



Product designation		Power contactor
Product type designation		BF09
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	25
Operational current le		
AC-1 (≤40°C)	Α	25
AC-1 (≤55°C)	Α	20
AC-1 (≤70°C)	Α	18
AC-3 (≤440V ≤55°C)	Α	9
AC-4 (400V)	Α	4.9
Rated operational power AC-3 (T≤55°C)		
230V	kW	2.2
400V	kW	4.2
415V	kW	4.5
440V	kW	4.8
500V	kW	5.5
690V	kW	7.5
Rated operational power AC-1 (T≤40°C)		
230V	kW	9.5
400V	kW	16
500V	kW	21
690V	kW	27
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series		
≤24V	Α	15
48V	Α	13
75V	Α	12
110V	Α	6
220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		
≤24V	Α	18
48V	Α	18
75V	Α	17
110V	Α	12
220V	Α	1
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		
≤24V	Α	20
48V	Α	20
75V 110V	A A	20 15



	220V	Α	10
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series	2201	,,	
120 max can six to in 201 mai 2/( = mic mai 1 poleo in conce	≤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	10
	48V	Α	9
	75V	Α	8
	110V	Α	2
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			_
	≤24V	Α	13
	48V	Α	11
	75V	Α	10
	110V	Α	7
	220V	Α	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	15
	48V	Α	15
	75V	Α	13
	110V	Α	11
	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	12
	220V	Α	7
Short-time allowable current for 10s (IEC/EN60947-1)		Α	150
Protection fuse			
	gG (IEC)	Α	25
	aM (IEC)	Α	10
Making capacity (RMS value)		Α	90
Breaking capacity at voltage			
	440V	Α	72
	500V	Α	72
	690V	Α	71
Resistance per pole (average value)		mΩ	2.5
Power dissipation per pole (average value)			
	lth	W	1.6
	AC-3	W	0.2
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
<del></del>	max	Ibin	1.5
Tightening torque for coil terminal	_		
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8



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Mariana la anagla de la cidada	simultan a cualu a con a stabila	max	Ibin	0.74
•	simultaneously connectable		Nr.	2
Conductor section	A1A1C/1/care:I			
	AWG/Kcmil	may		10
	Flexible w/o lug conductor section	max		10
	r lexible w/o lug conductor section	min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section	max		
	Trombie of through conductor coolien	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section			•
		min	mm²	1
		max	mm²	4
Da ta	ation according to IFO/FN COFOO			IP20 when
Power terminal prote	ection according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail
				35mm
Weight			g	360
Conductor section				
	AWG/kcmil conductor section			
		max		10
Auxiliary contact cha	racteristics			
Thermal current Ith			Α	10
IEC/EN 60947-5-1 d	esignation			A600 - P600
	-			7.000 1.000
	-	2001/	^	
	-	230V	A	3
	-	400V	Α	3 1.9
Operating current AC	215			3
Operating current AC	215	400V 500V	A A	3 1.9 1.4
Operating current AC	C15	400V	Α	3 1.9
Operating current AC	C15	400V 500V 110V	A A	3 1.9 1.4 5.7
Operating current AC	C15	400V 500V 110V 24V	A A A	3 1.9 1.4 5.7
Operating current AC	C15	400V 500V 110V 24V 48V	A A A	3 1.9 1.4 5.7 5.7 2.9
Operating current AC	C15	400V 500V 110V 24V 48V 60V	A A A A	3 1.9 1.4 5.7 5.7 2.9 2.3
Operating current AC	C15	400V 500V 110V 24V 48V 60V 110V	A A A A A	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25
Operating current AC	C15	400V 500V 110V 24V 48V 60V 110V 125V	A A A A A A	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1
Operating current AC	C15	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55
Operating current AC Operating current DC Operating current DC	C15	400V 500V 110V 24V 48V 60V 110V 125V	A A A A A A	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1
Operating current AC Operating current DC Operating current DC Operating current DC	C15	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55
Operating current AC Operating current DC Operating current DC Operating current DC Operations Mechanical life	C15	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current AC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life	C15	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current AC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data	C12 C13	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current AC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data	C15	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A Cycles cycles	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000
Operating current AC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data	212 213 213 10d according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A Cycles cycles	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000
Operating current AC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B	212 213 10d according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A Cycles cycles	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000 20000000
Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operations  Mechanical life  Electrical life  Safety related data  Performance level B	212 213 213 10d according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A Cycles cycles	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000



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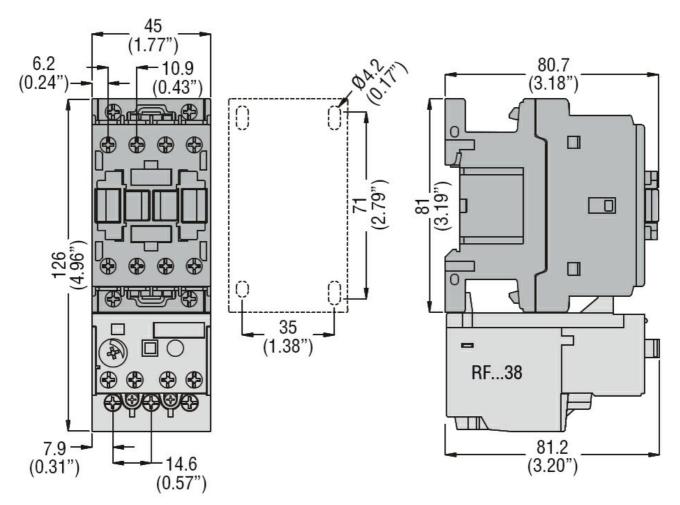
Rated AC voltage at 5	0/60Hz			V	24
AC operating voltage	0/00112			•	<b>2</b> ¬
re speraming remage	of 50/60Hz coil powe	red at 50Hz			
		pick-up			
			min	%Us	80
			max	%Us	110
		drop-out			
			min	%Us	20
			max	%Us	55
	of 50/60Hz coil powe	red at 60Hz			
		pick-up			
			min	%Us	85
			max	%Us	110
		drop-out			
			min	%Us	20
			max	%Us	55
AC average coil consu					
	of 50/60Hz coil powe	red at 50Hz		) /A	7.5
			in-rush	VA	75
	of 50/001 le seil serve		holding	VA	9
	of 50/60Hz coil powe	red at 60HZ	مام س ما	١/٨	70
			in-rush	VA VA	70 6.5
	of 60Hz ooil nowored	ot 60U-7	holding	VA	0.0
	of 60Hz coil powered	al 00HZ	in-rush	VA	75
			holding	VA VA	9
Dissipation at holding	<20°C 50Hz		riolality	W	2.5
DC coil operating	= <b>2</b> 0 0 30112			VV	2.0
Average coil consump	tion ≤20°C				
7 (Voluge con concump					
			in-rush	W	5.4
			in-rush holdina	W	5.4 2.4
Max cycles frequency			in-rush holding	W W	5.4 2.4
Max cycles frequency Mechanical operation				W	2.4
Mechanical operation					2.4
				W	2.4
Mechanical operation Operating times				W	2.4
Mechanical operation Operating times	ontrol	Closing NO		W	2.4
Mechanical operation Operating times	ontrol	Closing NO		W	2.4
Mechanical operation Operating times	ontrol	-	holding	W cycles/h	3600
Mechanical operation Operating times	ontrol	Closing NO Opening NO	holding	W cycles/h ms	2.4 3600 8 24
Mechanical operation Operating times	ontrol	-	holding	W cycles/h ms ms	2.4 3600 8 24 10
Mechanical operation Operating times	ontrol	Opening NO	holding min max	W cycles/h ms ms	2.4 3600 8 24
Mechanical operation Operating times	ontrol	-	min max min max	W cycles/h ms ms ms	2.4 3600 8 24 10 20
Mechanical operation Operating times	ontrol	Opening NO	min max min max min	w cycles/h ms ms ms	2.4 3600 8 24 10 20
Mechanical operation Operating times	ontrol	Opening NO Closing NC	min max min max	W cycles/h ms ms ms	2.4 3600 8 24 10 20
Mechanical operation Operating times	ontrol	Opening NO	min max min max min max	w cycles/h ms ms ms ms	2.4 3600 8 24 10 20 14 28
Mechanical operation Operating times	ontrol	Opening NO Closing NC	min max min max min max	w cycles/h ms ms ms ms ms	2.4 3600 8 24 10 20 14 28
Mechanical operation Operating times Average time for Us co	ontrol	Opening NO Closing NC	min max min max min max	w cycles/h ms ms ms ms	2.4 3600 8 24 10 20 14 28
Mechanical operation Operating times Average time for Us of	ontrol in AC	Opening NO Closing NC Opening NC	min max min max min max	w cycles/h ms ms ms ms ms	2.4 3600 8 24 10 20 14 28
Mechanical operation Operating times Average time for Us of	ontrol	Opening NO Closing NC Opening NC	min max min max min max min max	w cycles/h ms ms ms ms ms	2.4 3600 8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of	ontrol in AC	Opening NO Closing NC Opening NC	min max min max min max at 480V	w cycles/h ms ms ms ms ms ms	2.4 3600 8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of  UL technical data Full-load current (FLA)	ontrol in AC	Opening NO Closing NC Opening NC	min max min max min max min max	w cycles/h ms ms ms ms ms	2.4 3600 8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of	ontrol in AC	Opening NO Closing NC Opening NC	min max min max min max at 480V	w cycles/h ms ms ms ms ms ms	2.4 3600 8 24 10 20 14 28 7 18



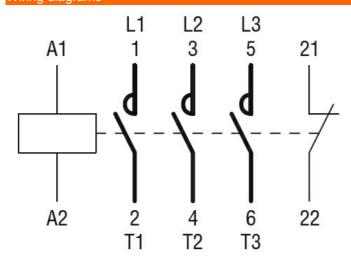
		110/120V	HP	0.75
		230V	HP	2
	for three-phase AC motor			
		200/208V	HP	3
		220/230V	HP	3
		460/480V	HP	5
		575/600V	HP	7.5
General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
		AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protection	fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
	ary contacts according to UL			A600 - P600
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protection	on			
Pollution degree				3

Dimensions





## 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	
cULus	
EAC	

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching