



Nr. 3 Rated instructions Nr. 3 Rated insulation voltage Ui IEC/EN V 690 Rated insulation voltage Ui IEC/EN V 690 Rated insulation voltage Uimp K V 6 Rated insulation voltage Uimp Rated insulation voltage Uimp Rated insulation voltage Uimp Rated insulation voltage Uimp Rated impulse withstand voltage Uimp Rated impulse withstand voltage Uimp Rated impulse withstand voltage Uimp Rated Impulse William Rated Voltage Impulse V	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 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 400V kW 4.2 440V kW 4.2 440V kW 4.2 440V kW 4.2 440V kW 4.5 440V kW 4.5 440V kW 5.5 690V kW 7.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 1.6 500V kW 2.1 1.5 48V A 1.5 48V A 1.5 48V A				
Rated impulse withstand voltage Uimp	Number of poles		Nr.	3
Rated impulse withstand voltage Uimp			V	690
Department Frequency Similar Hz 25 25 25 25 25 25 25 2			kV	6
EC Conventional free air thermal current Ith	Operational frequency			
EC Conventional free air thermal current lth		min	Hz	25
Operational current le AC-1 (≤45°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 400V kW 9.5 400V kW 9.5 400V 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 18 48V A 18 48V A 18 48V A 12 110V A 12 220V 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 2.2 410V kW 4.8 500V kW 5.5 690V kW 2.5 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 75V A 17 110V A 6 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	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 21 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 7 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 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 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 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 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 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 18 48V 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 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 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		AC-3 (≤440V ≤55°C)	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		AC-4 (400V)	Α	4.9
A00V KW 4.2 415V KW 4.5 446V KW 4.8 4.5 446V KW 5.5 690V KW 5.5 690V KW 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 27 230V 230V 24 24 24 24 24 24 24 2		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		500V	kW	21
		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 -		≤24V	Α	15
110V A 6 220V A -		48V	Α	13
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
EC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V				6
		220V	Α	
	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 $ \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	
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	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	2201		
TEO MAX CUITETILIE III DOG-DOG WILLI LIN > 101115 WILLI 3 POLES III SELIES	20AV	۸	15
	≤24V 48V	A	15 15
		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	
Tomas dissipation per pero (average value)	Ith	W	1.6
	AC-3	W	0.2
Tightening torque for terminals	70-3	v v	0.2
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	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	A1440/44 11			
	AWG/Kcmil			4.0
	Clavible w/s has senductor costion	max		10
	Flexible w/o lug conductor section	min	mm²	1
		min	mm² mm²	1 6
	Flexible c/w lug conductor section	max	111111	· ·
	r lexible 6/w rug conductor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section			•
	r loxiloto mar modilatos opaso lag contactor cocacin	min	mm²	1
		max	mm²	4
	(''			IP20 when
Power terminal protect	tion according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail
				35mm
Weight			g	360
Conductor section				
	AWG/kcmil conductor section			
A 112		max		10
Auxiliary contact chara	acteristics			
The arms of account out lith			٨	10
Thermal current Ith	oignation		Α	10
IEC/EN 60947-5-1 de	•		A	10 A600 - P600
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	•	2201/		A600 - P600
IEC/EN 60947-5-1 de	•	230V	A	A600 - P600 3
IEC/EN 60947-5-1 de	•	400V	A A	A600 - P600 3 1.9
IEC/EN 60947-5-1 de Operating current AC	15		A	A600 - P600 3
IEC/EN 60947-5-1 de Operating current AC	15	400V 500V	A A A	3 1.9 1.4
IEC/EN 60947-5-1 de Operating current AC Operating current DC	12	400V	A A	A600 - P600 3 1.9
IEC/EN 60947-5-1 de Operating current AC Operating current DC	12	400V 500V 110V	A A A	3 1.9 1.4 5.7
IEC/EN 60947-5-1 de Operating current AC Operating current DC	12	400V 500V 110V 24V	A A A	3 1.9 1.4 5.7
IEC/EN 60947-5-1 de Operating current AC Operating current DC	12	400V 500V 110V	A A A	3 1.9 1.4 5.7
IEC/EN 60947-5-1 de Operating current AC Operating current DC	12	400V 500V 110V 24V 48V	A A A A	A600 - P600 3 1.9 1.4 5.7 5.7 2.9
IEC/EN 60947-5-1 de 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
IEC/EN 60947-5-1 de	12	400V 500V 110V 24V 48V 60V 110V	A A A A A	A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25
Operating current ACCCOPERATION	12	400V 500V 110V 24V 48V 60V 110V 125V	A A A A A A	A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1
Operating current DC	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DC Mechanical life	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DC Operations Mechanical life Electrical life	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DC Operating current DC 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 Cycles	A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DC Operating current DC 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	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
Operating current DC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data	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	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
Operating current DC 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	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
Operating current DC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi	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	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 yes
Operating current DC 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	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



	0/60Hz			V	48
AC operating voltage					
	of 50/60Hz coil powered	at 50Hz			
	k	oick-up			
			min	%Us	80
		1	max	%Us	110
	(drop-out		0/116	20
			min	%Us %Us	20 55
	of 50/60Hz coil powered	ot 60∐-	max	7005	55
	•	oick-up			
	1	olok up	min	%Us	85
			max	%Us	110
	(drop-out		,,,,,	
			min	%Us	20
			max	%Us	55
AC average coil cons	umption at 20°C				
Č	of 50/60Hz coil powered	at 50Hz			
	•		in-rush	VA	75
			holding	VA	9
	of 50/60Hz coil powered	at 60Hz			
			in-rush	VA	70
			holding	VA	6.5
	of 60Hz coil powered at 6	60Hz			
			in-rush	VA	75
			holding	VA	9
Dissipation at holding				W	2.5
Max cycles frequency				1 /	0000
Mechanical operation				cycles/h	3600
Operating times Average time for Us c	ontrol				
Average lime for OS C	JIIIIOI				
	in AC				
	in AC	Closing NO			
		Closing NO	min	ms	8
		Closing NO	min max	ms ms	8 24
	(-	min max	ms ms	8 24
	(Closing NO Opening NO			
	(-	max	ms	24
	(-	max min	ms ms	10
	(Opening NO	max min	ms ms	10
		Opening NO Closing NC	max min max	ms ms ms	24 10 20
		Opening NO	max min max min	ms ms ms	24 10 20 14 28
		Opening NO Closing NC	max min max min max min	ms ms ms ms ms	24 10 20 14 28 7
		Opening NO Closing NC	max min max min max	ms ms ms ms	24 10 20 14 28
		Opening NO Closing NC Opening NC	max min max min max min	ms ms ms ms ms	24 10 20 14 28 7
JL technical data Full-load current (FLA		Opening NO Closing NC Opening NC	max min max min max min max	ms ms ms ms ms	24 10 20 14 28 7 18
		Opening NO Closing NC Opening NC	max min max min max min max at 480V	ms ms ms ms ms ms	24 10 20 14 28 7 18
Full-load current (FLA) for three-phase AC motor	Opening NO Closing NC Opening NC	max min max min max min max	ms ms ms ms ms	24 10 20 14 28 7 18
Full-load current (FLA) for three-phase AC motor	Opening NO Closing NC Opening NC	max min max min max min max at 480V	ms ms ms ms ms ms	24 10 20 14 28 7 18
Full-load current (FLA) for three-phase AC motor	Opening NO Closing NC Opening NC	max min max min max min max at 480V at 600V	ms ms ms ms ms ms	24 10 20 14 28 7 18 7.6 0.375
Full-load current (FLA) for three-phase AC motor	Opening NO Closing NC Opening NC	max min max min max min max at 480V at 600V	ms ms ms ms ms ms	24 10 20 14 28 7 18 7.6 0.375
) for three-phase AC motor erformance for single-phase AC motor	Opening NO Closing NC Opening NC or	max min max min max min max at 480V at 600V	ms ms ms ms ms ms	24 10 20 14 28 7 18 7.6 0.375
Full-load current (FLA) for three-phase AC motor	Opening NO Closing NC Opening NC or	max min max min max min max at 480V at 600V	ms ms ms ms ms ms	24 10 20 14 28 7 18 7.6 0.375

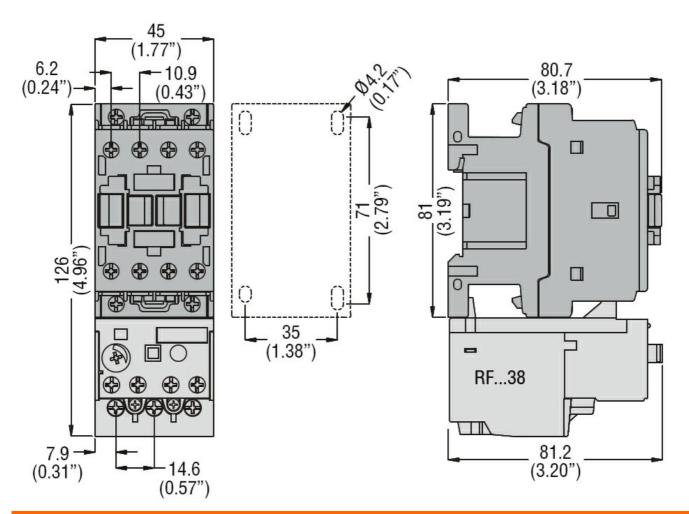




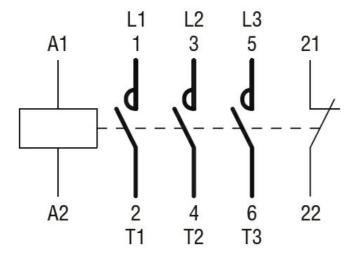
		220/230V	HP	3
		460/480V	HP	5
		575/600V	HP	7.5
General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
	•	AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	A	1
Short-circuit protect	tion fuse, 600V			
Chart and an protoco	High fault			
	i ligit iddi.	Short circuit current	kA	100
		Fuse rating	A	30
		Fuse class	, ,	J
	Standard fault	1 400 01400		
	Claridard radit	Short circuit current	kA	5
		Fuse rating	A	60
Contact rating of au	xiliary contacts according to UL	r use raining		A600 - P600
Ambient conditions				A000 - P000
Temperature				
remperature				
	Operating temperature		°C	5 0
		min	°C	-50 -70
	<u> </u>	max	٠.	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Prote	ction			
Pollution degree				3
Dimensions				

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 50/60HZ, 48VAC, 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



BF0901A048

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 50/60HZ, 48VAC, 1NC AUXILIARY CONTACT

CCC	
cULus	
EAC	

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching