

Product designation			Power contactor
Product type designation			BF09
Contact characteristics		Nle	3
Number of poles		Nr. V	
Rated insulation voltage Ui IEC/EN			690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			0.5
	min	Hz	25
150 Occupation of the control of the	max	Hz	400
IEC Conventional free air thermal current Ith		Α	25
Operational current le	• • • • • • • • • • • • • • • • • • • •		a-
	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	Α	20
	110V	Α	15
	,		



electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 12VDC, 1NC **AUXILIARY CONTACT ENERGY AND AUTOMATION**

	220V	Α	10
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	10
	48V	Α	9
	75V	Α	8
	110V	Α	2
	220V	A	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	220 V		
ILO MAX current le in DO3-DO3 with L/N = 13ms with 2 poles in series	≤24V	Α	13
	48V		
	46 V 75 V	A	11
		A	10
	110V	A	7
IFO	220V	Α	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	-0.11.	Δ.	4.5
	≤24V	A	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	A	72
	690V	Α	71
Resistance per pole (average value)	330 V	mΩ	2.5
Power dissipation per pole (average value)		11122	2.0
i owei dissipation per pole (average value)	Ith	W	1.6
		W	0.2
Tightening teams for tempicals	AC3	VV	0.2
Tightening torque for terminals		N 1 .	4.5
	min	Nm	1.5
	max ·	Nm	1.8
	min	lbin 	1.1
	max	lbin	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8



		max	lbin	0.74
	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			
		max		10
	Flexible w/o lug conductor section			
		min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section		2	
		min	mm²	1
	El 21 22 22 22 22 22 22 22 22 22 22 22 22	max	mm²	4
	Flexible with insulated spade lug conductor section		2	4
		min	mm²	1
		max	mm²	4 ID00
Power terminal prote	ection according to IEC/EN 60529			IP20 when
Mechanical features				properly wired
Operating position				
operating position		normal		Vertical plan
		allowable		±30°
		anowable		Screw / DIN rail
Fixing				35mm
Weight			g	490
Conductor section				
Conductor Coolien	AWG/kcmil conductor section			
	7117 G/Normin Goriadotor Goodion	max		10
Auxiliary contact cha	racteristics			
Thermal current Ith			Α	10
IEC/EN 60947-5-1 d	esignation			A600 - P600
Operating current AC				
		230V	Α	3
		400V	Α	1.9
		500V	Α	1.4
Operating current DO	C12			
Operating current DC	C12	110V	Α	5.7
		110V	Α	5.7
		110V 24V	A A	5.7
		24V	Α	5.7
		24V 48V	A A	5.7 2.9
		24V 48V 60V	A A A	5.7 2.9 2.3
		24V 48V 60V 110V	A A A	5.7 2.9 2.3 1.25
		24V 48V 60V 110V 125V	A A A A	5.7 2.9 2.3 1.25 1.1
Operating current DO		24V 48V 60V 110V 125V 220V	A A A A	5.7 2.9 2.3 1.25 1.1 0.55
Operating current DO Operations		24V 48V 60V 110V 125V 220V	A A A A	5.7 2.9 2.3 1.25 1.1 0.55
Operating current DO Operations Mechanical life		24V 48V 60V 110V 125V 220V	A A A A A	5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DO Operations Mechanical life Electrical life		24V 48V 60V 110V 125V 220V	A A A A A A	5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DO Operations Mechanical life Electrical life Safety related data		24V 48V 60V 110V 125V 220V	A A A A A A	5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DO Operations Mechanical life Electrical life Safety related data	C13	24V 48V 60V 110V 125V 220V	A A A A A A	5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DO Operations Mechanical life Electrical life Safety related data	10d according to EN/ISO 13489-1	24V 48V 60V 110V 125V 220V 600V	A A A A A A Cycles cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000
Operating current DO Operations Mechanical life Electrical life Safety related data Performance level B	10d according to EN/ISO 13489-1	24V 48V 60V 110V 125V 220V 600V	A A A A A A cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000
	10d according to EN/ISO 13489-1	24V 48V 60V 110V 125V 220V 600V	A A A A A A Cycles cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000

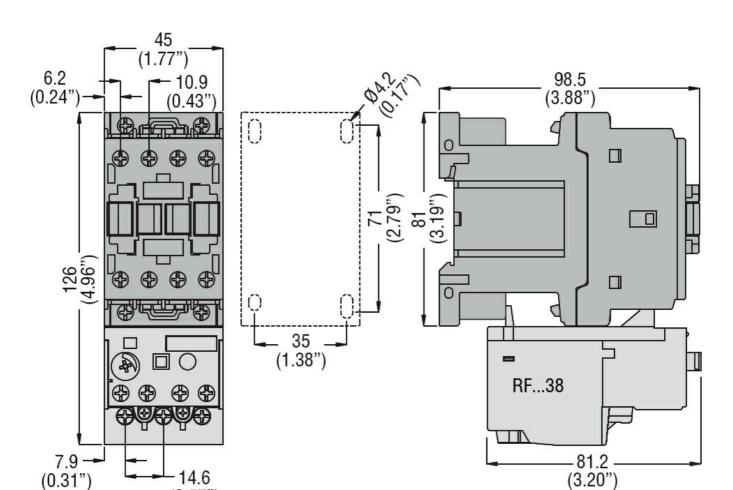


DC rated control voltage	16			V	12
DC operating voltage	, -				
	pick-up				
			min	%Us	70
			max	%Us	125
	drop-out				
			min	%Us	10
			max	%Us	40
Average coil consump	tion ≤20°C			147	- 4
			in-rush	W	5.4
May avalog froguesay			holding	W	5.4
Max cycles frequency Mechanical operation				cycles/h	3600
Operating times				cycles/II	3600
Average time for Us co	ontrol				
Average time for 03 cc	in AC				
	11710	Closing NO			
		2.233 110	min	ms	8
			max	ms	24
		Opening NO			
		. -	min	ms	10
			max	ms	20
		Closing NC			
			min	ms	14
			max	ms	28
		Opening NC			_
			min	ms	7
	in DC		max	ms	18
	In DC	Closing NO			
		Closing NO	min	ms	54
			max	ms	66
		Opening NO	Пах	1110	
		- F	min	ms	14
			max	ms	17
		Closing NC			
			min	ms	24
			max	ms	30
		Opening NC			
			min	ms	47
			max	ms	57
UL technical data	for the second second	-1			
Full-load current (FLA)	ior three-phase AC m	ΙΟΙΟΓ	-1 4001/	٨	7.6
			at 480V at 600V	A A	7.6 0.375
Yielded mechanical pe	rformance		ai 000V	^	0.070
nelueu meunanicai pe	for single-phase AC	motor			
	ioi oiligio pilase Ao	motor	110/120V	HP	0.75
			230V	HP	2
	for three-phase AC r	notor	2001		
			200/208V	HP	3
			220/230V	HP	3
			460/480V	HP	5
			575/600V	HP	7.5

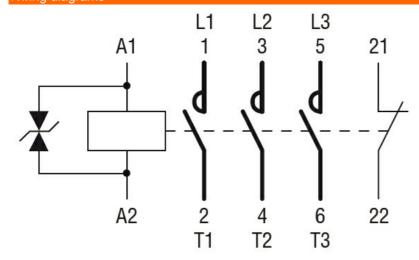


General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
		AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protection	n fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
	liary contacts according to UL			A600 - P600
Ambient conditions				
emperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protect	ion			
mpact resistance				1111
Pollution degree				3
Dimensions [mm (in)]				

electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 12VDC, 1NC **AUXILIARY CONTACT ENERGY AND AUTOMATION**



Wiring diagrams



(0.57")

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



BF0901D012

electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 12VDC, 1NC
AUXILIARY CONTACT

ENERGY	ANID	Διιτοι	MATION
LINERGI	AIND	AUIUI	MATION

CCC			
cULus			
EAC			

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching

electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 24VDC, 1NC **AUXILIARY CONTACT ENERGY AND AUTOMATION**



Product type designation	Product designation			Power contactor
Number of poles	Product type designation			BF09
Rated insulation voltage Ui IEC/EN V 690 Rated impulse withstand voltage Uimp kV 6 Operational frequency min Hz 25 max Hz 400 400 IEC Conventional free air thermal current Ith A 25 Operational current Ie AC-1 (≤40°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤55°C) A 20 AC-4 (400V) A 4.9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 400V kW 4.2 440V kW 4.2 440V kW 4.2 440V kW 5.5 690V kW 7.5 5.6 690V kW 7.5 690V kW 7.5				
Rated impulse withstand voltage Uimp				
Min Hz 25 100				
The company is a second sec			kV	6
EC Conventional free air thermal current Ith	Operational frequency			
EC Conventional free air thermal current Ith		min		
Operational current le AC-1 (≤40°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 4.2 440V 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 40V kW 9.5 40V kW 2.1 690V kW 2.7 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 18 48V A 10		max		
AC-1 (≤40°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 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 690V kW 7.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 690V kW 21 690V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 18 48V A 18 75V A 12 110V A 12 220V A 1 110V A 6 220V A 1 110V A 12 220V A 1 110V A 12 220V A 1 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			Α	25
AC-1 (S55°C)	Operational current le			
AC-1 (≤70°C)		AC-1 (≤40°C)	Α	25
AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 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 21 690V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A − IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 48V A 18 75V A 12 110V A 12 220V A 1		•	Α	20
Rated operational power AC-3 (T≤55°C) 230V kW 2.2 4400V kW 4.2 415V kW 4.5 440V kW 4.5 440V kW 5.5 690V kW 5.5 690V kW 5.5 690V kW 5.5 690V kW 16 690V kW 27 690V			Α	
Rated operational power AC-3 (T≤55°C) 230V kW 2.2 400V kW 4.2 415V kW 4.5 4440V kW 4.8 500V kW 5.5 690V kW 7.5 Rated operational power AC-1 (T≤40°C) 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 \$\frac{220V}{48V} A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series \$\frac{224V}{48V} A 18 48V A 18 75V A 17 110V A 16 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series \$\frac{224V}{220V} A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series \$\frac{224V}{220V} A 2 \text{1} IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series} \$\frac{224V}{220V} A 2 \text{2} \$\frac{224V}{220V} A 1 \text{2} \$\frac{224V}{220V} A 1 \text{2} \$\frac{224V}{220V} A 1 \text{2} \$\text{2} \$\frac{224V}{220V} A 2 \text{2} \$\frac{224V}{220V} A 1 \text{2} \$\frac{224V}{220V} A 2 \text{2} \$\frac{224V}{220V} A 1 \text{2} \$\frac{224V}{220V} A 2 \text{2}			Α	9
230V kW 2.2 400V kW 4.2 415V kW 4.5 446V kW 4.5 446V kW 4.8 500V kW 5.5 690V kW 7.5 5.5 690V kW 7.5 5.5 690V kW 16 500V kW 21 690V kW 27 5.5 690V kW 2		AC-4 (400V)	Α	4.9
400V kW 4.2 415V kW 4.5 440V kW 4.8 500V kW 5.5 690V kW 5.5 690V kW 7.5 7.5	Rated operational power AC-3 (T≤55°C)			
A15V		230V	kW	2.2
A40V kW 4.8 500V kW 5.5 690V kW 7.5		400V	kW	4.2
Soov kW 5.5 690V kW 7.5		415V	kW	4.5
Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 16 500V kW 21 690V kW 27 27 27 28 27 28 28				
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 A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 18 48V A 18 75V A 17 110V A 12 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series EC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 48V A 20 75V A 20				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	9	690V	kW	7.5
A00V kW 16 500V kW 21 690V kW 27	Rated operational power AC-1 (T≤40°C)			
S00V kW 21 690V kW 27				
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series				
Section Sec				
		690V	kW	27
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
T5V A 12 110V A 6 220V A -			Α	
110V A 6 220V A -			Α	
EC max current le in DC1 with L/R \leq 1ms with 2 poles in series \leq 24V A 18 48V A 18 75V A 17 110V A 12 220V A 1 110V A 20 220V 220				
EC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V				6
		220V	A	_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
IEC max current le in DC1 with L/R \leq 1ms with 3 poles in series $ \leq 24V \qquad A \qquad 20 \\ 48V \qquad A \qquad 20 \\ 75V \qquad A \qquad 20 $				
≤24V A 20 48V A 20 75V A 20		220V	A	1
48V A 20 75V A 20	IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
75V A 20				
110V A 15				
		110V	Α	15

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electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 24VDC, 1NC **AUXILIARY CONTACT ENERGY AND AUTOMATION**

	220V	Α	10
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	10
	48V	Α	9
	75V	Α	8
	110V	Α	2
	220V	A	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	220 V		
ILO MAX current le in DO3-DO3 with L/N = 13ms with 2 poles in series	≤24V	Α	13
	48V		
	46 V 75 V	A	11
		A	10
	110V	A	7
IFO	220V	Α	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	-0.11.	Δ.	4.5
	≤24V	A	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	A	72
	690V	Α	71
Resistance per pole (average value)	330 V	mΩ	2.5
Power dissipation per pole (average value)		11122	2.0
i owei dissipation per pole (average value)	Ith	W	1.6
		W	0.2
Tightening teams for tempicals	AC3	VV	0.2
Tightening torque for terminals		N 1 .	4.5
	min	Nm	1.5
	max ·	Nm	1.8
	min	lbin 	1.1
	max	lbin	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8



		max	lbin	0.74
	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			
		max		10
	Flexible w/o lug conductor section			
		min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section		2	
		min	mm²	1
	El 21 22 22 22 22 22 22 22 22 22 22 22 22	max	mm²	4
	Flexible with insulated spade lug conductor section		2	4
		min	mm²	1
		max	mm²	4 ID00
Power terminal prote	ection according to IEC/EN 60529			IP20 when
Mechanical features				properly wired
Operating position				
operating position		normal		Vertical plan
		allowable		±30°
		anowable		Screw / DIN rail
Fixing				35mm
Weight			g	490
Conductor section				
Conductor Coolien	AWG/kcmil conductor section			
	7117 G/Normin Goriadotor Goodion	max		10
Auxiliary contact cha	racteristics			
Thermal current Ith			Α	10
IEC/EN 60947-5-1 d	esignation			A600 - P600
Operating current AC				
		230V	Α	3
		400V	Α	1.9
		500V	Α	1.4
Operating current DO	C12			
Operating current DC	C12	110V	Α	5.7
		110V	Α	5.7
		110V 24V	A A	5.7
		24V	Α	5.7
		24V 48V	A A	5.7 2.9
		24V 48V 60V	A A A	5.7 2.9 2.3
		24V 48V 60V 110V	A A A	5.7 2.9 2.3 1.25
		24V 48V 60V 110V 125V	A A A A	5.7 2.9 2.3 1.25 1.1
Operating current DO		24V 48V 60V 110V 125V 220V	A A A A	5.7 2.9 2.3 1.25 1.1 0.55
Operating current DO Operations		24V 48V 60V 110V 125V 220V	A A A A	5.7 2.9 2.3 1.25 1.1 0.55
Operating current DO Operations Mechanical life		24V 48V 60V 110V 125V 220V	A A A A A	5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DO Operations Mechanical life Electrical life		24V 48V 60V 110V 125V 220V	A A A A A A	5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DO Operations Mechanical life Electrical life Safety related data		24V 48V 60V 110V 125V 220V	A A A A A A	5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DO Operations Mechanical life Electrical life Safety related data	C13	24V 48V 60V 110V 125V 220V	A A A A A A	5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DO Operations Mechanical life Electrical life Safety related data	10d according to EN/ISO 13489-1	24V 48V 60V 110V 125V 220V 600V	A A A A A A Cycles cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000
Operating current DO Operations Mechanical life Electrical life Safety related data Performance level B	10d according to EN/ISO 13489-1	24V 48V 60V 110V 125V 220V 600V	A A A A A A cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000
	10d according to EN/ISO 13489-1	24V 48V 60V 110V 125V 220V 600V	A A A A A A Cycles cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000



