

AF CONTACTORS - 3 POLE

TECHNICAL DATA



AC / DC Control supply				Type	AF09	AF12	AF16	AF26	AF30	AF38	AF40	AF52	AF65	AF80	AF96
IEC	AC-3	Rated operational power	220 - 230 - 240 V	kW	2.2	3	4	6.5	9	11	11	15	18.5	22	25
		$\theta \leq 60\text{ }^{\circ}\text{C}$ for AF09	415 V	kW	4	5.5	9	11	15	18.5	22	30	37	45	55
		... AF370	690 V	kW	5.5	7.5	9	15	18.5	22	22	30	37	45	55
		$\theta \leq 55\text{ }^{\circ}\text{C}$ for AF400	1000 V	kW	—	—	—	—	—	—	—	—	—	35	40
	... AF2650														
	Rated optional current	415 V	A	9	12	18	26	32	38	40	53	65	80	96	
AC-1	Rated operational current	1000 V	A	—	—	—	—	—	—	—	—	—	—	25	30
		690 V	A	25	28	30	45	50	50	70	100	105	125	130	

Main Accessories

Auxiliary contact blocks	Front mounting	CA410 (1 x N.O.) CA401 (1 x N.C.)
	Side mounting	CAL411 (1 x N.O. + 1 x N.C.)
Timers	Electronic	TEF4ON TEF4OFF
Interlocking units	Mechanical	VM4
	Mechanical / Electrical	BER164
Connection sets	For reversing contactors	BER384
Surge suppressors		BER654
		BER964
		Built-in surge protection

Overload Relays

Thermal relays		Class 10 (Class 10A for TF140, TA200DU)	TF42 (0.10...38 A)	TF65 (22...67 A)	TF96 (40...96 A)
Electronic relays		Class 10E, 20E, 30E	EF19 (0.10...18.9 A)	EF19 (0.10...18.9 A) EF45 (9...45 A)	EF65 (20...70 A)
					EF96 (20...100 A)

Manual Motor Starters

	Thermal / magnetic protection Class 10	MS116 (0.10...32 A) lcs up to 50 kA for class 10 A	MS165 (10...65 A) lcs up to 100 kA	MS5100 (40...100 A) lcs up to 50 kA
		MS132 (0.10...32 A) lcs up to 100 kA	MS495 (45...100 A) lcs up to 50 kA	
			MS497 (22...100 A) lcs up to 100 kA	
	Magnetic only types	MO132 (0.16...32 A) lcs up to 100 kA	MO165 (16...80 A) lcs up to 100 kA (1)	MO5100 (70...100 A) lcs up to 36 kA
			MO450 (40...50 A) lcs up to 50 kA	MO495 (63...100 A) lcs up to 50 kA
Accessories	For contactor mounting	BEA164	BEA384	BEA654 (2)



AF116	AF140	AF146	AF190	AF205	AF265	AF305	AF370	AF400	AF460	AF580	AF750	AF1250	AF1350	AF1650	AF2050	AF2650
30	37	45	55	55	75	90	110	110	132	160	220	—	257	315	—	—
55	75	75	90	110	132	160	200	220	250	355	425	—	500	600	630	—
55	75	90	132	160	200	250	315	315	355	500	600	—	750	900	1000	—
—	—	75	110	132	132	132	132	220	280	355	400	—	—	—	630	—
116	140	146	190	205	265	305	370	400	460	580	750	—	860	1060	1060	—
—	—	60	85	100	100	100	100	155	200	250	300	—	375	400	425	—
160	200	225	275	350	400	500	600	600	700	800	1050	1260	1350	1650	2050	2650

CAL1911 (1 x N.O. + 1 x N.C.)

CAL1811 (1 x N.O. + 1 x N.C.)

