



Product designation Product type designation			Power contactor BF12
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	28
Operational current le			
	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	5.5
	500V	kW	5
7	690V	kW	5
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	A	6
150 11 '- DO4 '11 1 /D 44 '11 0 1 ' ' ' '	220V	Α	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	·0.43.4		
	≤24V	A	20
	48V	A	20
	75V	A	18
	110V	A	13
IEC may current to in DC1 with 1/D < 1mg with 2 malas in paries	220V	A	1
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	~0.AV	۸	22
	≤24V	A	22
	48V 75V	A	22 20
	75V 110V	A A	20 16
	1100	^	10



	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			
120 max carrent to in 200 200 mar 2/11 = 10 ma mar 2 poise in conse	≤24V	Α	15
	48V	A	13
	75V	A	12
	110V	A	8
	220V	A	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	ZZU V		
TEO MAX current le in 200-2003 with E/K > 13ms with 3 poles in series	≤24V	۸	18
		A	
	48V	A	18
	75V	A	15
	110V	A	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			
	440V	Α	96
	500V	Α	96
	690V	Α	94
Resistance per pole (average value)		mΩ	2.5
Power dissipation per pole (average value)			
1 1 1 1 1 1	lth	W	2
	AC-3	W	0.4
Tightening torque for terminals	, 10 0	• •	U. 1
rightening torque for terminale	min	Nm	1.5
	max	Nm	1.8
	min	Ibin	1.1
Tightoning targue for call terminal	max	lbin	1.5
Tightening torque for coil terminal		N I .	0.0
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8



	max	Ibin	0.74
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil			
	max		10
Flexible w/o lug conductor section	_		
	min	mm²	1
FI 21 / 1 / 2	max	mm²	6
Flexible c/w lug conductor section	•		4
	min	mm²	1
Elevible with insulated anode lug conductor o	max	mm²	4
Flexible with insulated spade lug conductor se	ection min	mm²	1
	max	mm²	4
	тих		IP20 when
Power terminal protection according to IEC/EN 60529			properly wired
Mechanical features			
Operating position			
	normal		Vertical plan
	allowable		±30°
Fixing			Screw / DIN rail
			35mm
Weight		g	356
Auxiliary contact characteristics		^	4.0
Thermal current lth		Α	10 A600 B600
IEC/EN 60947-5-1 designation Operating current AC15			A600 - P600
Operating current AC13	230V	Α	3
	400V	A	1.9
	500V	A	1.4
Operating current DC12			
5	110V	Α	5.7
Operating current DC13			
	24V	Α	5.7
	48V	Α	2.9
	60V	Α	2.3
	110V	Α	1.25
	125V	Α	1.1
	220V	Α	0.55
	600V	Α	0.2
Operations			
Mechanical life		cycles	20000000
Electrical life		cycles	2000000
Safety related data			
Performance level B10d according to EN/ISO 13489-1			0000000
	rated load	cycles	2000000
FMC compatibility	mechanical load	cycles	20000000
EMC compatibility AC coil operating			yes
Rated AC voltage at 50/60Hz		V	230
AC operating voltage		V	200