DC rated control voltage	re			V	24
DC operating voltage	je			v	24
₁ ag • onago	pick-up				
			min	%Us	70
			max	%Us	125
	drop-out				_
			min	%Us	10
			max	%Us	40
Average coil consump	tion ≤20°C		:ab	147	F 4
			in-rush	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				
· ·	in AC				
		Closing NO			
			min	ms	8
			max	ms	24
		Opening NO			4.0
			min	ms	10
		Closing NC	max	ms	20
		Closing NC	min	ms	14
			max	ms	28
		Opening NC			
		1 0	min	ms	7
			max	ms	18
	in DC				_
		Closing NO			
			min	ms	54
		Opening NO	max	ms	66
		Opening NO	min	ms	14
			max	ms	17
		Closing NC	max	1110	• •
		-	min	ms	24
			max	ms	30
		Opening NC			
			min	ms	47
			max	ms	57
UL technical data	for three set and A	O motor			
Full-load current (FLA)	for three-phase A	o motor	ct 400V	۸	7.6
			at 480V at 600V	A A	7.6 0.375
Yielded mechanical pe	erformance		at 000 v		0.070
. Iolada modilamda pe	for single-phase	AC motor			
	io. cg.o pridoc		110/120V	HP	0.75
			230V	HP	2
	for three-phase A	AC motor			
			200/208V	HP	3
			220/230V	HP	3
			460/480V	HP	5
			575/600V	HP	7.5

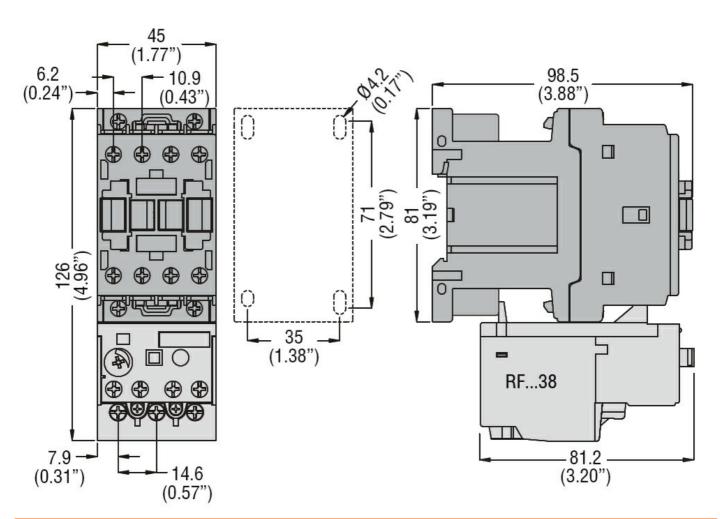


General USE				
General USE	Occidents			
	Contactor	A.O	Δ.	0.5
	A The control of	AC current	A	25
	Auxiliary contacts	A.C		000
		AC voltage	V	600
		AC current	A	10
		DC voltage	V	250
		DC current	A	1
Short-circuit protect				
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
Contact rating of au	xiliary 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 & Prote	ction			
Impact resistance				""
Pollution degree				3
Dimensions [mm (in)]			

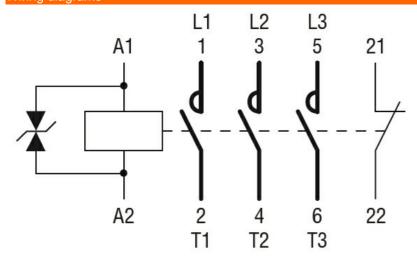
AUXILIARY CONTACT



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



BF0901D024

electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 24VDC, 1NC
AUXILIARY CONTACT

ENERGY AND AUTOMATION

CCC				
cULus	 _	_	_	
EAC				

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching

electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 48VDC, 1NC **AUXILIARY CONTACT ENERGY AND AUTOMATION**



Nimber of poles Nimber of	Product designation Product type designation			Power contactor BF09
Rated insulation voltage Ui IEC/EN V 690 Rated impulse withstand voltage Uimp kV 6 Operational frequency min Hz 25 IEC Conventional free air thermal current lth A 25 25 Operational current le AC-1 (≤40°C) A 25 A 20 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440∨ ≤55°C) A 9 AC-4 (400V) A 4.9 AC-9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 400V kW 4.2 440V kW 4.5 440V kW 4.5 440V kW 5.5 690V kW 7.5 AC-1 (T≤40°C) 230V kW 2.2 Rated operational power AC-1 (T≤40°C) 230V kW 2.1 450V kW 16 500V kW 2.1 450V kW 2.1 450V kW 2.1 690V kW 2.1 450V kW 2.1 450V kW 2.1 16 Common current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 A 15 48V A 13 75V A 12 A 18 48V A 18 A8V A 12 A10V kW A 20 110V A 20V kW A 12 A10V kW A 20 110V A 20V kW A 12 A10V kW A 20V kW A 20				
Rated impulse withstand voltage Uimp	Number of poles		Nr.	3
Deprational frequency	Rated insulation voltage Ui IEC/EN		V	690
Min	Rated impulse withstand voltage Uimp		kV	6
EC Conventional free air thermal current Ith	Operational frequency			
EC Conventional free air thermal current Ith		min	Hz	25
Operational current le AC-1 (≤55°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤4400 ≤55°C) A 9 AC-4 (4000V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 400V 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 40V kW 9.5 40V kW 9.5 40V kW 9.5 40V kW 21 690V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 48V A 18 48V A 18 48V A 12 224V A		max	Hz	400
AC-1 (≤40°C)	IEC Conventional free air thermal current Ith		Α	25
AC-1 (≤55°C) A 20 AC-1 (1570°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 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 A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 17 110V A 6 220V A 1 110V A 18 48V A 18 75V A 17 110V A 12 220V A 1	Operational current le			
AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 415V kW 4.5 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 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 A 15 48V A 13 75V A 12 110V A 6 220V A 1 110V A 6 220V A 1 110V A 18 48V A 18 75V A 17 110V A 18 48V A 18 75V A 17 110V A 12 220V A 1 110V A 2 220V A 1 110V A 12 220V A 1 110V A 2 220V A 1 110V A 12 220V A 1		AC-1 (≤40°C)	Α	25
AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 4400V 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 27 EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 12 110V A 18 75V A 17 110V A 12 220V A 1		AC-1 (≤55°C)	Α	20
AC-4 (400V)		AC-1 (≤70°C)	Α	18
Rated operational power AC-3 (T≤55°C) 230V kW 2.2 400V kW 4.2 415V kW 4.5 4440V kW 4.8 500V kW 5.5 690V kW 7.5 Rated operational power AC-1 (T≤40°C) 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 A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 18 48V A 18 75V A 17 110V A 12 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		AC-3 (≤440V ≤55°C)	Α	9
230V kW 2.2 440V kW 4.2 415V kW 4.5 446V kW 4.8 500V kW 5.5 690V kW 7.5		AC-4 (400V)	Α	4.9
400V kW 4.2 415V kW 4.5 446V kW 4.8 500V kW 5.5 690V kW 5.5 690V kW 7.5 7.5	Rated operational power AC-3 (T≤55°C)			
A15V		230V	kW	2.2
A40V kW 4.8 500V kW 5.5 690V kW 7.5		400V	kW	4.2
Soov kW 5.5 690V kW 7.5		415V	kW	4.5
Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 16 500V kW 21 690V kW 27 230V 690V		440V	kW	4.8
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 A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 18 48V A 18 75V A 17 110V A 12 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 48V A 20 75V A 20		500V	kW	5.5
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		690V	kW	7.5
A00V kW 16 500V kW 21 690V kW 27	Rated operational power AC-1 (T≤40°C)			
Soov kW 21 690V kW 27 27		230V	kW	9.5
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V		400V	kW	16
Section Sec				
		690V	kW	27
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
T5V A 12 110V A 6 220V A -			Α	15
110V A 6 220V A -			Α	
EC max current le in DC1 with L/R \leq 1ms with 2 poles in series \leq 24V A 18 48V A 18 75V A 17 110V A 12 220V A 1 110V A 20 220V 22				
EC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V				6
		220V	A	_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				
IEC max current le in DC1 with L/R \leq 1ms with 3 poles in series				
≤24V A 20 48V A 20 75V A 20		220V	Α	
48V A 20 75V A 20	IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
75V A 20				
110V A 15				
		110V	Α	15