VM19 (for same size contactors)

VM750H
VM750V

VM1650H

BER1404

BER2054

BER3704

BEM46030

BEM75030

TF140DU
(66...142 A)
 $\theta \leq 55^\circ\text{C}$

TA200DU
(66...200 A)
 $\theta \leq 55^\circ\text{C}$

EF146
(54...150 A)

EF205
(63...210 A)

EF370
(115...380 A)

EF460 - 500
(150...500 A)

EF750 - 800
(250...800 A)

Short-circuit protection devices

Tmax Circuit breaker and accessories



AF CONTACTORS - 4 POLE

TECHNICAL DATA

   										
IEC	AC-1 Rated operational current	$\theta \leq 40\text{ }^{\circ}\text{C}$, 690 V	A	25	30	45	55	70	100	125
AC / DC Control supply			Type	AF09	AF16	AF26	AF38	AF40	AF52	AF80
AC Control supply			Type	AF09	AF16	AF26	AF38	AF40	AF52	AF80
DC Control supply			Type	AF09	AF16	AF26	AF38	AF40	AF52	AF80
IEC	Rated operational current 690V AC-1	$\theta \leq 40\text{ }^{\circ}\text{C}$	A	25	30	45	55	70	100	125
		$\theta \leq 60\text{ }^{\circ}\text{C}$ (1)	A	25	30	40	45	60	80	105
		$\theta \leq 70\text{ }^{\circ}\text{C}$	A	22	26	32	37	50	70	90
With conductor cross sectional area			mm ²	4	6	10	16	35	35	50
Rated operational voltage Ue max.			V	690	690	690	690	690	690	690
$\theta \leq 55\text{ }^{\circ}\text{C}$ for EK550, EK1000 contactors										

Main accessories		
Auxiliary contact blocks	Front mounting	CA410 (1 x N.O.), CA401 (1 x N.C.)
	Side mounting	CAL411 (1 x N.O. + 1 x N.C.)
Timers	Electronic	TEF4-ON TEF4-OFF
Interlocking units	Mechanical / Electrical	VEM4
	Mechanical	VM4 VM96-4
Surge suppressors	Varistor + RC (AC / DC)	Built-in surge protection



160	200	275	350	400	500	525	800	1000
AF116	AF140	AF190	AF205	AF265	AF305	AF370	—	—
AF116	AF140	AF190	AF205	AF265	AF305	AF370	EK550	EK1000
AF116	AF140	AF190	AF205	AF265	AF305	AF370	EK550	EK1000
160	200	250	275	350	375	400	800	1000
145	175	225	250	300	325	350	650	800
130	160	185	200	240	260	290	575	720
70	95	150	240	240	300	2 x 185	2 x 240	2 x 300
690	690	1000	1000	1000	1000	1000	1000	1000

CAL19-11 (1 x N.O. + 1 x N.C.)	CAL1611 (1 x N.O. + 1 x N.C.)
VM19 (for same size contactors)	VH800
	RCEH800

AF CONTACTORS

4 TO 630kW

Features:

- 3 Pole.
- Add-on auxiliary contact.
- Built-in surge suppression.
- Reduced panel energy consumption.
- Very distinct closing and opening.
- DIN or Panel mounting.



AF093010...

3 POLE - 3NO CONTACTORS

415V AC-3 (kW)	415V AC-3 (A)	AC-1 (A)	Auxiliary		Part No.	
			NO	NC		
4	9	25	1	0	AF093010	☐
			0	1	AF093001	☐
5.5	12	28	1	0	AF123010	☐
			0	1	AF123001	☐
7.5	18	30	1	0	AF163010	☐
			0	1	AF163001	☐
11	26	45	0	0	AF263000	☐ ¹⁾
15	32	50	0	0	AF303000	☐ ¹⁾
18.5	38	50	0	0	AF383000	☐ ¹⁾
	40	70	0	0	AF403000	☐
22	53	100	0	0	AF523000	☐
30	65	105	0	0	AF653000	☐
37	80	125	0	0	AF803000	☐
45	96	130	0	0	AF963000	☐
55	116	160	1	1	AF1163011	☐

Features:

- 3 Pole.
- Add-on auxiliary contact.
- Built-in surge suppression.
- Reduced panel energy consumption.
- Very distinct closing and opening.
- Can withstand short voltage dips and voltage sags.
- For connection with built-in cable clamps.
- Panel mounting.



AF1163011...



AF3703011...

400V AC-3 (kW)	415V AC-3 (A)	AC-1 (A)	Auxiliary		Part No.	
			NO	NC		
75	140	200	1	1	AF1403011	☐
75	146	225	1	1	AF1463011	☐
90	190	275	1	1	AF1903011	☐
110	205	350	1	1	AF2053011	☐
140	265	400	1	1	AF2653011	☐
160	305	500	1	1	AF3053011	☐
200	370	600	1	1	AF3703011	☐
220	400	600	1	1	AF4003011	*
250	460	700	1	1	AF4603011	*
355	580	800	1	1	AF5803011	*
400	750	1050	1	1	AF7503011	*
-	-	1260	1	1	AF12503011	*
475	860	1350	1	1	AF13503011	*
560	1060	1650	1	1	AF16503011	*
-	1060	2050	1	1	AF20503011	*
-	-	2650	1	1	AF26503011	*

☐ To complete Part Number, add the required voltage code:

Code	11	13	14
Control Voltages	24...60V AC / 20...60V DC	100...250V AC/DC	250...500V AC/DC

* Code	70
Control Voltages	100...250 V AC/DC

1) 11 (24...60V AC/20...60V DC) arrangement not suitable for direct control by PLC-output.

- Other coil voltages and auxiliary contact arrangements available.
- AF400 ... AF2650 are equipped with low voltage inputs for control, for example by a PLC. For example, a 240V AC supply can be permanently on A1 and A2 which allows the contactor to be switched with a 24V DC signal from a PLC.

AF CONTACTORS

4 TO 200kW

Features:

- 4 Pole.
- Add-on auxiliary contact.
- Built-in surge suppression.
- Reduced panel energy consumption.
- Very distinct closing and opening.
- Can withstand short voltage dips and voltage sags.
- DIN or Panel mounting. AF09...AF80.
- For connection with built-in cable clamps AF116...AF140.
- Panel mounting. AF116...AF370



AF094000...



AF804000...

4 POLE - 4NO CONTACTORS

415V AC-3 (kW)	415V AC-3 (A)	AC-1 (A)	Auxiliary		Part No.
			NO	NC	
DIN or Panel Mount					
4	9	25	0	0	AF094000 ☐ ¹⁾
7.5	18	30	0	0	AF164000 ☐ ¹⁾
11	21.2	45	0	0	AF264000 ☐ ¹⁾
11	21.2	55	0	0	AF384000 ☐ ¹⁾
18.5	40	70	0	0	AF404000 ☐ ¹⁾
22	53	100	0	0	AF524000 ☐ ¹⁾
37	80	125	0	0	AF804000 ☐ ¹⁾
Panel Mount					
55	116	160	0	0	AF1164000 ☐
75	140	200	0	0	AF1404000 ☐
90	190	275	0	0	AF1904000 ☐
110	205	350	0	0	AF2054000 ☐
132	265	400	0	0	AF2654000 ☐
160	305	500	0	0	AF3054000 ☐
200	370	525	0	0	AF3704000 ☐

☐ To complete Part Number, add the required voltage code:

Code	11	13	14
Control Voltages	24...60V AC / 20...60V DC	100...250V AC/DC	250...500V AC/DC

1) 11 (24...60V AC/20...60V DC) arrangement not suitable for direct control by PLC-output.

- Other coil voltages and auxiliary contact arrangements available.
- For B version (bar connections) order standard version and remove terminals.

4 POLE - 2NO/2NC CONTACTORS

415V AC-3 (kW)	415V AC-3 (A)	AC-1 (A)	Auxiliary		Part No.
			NO	NC	
4	9	25	0	0	AF092200 ☐ ¹⁾
7.5	18	30	0	0	AF162200 ☐ ¹⁾
11	21.2	45	0	0	AF262200 ☐ ¹⁾
11	21.2	55	0	0	AF382200 ☐ ¹⁾
18.5	40	70	0	0	AF402200 ☐ ¹⁾
37	80	125	0	0	AF802200 ☐ ¹⁾

☐ To complete Part Number, add the required voltage code:

Code	11	13	14
Control Voltages	24...60V AC / 20...60V DC	100...250V AC/DC	250...500V AC/DC

1) 11(24...60VAC/20...60VDC) not suitable for direct control by PLC-output.

- Other coil voltages and auxiliary contact arrangements available.



AF092200...



AF802200...

AF CONTACTOR OVERLOADS

Features:

- Manual or automatic reset selectable.
- Phase loss sensitive acc. to IEC/EN 60947-4-1.
- TEST and STOP function – Trip indication on the front.
- Temperature compensation.
- Suitable for three- and single-phase applications.
- Tripping class 10.