AC operating voltage

of 50/60Hz coil powered at 50Hz pick-up



		min	%Us	80
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
of 50/60Hz c	oil powered at 60Hz			
	pick-up			
		min	%Us	85
		max	%Us	110
	drop-out		0/11-	0.0
		min	%Us	20
A.O		max	%Us	55
AC average coil consumption at 20°C				
0f 50/60HZ C	oil powered at 50Hz	in wal	١/٨	75
		in-rush	VA	75
-t F0/001	oil powered at COLL-	holding	VA	9
OT 50/60HZ C	oil powered at 60Hz	المنسمة	١/٨	70
		in-rush	VA	70 6.5
of COUP and	noward at 60Uz	holding	VA	6.5
ot bunz coll	powered at 60Hz	in-rush	VA	75
		holding	VA VA	9
Dissipation at holding <20°C 50Hz		noluling	W	2.5
Dissipation at holding ≤20°C 50Hz Max cycles frequency			VV	2.5
Mechanical operation			cycles/h	3600
Operating times			Cycles/11	3000
Average time for Us control				
_				
in AC	Closing NO			
_	Closing NO	min	ms	8
_	Closing NO	min max	ms ms	8 24
_	- -	min max	ms ms	8 24
_	Closing NO Opening NO	max		24
_	- -		ms	
_	- -	max min	ms ms	10
_	Opening NO	max min	ms ms	10
_	Opening NO	max min max	ms ms ms	241020
_	Opening NO	max min max min	ms ms ms	24102014
_	Opening NO Closing NC	max min max min	ms ms ms	24102014
in AC	Opening NO Closing NC	max min max min max	ms ms ms ms	24 10 20 14 28
in AC UL technical data	Opening NO Closing NC	max min max min max min	ms ms ms ms ms	24 10 20 14 28
in AC UL technical data Rated operational voltage AC (UL)	Opening NO Closing NC Opening NC	max min max min max min	ms ms ms ms ms	24 10 20 14 28
in AC UL technical data	Opening NO Closing NC Opening NC	max min max min max min max	ms ms ms ms ms	24 10 20 14 28 7 18
in AC UL technical data Rated operational voltage AC (UL)	Opening NO Closing NC Opening NC	max min max min max min max at 480V	ms ms ms ms ms v	24 10 20 14 28 7 18 600
UL technical data Rated operational voltage AC (UL) Full-load current (FLA) for three-phase	Opening NO Closing NC Opening NC	max min max min max min max	ms ms ms ms ms ms	24 10 20 14 28 7 18
UL technical data Rated operational voltage AC (UL) Full-load current (FLA) for three-phase	Opening NO Closing NC Opening NC se AC motor	max min max min max min max at 480V	ms ms ms ms ms v	24 10 20 14 28 7 18 600
UL technical data Rated operational voltage AC (UL) Full-load current (FLA) for three-phase	Opening NO Closing NC Opening NC	max min max min max min max at 480V at 600V	ms ms ms ms ms v	24 10 20 14 28 7 18 600 11 11
UL technical data Rated operational voltage AC (UL) Full-load current (FLA) for three-phase	Opening NO Closing NC Opening NC se AC motor	max min max min max min max at 480V at 600V	ms ms ms ms ms ms A A HP	24 10 20 14 28 7 18 600 11 11
UL technical data Rated operational voltage AC (UL) Full-load current (FLA) for three-phase Yielded mechanical performance for single-phase	Opening NO Closing NC Opening NC see AC motor	max min max min max min max at 480V at 600V	ms ms ms ms ms v	24 10 20 14 28 7 18 600 11 11
UL technical data Rated operational voltage AC (UL) Full-load current (FLA) for three-phase	Opening NO Closing NC Opening NC see AC motor	max min max min max min max at 480V at 600V 110/120V 230V	ms ms ms ms ms ms A HP HP	24 10 20 14 28 7 18 600 11 11 11
UL technical data Rated operational voltage AC (UL) Full-load current (FLA) for three-phase Yielded mechanical performance for single-phase	Opening NO Closing NC Opening NC see AC motor	max min max min max min max at 480V at 600V 110/120V 230V 200/208V	ms ms ms ms ms ms Ms A HP HP	24 10 20 14 28 7 18 600 11 11 2
UL technical data Rated operational voltage AC (UL) Full-load current (FLA) for three-phase Yielded mechanical performance for single-phase	Opening NO Closing NC Opening NC see AC motor	max min max min max min max at 480V at 600V 110/120V 230V 200/208V 220/230V	ms ms ms ms ms ms Ms A HP HP	24 10 20 14 28 7 18 600 11 11 12
UL technical data Rated operational voltage AC (UL) Full-load current (FLA) for three-phase Yielded mechanical performance for single-phase	Opening NO Closing NC Opening NC see AC motor	max min max min max min max at 480V at 600V 110/120V 230V 200/208V	ms ms ms ms ms ms Ms A HP HP	24 10 20 14 28 7 18 600 11 11 2

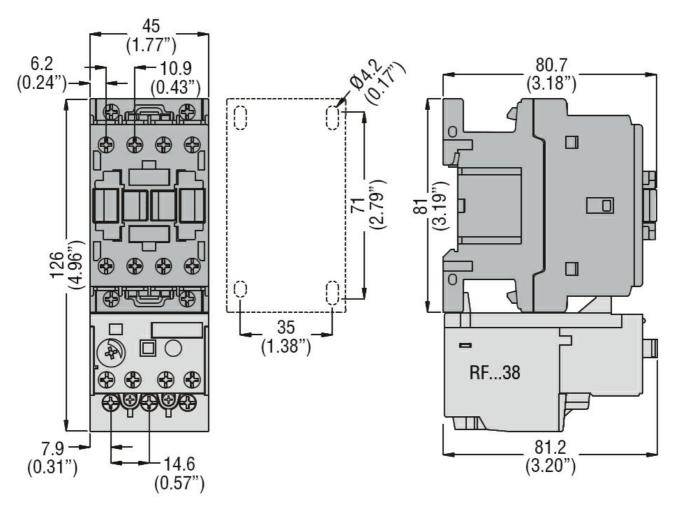




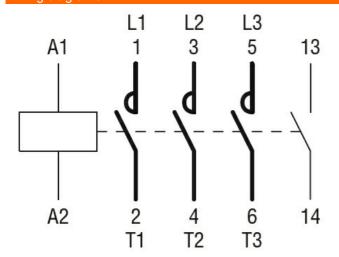
General USE				
General USE	Cantastas			
	Contactor	AC current	Α	28
	Auviliant contacts	AC current	A	20
	Auxiliary contacts	AC voltage	V	600
		AC voltage AC current	v A	10
		DC voltage	250	
		DC voltage DC current	V A	1
Short-circuit protectio	n fuso 600V	DC current		1
Short-circuit protectio	High fault			
	riigiriadit	Short circuit current	kA	100
		Fuse rating	A	30
		Fuse class	,,	J
	Standard fault	1 400 0,400		
	Startadia radit	Short circuit current	kA	5
		Fuse rating	Α	70
Contact rating of auxil	iary contacts according to UL	. acc .a.m.g		A600 - P600
Ambient conditions				
Temperature				
	Operating temperature			
	a promise a company of a compan	min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protect	ion			
Pollution degree				3
Dimensions				

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, AC COIL 50/60HZ, 230VAC, 1NO AUXILIARY CONTACT



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

CCC



BF1210A230

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, AC COIL 50/60HZ, 230VAC, 1NO AUXILIARY CONTACT

cULus			
EAC			

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching