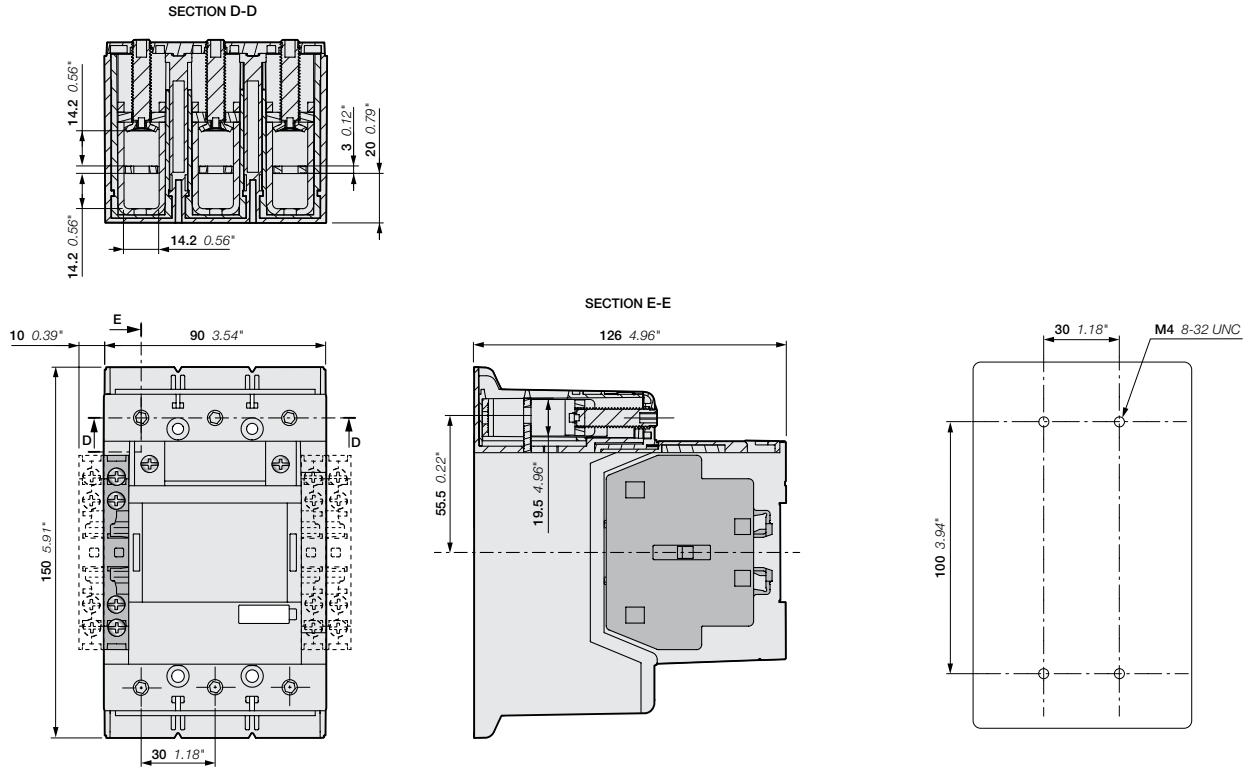
Main pole - Utilization characteristics according to UL / CSA

| Contactor types | AC / DC operated | AF116 | AF140 | AF146 |
|--|---------------------|---|---------|---------|
| Standards | | UL 60947-4-1A and CSA C22.2 N° 60947-4-1-07 | | |
| Max. operational voltage | | 600 V | | |
| UL / CSA General use rating | | | | |
| 600 VAC | | 160 A | 200 A | 200 A |
| With conductor cross-sectional area | | AWG 2/0 | AWG 3/0 | AWG 3/0 |
| UL / CSA maximum 3-phase motor rating | | | | |
| Full load current | 220-208 V AC | 88 A | 114 A | 114 A |
| | 220-240 V AC | 104 A | 130 A | 130 A |
| | 440-480 V AC | 96 A | 124 A | 124 A |
| | 550-600 V AC | 99 A | 125 A | 125 A |
| | | | | |
| Horse power rating | 220-208 V AC | 30 hp | 40 hp | 40 hp |
| | 220-240 V AC | 40 hp | 50 hp | 50 hp |
| | 440-480 V AC | 75 hp | 100 hp | 100 hp |
| | 550-600 V AC | 100 hp | 125 hp | 125 hp |
| | | | | |
| Short-circuit protection device for contactors | | | | |
| without thermal overload relay - Motor protection excluded | | | | |
| Fuse rating | | 250 A | 250 A | 250 A |
| Fuse type, 600 V | | J/R | | |
| Connection capacity acc to UL/CSA | 1 or 2 x | AWG 6 ...3/0 | | |

AF116 ... AF146 3-pole contactors

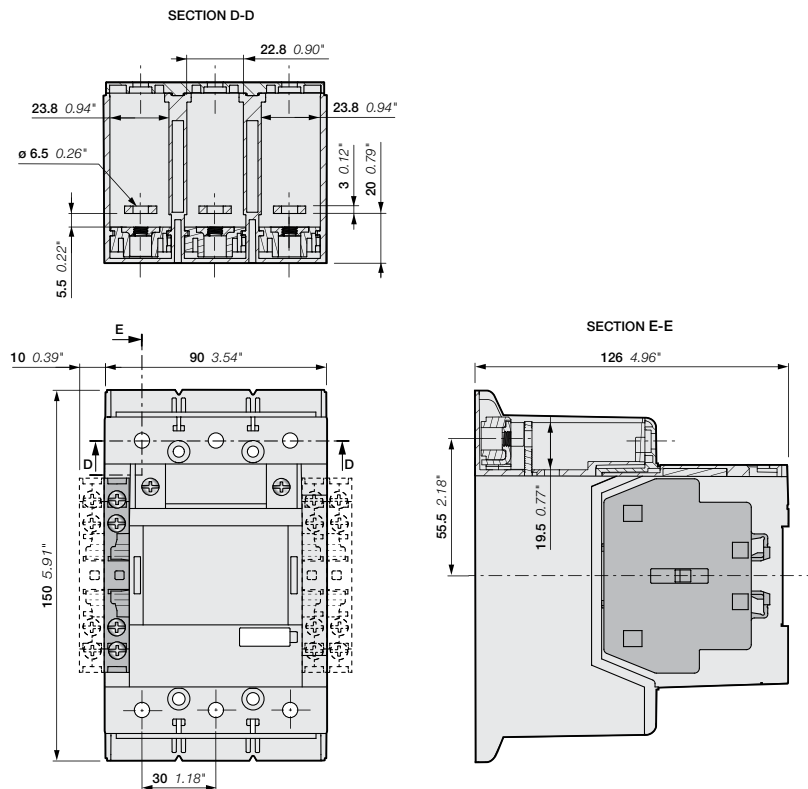
Dimension drawings

Main dimensions mm, inches



AF116, AF140, AF146-30-00 + CAL19 2-pole auxiliary contact block
AF116, AF140, AF146-30-11

AF116, AF140, AF146-30-...(B)



AF116, AF140, AF146-30-00B + CAL19 2-pole auxiliary contact block
AF116, AF140, AF146-30-11B

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