TF42



TF65

THERMAL OVERLOADS FOR AF CONTACTORS

To Suit	Current setting		Part No.
	A (Min.)	A (Max.)	
AF09 ... AF38	0.1	0.13	TF42-0.13
	0.13	0.17	TF42-0.17
	0.17	0.23	TF42-0.23
	0.23	0.31	TF42-0.31
	0.31	0.41	TF42-0.41
	0.41	0.55	TF42-0.55
	0.55	0.74	TF42-0.74
	0.74	1	TF42-1.0
	1	1.3	TF42-1.3
	1.3	1.7	TF42-1.7
	1.7	2.3	TF42-2.3
	2.3	3.1	TF42-3.1
	3.1	4.2	TF42-4.2
	4.2	5.7	TF42-5.7
	5.7	7.6	TF42-7.6
	7.6	10	TF42-10
	10	13	TF42-13
	13	16	TF42-16
	16	20	TF42-20
	20	24	TF42-24
AF40 ... AF65	24	29	TF42-29
	29	35	TF42-35
	35	38	TF42-38
	22	28	TF65-28
	25	33	TF65-33
	30	40	TF65-40
	36	47	TF65-47
	44	53	TF65-53
AF80, AF96	50	60	TF65-60
	57	67	TF65-67
	40	51	TF96-51
	48	60	TF96-60
	57	68	TF96-68
AF116...AF140	65	78	TF96-78
	75	87	TF96-87
	84	96	TF96-96
	66	90	TF140DU-90
AF190, AF205	80	110	TF140DU-110
	100	135	TF140DU-135
	110	142	TF140DU-142
	66	90	TA200DU-90
AF190, AF205	80	110	TA200DU-110
	100	135	TA200DU-135
	110	150	TA200DU-150
	130	175	TA200DU-175
	150	200	TA200DU-200

AF CONTACTOR OVERLOADS

Features:

- Manual or automatic reset selectable.
- TEST and STOP function – Trip indication on the front.
- High accuracy.
- Temperature compensation.
- Trip contact (N.C.), signal contact (N.O.),
- Tripping class 10E, 20E, 30E.



EF19



EF65



DRS-F-01



DB19EF

ELECTRONIC OVERLOADS

To Suit	Current setting		Part No.
	A (Min.)	A (Max.)	
AF09 ... AF38	0.1	0.32	EF19-0.32
	0.3	1	EF19-1.0
	0.8	2.7	EF19-2.7
	1.9	6.3	EF19-6.3
	5.7	18.9	EF19-18.9
AF26 ... AF38	9	30	EF45-30
	15	45	EF45-45
AF40 ... AF65	20	56	EF65-56
	25	70	EF65-70
AF80, AF96	20	56	EF96-56
	36	100	EF96-100
AF116...AF146	54	150	EF146-150
AF190, AF205	63	210	EF205
AF265 ... AF370	115	380	EF370

OVERLOAD RELAY ACCESSORIES

REMOTE RESET CONTROL

To Suit	Description	Part No.
TF42-TF96 EF19-EF750	Remote reset coil 24 - 30 V AC/DC	DRS-F-01
	Remote reset coil 48 - 60 V AC/DC	DRS-F-02
	Remote reset coil 110 - 127 V AC/DC	DRS-F-03
	Remote reset coil 220 - 240 V AC/DC	DRS-F-04

SIDE MOUNTING KIT

To Suit	Description	Part No.
TF42	Side mounting kit	DB42
TF65	Side mounting kit	DB65
TF96, EF96	Side mounting kit	DB96
EF19	Side mounting kit	DB19EF
EF45	Side mounting kit	DB45EF
TA200DU	Side mounting kit	DB200

AF CONTACTOR ACCESSORIES



CAL411



CA410



CAT411E

AUXILIARY CONTACTS

Suitable for	Auxiliary		Part No.
	NO	NC	
Side-mounted instantaneous auxiliary contact blocks			
AF09 ... AF96	1	1	CAL411
AF116 ...AF370	1	1	CAL19-11
	1	1	CAL19-11B*
Front-mounted instantaneous auxiliary contact blocks			
AF09 ... AF96	1	0	CA410
	0	1	CA401
AF09 ... AF16	2	2	CA422M
AF26 ... AF96	2	2	CA422E
AF09 ... AF16	2	2	CA422U
AF09 ... AF80	3	1	CA431E
	4	0	CA440E
AF09 ... AF16	0	4	CA404E
Front-mounted auxiliary contact blocks with N.O. leading contact and N.C. lagging contact			
AF09 ... AF96	1	0	CC410
	0	1	CC401
Front-mounted instantaneous auxiliary contact and A1/A2 coil terminal blocks			
AF09 ... AF16	1	1	CAT411M
AF26 ... AF65	1	1	CAT411E
AF09 ... AF16	1	1	CAT411U

*Second block for mounting in addition to a first CAL ...-11 block.

