



Product designation			Power contactor
Product type designation  Contact characteristics			BF12
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency		ΚV	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith	max	A	28
Operational current le		- / (	
oporational carron to	AC-1 (≤40°C)	Α	28
	AC-1 (≤55°C)	Α	23
	AC-1 (≤70°C)	Α	20
	AC-3 (≤440V ≤55°C)	Α	12
	AC-4 (400V)	Α	7.9
Rated operational power AC-3 (T≤55°C)	,		_
	230V	kW	3.2
	400V	kW	5.7
	415V	kW	6.2
	440V	kW	6.2
	500V	kW	7.5
	690V	kW	10
Rated operational power AC-1 (T≤40°C)			
	230V	kW	10
	400V	kW	18
	500V	kW	23
	690V	kW	32
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	Α	17
	48V	Α	15
	75V	Α	13
	110V	Α	6
150 H. J. BOA W. J. B. J.	220V	Α	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		_	
	≤24V	Α	20
	48V	A	20
	75V	A	18
	110V	A	13
IEC may current to in DC1 with 1/D < 1 mg with 2 notes in cories	220V	A	1
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	~0.A\/	۸	22
	≤24V	A	22
	48V	A	22
	75V	A	20
	110V	Α	16



	220V	Α	11
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	20
	48V	Α	20
	75V	Α	20
	110V	Α	16
	220V	Α	12
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
·	≤24V	Α	12
	48V	Α	11
	75V	Α	10
	110V	Α	2
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	220 V		
The max current le in boo-boo with bit 2 forms with 2 poles in series	≤24V	Α	15
	48V	A	13
	46 V 75 V		13
		A	
	110V	A	8
150	220V	A	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	.= :		4.0
	≤24V	Α	18
	48V	Α	18
	75V	Α	15
	110V	Α	12
	220V	Α	6
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	15
	48V	Α	15
	75V	Α	15
	110V	Α	16
	220V	Α	7
Short-time allowable current for 10s (IEC/EN60947-1)		Α	150
Protection fuse			
	gG (IEC)	Α	32
	aM (IEC)	Α	12
Making capacity (RMS value)	·	Α	120
Breaking capacity at voltage			
J. Safe and J. Saf	440V	Α	96
	500V	A	96
	690V	A	94
Resistance per note (average value)	090 v	mΩ	2.5
Resistance per pole (average value)		11177	۷.ن
Power dissipation per pole (average value)	141	147	2
	Ith	W	2
Till to die teen et te teen de	AC-3	W	0.4
Tightening torque for terminals			4 =
	min	Nm	1.5
	max	Nm	1.8
	min	Ibin	1.1
	max	lbin	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	Ibin	0.8



		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	A1440/44 11			
	AWG/Kcmil			4.0
	Clavible w/e lug conductor acction	max		10
	Flexible w/o lug conductor section	min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section	IIIax	111111	0
	r lexible 6/w rug corroactor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section	max		•
	r toxiste mar inculated opade lag contactor cocaen	min	mm²	1
		max	mm²	4
				IP20 when
Power terminal protect	ction according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail
				35mm
Weight			g	496
Conductor section				
Conductor section	AWG/kcmil conductor section			
		max		10
Auxiliary contact chara		max	, i	
Auxiliary contact chara Thermal current Ith	acteristics	max	A	10
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de	signation	max	А	
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de	signation			10 A600 - P600
Auxiliary contact chara	signation	230V	A	10 A600 - P600
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de	signation	230V 400V	A A	10 A600 - P600 3 1.9
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC	signation 15	230V	A	10 A600 - P600
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC	signation 15	230V 400V 500V	A A A	10 A600 - P600 3 1.9 1.4
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	signation 15	230V 400V	A A	10 A600 - P600 3 1.9
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	signation 15	230V 400V 500V	A A A	10 A600 - P600 3 1.9 1.4
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	signation 15	230V 400V 500V 110V	A A A	10 A600 - P600 3 1.9 1.4 5.7
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	signation 15	230V 400V 500V 110V 24V 48V	A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	signation 15	230V 400V 500V 110V 24V 48V 60V	A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	signation 15	230V 400V 500V 110V 24V 48V 60V 110V	A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de	signation 15	230V 400V 500V 110V 24V 48V 60V 110V 125V	A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	signation 15	230V 400V 500V 110V 24V 48V 60V 110V	A A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	signation 15	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55
Auxiliary contact chara Thermal current lth IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC	signation 15	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC	signation 15	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC	signation 15	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC  Second Company Company Current DC  Operations Mechanical life Electrical life Safety related data	signation 15	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC  Second Company Company Current DC  Operations Mechanical life Electrical life Safety related data	signation 15  12	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC  Second Company Company Current DC  Operations Mechanical life Electrical life Safety related data	signation 15  12  13  Od according to EN/ISO 13489-1	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	10 A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1 0.55 0.2  20000000 2000000
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC  Electrical life Safety related data Performance level B1	signation 15  12  13  Od according to EN/ISO 13489-1	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	10 A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1 0.55 0.2  20000000 20000000
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC  Electrical life Safety related data Performance level B1	signation 15  12  13  Od according to EN/ISO 13489-1	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	10 A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1 0.55 0.2  20000000 20000000 20000000



DC rated control voltage	ae			V	60
DC operating voltage	<i>y</i> -				
	pick-up				
			min	%Us	70
			max	%Us	125
	drop-out				
			min	%Us	10
			max	%Us	40
Average coil consump	tion ≤20°C		in much	147	F 4
			in-rush	W W	5.4 5.4
Max cycles frequency			holding	VV	5.4
Mechanical operation				cycles/h	3600
Operating times				0,0100/11	0000
Average time for Us co	ontrol				
J	in AC				
		Closing NO			
			min	ms	8
			max	ms	24
		Opening NO			
			min	ms	10
		Closing NC	max	ms	20
		Closing NC	min	ms	14
			max	ms	28
		Opening NC	max	1110	20
		opolinig 110	min	ms	7
			max	ms	18
	in DC				
		Closing NO			
			min	ms	54
		0 : 110	max	ms	66
		Opening NO			4.4
			min	ms ms	14 17
		Closing NC	max	ms	17
		Closing NO	min	ms	24
			max	ms	30
		Opening NC	<del></del> -	-	
			min	ms	47
			max	ms	57
UL technical data					
Full-load current (FLA)	for three-phase	AC motor			
			at 480V	A	11
Violated as a short set			at 600V	A	11
Yielded mechanical pe		oo AC motor			
	for single-phas	BE AC ITIOLOF	110/120V	HP	1
			230V	HP	2
	for three-phase	e AC motor	250 V	111	
	.c. ando prido		200/208V	HP	5
			220/230V	HP	5
			460/480V	HP	7.5
			575/600V	HP	10

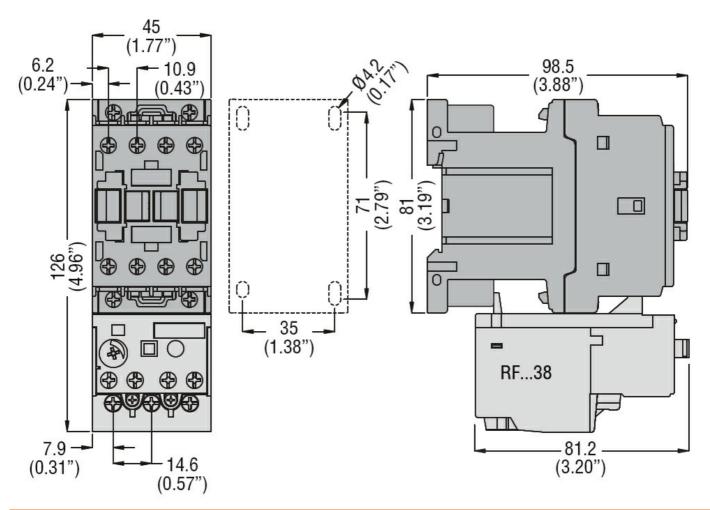




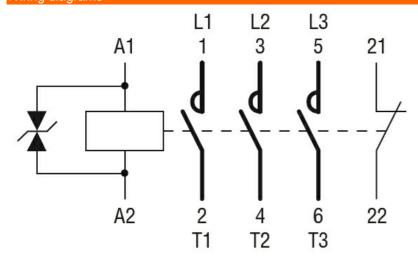
General USE				
	Contactor			
		AC current	Α	28
	Auxiliary contacts			
		AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protection	on fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	70
Contact rating of aux	iliary contacts according to UL			A600 - P600
Ambient conditions	· ·			
Temperature				
•	Operating temperature			
	3 1 1 1 1 1 1	min	°C	-50
		max	°C	70
	Storage temperature			
	- · · · · · · · · · · · · · · · · · · ·	min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protec	tion			
Pollution degree				3
Dimensions				
211110110110				



**ENERGY AND AUTOMATION** 



### Wiring diagrams



### Certifications and compliance

### Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

#### Certificates



### BF1201D060

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, DC COIL, 60VDC, **1NC AUXILIARY CONTACT** 

CCC			
cULus			
EAC			

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching

BF1201D060