

# 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	UL/CSA	Rated control circuit voltage Uc	Auxiliary contacts fitted	Type	Order code	Weight			
Rated operational power	3-phase motor rating	General use rating				Pkg (1 pce)			
400 V AC-3	690 V AC-1	480 V	600 V AC			kg			
kW	A	hp	A	V 50/60 Hz	V DC				
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 <sup>1)</sup>	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 <sup>1)</sup>	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 <sup>1)</sup>	1SFL467001R1411	1.750

#### 3-pole contactors with bar connections

IEC	UL/CSA	Rated control circuit voltage Uc	Auxiliary contacts fitted	Type	Order code	Weight			
Rated operational power	3-phase motor rating	General use rating				Pkg (1 pce)			
400 V AC-3	690 V AC-1	480 V	600 V AC			kg			
kW	A	hp	A	V 50/60 Hz	V DC				
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 <sup>1)</sup>	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 <sup>1)</sup>	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 <sup>1)</sup>	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
<b>A</b>					
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
<b>A</b>					
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		
<b>AC-1 Utilization category</b>				
For air temperature close to contactor				
<b><math>I_e</math> / Rated operational current AC-1</b>	$\theta \leq 40\text{ °C}$	160 A	200 A	225 A
$U_e$ max. $\leq 690\text{ V}$ , 50/60 Hz	$\theta \leq 60\text{ °C}$	145 A	175 A	200 A
	$\theta \leq 70\text{ °C}$	130 A	160 A	175 A
With conductor cross-sectional area		70 mm <sup>2</sup>	70 mm <sup>2</sup>	95 mm <sup>2</sup>
<b>AC-3 Utilization category</b>				
For air temperature close to contactor $\theta \leq 55\text{ °C}$				
<b><math>I_e</math> / Max. rated operational current AC-3</b>				
 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
<b>Rated operational power AC-3</b>				
 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
<b>Short-circuit protection device for contactors</b>				
without thermal overload relay - Motor protection excluded				
$U_e \leq 500\text{ V AC}$ - gG type fuse		200 A	315 A	315 A
<b>Max. electrical switching frequency</b>	<b>AC-1</b>	300 cycles/h		
	<b>AC-3</b>	300 cycles/h		
Connection capacity (min. ... max.)				
<b>Main conductors (poles)</b>				
Stranded	<b>1 or 2 x</b>	10 ... 95 mm <sup>2</sup>		
Flexible	<b>1 or 2 x</b>	10 ... 70 mm <sup>2</sup>		

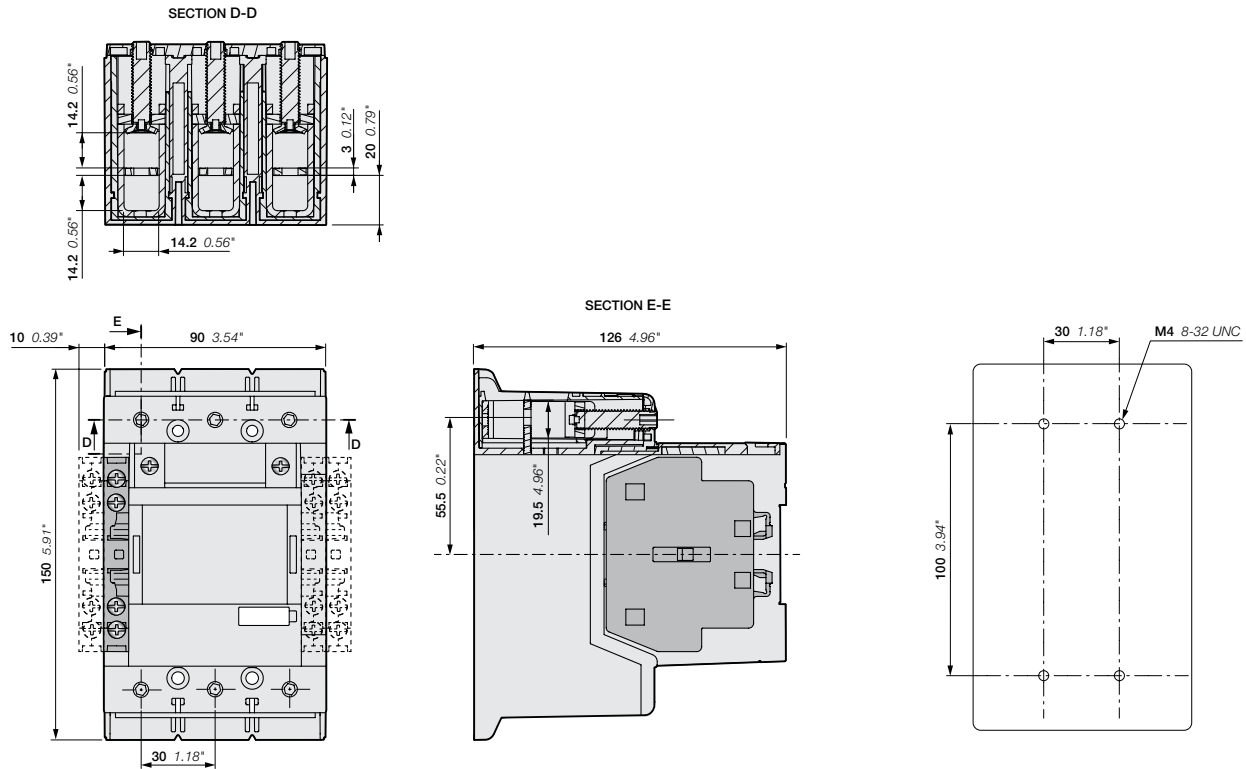
### Main pole - Utilization characteristics according to UL / CSA

Contactor types	AC / DC operated	AF116	AF140	AF146
Standards		UL 60947-4-1A and CSA C22.2 N° 60947-4-1-07		
<b>Max. operational voltage</b>		600 V		
<b>UL / CSA General use rating</b>				
600 VAC		160 A	200 A	200 A
With conductor cross-sectional area		AWG 2/0	AWG 3/0	AWG 3/0
<b>UL / CSA maximum 3-phase motor rating</b>				
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
<b>Short-circuit protection device for contactors</b>				
without thermal overload relay - Motor protection excluded				
Fuse rating		250 A	250 A	250 A
Fuse type, 600 V		J/R		
<b>Connexion capacity acc to UL/CSA</b>	<b>1 or 2 x</b>	AWG 6 ...3/0		

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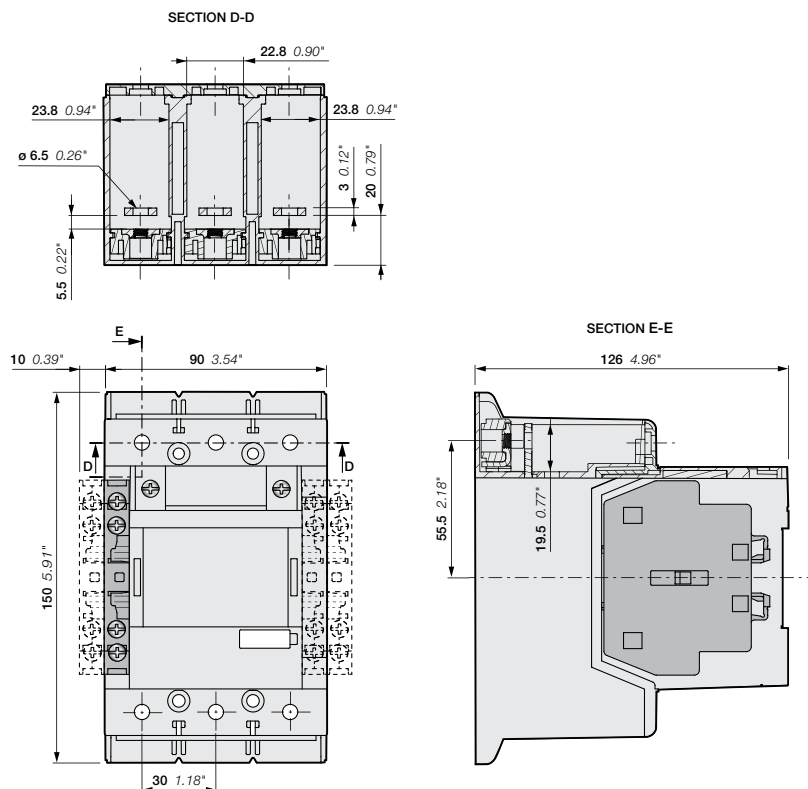
## Dimension drawings

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