MECHANICAL INTERLOCK UNIT

Suitable for	Mounting	Part No.
Mechanical interlock units for two contactors mounted side by side		
AF09 ... AF38		VM4
AF40 ... AF96		VM96-4
AF116 ... AF146, AF190, AF205, AF265 ... AF370		VM19
AF116 ... AF146, AF190, AF205		VM140/190
AF190, AF205, AF265 ... AF370		VM205/265
AF265 ... AF370 and AF400 ... AF460		VM370/400
AF400 ... AF1250	PN.. mounting plate to be ordered separately	VM750H
AF1350 ... AF2650	Plate included	VM1650H
Mechanical interlock units for two contactors mounted one above the other		
AF400 ... AF1250	Additional plate (not supplied)	VM750V

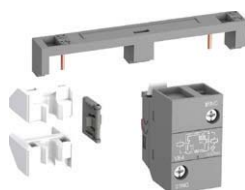
- VM750V: for two contactors mounted one above the other.



VM19



VM140/190



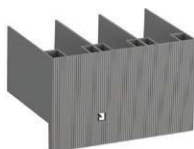
VEM4

MECHANICAL AND ELECTRICAL INTERLOCK SET

Suitable for	Auxiliary		Part No.
	NO	NC	
AF09 ... AF38	0	2	VEM4

- VEM4 includes a VM4 mechanical interlock unit with 2 fixing clips (BB4), a VE4 electrical interlock block. VE4 block must be used with A2-A2 connection to respect the electrical connection diagram.

AF CONTACTOR ACCESSORIES



LT6530



LT20540C

TERMINAL SHROUDS

Suitable for	Part No.
3-Pole Contactors	
AF40 ... AF65	LT6530
AF80 ... AF96	LT9630
A210...A300	LT300AL
AF190, AF205, with cable clamps	LT20530C
AF265 ... AF370, with cable clamps	LT37030C
AF116 ... AF146, with compression lugs	LT14030L
AF190, AF205, with compression lugs	LT20530L
AF265 ... AF370, with compression lugs	LT37030L
AF190, AF205, with shorting bar or between contactor and TOL/EOL in DOL-starters	LT20530Y
AF265 ... AF370, with shorting bar or between contactor and TOL/EOL in DOL-starters	LT37030Y
AF265 ... AF370, for use with extending cable clamps	LT37030D
4-Pole Contactors	
AF190 ... AF205, with cable clamps	LT20540C
AF265 ... AF370, with cable clamps	LT37040C
AF116 ... AF140, with compression lugs	LT14040L
AF190 ... AF205, with compression lugs	LT20540L
AF265 ... AF370, with compression lugs	LT37040L

TERMINAL ENLARGEMENTS



LW460



LW20540

Suitable for	Dimensions		Part No.
	hole Ø (mm)	bar (mm)	
3-Pole Contactors			
AF116...AF146	6.5	13 x 3	LW140
AF190...AF205	10.5	17.5 x 5	LW205
AF265...AF370	10.5	25 x 5	LW370
4-Pole Contactors			
AF190 ... AF205	10.5	20 x 5	LW20540
AF265 ... AF370	10.5	25 x 5	LW370-40

TERMINAL EXTENSION



LX140

Suitable for	Dimensions		Part No.
	hole Ø (mm)	bar (mm)	
3-Pole Contactors			
AF116...AF146	6.5	13 x 3	LX140
AF190...AF205	8.5	17.5 x 5	LX205
AF265...AF370	10.5	20 x 5	LX370

ELECTRONIC TIMER WITH SCREW TERMINALS



TEF4-ON

Suitable for	Time delay range	Delay type	Auxiliary		Part No.
			NO	NC	
AF09 ... AF96	0.1...1 s	ON-delay	1	1	TEF4-ON
	1...10 s 10...100 s	OFF-delay	1	1	TEF4-OFF

- Rated control circuit voltage U_c 24...240 V 50/60 Hz or DC.