220V Α 10 IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series ≤24V Α 20 48V Α 20 75V 20 Α 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 9 Α 75V 8 2 110V Α 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 7 110V Α 220V Α 2 IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series ≤24V Α 15 48V 15 75V Α 13 110V Α 11 220V 6 IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series ≤24V Α 15 48V Α 15 75V 15 Α 110V Α 12 220V 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) 2.5 $m\Omega$ Power dissipation per pole (average value) W 1.6 lth AC3 W 0.2 Tightening torque for terminals min Nm 1.5 max Nm 1.8 min Ibin 1.1 Ibin 1.5 max Tightening torque for coil terminal

min

max min Nm

Nm

Ibin

0.8

8.0

1



N4	eta Barra da consentado	max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	AMC/Komil			
	AWG/Kcmil	max		10
	Flexible w/o lug conductor section	IIIdx		10
	r lexible w/o lug coriductor section	min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section	max		
	. Ionale of Wing contactor coolien	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section			
	· · · · · · · · · · · · · · · · · · ·	min	mm²	1
		max	mm²	4
				IP20 when
Power terminal protec	ction according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail
				35mm
Weight			g	493
Conductor section				
	AWG/kcmil conductor section			
		max		10
Auxiliary contact char	acteristics			
Thermal current Ith			Α	10
				A600 - P600
IEC/EN 60947-5-1 de Operating current AC		230V	A	3
		400V	Α	3 1.9
Operating current AC	15			3
	15	400V 500V	A A	3 1.9 1.4
Operating current AC Operating current DC	12	400V	Α	3 1.9
Operating current AC Operating current DC	12	400V 500V 110V	A A	3 1.9 1.4 5.7
Operating current AC Operating current DC	12	400V 500V 110V 24V	A A A	3 1.9 1.4 5.7
Operating current AC Operating current DC	12	400V 500V 110V 24V 48V	A A A A	3 1.9 1.4 5.7 5.7 2.9
Operating current AC Operating current DC	12	400V 500V 110V 24V 48V 60V	A A A A A	3 1.9 1.4 5.7 5.7 2.9 2.3
Operating current AC Operating current DC	12	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	12	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	12	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	12	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	12	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 Operating current DC Operating current DC	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A 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 Operations Mechanical life Electrical life	12	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	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A 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	12	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A 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	12 13 10d according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A 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 Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B1	12 13 Od according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A 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 2000000 2000000
Operating current AC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accord	12 13 10d according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A 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 2000000 2000000 2000000 yes
Operating current AC Operating current DC Operating current DC Operating current DC Mechanical life Electrical life Safety related data Performance level B1	12 13 Od according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A 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 2000000 2000000

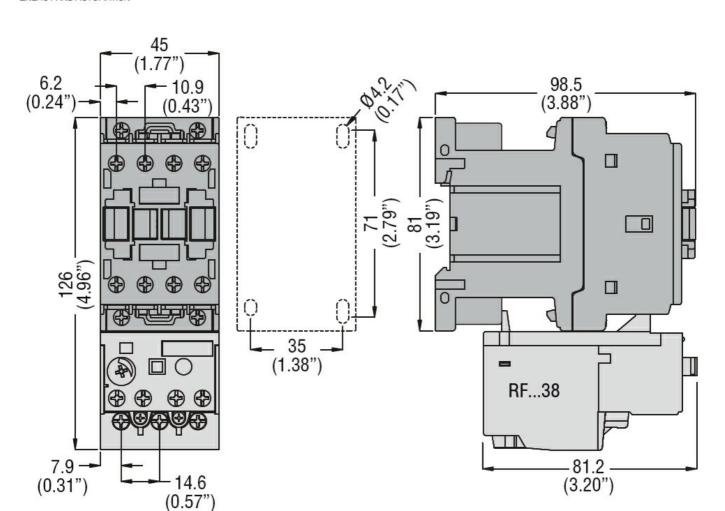
DC rated control voltage	1e			V	48
DC operating voltage	,-				
. 0	pick-up				
			min	%Us	70
			max	%Us	125
	drop-out				
			min	%Us	10
Average seil consumpt	tion <20°C		max	%Us	40
Average coil consumpt	lion ≥20 C		in-rush	W	5.4
			holding	W	5.4
Max cycles frequency			Holding	• • • • • • • • • • • • • • • • • • • •	0.1
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us co	ontrol				
	in AC				
		Closing NO			
			min	ms	8
		Oncaina NO	max	ms	24
		Opening NO	min	ma	10
			min max	ms ms	20
		Closing NC	παλ	1113	20
		0.00g 0	min	ms	14
			max	ms	28
		Opening NC			
			min	ms	7
			max	ms	18
	in DC	01 : 110			
		Closing NO	min	ma	54
			max	ms ms	66
		Opening NO	παλ	1113	00
		opogo	min	ms	14
			max	ms	17
		Closing NC			
			min	ms	24
		<u> </u>	max	ms	30
		Opening NC			47
			min	ms	47 57
UL technical data			max	ms	57
Full-load current (FLA)	for three-phase AC	? motor			
i dii ioda callelit (i LA)	ioi tilico pilase At	J MOTO	at 480V	Α	7.6
			at 600V	A	0.375
Yielded mechanical pe	rformance				
1 -	for single-phase	AC motor			
	- <i>'</i>		110/120V	HP	0.75
			230V	HP	2
	for three-phase A	C motor			
			200/208V	HP	3
			220/230V	HP	3
			460/480V 575/600V	HP HP	5 7.5
			373/6007	ПР	ı.J



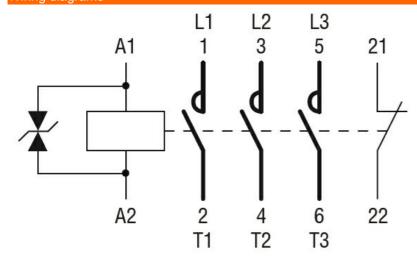
-				
General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
	•	AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protect	ion fuse, 600V			
	High fault			
	-	Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
Contact rating of au	xiliary 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 & Prote	ction			
Impact resistance				""
Pollution degree				3
Dimensions [mm (in)]			

AUXILIARY CONTACT

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



BF0901D048

electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 48VDC, 1NC
AUXILIARY CONTACT

ENERGY AND AUTOMATION

CCC				
cULus	 _	_	_	
EAC				

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching

electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 60VDC, 1NC **AUXILIARY CONTACT ENERGY AND AUTOMATION**



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	10.4 (11000)		0.5
	AC-1 (≤40°C)	A	25
	AC-1 (≤55°C)	A	20
	AC-1 (≤70°C)	A	18
	AC-3 (≤440V ≤55°C)	A	9
Dated energtional newer AC 2 /T<55°C)	AC-4 (400V)	Α	4.9
Rated operational power AC-3 (T≤55°C)	2201/	LAAA	0.0
	230V 400V	kW kW	2.2 4.2
	400 V 415 V	kW	4.2 4.5
	440V	kW	4.8
	500V	kW	5.5
	690V	kW	7.5
Rated operational power AC-1 (T≤40°C)	0001	1000	7.0
ration operational power rice is (1=10-0)	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	Α	20
	110V	Α	15

electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 60VDC, 1NC **AUXILIARY CONTACT ENERGY AND AUTOMATION**

	220V	Α	10
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	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	A	10
	110V	A	7
	220V	A	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	220 V		
TEO MAX CUITERLIE III DOG-DOG WILLI LIN > 101115 WILLI 3 POLES III SELLES	≤24V	Α	15
	48V	A	15
	75V	A	13
	110V	A	11
	220V	A	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)	300.	mΩ	2.5
Power dissipation per pole (average value)		.1134	
Tomos dissipation per pero (average value)	Ith	W	1.6
	AC3	W	0.2
Tightening torque for terminals	AUS	v v	U.Z
rightening torque for terminals	min	Nim	1.5
	min	Nm Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
This is the state of the state	max	lbin	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	Ibin	0.8



		max	lbin	0.74
	s simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			
	-	max		10
	Flexible w/o lug conductor section		2	4
		min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section	IIIax	111111	
	Tiexible with insulated spade lug conductor section	min	mm²	1
		max	mm²	4
_		max		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	494
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
Operating current AC	215			
		230V	Α	3
		400V	Α	1.9
		500V	Α	1.4
Operating current DO	212			
		110V	Α	5.7
Operating current DO	C13		_	
		24V	A	5.7
		48V	A	2.9
		60V	A	2.3
		110V	A	1.25
		125V 220V	A A	1.1 0.55
		600V	A	0.2
		000 V		U.Z
Operations				0000000
			cycles	20000000
Mechanical life			cycles	20000000
Mechanical life Electrical life			cycles	2000000
Mechanical life Electrical life Safety related data	10d according to EN/ISO 13489-1			
Mechanical life Electrical life Safety related data	s10d according to EN/ISO 13489-1	rated load	cycles	2000000
Mechanical life Electrical life Safety related data		rated load	cycles	2000000
Mechanical life Electrical life Safety related data Performance level B	me	rated load chanical load	cycles	2000000 2000000 20000000
			cycles	2000000

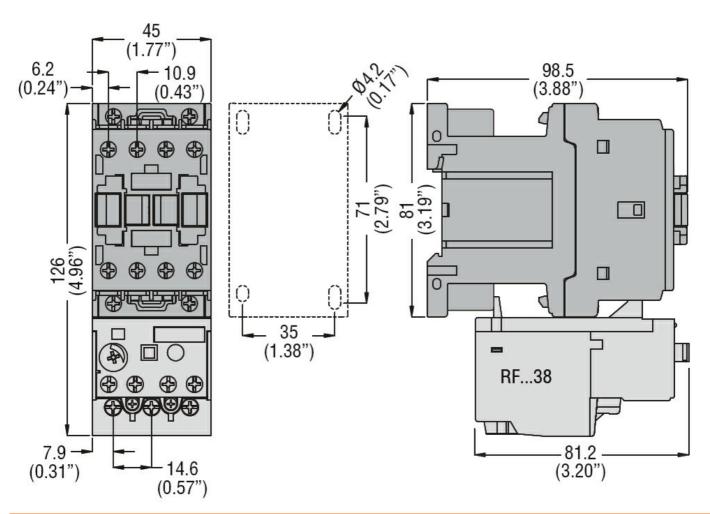
DC roted control voltage	••			W	60
DC rated control voltage DC operating voltage	je			V	60
DC operating voltage	pick-up				
	pick-up		min	%Us	70
			max	%Us	125
	drop-out		Пах	7000	120
	a. op 0 a.		min	%Us	10
			max	%Us	40
Average coil consumpt	tion ≤20°C				
			in-rush	W	5.4
			holding	W	5.4
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us co					
	in AC				
		Closing NO			0
			min	ms	8
		Opening NO	max	ms	24
		Opening NO	min	ms	10
			max	ms	20
		Closing NC	παλ	1113	20
		Closing 140	min	ms	14
			max	ms	28
		Opening NC			
		. 0	min	ms	7
			max	ms	18
	in DC				
		Closing NO			
			min	ms	54
			max	ms	66
		Opening NO			4.4
			min	ms	14
		Closing NC	max	ms	17
		Closing INC	min	ms	24
			max	ms	30
		Opening NC	max	0	
		, 5 -	min	ms	47
			max	ms	57
UL technical data					
Full-load current (FLA)	for three-phase AC mo	tor			
			at 480V	Α	7.6
			at 600V	Α	0.375
Yielded mechanical pe					
	for single-phase AC n	notor			
			110/120V	HP	0.75
	for the contract A C	-t	230V	HP	2
	for three-phase AC m	ΟΙΟΓ	200/2001	UD	2
			200/208V 220/230V	HP HP	3
			460/480V	HP	5
			575/600V	HP	7.5



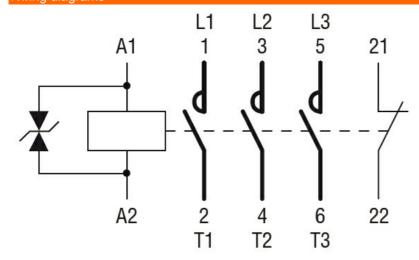
General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
		AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protectio	n fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
	liary contacts according to UL			A600 - P600
Ambient conditions				
emperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
/lax altitude			m	3000
Resistance & Protect	ion			
mpact resistance				1111
Pollution degree				3
Dimensions [mm (in)]				

electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 60VDC, 1NC

AUXILIARY CONTACT 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



BF0901D060

electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 60VDC, 1NC
AUXILIARY CONTACT

ENERGY AND AUTOMATION

CCC			
cULus	_	_	
EAC			

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching







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 400 400 IEC Conventional free air thermal current Ith A 25 Operational current Ie AC-1 (≤40°C) A 25 AC-1 (≤70°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 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<	Product designation Product type designation			Power contactor BF09
Number of poles	7.7			БГОЭ
Rated insulation voltage Ui IEC/EN V 690 Rated impulse withstand voltage Uimp kV 6 Operational frequency min Hz 25 IEC Conventional free air thermal current Ith A 25 Operational current Ie AC-1 (≤40°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 4.0 4.0 4.0 4.9 4.0 <td></td> <td></td> <td>Nr</td> <td>3</td>			Nr	3
Rated impulse withstand voltage Uimp				
Tend the propertional frequency min max by Hz max Hz max hz hz hz 400 IEC Conventional free air thermal current lith A 25 Operational current le AC-1 (\$40°C)				
Min Hz 25 Max Hz 400 EC Conventional free air thermal current lth A 25 Operational current le AC-1 (≤40°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) AC-4 (400V) A 4.9 AC-4 (400V) A 4.9 AC-5 (≤440V ≤55°C) A 9 AC-6 (400V) A 4.9 AC-7 (400V) A 4.9 AC-8 (400V) A 4.9 AC-9 (400V) A 4.9 AC-1 (400V) A 4.9 AC-9 (400V) A 4.9 AC-9 (400V) A 4.9 AC-1 (400V) A 4.9 AC-9 (400V) A 4.9 AC-1 (400			K V	0
EC Conventional free air thermal current lth	Operational frequency	min	⊔ ⊸	25
EC Conventional free air thermal current lth				
Operational current le AC-1 (≤40°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 400V kW 4.2 415V kW 4.5 415V kW 4.5 420 415V kW 4.8 500V kW 5.5 690V kW 5.5 690V kW 7.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 16 500V kW 2.2 415V kW 4.8 500V kW 1.5 500V kW 2.2 415V kW 4.8 500V kW 2.2 415V kW 4.8 500V kW 2.5	IEC Conventional free air thermal aurrent Ith	IIIdX		
AC-1 (≤40°C)			A	23
AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 400V kW 4.2 415V kW 4.5 440V kW 5.5 690V kW 2.7 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 16 500V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 12 110V A 6 220V A 1 110V A 18 48V A 18 75V A 12 110V A 18 48V A 18 75V A 12 110V A 18 48V A 18 75V A 17 110V A 12 220V A 1	Operational current le	AC 1 (<10°C)	۸	0.5
AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 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 690V kW 21 690V kW 16 500V kW 21 690V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 12 110V A 6 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series				
AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 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 690V kW 21 690V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 48V A 18 75V A 17 110V A 12 220V A 1 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		` ,		
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 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 48V A 18 75V A 17 110V A 18 48V A 18 75V A 17 110V A 12 220V A 1 110V A 12 220V A 1 110V A 2 220V A 1 110V A 2 220V A 1 110V A 12 220V A 1 110V A 2 220V A 1		` ,		
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 16 500V kW 21 690V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 48V A 18 75V A 17 110V A 12 220V A 1 110V A 2 220V A 1 110V A 12 220V A 1		*		
230V kW 2.2 400V kW 4.2 415V kW 4.5 440V kW 4.5 440V kW 4.8 500V kW 5.5 690V kW 7.5 690V kW 7.5 690V kW 7.5 690V kW 16 500V kW 21 690V kW 27 690V kW 28 690V kW 29 690V kW		AC-4 (400V)	A	4.9
400V kW 4.2 415V kW 4.5 440V kW 4.5 440V kW 4.8 500V kW 5.5 690V kW 7.5	Rated operational power AC-3 (T≤55°C)			
415V				
A40V kW 4.8 500V kW 5.5 690V kW 7.5				
S00V kW 5.5				
Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 16 500V kW 21 690V kW 27 27				
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 A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 18 48V A 18 75V A 17 110V A 12 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 48V A 20 48V A 20 75V A 20				
		690V	kW	7.5
	Rated operational power AC-1 (T≤40°C)			
Soov kW 21 690V kW 27		230V	kW	9.5
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series		400V	kW	16
Section Sec		500V	kW	21
		690V	kW	27
48V A 13 75V A 12 110V A 6 220V A -	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
T5V A 12 110V A 6 220V A -		≤24V	Α	15
110V A 6 220V A -		48V	Α	13
EC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V		75V	Α	12
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 17 110V A 12 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 48V A 20 75V A 20		110V	Α	6
			Α	_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	•	≤24V	Α	18
220V A 1				
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 48V A 20 75V A 20				
≤24V A 20 48V A 20 75V A 20	IFC max current le in DC1 with L/R < 1ms with 3 noles in series			•
48V A 20 75V A 20		<24\/	Δ	20
75V A 20				
110V A 15				
		1100	^	10





	220V	Α	10
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	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	A	10
	110V	A	7
	220V	A	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	22U V		
TEC max current le in DO3-DO3 with E/R > 13ms with 3 poles in series	≤24V	۸	15
	≤24 V 48 V	A	
		A	15
	75V	A	13
	110V	A	11
150 DOS DOS 111 L/D + 45	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)			- -
. The storpasion por polo (arolago raido)	lth	W	1.6
	AC3	W	0.2
Tightening torque for terminals	7,00	V V	V. <u>L</u>
rightening torque for terminals	min	Nm	1.5
		Nm	1.8
	max		
	min	lbin Ibin	1.1
Tightonian tourns for sail towning!	max	lbin	1.5
Tightening torque for coil terminal	·		0.0
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8





		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	AMO ((4)			
	AWG/Kcmil			4.0
	Florible w/e lug conductor coetien	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 c/w lug conductor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section	max		•
	r rexide mar mediated opade rag corradeter econom	min	mm²	1
		max	mm²	4
				IP20 when
Power terminal prote	ction according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail
				35mm
Weight			g	492
Conductor section				
	AWG/kcmil conductor section			
		max		10
Auxiliary contact char		max		
Thermal current Ith	racteristics	max	A	10
Thermal current Ith IEC/EN 60947-5-1 de	esignation	max	A	
Thermal current Ith IEC/EN 60947-5-1 de	esignation			10 A600 - P600
Thermal current Ith IEC/EN 60947-5-1 de	esignation	230V	A	10 A600 - P600
Thermal current Ith IEC/EN 60947-5-1 de	esignation	230V 400V	A A	10 A600 - P600 3 1.9
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	esignation 215	230V	A	10 A600 - P600
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	esignation 215	230V 400V 500V	A A A	10 A600 - P600 3 1.9 1.4
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V	A A	10 A600 - P600 3 1.9
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V 500V	A A A	10 A600 - P600 3 1.9 1.4
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V 500V 110V	A A A	10 A600 - P600 3 1.9 1.4 5.7
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V 500V 110V 24V 48V	A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	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
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	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
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V 500V 110V 24V 48V 60V 110V 125V	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
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	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
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC	esignation 215	230V 400V 500V 110V 24V 48V 60V 110V 125V	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
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC	esignation 215	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
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	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
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life	esignation 215	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
Thermal current lth 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	esignation 215 212 213	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
Thermal current lth 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	esignation 215	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
Thermal current lth 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	esignation 315 312 313 10d 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
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B	esignation 212 213 10d 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
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 Electrical life Safety related data Performance level B	esignation 315 312 313 10d 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





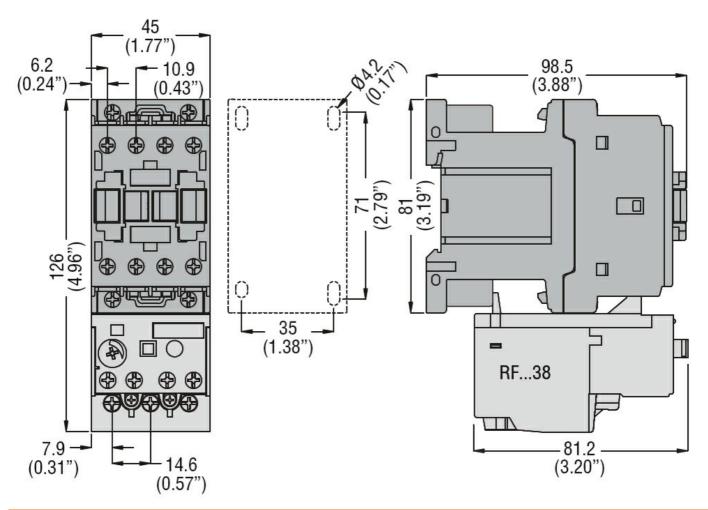
DC roted control voltage	10			V	110
DC rated control voltage DC operating voltage	<u>je</u>			V	110
Do operating voltage	pick-up				
	pion up		min	%Us	70
			max	%Us	125
	drop-out				
	•		min	%Us	10
			max	%Us	40
Average coil consump	tion ≤20°C				
			in-rush	W	5.4
			holding	W	5.4
Max cycles frequency					2000
Mechanical operation				cycles/h	3600
Operating times Average time for Us co	ontrol				
Average unie ioi os co	in AC				
	III AO	Closing NO			
		2.35	min	ms	8
			max	ms	24
		Opening NO			
			min	ms	10
			max	ms	20
		Closing NC			
			min	ms	14
		On anima NO	max	ms	28
		Opening NC	min	ma	7
			max	ms ms	, 18
	in DC		тих	1110	
	2 0	Closing NO			
		3	min	ms	54
			max	ms	66
		Opening NO			
			min	ms	14
		O	max	ms	17
		Closing NC	. •		0.4
			min	ms ms	24
		Opening NC	max	ms	30
		Opening NO	min	ms	47
			max	ms	57
UL technical data			3/		
Full-load current (FLA)	for three-phase A	AC motor			
,	•		at 480V	Α	7.6
			at 600V	Α	0.375
Yielded mechanical pe					
	for single-phase	e AC motor			
			110/120V	HP	0.75
			230V	HP	2
	for three-phase	AC motor	000/0001		2
			200/208V	HP	3
			220/230V 460/480V	HP HP	3 5
			575/600V	HP	5 7.5
			J1 J/000 V	1 11	



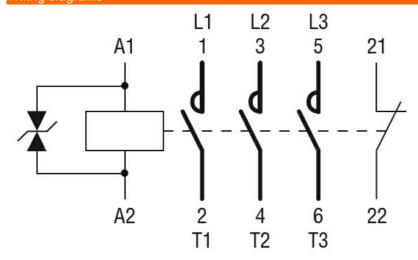


General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
		AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
hort-circuit protectio	n fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
	liary contacts according to UL			A600 - P600
mbient conditions				
emperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
/lax altitude			m	3000
Resistance & Protect	ion			
mpact resistance				1111
Pollution degree				3
Dimensions [mm (in)]				





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



BF0901D110

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 110VDC, 1NC AUXILIARY CONTACT

CCC	
cULus	
EAC	

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





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 400 400 IEC Conventional free air thermal current Ith A 25 Operational current Ie AC-1 (≤40°C) A 25 AC-1 (≤70°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 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<	Product designation Product type designation			Power contactor BF09
Number of poles	7.7			БГОЭ
Rated insulation voltage Ui IEC/EN V 690 Rated impulse withstand voltage Uimp kV 6 Operational frequency min Hz 25 IEC Conventional free air thermal current Ith A 25 Operational current Ie AC-1 (≤40°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 4.0 4.0 4.0 4.9 4.0 <td></td> <td></td> <td>Nr</td> <td>3</td>			Nr	3
Rated impulse withstand voltage Uimp				
Tend the propertional frequency min max by Hz max Hz max hz hz hz 400 IEC Conventional free air thermal current lith A 25 Operational current le AC-1 (\$40°C)				
Min Hz 25 Max Hz 400 EC Conventional free air thermal current lth A 25 Operational current le AC-1 (≤40°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) AC-4 (400V) A 4.9 AC-4 (400V) A 4.9 AC-5 (≤440V ≤55°C) A 9 AC-6 (400V) A 4.9 AC-7 (400V) A 4.9 AC-8 (400V) A 4.9 AC-9 (400V) A 4.9 AC-1 (400V) A 4.9 AC-9 (400V) A 4.9 AC-9 (400V) A 4.9 AC-1 (400V) A 4.9 AC-9 (400V) A 4.9 AC-1 (400			K V	0
EC Conventional free air thermal current lth	Operational frequency	min	⊔ ⊸	25
EC Conventional free air thermal current lth				
Operational current le AC-1 (≤40°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 400V kW 4.2 415V kW 4.5 415V kW 4.5 420 415V kW 4.8 500V kW 5.5 690V kW 5.5 690V kW 7.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 16 500V kW 2.2 415V kW 4.8 500V kW 1.5 500V kW 2.2 415V kW 4.8 500V kW 2.2 415V kW 4.8 500V kW 2.5	IEC Conventional free air thermal aurrent Ith	IIIdX		
AC-1 (≤40°C)			A	23
AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 400V kW 4.2 415V kW 4.5 440V kW 5.5 690V kW 2.7 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 16 500V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 12 110V A 6 220V A 1 110V A 18 48V A 18 75V A 12 110V A 18 48V A 18 75V A 12 110V A 18 48V A 18 75V A 17 110V A 12 220V A 1	Operational current le	AC 1 (<10°C)	۸	0.5
AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 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 690V kW 21 690V kW 16 500V kW 21 690V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 12 110V A 6 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series				
AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 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 690V kW 21 690V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 48V A 18 75V A 17 110V A 12 220V A 1 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		` ,		
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 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 48V A 18 75V A 17 110V A 18 48V A 18 75V A 17 110V A 12 220V A 1 110V A 12 220V A 1 110V A 2 220V A 1 110V A 2 220V A 1 110V A 12 220V A 1 110V A 2 220V A 1		` ,		
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 16 500V kW 21 690V kW 27 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 48V A 18 75V A 17 110V A 12 220V A 1 110V A 2 220V A 1 110V A 12 220V A 1		*		
230V kW 2.2 400V kW 4.2 415V kW 4.5 440V kW 4.5 440V kW 4.8 500V kW 5.5 690V kW 7.5 690V kW 7.5 690V kW 7.5 690V kW 16 500V kW 21 690V kW 27 690V kW 28 690V kW 29 690V kW		AC-4 (400V)	A	4.9
400V kW 4.2 415V kW 4.5 440V kW 4.5 440V kW 4.8 500V kW 5.5 690V kW 7.5	Rated operational power AC-3 (T≤55°C)			
415V				
A40V kW 4.8 500V kW 5.5 690V kW 7.5				
S00V kW 5.5				
Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 16 500V kW 21 690V kW 27 27				
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 A 15 48V A 13 75V A 12 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 18 48V A 18 75V A 17 110V A 12 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 48V A 20 48V A 20 75V A 20				
		690V	kW	7.5
	Rated operational power AC-1 (T≤40°C)			
Soov kW 21 690V kW 27		230V	kW	9.5
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series		400V	kW	16
Section Sec		500V	kW	21
		690V	kW	27
48V A 13 75V A 12 110V A 6 220V A -	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
T5V A 12 110V A 6 220V A -		≤24V	Α	15
110V A 6 220V A -		48V	Α	13
EC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V		75V	Α	12
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 18 48V A 18 75V A 17 110V A 12 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 48V A 20 75V A 20		110V	Α	6
			Α	_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	•	≤24V	Α	18
220V A 1				
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 48V A 20 75V A 20				
≤24V A 20 48V A 20 75V A 20	IFC max current le in DC1 with L/R < 1ms with 3 noles in series			•
48V A 20 75V A 20		<24\/	Δ	20
75V A 20				
110V A 15				
		1100	^	10



	220V	Α	10
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	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			
The max surrounds in Boo Boo man give Tome man 2 person in comes	≤24V	Α	13
	48V	A	11
	75V	A	10
	110V	A	7
	220V	A	2
IEC many assert to in DC2 DC5 with L/D < 45 man with 2 males in agrica	220 V	A	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	20AV	٨	4 E
	≤24V	A	15
	48V	A	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			
<u> </u>	440V	Α	72
	500V	Α	72
	690V	Α	71
Resistance per pole (average value)	300.	mΩ	2.5
Power dissipation per pole (average value)		.1134	
1 ones dissipation per pero (average value)	Ith	W	1.6
	AC3	W	0.2
Tightening torque for terminals	AUS	v v	U.Z
rightening torque for terminals	min	Nim	1.5
	min	Nm Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
	max	Ibin	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				
	AWG/Kcmil			4.0
	Florible w/s 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		•
	Tionale marmodiated space lag conductor coolen	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
Canalizataraaatian				
Conductor section				
Conductor section	AWG/kcmil conductor section			
		max		10
Auxiliary contact chara		max		
Auxiliary contact chara Thermal current Ith	acteristics	max	A	10
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de	acteristics esignation	max	A	
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de	acteristics esignation			10 A600 - P600
Auxiliary contact chara	acteristics esignation	230V	A	10 A600 - P600
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de	acteristics esignation	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	esignation 15	230V	A	10 A600 - P600
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC	esignation 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	esignation 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	esignation 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	esignation 15	230V 400V 500V 110V 24V	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	esignation 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	esignation 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	esignation 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	esignation 15	230V 400V 500V 110V 24V 48V 60V 110V 125V	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
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 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 Operating current AC Operating current DC	esignation 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 charanteemal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC	esignation 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	esignation 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	esignation 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	esignation 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	esignation 15 12 13	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	esignation 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 DC Operating current DC Operating current DC Operating current DC Operating current DC Electrical life Electrical life Safety related data Performance level B1	esignation 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 DC Operating current DC Operating current DC Operating current DC Operating current DC Electrical life Electrical life Safety related data Performance level B1	esignation 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	125
DC operating voltage	,				-
-	pick-up				
			min	%Us	70
			max	%Us	125
	drop-out			0/11	4.0
			min	%Us %Us	10 40
Average coil consump	tion <20°C		max	7005	40
Average con consump	11011 =20 0		in-rush	W	5.4
			holding	W	5.4
Max cycles frequency			3 3		
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us co					
	in AC				
		Closing NO			0
			min	ms ms	8 24
		Opening NO	max	ms	4 4
		Oponing NO	min	ms	10
			max	ms	20
		Closing NC			
			min	ms	14
			max	ms	28
		Opening NC			_
			min	ms	7
	in DC		max	ms	18
	III DC	Closing NO			
		2.05	min	ms	54
			max	ms	66
		Opening NO			
			min	ms	14
		01 1 112	max	ms	17
		Closing NC		m.c	24
			min	ms ms	24 30
		Opening NC	max	ms	30
		Oponing NO	min	ms	47
			max	ms	57
UL technical data					
Full-load current (FLA)	for three-phase	AC motor			
			at 480V	Α	7.6
X(1) 1	,		at 600V	Α	0.375
Yielded mechanical pe					
	for single-phas	se ac motor	110/120V	HP	0.75
			230V	HP	0.75
	for three-phase	e AC motor	230 V	1 11	
	.or alloo pilast		200/208V	HP	3
			220/230V	HP	3
			460/480V	HP	5
			575/600V	HP	7.5

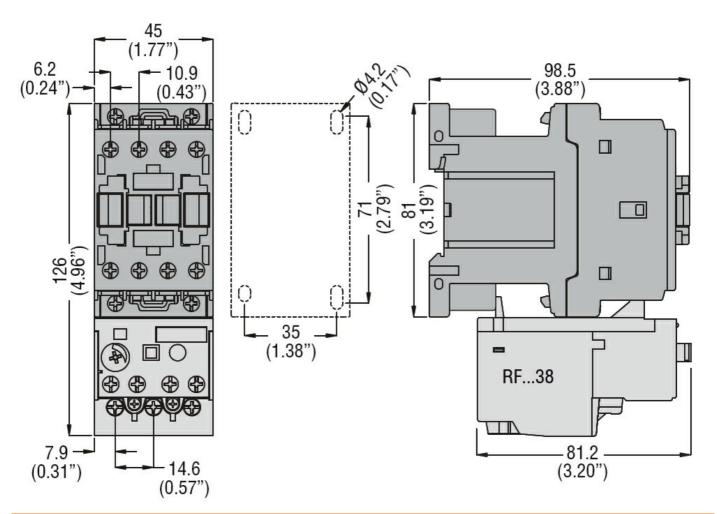




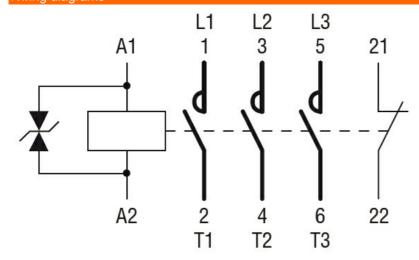
General USE				
General USE	Occidents			
	Contactor	A.O	Δ.	0.5
	A Was a stanta	AC current	A	25
	Auxiliary contacts	A.C		000
		AC voltage	V	600
		AC current	A	10
		DC voltage	V	250
		DC current	A	1
Short-circuit protect				
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
Contact rating of au	xiliary 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 & Prote	ction			
Impact resistance				""
Pollution degree				3
Dimensions [mm (in)]			

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 125VDC, 1NC 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



BF0901D125

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 125VDC, 1NC AUXILIARY CONTACT

CCC			
cULus		_	•
EAC			

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





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	A	6
150 (1 : BO4 **I + /B + 4 **I + 0 ** 1 **	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	.0.43.4		4.0
	≤24V	A	18
	48V	A	18
	75V	A	17
	110V	A	12
IFC may augrent to in DC4 with 1/D < 4 with 2 to in in-	220V	Α	1
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	20A1	۸	20
	≤24V	A	20
	48V	A	20
	75V	A	20
	110V	Α	15



BF0901D220

	220V	Α	10
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	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			
The max surrounds in Boo Boo man give Tome man 2 person in comes	≤24V	Α	13
	48V	A	11
	75V	A	10
	110V	A	7
	220V	A	2
IEC many assert to in DC2 DC5 with L/D < 45 man with 2 males in agrica	220 V	A	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	20AV	٨	4 E
	≤24V	A	15
	48V	A	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			
<u> </u>	440V	Α	72
	500V	Α	72
	690V	Α	71
Resistance per pole (average value)	300.	mΩ	2.5
Power dissipation per pole (average value)		.1134	
1 ones dissipation per pero (average value)	Ith	W	1.6
	AC3	W	0.2
Tightening torque for terminals	AUS	v v	U.Z
rightening torque for terminals	min	Nim	1.5
	min	Nm Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
	max	Ibin	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	Ibin	0.8



NA	-the form of the second to	max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	ANA/O/I/C-m-!!			
	AWG/Kcmil	may		10
	Florible w/e lug conductor coetien	max		10
	Flexible w/o lug conductor section	min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section	max	111111	
	Tiexible 5/W lag conductor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section	max		•
	r ionibio mar modiatod opado rag corridador cocacir	min	mm²	1
		max	mm²	4
				IP20 when
Power terminal prote	ction according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail
				35mm
Weight			g	500
Conductor section				
	AWG/kcmil conductor section			
		max		10
Auxiliary contact char	racteristics		•	1.0
Thermal current Ith			А	10
IEC/EN 60947-5-1 de				A600 - P600
Operating current AC	715	0001		•
		230V	A	3
		400V	A	1.9
		E001/		
O	N40	500V	A	1.4
Operating current DC	212			
•		500V 110V	A	5.7
		110V	А	5.7
		110V 24V	A A	5.7
		110V 24V 48V	A A A	5.7 5.7 2.9
•		110V 24V 48V 60V	A A A	5.7 5.7 2.9 2.3
		110V 24V 48V 60V 110V	A A A A	5.7 5.7 2.9 2.3 1.25
		110V 24V 48V 60V 110V 125V	A A A A A	5.7 5.7 2.9 2.3 1.25 1.1
		110V 24V 48V 60V 110V 125V 220V	A A A A A	5.7 5.7 2.9 2.3 1.25 1.1 0.55
Operating current DC		110V 24V 48V 60V 110V 125V	A A A A A	5.7 5.7 2.9 2.3 1.25 1.1
Operating current DC		110V 24V 48V 60V 110V 125V 220V	A A A A A A	5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DC Operations Mechanical life		110V 24V 48V 60V 110V 125V 220V	A A A A A A Cycles	5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DC Operations Mechanical life Electrical life		110V 24V 48V 60V 110V 125V 220V	A A A A A A	5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DC Operations Mechanical life Electrical life Safety related data	213	110V 24V 48V 60V 110V 125V 220V	A A A A A A Cycles	5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DC Operations Mechanical life Electrical life Safety related data		110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A Cycles	5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000
Operating current DC Operations Mechanical life Electrical life Safety related data	10d according to EN/ISO 13489-1	110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A Cycles cycles	5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000
Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B	10d according to EN/ISO 13489-1	110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A Cycles	5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000
	10d according to EN/ISO 13489-1	110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A Cycles cycles	5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000



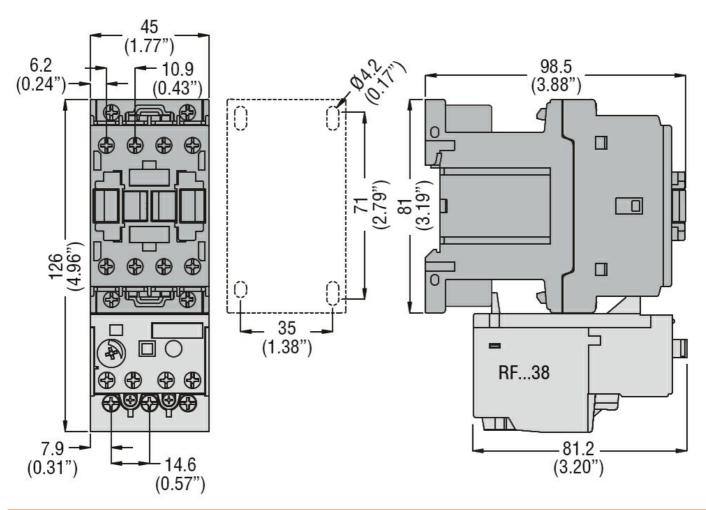
DC rated control voltage	je			V	220
DC operating voltage					
	pick-up		min	0/ L lo	70
			min max	%Us %Us	70 125
	drop-out		IIIdx	/003	120
	arop out		min	%Us	10
			max	%Us	40
Average coil consump	tion ≤20°C				
			in-rush	W	5.4
			holding	W	5.4
Max cycles frequency				avala a /b	2000
Mechanical operation Operating times				cycles/h	3600
Average time for Us co	ontrol				
Average time for 03 cc	in AC				
		Closing NO			
		5 -	min	ms	8
			max	ms	24
		Opening NO			
			min	ms	10
		Ola aira a NO	max	ms	20
		Closing NC	min	ms	14
			max	ms	28
		Opening NC	max	1110	20
		. 0	min	ms	7
			max	ms	18
	in DC				
		Closing NO			- 4
			min	ms	54
		Opening NO	max	ms	66
		Opening NO	min	ms	14
			max	ms	17
		Closing NC			
			min	ms	24
		_	max	ms	30
		Opening NC			4.7
			min	ms ms	47 57
UL technical data			max	ms	57
Full-load current (FLA)	for three-phase	AC motor			
	is. in co pridoo		at 480V	Α	7.6
			at 600V	Α	0.375
Yielded mechanical pe	rformance				
	for single-phase	e AC motor			
			110/120V	HP	0.75
	<u> </u>		230V	HP	2
	for three-phase	e AC motor	200/2007	UD	2
			200/208V 220/230V	HP HP	3
			460/480V	HP	5 5
			575/600V	HP	7.5



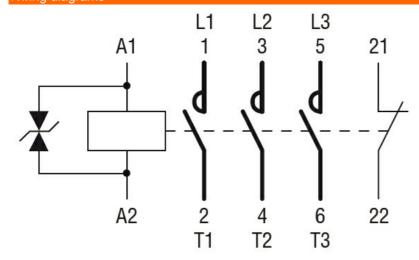


General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
		AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protect	ction fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
Contact rating of au	uxiliary contacts according to UL			A600 - P600
Ambient conditions	3			
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Prote	ection			
Impact resistance				""
Pollution degree				3
Dimensions [mm (i	n)]			





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



BF0901D220

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 220VDC, 1NC AUXILIARY CONTACT

CCC			
cULus			
EAC			

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching