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



Product type designation	Product designation			Power contactor
Number of poles         Nr. 3           Rated insulation voltage Ui IEC/EN         V 690           Rated insulation voltage Uimp         kV 6           Operational frequency         min Hz 25           max Hz 400         EC Conventional free air thermal current Ith         A 25           Operational current Ie         AC-1 (≤40°C) A 20         AC-1 (≤55°C) A 20           AC-1 (≤55°C) A 20         AC-1 (≤70°C) A 18         AC-3 (≤400°V S5°C) A 9           AC-3 (≤400°V S5°C) A 2-4 (4000°V A 4.9         AC-3 (≤400°V KW 4.2           AC-4 (4000°V KW 4.2         AC-4 (400°V KW 4.5           AC-5 (≤40°C) A 500°V KW 5.5         AC-7 (≤40°C)           AC-8 (500°V KW 5.5         AC-9 (500°V KW 5.5           AC-9 (400°V KW 4.5         AC-1 (50°C)           AC-1 (50°C) KW 5.5         AC-1 (50°C)           AC-2 (400°V KW 5.5         AC-2 (400°V KW 5.5           AC-2 (400°V KW 5.5         AC-2 (400°V KW 5.5           AC-2 (400°V KW 5.5         AC-2 (400°V KW 5.5           AC-2 (400°V KW 6.5         AC-2 (400°V KW 5.5           AC-2 (400°V KW 7.5         AC-2 (400°V KW 7.5           Rated	Product type designation			BF09
Rated insulation voltage Uil EC/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         18           AC-3 (≤440V ≤5°C)         A         4         49         A         49           Rated operational power AC-3 (T≤55°C)         230V         kW         2.2         400V         kW         4.2           440V         kW         4.2         415V         kW         4.2         440V         kW         4.2           440V         kW         4.2         440V         kW         4.5         440V         kW         5.5         690V         kW         7.5         690V         kW         7.5         690V         kW         7.5         690V         kW         7.5         A         10         480V         A         11         480V         A         15         480V				
Rated impulse withstand voltage Uimp				
Operational frequency         min max Hz May Hz Mount         Hz Mount         400           IEC Conventional free air thermal current lith         A 25           Operational current le           AC-1 (\$40°C)				
EC Conventional free air thermal current lith			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 (≤770°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       4.2         440V       kW       4.5         440V       kW       4.5         440V       kW       4.5         40V       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       2.1         690V       kW       2.7         IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series         ≤24V       A       18         48V       A       18         48V       A       18         48V       A       18         75V       A       1         100       A       1		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)  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 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 75V A 12 110V A 12 220V A 1  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			Α	25
AC-1 (S55°C)   A   20   AC-1 (S70°C)   A   18   AC-3 (≤440V ≤55°C)   A   9   AC-4 (400V)   A   4.9	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 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 1110V 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	20
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 4.5 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 12 220V A 1         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         ≤24V A 20 48V A 20 48V A 20 75V A 20			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{\text{\$\circ}}{\text{48V}} \times \frac{\text{\$\circ}}{\text{\$\circ}} \times \frac{\text{\$\circ}}{\tex			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   7.5   690V   kW   16   500V   kW   21   690V   kW   27		AC-4 (400V)	Α	4.9
400V   kW   4.2   415V   kW   4.5   440V   kW   4.8   440V   kW   5.5   690V   kW   5.5   690V   kW   7.5	Rated operational power AC-3 (T≤55°C)			
		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			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 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			kW	5.5
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	9	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   S24V   A   15				
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			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				6
		220V	Α	_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
			Α	
EC max current le in DC1 with L/R $\leq$ 1ms with 3 poles in series   $\leq$ 24V A 20 48V A 20 75V A 20				
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		220V	Α	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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	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	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	0 ((=0)	_	
	gG (IEC)	A	25
Malian and (DMO all a)	aM (IEC)	A	10
Making capacity (RMS value)		Α	90
Breaking capacity at voltage	4.401.4	^	70
	440V	A	72 72
	500V	A	72 71
Desigtance normale (everges value)	690V	A	71
Resistance per pole (average value)		mΩ	2.5
Power dissipation per pole (average value)	1414	10/	1.6
	Ith AC-3	W	1.6
Tightoning targue for terminals	AU-3	VV	0.2
Tightening torque for terminals	min	Nm	1.5
	min	Nm	1.8
	max min	Ibin	1.8
	max	lbin	1.5
Tightening torque for coil terminal	IIIAX	ווטו	1.0
nghiening torque for contentinal	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8



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

**ENERGY AND AUTOMATION** 

		max	lbin	0.74
	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			
	<del></del>	max		10
	Flexible w/o lug conductor section			4
		min	mm²	1
	Clavible also be apply store and the store	max	mm²	6
	Flexible c/w lug conductor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section	IIIax	111111	4
	r lexible 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	C15			
		230V	Α	3
		400V	Α	1.9
		500V	Α	1.4
Operating current DO	C12			
		4 4 6 3 4	Α	5.7
		110V		
Operating current DO	C13			
Operating current D0	C13	24V	Α	5.7
Operating current D0	C13	24V 48V	A A	5.7 2.9
Operating current D0	C13	24V 48V 60V	A A A	5.7 2.9 2.3
Operating current D0	C13	24V 48V 60V 110V	A A A	5.7 2.9 2.3 1.25
Operating current D0	C13	24V 48V 60V 110V 125V	A A A A	5.7 2.9 2.3 1.25 1.1
Operating current D0	C13	24V 48V 60V 110V 125V 220V	A A A A	5.7 2.9 2.3 1.25 1.1 0.55
	C13	24V 48V 60V 110V 125V	A A A A	5.7 2.9 2.3 1.25 1.1
Operations	C13	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
Operations Mechanical life	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
Operations Mechanical life Electrical life	C13	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 Safety related data Performance level B		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
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 Cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000
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 20000000
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 Cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000
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 cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000

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

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DC rated control voltage	je			V	60
DC operating voltage					
	pick-up				
			min	%Us	70
	1		max	%Us	125
	drop-out			%Us	10
			min max	%Us	10 40
Average coil consump	tion <20°C		IIIax	/003	40
Average con consump	11011 =20 0		in-rush	W	5.4
			holding	W	5.4
Max cycles frequency			Helding	• • • • • • • • • • • • • • • • • • • •	0.1
Mechanical operation				cycles/h	3600
Operating times				<i>- - - - - - - - - -</i>	
Average time for Us co	ontrol				
· ·	in AC				
		Closing NO			
		-	min	ms	8
			max	ms	24
		Opening NO			
			min	ms	10
			max	ms	20
		Closing NC			
			min	ms	14
		0 : NO	max	ms	28
		Opening NC			7
			min	ms ms	7 18
	in DC		max	ms	10
	III DC	Closing NO			
		Closing NO	min	ms	54
			max	ms	66
		Opening NO			
		1 0	min	ms	14
			max	ms	17
		Closing NC			
			min	ms	24
			max	ms	30
		Opening NC			
			min	ms	47
I II to also be to be			max	ms	57
UL technical data	for three sizes : AO	40.0			
rull-load current (FLA)	for three-phase AC mo	OLOT	-4 4001/	٨	7.6
			at 480V at 600V	A A	7.6 0.375
Yielded mechanical pe	rformance		at 000V	^	0.010
пешей теспатісаі ре	for single-phase AC r	notor			
	ioi siligie-pilase ACT	110101	110/120V	HP	0.75
			230V	HP	2
	for three-phase AC m	otor	200 V		
	2 20 p 7. 0 m		200/208V	HP	3
			220/230V	HP	3
			460/480V	HP	5
			575/600V	HP	7.5

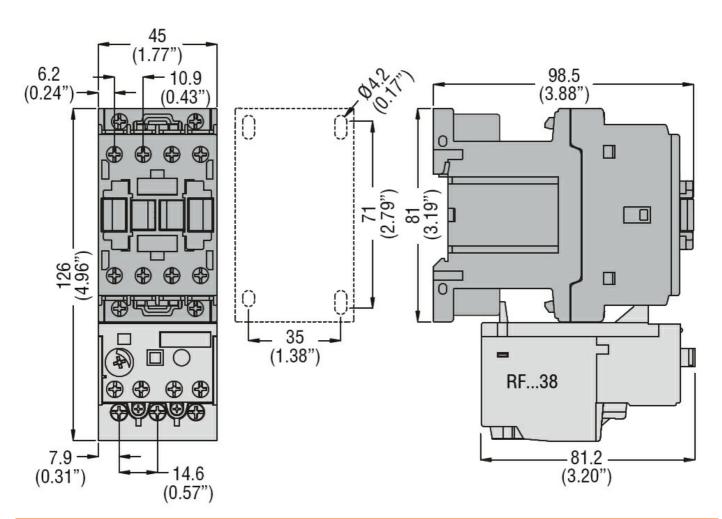


# electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 60VDC, 1NC AUXILIARY CONTACT

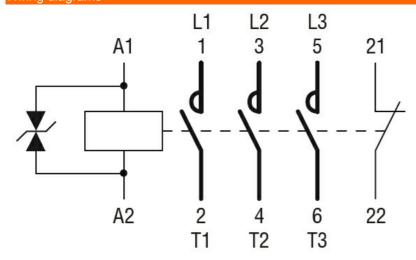
**ENERGY AND AUTOMATION** 

General USE				
General GGL	Contactor			
	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 protecti	on fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
	ciliary 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 & Protect	tion			
Impact resistance				1111
Pollution degree				3
Dimensions				

**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