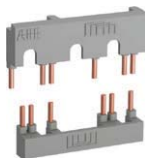
AF CONTACTOR ACCESSORIES



BEA164

CONNECTING LINKS WITH MANUAL MOTOR STARTER

Suitable for	Manual motor starter	Part No.
AF09 ... AF16	with MS116-0.16 ... MS116-25, MS132-0.16 ... MS132-25	BEA164
AF26 ... AF38	with MS116-0.16 ... MS116-16, MS132-0.16 ... MS132-10	BEA264
	with MS116-20 ... MS116-32, MS132-12 ... MS132-32	BEA384
AF40 ... AF65	with MS165-16 ... M165-65	BEA654



BER164

CONNECTION SETS FOR REVERSING CONTACTORS

Suitable for	Part No.
AF09 ... AF16	BER164
AF26 ... AF38	BER384
AF40 ... AF65	BER654
AF80 ... AF96	BER964
AF116 ... AF146	BER1404
AF190 ... AF205	BER2054
AF265 ... AF370	BER3704



BEY384

CONNECTION SETS FOR STAR-DELTA STARTING

Suitable for	Interlock unit between delta & star contactors	Part No.
AF09 ... AF16	With or without VM4 or VEM4	BEY164
AF26 ... AF38	With or without VM4 or VEM4	BEY384
AF40 ... AF65	With or without VM96-4	BEY654
AF80 ... AF96	With or without VM96-4	BEY964



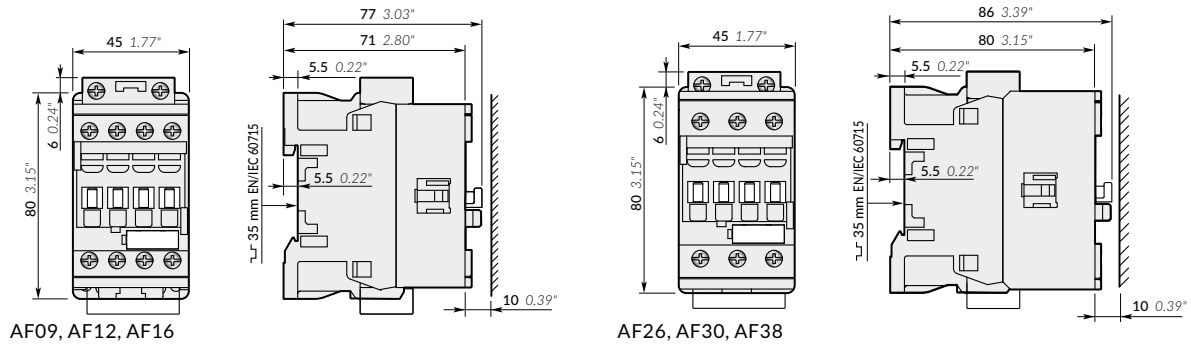
BX4CA

PROTECTIVE COVERS

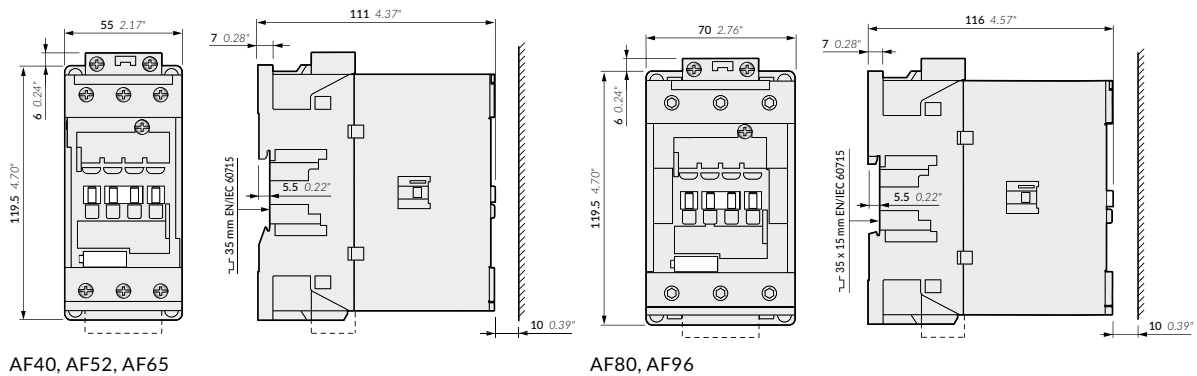
Suitable for	Part No.
Suit for 4P CA4 auxiliary contact blocks and TEF4 electronic timer	BX4CA

AF CONTACTOR - DIMENSIONS

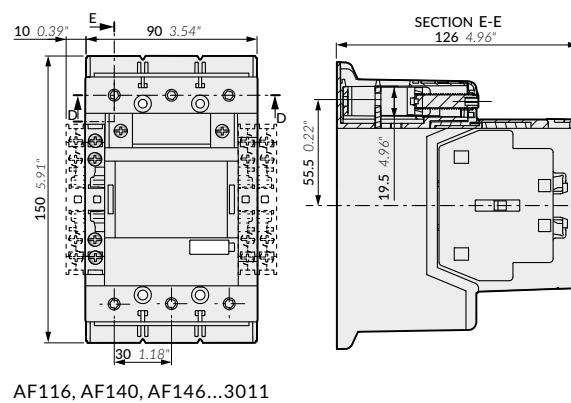
3 POLE - 3NO CONTACTORS (4 TO 18.5kW)

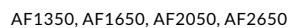
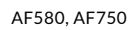
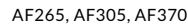


3 POLE - 3NO CONTACTORS (18.5 TO 45kW)



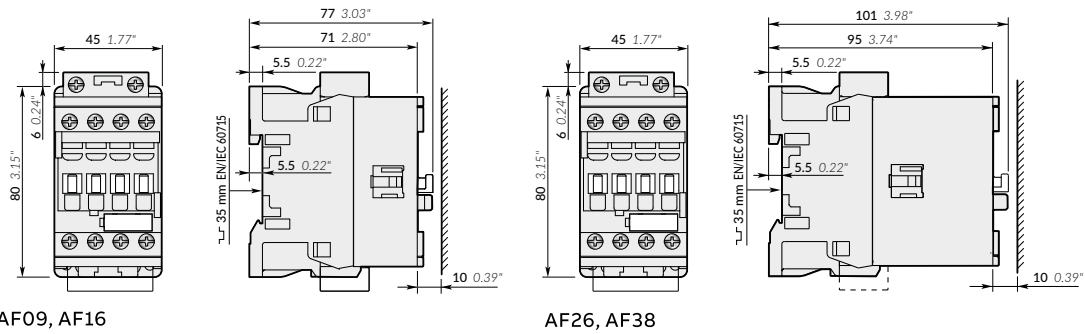
3 POLE - 3NO CONTACTORS (55 TO 75kW)



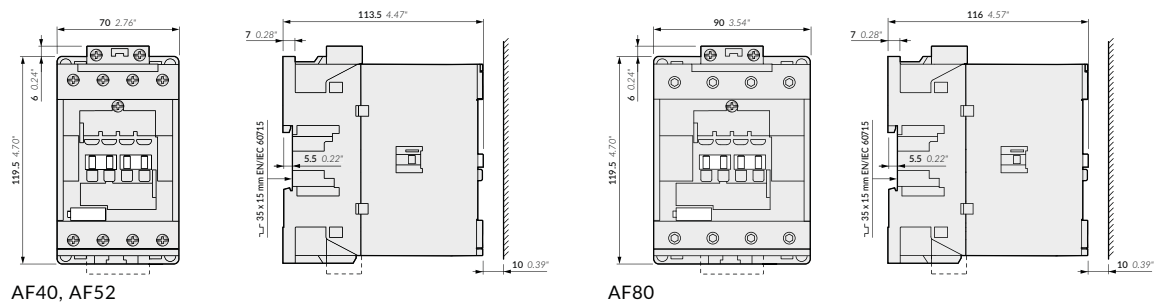


AF CONTACTOR - DIMENSIONS

4 POLE - 4NO CONTACTORS (4 TO 11kW)



4 POLE - 4NO CONTACTORS (11 TO 37kW)



4 POLE - 4NO CONTACTORS (37 TO 75kW)

