



Product designation Product type designation			Power contactor BF09
Contact characteristics			DI 00
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
• • •	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	25
Operational current le			
	AC-1 (≤40°C)	Α	25
	AC-1 (≤55°C)	Α	20
	AC-1 (≤70°C)	Α	18
	AC-3 (≤440V ≤55°C)	Α	9
	AC-4 (400V)	Α	4.9
Rated operational power AC-3 (T≤55°C)			
	230V	kW	2.2
	400V	kW	4.2
	415V	kW	4.5
	440V	kW	4.8
	500V	kW	5.5
	690V	kW	7.5
Rated operational power AC-1 (T≤40°C)			
	230V	kW	9.5
	400V	kW	16
	500V	kW	21
	690V	kW	27
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	Α	15
	48V	Α	13
	75V	Α	12
	110V	Α	6
	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	Α	18
	48V	Α	18
	75V	Α	17
	110V	Α	12
	220V	Α	1
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
	≤24V	Α	20
	48V	Α	20
	75V	Α	20
	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	
1 ones dissipation per pero (average value)	Ith	W	1.6
	AC-3	W	0.2
Tightening torque for terminals	70-3	v v	U. <u>L</u>
rightening torque for terminals	min	Nim	1.5
	min	Nm Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
This is the second of the seco	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	1110/14			
	AWG/Kcmil			4.0
	Clavible w/o live an diretor postion	max		10
	Flexible w/o lug conductor section	min	mama ²	1
		min	mm² mm²	1 6
	Flexible c/w lug conductor section	max	111111	0
	r lexible 6/w lug corluction section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section			•
	r loxible mar inediated opade lag confederer cooler	min	mm²	1
		max	mm²	4
D (('			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	358
Conductor section				
	AWG/kcmil conductor section			
A 10	and the second s	max		10
Auxiliary contact chara Thermal current Ith	acteristics		A	10
	aignation		<u> </u>	10 A600 B600
IEC/EN 60947-5-1 de	•		A	A600 - P600
IEC/EN 60947-5-1 de	•	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	3 1.9 1.4 5.7 5.7
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 Operating current AC Operating current DC	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
IEC/EN 60947-5-1 de Operating current AC Operating current DC	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
IEC/EN 60947-5-1 de 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	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 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 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	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 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



Rated AC voltage at 5	50/60Hz		V	230
AC operating voltage				
, ,	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
		min	%Us	20
	(50/001)	max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up		0/11-	0.5
		min	%Us	85
	drop out	max	%Us	110
	drop-out	min	%Us	20
		max	%Us	55
AC average coil cons	umption at 20°C	Шах	7003	
, to average con cons	of 50/60Hz coil powered at 50Hz			
	51 50/501 12 5511 powered at 501 12	in-rush	VA	75
		holding	VA	9
	of 50/60Hz coil powered at 60Hz	_ _	***	
	0. 00,001.12 00.1 powerou at 001.12	in-rush	VA	70
		holding	VA	6.5
	of 60Hz coil powered at 60Hz	3		
	1 1 1	in-rush	VA	75
		holding	VA	9
Dissipation at holding	≤20°C 50Hz		W	2.5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Mechanical operation Operating times			cycles/h	3600
Mechanical operation	ontrol		cycles/h	3600
Mechanical operation Operating times	ontrol in AC		cycles/h	3600
Mechanical operation Operating times	ontrol			
Mechanical operation Operating times	ontrol in AC	min	ms	8
Mechanical operation Operating times	ontrol in AC Closing I	min max		
Mechanical operation Operating times	ontrol in AC	min max NO	ms ms	8 24
Mechanical operation Operating times	ontrol in AC Closing I	min max NO min	ms ms ms	8 24 10
Mechanical operation Operating times	ontrol in AC Closing I Opening	min max NO min max	ms ms	8 24
Mechanical operation Operating times	ontrol in AC Closing I	min max NO min max	ms ms ms	8 24 10 20
Mechanical operation Operating times	ontrol in AC Closing I Opening	min max NO min max NC	ms ms ms ms	8 24 10 20
Mechanical operation Operating times	ontrol in AC Closing I Opening Closing I	min max NO min max NC min max	ms ms ms	8 24 10 20
Mechanical operation Operating times	ontrol in AC Closing I Opening	min max NO min max NC min max NC	ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times	ontrol in AC Closing I Opening Closing I	min max NO min max NC min max NC min max MC	ms ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times Average time for Us of	ontrol in AC Closing I Opening Closing I	min max NO min max NC min max NC	ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times Average time for Us of	ontrol in AC Closing I Opening Closing I	min max NO min max NC min max NC min max MC	ms ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times Average time for Us of the control of the co	ontrol in AC Closing I Opening Closing I	min max NO min max NC min max NC min max NC min max	ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of the control of the co	ontrol in AC Closing I Opening Closing I	min max NO min max NC min max NC min max MC	ms ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times Average time for Us of the second o	ontrol in AC Closing I Opening Closing I Opening Opening	min max NO min max NC min max NC min max NC at 480V	ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of	ontrol in AC Closing I Opening Closing I Opening of three-phase AC motor erformance	min max NO min max NC min max NC min max NC at 480V	ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of the second o	ontrol in AC Closing I Opening Closing I Opening Opening	min max NO min max NC min max NC min max NC at 480V	ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of the control of the co	ontrol in AC Closing I Opening Closing I Opening of three-phase AC motor erformance	Min max NO min max NC min max NC MC min max NC min max NC at 480V at 600V	ms ms ms ms ms A	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of the control of the co	ontrol in AC Closing I Opening Closing I Opening of three-phase AC motor erformance	Min max NO min max NC min max NC min max NC at 480V at 600V	ms ms ms ms ms A A	8 24 10 20 14 28 7 18 7.6 0.375
Mechanical operation Operating times Average time for Us of the second o	ontrol in AC Closing I Opening Closing I Opening of three-phase AC motor erformance for single-phase AC motor	Min max NO min max NC min max NC min max NC at 480V at 600V	ms ms ms ms ms A A	8 24 10 20 14 28 7 18 7.6 0.375

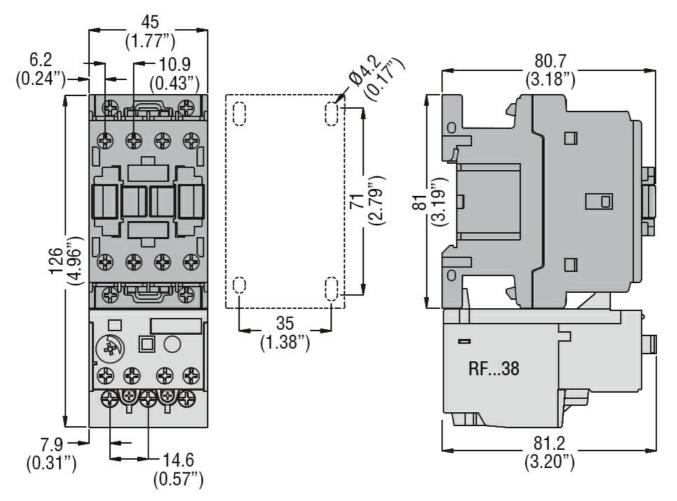




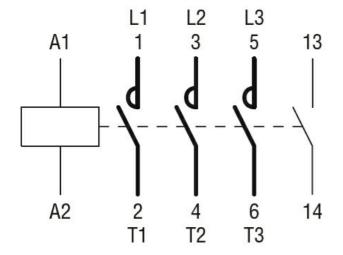
		220/230V	HP	3
		460/480V	HP	5
		575/600V	HP	7.5
General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
	·	AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protect	tion fuse, 600V			
	High fault			
	· ·	Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
Contact rating of auxiliary 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			
Pollution degree				3
Dimensions				

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 50/60HZ, 230VAC, 1NO AUXILIARY CONTACT



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC



BF0910A230

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 50/60HZ, 230VAC, 1NO AUXILIARY CONTACT

cULus			
EAC			

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching