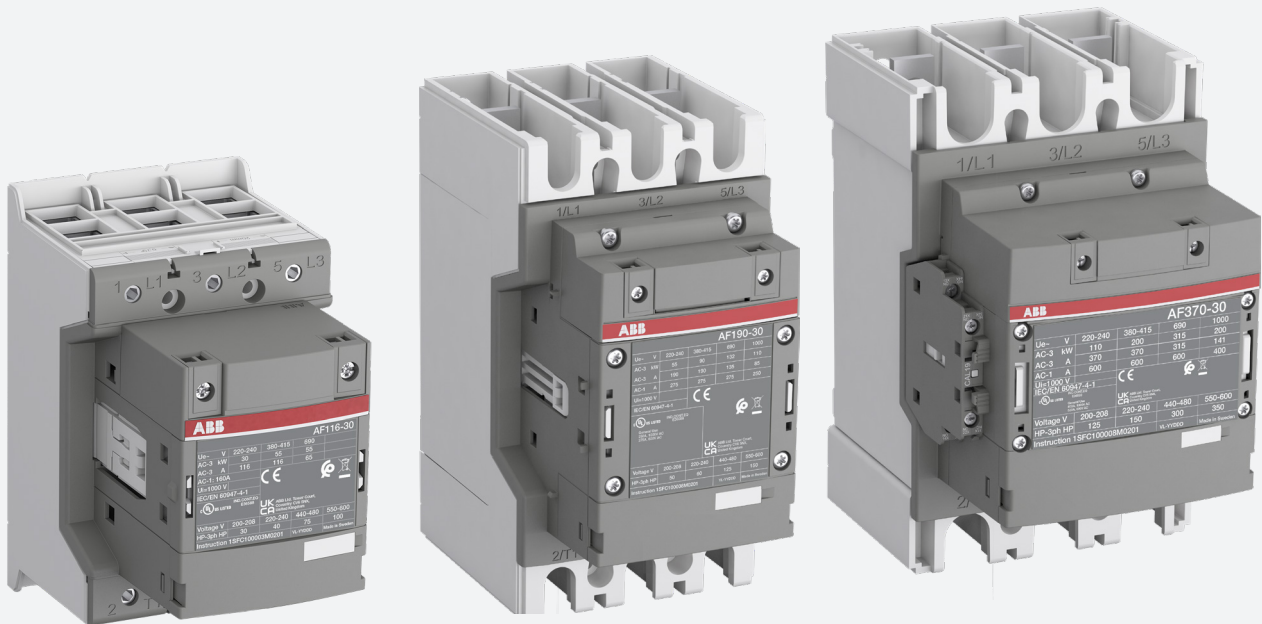
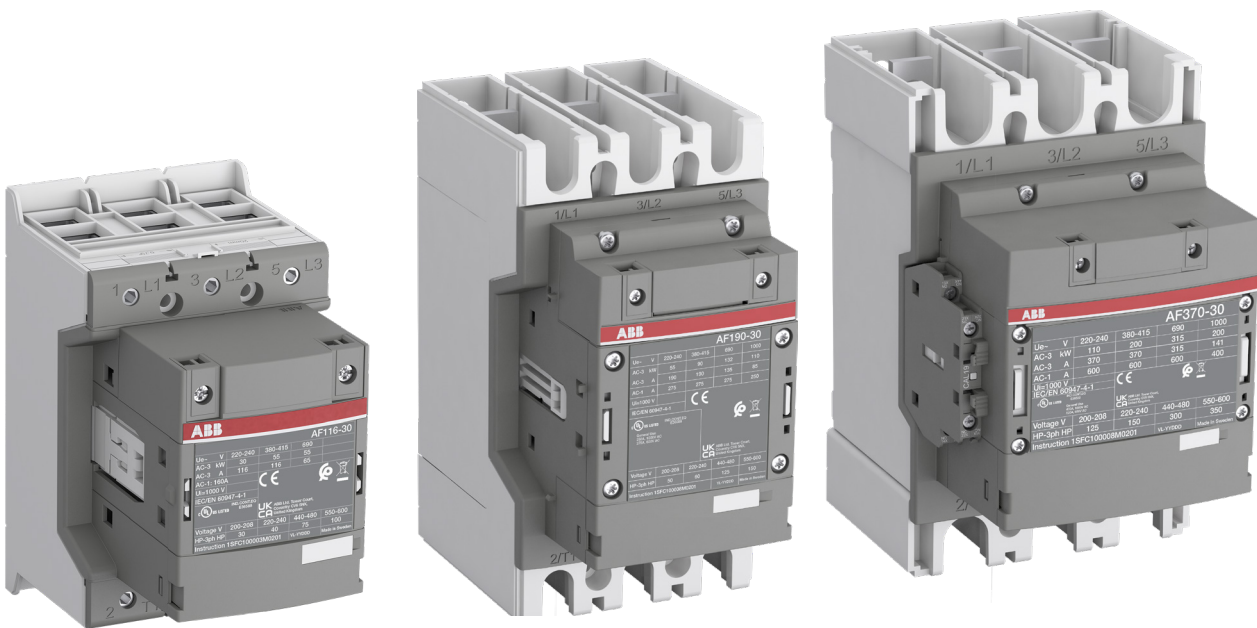


AF contactors for faster operation utilization



AF contactors for faster operation utilization

ABB's AF platform is now extended with new coils bringing faster operation time to the offer. It provides an additional choice, fitting to more solutions up to 200 kW AC-3. With the same footprint, design work is simpler – all with the advantage of ABB's trusted quality and global support.



Speed up your projects

One modular design

AF platform shares the same footprint – giving standalone contactors and starter combinations the same space requirements. The short circuit performance is equivalent, making it possible to use one common circuit design for multiple applications.



Optimum interface

One contactor platform

AF platform has a common range of accessories and protection devices. Reducing stock levels, minimizing mounting errors and maximizing interchangeability - the new contactors are good for business.



Global availability

Expand your market

Use ABB's global distribution channels to source your AF contactors. The range is compliant with all major international standards and approvals and suitable for use in most countries. Supported by ABB's global service network all around the world, get peace of mind.

AF116 ... AF146 3-pole contactors

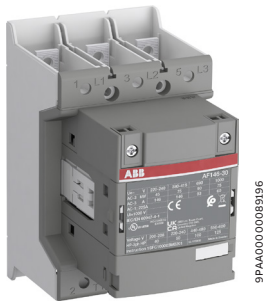
55 to 75 kW

AC operated- optimized for short operation times



AF146-30-00

9PA40000089173



AF146-30-00B

9PA40000089196

AF116 ... AF140 contactors are mainly used for controlling 3-phase motors and power circuits up to 690 V AC, AF146 up to 1000 V AC. These contactors are of the block type design with 3 main poles.

- control circuit: AC operated with electronic coil interface
 - with faster operating time
 - reduced panel energy consumption
 - very distinct closing and opening
- built-in surge suppression
- add-on auxiliary contact blocks for side mounting and a wide range of accessories.

IEC	UL / CSA		Rated control circuit voltage		Auxiliary contacts fitted	Type (1)	Order code	Weight
	Rated operational power	3-phase motor rating	General use rating	Uc min. ... Uc max.				
400 V AC-3 kW	AC-1 A	480 V hp	600 V AC A	V 50 Hz V 60Hz				kg

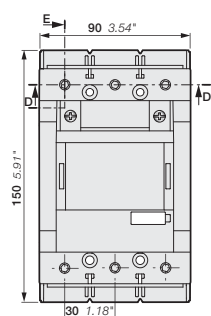
For connection with built-in cable clamps

Rated operational power	3-phase motor rating	General use rating	Uc min. ... Uc max.	Uc min. ... Uc max.	Auxiliary contacts fitted	Type (1)	Order code	Weight	
55	160	75	160	110...120	110...120	0 0	AF116-30-00-42	1SFL427001R4200	1.750
				220...240	220...240	0 0	AF116-30-00-43	1SFL427001R4300	1.750
75	200	100	200	110...120	110...120	0 0	AF140-30-00-42	1SFL447001R4200	1.750
				220...240	220...240	0 0	AF140-30-00-43	1SFL447001R4300	1.750
75	225	100	200	110...120	110...120	0 0	AF146-30-00-42	1SFL467001R4200	1.750
				220...240	220...240	0 0	AF146-30-00-43	1SFL467001R4300	1.750

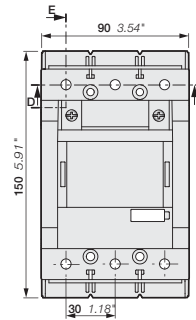
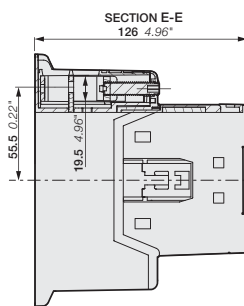
With bar connections

Rated operational power	3-phase motor rating	General use rating	Uc min. ... Uc max.	Uc min. ... Uc max.	Auxiliary contacts fitted	Type (1)	Order code	Weight	
55	160	75	160	110...120	110...120	0 0	AF116-30-00B-42	1SFL427002R4200	1.500
				220...240	220...240	0 0	AF116-30-00B-43	1SFL427002R4300	1.500
75	200	100	200	110...120	110...120	0 0	AF140-30-00B-42	1SFL447002R4200	1.500
				220...240	220...240	0 0	AF140-30-00B-43	1SFL447002R4300	1.500
75	225	100	200	110...120	110...120	0 0	AF146-30-00B-42	1SFL467002R4200	1.500
				220...240	220...240	0 0	AF146-30-00B-43	1SFL467002R4300	1.500

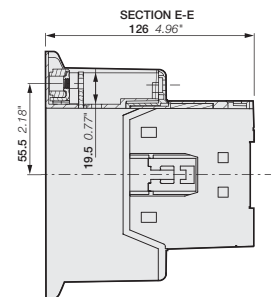
(1) For other auxiliary contacts arrangements, please contact your ABB local sales organization.



AF116, AF140, AF146-30-00



AF116, AF140, AF146-30-00B

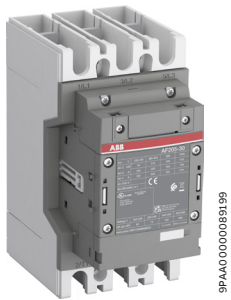


Main dimensions mm, inches

AF190 ... AF370 3-pole contactors

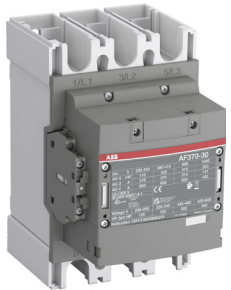
90 to 200 kW

AC operated-optimized for short operation times



AF205-30-00

9PAA0000089199



AF370-30-00

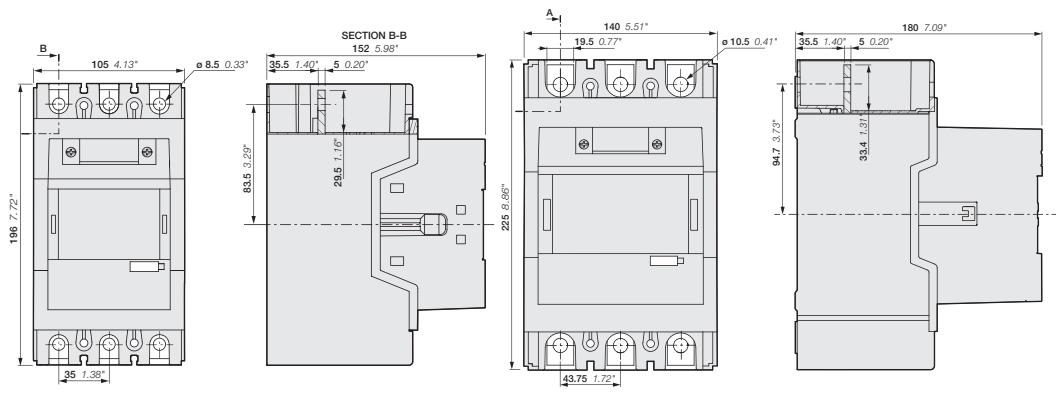
9PAA0000089187

AF190 ... AF370 contactors are mainly used for controlling 3-phase motors and power circuits up to 1000 V AC. These contactors are of the block type design with 3 main poles.

- control circuit: AC operated with electronic coil interface
 - with faster operating time
 - reduced panel energy consumption
 - very distinct closing and opening
- built-in surge suppression
- add-on auxiliary contact blocks for side mounting and a wide range of accessories.

IEC	UL / CSA		Rated control circuit voltage		Auxiliary contacts fitted	Type (1)	Order code	Weight
	Rated operational power	3-phase motor rating	General use rating	Uc min. ... Uc max.				
400 V AC-3	AC-1	480 V	600 V AC	V 50 Hz V 60 Hz				kg
kW	A	hp	A					
90	275	125	275	110...120 48...130	0 0	AF190-30-00-42	1SFL487002R4200	3.000
				220...240 100...250	0 0	AF190-30-00-43	1SFL487002R4300	3.000
110	350	150	300	110...120 110...120	0 0	AF205-30-00-42	1SFL527002R4200	3.000
				220...240 220...240	0 0	AF205-30-00-43	1SFL527002R4300	3.000
132	400	200	350	110...120 110...120	0 0	AF265-30-00-42	1SFL547002R4200	4.605
				220...240 220...240	0 0	AF265-30-00-43	1SFL547002R4300	4.605
160	500	250	400	110...120 110...120	0 0	AF305-30-00-42	1SFL587002R4200	4.605
				220...240 220...240	0 0	AF305-30-00-43	1SFL587002R4300	4.605
200	600	300	520	110...120 110...120	0 0	AF370-30-00-42	1SFL607002R4200	4.605
				220...240 220...240	0 0	AF370-30-00-43	1SFL607002R4300	4.605

(1) For other auxiliary contacts arrangements, please contact your ABB local sales organization.



AF190, AF205

AF265, AF305, AF370

Main dimensions mm, inches

AF116 ... AF146 3-pole contactors

55 to 75 kW

AC operated with 1 N.O. + 1 N.C. auxiliary contacts - optimized for short operation times



AF146-30-11

9PAA00000893176



AF146-30-11B

9PAA00000893184

AF116 ... AF140 contactors are mainly used for controlling 3-phase motors and power circuits up to 690 V AC, AF146 up to 1000 V AC. These contactors are of the block type design with 3 main poles.

- control circuit: AC operated with electronic coil interface
 - with faster operating time
 - reduced panel energy consumption
 - very distinct closing and opening
- built-in surge suppression
- add-on auxiliary contact blocks for side mounting and a wide range of accessories.

IEC	UL / CSA		Rated control circuit voltage		Auxiliary contacts fitted	Type (1)	Order code	Weight
Rated operational power	3-phase motor current $\theta \leq 40^\circ\text{C}$	General use rating	Uc min. ... Uc max.					
400 V AC-3 kW	AC-1 A	480 V hp	600 V AC A	V 50 Hz V 60Hz				kg

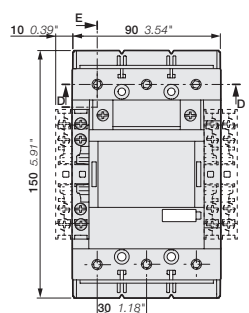
For connection with built-in cable clamps

Rated operational power	3-phase motor current	General use rating	Rated control circuit voltage	Auxiliary contacts fitted	Type	Order code	Weight	
55	160	75	160	110...120	110...120	1 1 AF116-30-11-42	1SFL427001R4211	1.750
				220...240	220...240	1 1 AF116-30-11-43	1SFL427001R4311	1.750
75	200	100	200	110...120	110...120	1 1 AF140-30-11-42	1SFL447001R4211	1.750
				220...240	220...240	1 1 AF140-30-11-43	1SFL447001R4311	1.750
75	225	100	200	110...120	110...120	1 1 AF146-30-11-42	1SFL467001R4211	1.750
				220...240	220...240	1 1 AF146-30-11-43	1SFL467001R4311	1.750

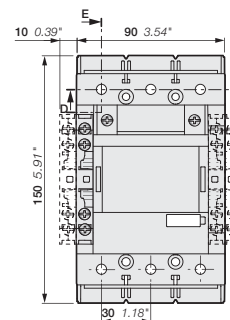
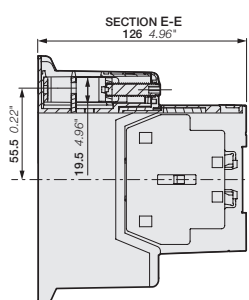
With bar connections

Rated operational power	3-phase motor current	General use rating	Rated control circuit voltage	Auxiliary contacts fitted	Type	Order code	Weight	
55	160	75	160	110...120	110...120	1 1 AF116-30-11B-42	1SFL427002R4211	1.500
				220...240	220...240	1 1 AF116-30-11B-43	1SFL427002R4311	1.500
75	200	100	200	110...120	110...120	1 1 AF140-30-11B-42	1SFL447002R4211	1.500
				220...240	220...240	1 1 AF140-30-11B-43	1SFL447002R4311	1.500
75	225	100	200	110...120	110...120	1 1 AF146-30-11B-42	1SFL467002R4211	1.500
				220...240	210...240	1 1 AF146-30-11B-43	1SFL467002R4311	1.500

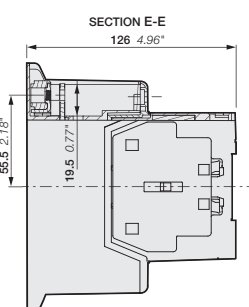
(1) For other auxiliary contacts arrangements, please contact your ABB local sales organization.



AF116, AF140, AF146-30-11



AF116, AF140, AF146-30-11B

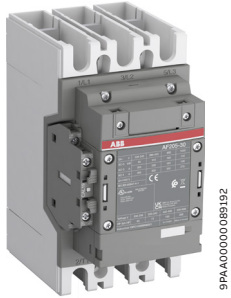


Main dimensions mm, inches

AF190 ... AF370 3-pole contactors

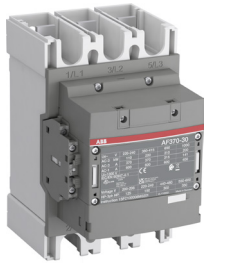
90 to 200 kW

AC operated with 1 N.O. + 1 N.C. auxiliary contacts - optimized for short operation times



AF205-30-11

9PAA0000089192



AF370-30-11

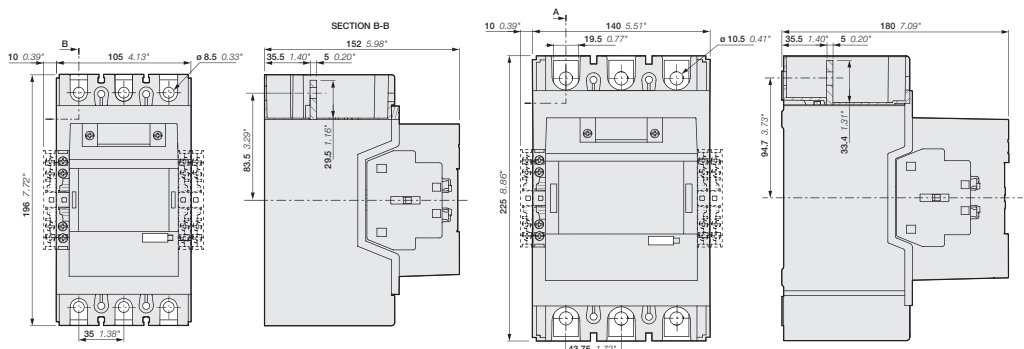
9PAA0000089180

AF190 ... AF370 contactors are mainly used for controlling 3-phase motors and power circuits up to 1000 V AC. These contactors are of the block type design with 3 main poles.

- control circuit: AC operated with electronic coil interface
 - with faster operating time
 - reduced panel energy consumption
 - very distinct closing and opening
- built-in surge suppression
- add-on auxiliary contact blocks for side mounting and a wide range of accessories.

IEC Rated operational power	UL / CSA 3-phase motor rating 480 V	General use rating 600 V AC	Rated control circuit voltage Uc min. ... Uc max.		Auxiliary contacts fitted	Type (1)	Order code	Weight Pkg (1 pce) kg	
			V 50 Hz	V 60 Hz					
400 V AC-3 kW	AC-1 A	hp	A	V 50 Hz	V 60 Hz				
90	275	125	275	110...120	110...120	1 1	AF190-30-11-42	1SFL487002R4211	3.000
				220...240	220...240	1 1	AF190-30-11-43	1SFL487002R4311	3.000
110	350	150	300	110...120	110...120	1 1	AF205-30-11-42	1SFL527002R4211	3.000
				220...240	220...240	1 1	AF205-30-11-43	1SFL527002R4311	3.000
132	400	200	350	110...120	110...120	1 1	AF265-30-11-42	1SFL547002R4211	4.640
				220...240	220...240	1 1	AF265-30-11-43	1SFL547002R4311	4.640
160	500	250	400	110...120	110...120	1 1	AF305-30-11-42	1SFL587002R4211	4.640
				220...240	220...240	1 1	AF305-30-11-43	1SFL587002R4311	4.640
200	600	300	520	110...120	110...120	1 1	AF370-30-11-42	1SFL607002R4211	4.640
				220...240	220...240	1 1	AF370-30-11-43	1SFL607002R4311	4.640

(1) For other auxiliary contacts arrangements, please contact your ABB local sales organization.



AF190, AF205

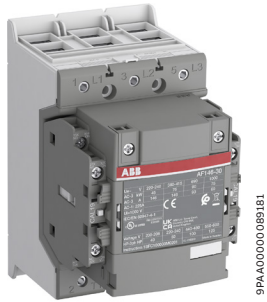
AF265, AF305, AF370

Main dimensions mm, inches

AF116 ... AF146 3-pole contactors

55 to 75 kW

AC operated with 2 N.O. + 2 N.C. auxiliary contacts - optimized for short operation times



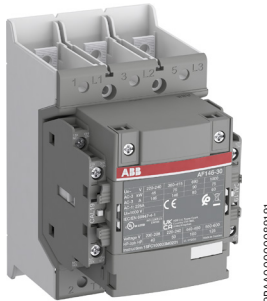
AF146-30-22

9PAA0000089181

AF116 ... AF140 contactors are mainly used for controlling 3-phase motors and power circuits up to 690 V AC, AF146 up to 1000 V AC. These contactors are of the block type design with 3 main poles.

- control circuit: AC operated with electronic coil interface
 - with faster operating time
 - reduced panel energy consumption
 - very distinct closing and opening
- built-in surge suppression
- add-on auxiliary contact blocks for side mounting and a wide range of accessories.

IEC Rated operational power	UL / CSA 3-phase motor current rating θ ≤ 40 °C	General use rating 480 V	Rated control circuit voltage Uc min. ... Uc max.	Auxiliary contacts fitted	Type (1)	Order code	Weight
							Pkg (1 pce)
400 V AC-3 kW	AC-1 A	hp	V 50 Hz V 60Hz				kg



AF146-30-22B

9PAA0000089191

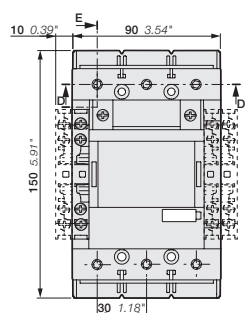
For connection with built-in cable clamps

Rated operational power (kW)	3-phase motor current rating (A)	General use rating (hp)	Rated control circuit voltage (V)	Auxiliary contacts fitted	Type	Order code	Weight (kg)		
55	160	75	160	110...120	110...120	2 2	AF116-30-22-42	1SFL427001R4222	1.750
				220...240	220...240	2 2	AF116-30-22-43	1SFL427001R4322	1.750
75	200	100	200	110...120	110...120	2 2	AF140-30-22-42	1SFL447001R4222	1.750
				220...240	220...240	2 2	AF140-30-22-43	1SFL447001R4322	1.750
75	225	100	200	110...120	110...120	2 2	AF146-30-22-42	1SFL467001R4222	1.750
				220...240	220...240	2 2	AF146-30-22-43	1SFL467001R4322	1.750

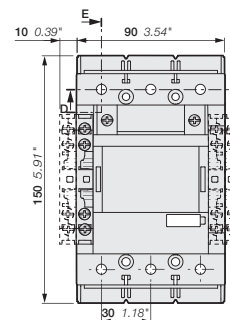
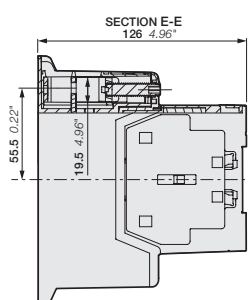
With bar connections

Rated operational power (kW)	3-phase motor current rating (A)	General use rating (hp)	Rated control circuit voltage (V)	Auxiliary contacts fitted	Type	Order code	Weight (kg)		
55	160	75	160	110...120	110...120	2 2	AF116-30-22B-42	1SFL427002R4222	1.500
				220...240	220...240	2 2	AF116-30-22B-43	1SFL427002R4322	1.500
75	200	100	200	110...120	110...120	2 2	AF140-30-22B-42	1SFL447002R4222	1.500
				220...240	220...240	2 2	AF140-30-22B-43	1SFL447002R4322	1.500
75	225	100	200	110...120	110...120	2 2	AF146-30-22B-42	1SFL467002R4222	1.500
				220...240	210...240	2 2	AF146-30-22B-43	1SFL467002R4322	1.500

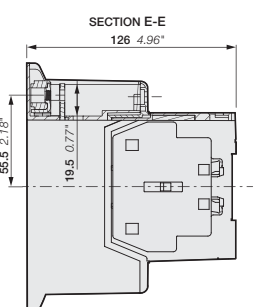
(1) For other auxiliary contacts arrangements, please contact your ABB local sales organization.



AF116, AF140, AF146-30-11



AF116, AF140, AF146-30-11B

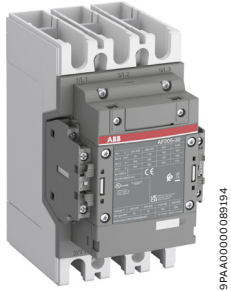


Main dimensions mm, inches

AF190 ... AF370 3-pole contactors

90 to 200 kW

AC operated with 2 N.O. + 2 N.C. auxiliary contacts - optimized for short operation times



AF205-30-22

9PAA00000088194



AF370-30-22

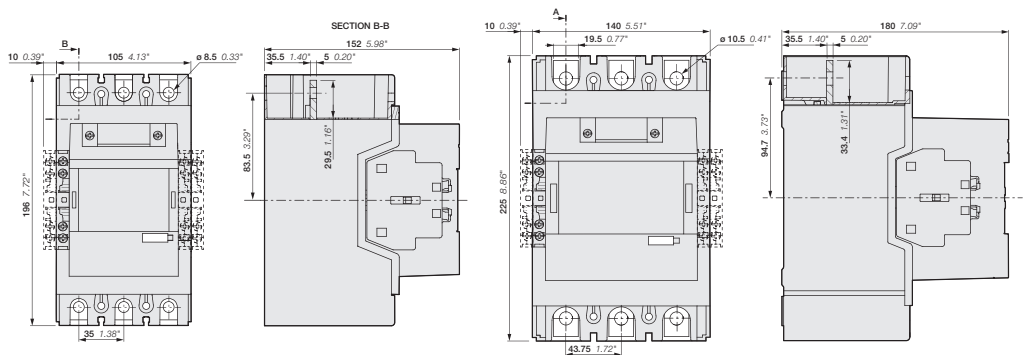
9PAA00000089371

AF190 ... AF370 contactors are mainly used for controlling 3-phase motors and power circuits up to 1000 V AC. These contactors are of the block type design with 3 main poles.

- control circuit: AC operated with electronic coil interface
 - with faster operating time
 - reduced panel energy consumption
 - very distinct closing and opening
- built-in surge suppression
- add-on auxiliary contact blocks for side mounting and a wide range of accessories.

IEC Rated operational power	UL / CSA 3-phase motor rating 480 V	General use rating 600 V AC	Rated control circuit voltage Uc min. ... Uc max.		Auxiliary contacts fitted	Type (1)	Order code	Weight Pkg (1 pce) kg	
			V 50 Hz	V 60 Hz					
400 V AC-3 kW	AC-1 A	hp	A	V 50 Hz	V 60 Hz				
90	275	125	275	110...120	110...120	2 2	AF190-30-22-42	1SFL487002R4222	3.000
				220...240	220...240	2 2	AF190-30-22-43	1SFL487002R4322	3.000
110	350	150	300	110...120	110...120	2 2	AF205-30-22-42	1SFL527002R4222	3.000
				220...240	220...240	2 2	AF205-30-22-43	1SFL527002R4322	3.000
132	400	200	350	110...120	110...120	2 2	AF265-30-22-42	1SFL547002R4222	4.675
				220...240	220...240	2 2	AF265-30-22-43	1SFL547002R4322	4.675
160	500	250	400	110...120	110...120	2 2	AF305-30-22-42	1SFL587002R4222	4.675
				220...240	220...240	2 2	AF305-30-22-43	1SFL587002R4322	4.675
200	600	300	520	110...120	110...120	2 2	AF370-30-22-42	1SFL607002R4222	4.675
				220...240	220...240	2 2	AF370-30-22-43	1SFL607002R4322	4.675

(1) For other auxiliary contacts arrangements, please contact your ABB local sales organization.



AF190, AF205

AF265, AF305, AF370

Main dimensions mm, inches

AF116 ... AF370 3-pole contactors

Technical data

Main pole - Utilization characteristics according to IEC

Contactor types	AC operated	AF116	AF140	AF146	AF190	AF205	AF265	AF305	AF370
Standards		IEC 60947-1 / 60947-4-1 and EN 60947-1 / 60947-4-1							
Rated operational voltage U _e max.		690 V	690 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V
Rated frequency (without derating)		50 / 60 Hz							
Conventional free-air thermal current I _{th} acc. to IEC 60947-4-1, open contactors, $\theta \leq 40^\circ\text{C}$		160 A	200 A	225 A	275 A	350 A	400 A	500 A	600 A
With conductor cross-sectional area		70 mm ²	95 mm ²	95 mm ²	150 mm ²	240 mm ² (3)	240 mm ²	300 mm ² (4)	2 x 185 mm ² (4)
AC-1 Utilization category									
For air temperature close to contactor									
I _e / Rated operational current AC-1	$\theta \leq 40^\circ\text{C}$	160 A	200 A	225 A	275 A	350 A	400 A	500 A	600 A
U _e max. $\leq 690\text{ V}$, 50/60 Hz	$\theta \leq 60^\circ\text{C}$	145 A	175 A	200 A	250 A	300 A	350 A	400 A	500 A
	$\theta \leq 70^\circ\text{C}$	130 A	160 A	175 A	200 A	240 A	290 A	325 A	400 A
I _e / Rated operational current AC-1	$\theta \leq 40^\circ\text{C}$	–	–	225 A	250 A	275 A	350 A	375 A	400 A
U _e max. $\leq 1000\text{ V}$, 50/60 Hz	$\theta \leq 60^\circ\text{C}$	–	–	200 A	225 A	250 A	300 A	325 A	350 A
	$\theta \leq 70^\circ\text{C}$	–	–	175 A	185 A	200 A	240 A	260 A	290 A
With conductor cross-sectional area		70 mm ²	95 mm ²	95 mm ²	150 mm ²	240 mm ² (3)	240 mm ²	300 mm ² (4)	2 x 185 mm ² (4)
AC-3 Utilization category									
For air temperature close to contactor $\theta \leq 60^\circ\text{C}$									
I _e / Max. rated operational current AC-3 (1)									
	220-230-240 V	116 A	140 A	146 A	190 A	205 A	265 A	305 A	370 A
	380-400 V	116 A	140 A	146 A	190 A	205 A	265 A	305 A	370 A
	415 V	116 A	140 A	146 A	190 A	205 A	265 A	305 A	370 A
	440 V	116 A	140 A	146 A	190 A	205 A	265 A	305 A	370 A
	500 V	110 A	130 A	130 A	156 A	186 A	250 A	290 A	350 A
	690 V	65 A	80 A	93 A	135 A	165 A	250 A	290 A	315 A
	1000 V	–	–	60 A	85 A	100 A	113 A	131 A	141 A
Rated operational power AC-3 (1)									
	220-230-240 V	30 kW	37 kW	45 kW	55 kW	55 kW	75 kW	90 kW	110 kW
	380-400 V	55 kW	75 kW	75 kW	90 kW	110 kW	132 kW	160 kW	200 kW
	415 V	55 kW	75 kW	75 kW	90 kW	110 kW	132 kW	160 kW	200 kW
	440 V	75 kW	90 kW	90 kW	110 kW	132 kW	160 kW	160 kW	200 kW
	500 V	75 kW	90 kW	90 kW	110 kW	132 kW	160 kW	200 kW	250 kW
	690 V	55 kW	75 kW	90 kW	132 kW	160 kW	200 kW	250 kW	315 kW
	1000 V	–	–	75 kW	110 kW	132 kW	160 kW	185 kW	200 kW
Rated making capacity AC-3		10 x I _e AC-3 acc. to IEC 60947-4-1							
Rated breaking capacity AC-3		8 x I _e AC-3 acc. to IEC 60947-4-1							
Short-circuit protection device for contactors without thermal overload relay - Motor protection excluded (2)									
U _e $\leq 500\text{ V}$ AC - gG type fuse		250 A	315 A	315 A	355 A	400 A	500 A	500 A	630 A
Rated short-time withstand current I _{cw} at 40 °C ambient temperature, in free air from a cold state	1 s	1300 A	1460 A	1460 A	1900 A	2050 A	2650 A	3050 A	3700 A
	10 s	928 A	1168 A	1168 A	1520 A	1640 A	2120 A	2440 A	2960 A
	30 s	536 A	674 A	674 A	878 A	947 A	1224 A	1409 A	1709 A
	1 min	379 A	477 A	477 A	621 A	670 A	865 A	996 A	1208 A
	15 min	160 A	200 A	225 A	275 A	350 A	400 A	500 A	600 A
Maximum breaking capacity cos $\phi = 0.45$									
(cos $\phi = 0.35$ for I _e > 100 A)	at 440 V	2000 A	3000 A	3000 A	3300 A	3500 A	3800 A	4600 A	5000 A
	at 690 V	1000 A	1500 A	1500 A	2200 A	2500 A	3300 A	3800 A	4000 A
Power dissipation per pole	I _e / AC-1	12 W	18 W	23 W	15 W	25 W	32 W	50 W	72 W
	I _e / AC-3	6 W	9 W	10 W	7 W	8 W	14 W	19 W	27 W
Maximum electrical switching frequency	AC-1	300 cycles/h							
	AC-3	300 cycles/h							
	AC-2, AC-4	150 cycles/h							



3-phase motors

1500 r.p.m. 50 Hz
1800 r.p.m. 60 Hz
3-phase motors

(1) For the corresponding kW/A or hp/A values of 1500 r.p.m, 50 Hz or 1800 r.p.m, 60 Hz, 3-phase motors, see "Motor rated operational powers and currents".

For AC-3e utilization category, please consult your ABB local sales organization.

(2) For the protection of motor starters against short circuits, see "Coordination with short-circuit protection devices".

(3) For currents above 275A use terminal enlargements or terminal extensions.

(4) For currents above 450A use terminal enlargements or terminal extensions.

AF116 ... AF370 3-pole contactors

Technical data

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

Contactor types	AC operated	AF116	AF140	AF146	AF190	AF205	AF265	AF305	AF370
Standards		UL 60947-1 / 60947-4-1A and CSA 60947-1 / 60947-4-1A							
Maximum operational voltage		600 V	600 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V
NEMA size		-	4	-	-	-	5	-	-
NEMA continuous amp rating	Thermal current	-	135 A	-	-	-	270 A	-	-
NEMA maximum horse power ratings									
1-phase, 60 Hz	115 V AC	-	-	-	-	-	-	-	-
	230 V AC	-	-	-	-	-	-	-	-
NEMA maximum horse power ratings									
3-phase, 60 Hz	200 V AC	-	40 hp	-	-	-	75 hp	-	-
	230 V AC	-	50hp	-	-	-	100 hp	-	-
	460 V AC	-	100 hp	-	-	-	200 hp	-	-
	575 V AC	-	100 hp	-	-	-	200 hp	-	-
UL / CSA general use rating									
600 V AC		160 A	200 A	200 A	275 A	300 A	350 A	400 A	520 A
1000 V AC		-	-	200 A	250 A	275 A	300 A	350 A	400 A
With conductor cross-sectional area		AWG 2/0	AWG 3/0	AWG 3/0	MCM 250	MCM 350 (2)	MCM 500	2//AWG 3/0	2//MCM 300
UL / CSA maximum 1-phase motor rating									
Full load current	1000V AC	-	-	200 A	250 A	275 A	300 A	350 A	400 A
	120 V AC	-	-	-	-	-	-	-	-
	240 V AC	-	-	-	-	-	-	-	-
Horse power rating	120 V AC	-	-	-	-	-	-	-	-
	240 V AC	-	-	-	-	-	-	-	-
UL / CSA maximum 3-phase motor rating									
Full load current (1)	200-208 V AC	92 A	120 A	120 A	150 A	177 A	221 A	285 A	359 A
	220-240 V AC	104 A	130 A	130 A	154 A	192 A	248 A	312 A	360 A
	440-480 V AC	96 A	124 A	124 A	156 A	180 A	240 A	302 A	361 A
	550-600 V AC	99 A	125 A	125 A	144 A	192 A	242 A	289 A	336 A
Horse power rating (1)	200-208 V AC	30 hp	40 hp	40 hp	50 hp	60 hp	75 hp	100 hp	125 hp
	220-240 V AC	40 hp	50 hp	50 hp	60 hp	75 hp	100 hp	125 hp	150 hp
	440-480 V AC	75 hp	100 hp	100 hp	125 hp	150 hp	200 hp	250 hp	300 hp
	550-600 V AC	100 hp	125 hp	125 hp	150 hp	200 hp	250 hp	300 hp	350 hp
Short-circuit protection device for contactors									
without thermal overload relay - Motor protection excluded									
High fault current		100 kA							
Fuse rating		225 A	250 A	250 A	400 A	400 A	500 A	600 A	600 A
Fuse type, 600 V		J							
Maximum electrical switching frequency									
For general use		300 cycles/h							
For motor use		300 cycles/h							

(1) For the corresponding kW/A or hp/A values of 1500 r.p.m, 50 Hz or 1800 r.p.m, 60 Hz, 3-phase motors, see "Motor rated operational powers and currents".

(2) For conductor cross-sectional area above MCM 300 use terminal enlargements LW205.

AF116 ... AF370 3-pole contactors

Technical data

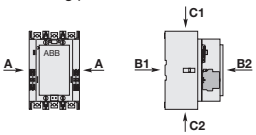
Main pole utilization characteristics - 3 N.O. non-reversing contactors

Contactor types	AC operated	AF116	AF140	AF146	AF190	AF205	AF265	AF305	AF370
HVAC application - UL / CSA									
Definite purpose heating rating - 3-phase									
Full Load Amps (FLA)		116 A	125 A	160 A	200 A	250 A	300 A	350 A	520 A
Locked Rotor Amps (LRA)	200-208 V AC	800 A	875 A	1050 A	1400 A	1500 A	2100 A	2450 A	3120 A
	220-240 V AC	800 A	875 A	1050 A	1400 A	1500 A	2100 A	2450 A	3120 A
	440-480 V AC	800 A	875 A	1050 A	1400 A	1500 A	2100 A	2450 A	3120 A
	550-600 V AC	800 A	875 A	1050 A	1400 A	1500 A	2100 A	2450 A	3120 A
Definite purpose air conditioning rating - 3-phase									
Full Load Amps (FLA)		116 A	125 A	160 A	200 A	250 A	300 A	350 A	520 A
Locked Rotor Amps (LRA)	200-208 V AC	800 A	875 A	1050 A	1400 A	1500 A	2100 A	2450 A	3120 A
	220-240 V AC	800 A	875 A	1050 A	1400 A	1500 A	2100 A	2450 A	3120 A
	440-480 V AC	800 A	875 A	1050 A	1400 A	1500 A	2100 A	2450 A	3120 A
	550-600 V AC	800 A	875 A	1050 A	1400 A	1500 A	2100 A	2450 A	3120 A
AC Resistance air heating									
Full Load Amps (FLA)	600 V AC	160 A	200 A	200 A	250 A	300 A	400 A	450 A	520 A
Elevator control, load switching, 500 000 electrical operating cycles acc. to CSA B44.1 / ASME 17.5 paragraph 19.2.1									
3-phase									
Horse power rating	200-208 V AC	15 hp	15 hp	15 hp	20 hp	30 hp	40 hp	40 hp	50 hp
	220-240 V AC	20 hp	20 hp	20 hp	25 hp	30 hp	40 hp	50 hp	60 hp
	440-480 V AC	40 hp	40 hp	40 hp	60 hp	75 hp	100 hp	100 hp	125 hp
	550-600 V AC	50 hp	50 hp	50 hp	75 hp	100 hp	125 hp	150 hp	150 hp
Elevator control, 500 000 mechanical operating cycles, 5 electrical operating cycles acc. to CSA B44.1 / ASME 17.5 paragraph 19.2.2									
3-phase									
Horse power rating	200-208 V AC	30 hp	40 hp	40 hp	50 hp	60 hp	75 hp	100 hp	125 hp
	220-240 V AC	40 hp	50 hp	50 hp	60 hp	75 hp	100 hp	125 hp	150 hp
	440-480 V AC	75 hp	100 hp	100 hp	125 hp	150 hp	200 hp	250 hp	300 hp
	550-600 V AC	100 hp	125 hp	125 hp	150 hp	200 hp	250 hp	300 hp	350 hp
Lighting application - UL / CSA									
Tungsten lamps									
1-phase per pole	347 V AC	-	-	-	-	-	-	-	-
3-phase break all lines	600 V AC	-	-	-	-	-	-	-	-
Electrical discharge lamps (ballast)									
1-phase per pole	347 V AC	160 A	200 A	200 A	250 A	300 A	400 A	450 A	520 A
3-phase break all lines	600 V AC	160 A	200 A	200 A	250 A	300 A	400 A	450 A	520 A

AF116 ... AF370 3-pole contactors

Technical data

General technical data

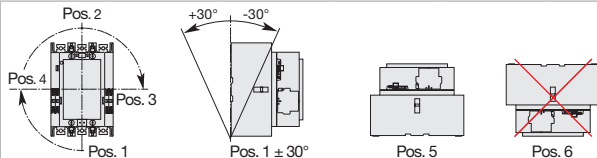
Contactor types	AC operated	AF116	AF140	AF146	AF190	AF205	AF265	AF305	AF370
Rated insulation voltage Ui acc. to IEC 60947-4-1		1000 V							
acc. to UL / CSA		1000 V							
Rated impulse withstand voltage Uimp.		8 kV							
Electromagnetic compatibility		AF contactors comply with IEC 60947-1 / EN 60947-1 - Environment A							
Ambient air temperature close to contactor									
Operation	Fitted with thermal overload relay	-25 to +55 °C							
	Without thermal overload relay	-40 to +70 °C							
Storage		-40 to +70 °C							
Climatic withstand		Category B according to IEC 60947-1 Annex Q							
Maximum operating altitude (without derating)		3000 m							
Mechanical durability									
Number of operating cycles		5 million operating cycles							
Maximum switching frequency		300 cycles/h							
Shock withstand acc. to IEC 60068-2-27 and EN 60068-2-27									
Mounting position 1		No change in contact position, closed or open position							
	Shock direction	1/2 sinusoidal shock for 11 ms				1/2 sinusoidal shock for 30 ms			
	A	20 g				20 g			
	B1	15 g closed position / 3 g open position				15 g closed position / 3 g open position			
	B2	15 g closed position / 3 g open position				15 g closed position / 3 g open position			
	C1	20 g				20 g			
	C2	20 g				20 g			
Vibration withstand acc to IEC 60068-2-6		0.7 g closed position / 0.7 g open position 13.2...100 Hz							

Magnet system characteristics

Contactor types	AC operated	AF116	AF140	AF146	AF190	AF205	AF265	AF305	AF370
Coil operating limits acc. to IEC 60947-4-1	AC supply	At $\theta \leq 70^\circ\text{C}$ $0.85 \times U_c \text{ min} \dots 1.1 \times U_c \text{ max}$							
AC control voltage 50/60 Hz		50 Hz: 110...120 V							
Rated control circuit voltage Uc (1)		220...240 V							
		60 Hz: 110...120 V							
		220...240 V							
Coil consumption									
AC control voltage 50/60 Hz									
110...120 V AC	Average pull-in value	180 VA			180 VA		340 VA		
	Average holding value	6 VA/2 W			6 VA/2 W		17 VA/3 W		
220...240 V AC	Average pull-in value	130 VA			220 VA		385 VA		
	Average holding value	8 VA/2.5 W			8 VA/2.5 W		20 VA/4.5 W		
Operating time									
Coil supply between A1 - A2 Between coil energization and:	N.O. contact closing	20...35 ms			20...35 ms		20...35 ms		
Between coil de-energization and:	N.O. contact opening	15...20 ms			15...30 ms		20...30 ms		

(1) For more detailed data, please consult your ABB local sales organization

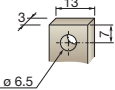
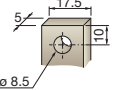
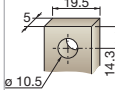











Mounting characteristics and conditions for use

Contactor types	AC operated	AF116	AF140	AF146	AF190	AF205	AF265	AF305	AF370
Mounting positions									
Mounting distances		Max. add-on N.O. or N.C. auxiliary contacts: see accessory fitting details for 3-pole contactor AF116 ... AF370							
Fixing		The contactors can be assembled side by side							
On rail acc. to IEC 60715, EN 60715		-							
By screws		4 x M4				4 x M5			

AF116 ... AF370 3-pole contactors

Technical data

Connecting characteristics

Contactor types	AC operated	AF116	AF140	AF146	AF190	AF205	AF265	AF305	AF370
Main terminals									
Flat type									
Connection capacity (min. ... max.)									
Main conductors (poles)									
 Cu cable - Stranded	1 x	10...95 mm ²			6...150 mm ²		16...300 mm ²		
Clamp type		LD... included (1)			1SDA066917R1		1SDA055016R1		
Tightening torque		8 Nm			14 Nm		25 Nm		
 Cu cable - Stranded	2 x	10...95 mm ²			50...120 mm ²		70...185 mm ²		
Clamp type		LD... included (1)			1SFN074709R1000, LZ185-2C/120		1SCA022194R0890, OZXB4		
Tightening torque		8 Nm			16 Nm		22 Nm		
 Al cable - Stranded	1 x	-			95...185 mm ²		185...240 mm ²		
Clamp type		-			1SDA054988R1		1SDA055020R1		
Tightening torque		-			31 Nm		43 Nm		
 Cu cable - Flexible	1 x	10...70 mm ²			6...120 mm ²		16...240 mm ²		
Clamp type		LD... included (1)			1SDA066917R1		1SDA055016R1		
Tightening torque		8 Nm			14 Nm		25 Nm		
 Cu cable - Flexible	2 x	10...70 mm ²			50...95 mm ²		70...185 mm ²		
Clamp type		LD... included (1)			1SFN074709R1000, LZ185-2C/120		1SCA022194R0890, OZXB4		
Tightening torque		8 Nm			16 Nm		22 Nm		
 Lugs	L ≤	22 mm (.866 in)			24 mm (.945 in)		32 mm (1.260 in)		
	Ø >	6 mm (.236 in)			8 mm (.315 in)		10 mm (.394 in)		
Socket type		LL... included			LL... included		LL... included		
Tightening torque		9 Nm / 80 lb.in			18 Nm / 160 lb.in		28 Nm / 248 lb.in		
Connection capacity acc. to UL / CSA	1 x	AWG 6...3/0			6...300 MCM		4...400 MCM		
Clamp type		LD... included (1)			ATK185 (2)		ATK300 (2)		
Tightening torque		8 Nm / 71 lb.in			34 Nm / 301 lb.in		42 Nm / 372 lb.in		
Connection capacity acc. to UL / CSA	2 x	AWG 6...3/0			-		4...500 MCM		
Clamp type		LD... included (1)			-		ATK300/2 (2)		
Tightening torque		8 Nm / 71 lb.in			-		42 Nm / 372 lb.in		
Auxiliary conductors (coil terminals)									
 Solid / stranded	1 x	1...4 mm ²							
	2 x	1...4 mm ²							
 Flexible	1 x	0.75...2.5 mm ²							
	2 x	0.75...2.5 mm ²							
 Flexible with non insulated ferrule	1 x	0.75...2.5 mm ²							
	2 x	0.75...2.5 mm ²							
 Flexible with insulated ferrule	1 x	0.75...2.5 mm ²							
	2 x	0.75...2.5 mm ²							
 Lugs	L <	8 mm							
	l >	3.5 mm							
Connection capacity acc. to UL / CSA	1 or 2 x	AWG 18...14							
Stripping length		9 mm							
Tightening torque		1.00 Nm / 9 lb.in							
Degree of protection acc. to IEC 60947-1 / EN 60947-1 and IEC 60529 / EN 60529									
Main terminals		IP00							
Coil terminals		IP20							
Screw terminals									
Main terminals		M6			M8		M10		
Screwdriver type		Screws and bolts							
Coil terminals (delivered in open position)		M3.5							
Screwdriver type		Flat Ø 5.5 mm / Pozidriv 2							

(1) LD... not included for AF116 ... AF146-30-..B.

(2) Available in North America only.

Spare parts contactors

Contactor coils, main contact sets and arc chutes

Main contact sets

Replacement parts for the main contacts. Set for AF116 ... AF370 includes complete base, complete moving contact bridge and return springs.

For contactors	Type	Order code	Pkg qty	Weight (1 pce) kg
3-pole contactors				
AF116	ZL116	1SFN164203R1000	1	0.410
AF140	ZL140	1SFN164403R1000	1	0.410
AF146	ZL146	1SFN164603R1000	1	0.410
AF190	ZL190	1SFN164803R1000	1	1.093
AF205	ZL205	1SFN165203R1000	1	1.093
AF265	ZL265	1SFN165403R1000	1	2.010
AF305	ZL305	1SFN165803R1000	1	2.010
AF370	ZL370	1SFN166003R1000	1	2.010

Note: Only suitable for AF116...AF370 contactors "Made in Sweden" produced after 2018-09-01 (010918).

Spare parts contactors

Contactor coils, main contact sets and arc chutes

Contactor coil modules

Coil modules replacement kit for 3-pole contactors. Includes coil, electronic module, fasteners, damping and terminal cover.

	Rated control circuit Voltage Uc		Type	Order code	Pkg qty	Weight (1 pce) kg
	V 50Hz	V 60Hz				
3-pole contactors						
AF116	110...120	110...120	ZAF116-42	1SFN154270R4206	1	0.313
	220...240	220...240	ZAF116-43	1SFN154270R4306	1	0.288
AF140	110...120	110...120	ZAF140-42	1SFN154470R4206	1	0.313
	220...240	220...240	ZAF140-43	1SFN154470R4306	1	0.288
AF146	110...120	110...120	ZAF146-42	1SFN154670R4206	1	0.313
	220...240	220...240	ZAF146-43	1SFN154670R4306	1	0.288
AF190, AF205	110...120	110...120	ZAF205-42	1SFN154870R4206	1	0.831
	220...240	220...240	ZAF205-43	1SFN154870R4306	1	0.823
AF265, AF305, AF370	110...120	110...120	ZAF370-42	1SFN155470R4206	1	1.316
	220...240	220...240	ZAF370-43	1SFN155470R4306	1	1.036

Note: Only suitable for AF116...AF370 contactors "Made in Sweden" produced after 2018-09-01 (010918).

Electronic Modules

Control circuit electronic module spare part.

	Rated control circuit Voltage Uc		Type	Order code	Pkg qty	Weight (1 pce) kg
	V 50Hz	V 60 Hz				
3-pole contactors						
AF116	110...120	110...120	ZP116-42	1SFN164223R1042	1	0.131
	220...240	220...240	ZP116-43	1SFN164223R1043	1	0.133
AF140	110...120	110...120	ZP140-43	1SFN164423R1042	1	0.131
	220...240	220...240	ZP140-43	1SFN164423R1043	1	0.133
AF146	110...120	110...120	ZP146-42	1SFN164623R1042	1	0.131
	220...240	220...240	ZP146-43	1SFN164623R1043	1	0.133
AF190, AF205	110...120	110...120	ZP205-42	1SFN164823R1042	1	0.610
	220...240	220...240	ZP205-43	1SFN164823R1043	1	0.610
AF265, AF305, AF370	110...120	110...120	ZP370-42	1SFN165423R1042	1	0.704
	220...240	220...240	ZP370-43	1SFN165423R1043	1	0.694

Note: Only suitable for AF265, AF305, AF370 contactors "Made in Sweden" produced after 2018-09-01 (010918).



—
ABB France

2 rue d'Arsonval
F-69687 Chassieu cedex / France

—
ABB STOTZ-KONTAKT GmbH

Eppelheimer Straße 82
69123 Heidelberg, Germany

—
ABB AB

ABB Electrification Sweden AB
Motor Starting and Safety
721 61 Västerås, Sweden

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