



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)		
	AC-1 (≤40°C)	A	25
	AC-1 (≤55°C)	Α	20
	AC-1 (≤70°C)	A	18
	AC-3 (≤440V ≤55°C)	A	9
Dated an autional nervey AC 2 (T <fe°c)< td=""><td>AC-4 (400V)</td><td>Α</td><td>4.9</td></fe°c)<>	AC-4 (400V)	Α	4.9
Rated operational power AC-3 (T≤55°C)	2201/	LAAA	2.2
	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
Traces operational perior (1–10 o)	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	A	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	22U 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	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	ANA(O/I/C : 1)			
	AWG/Kcmil			4.0
	Florible w/o han one duston costion	max		10
	Flexible w/o lug conductor section		2	4
		min	mm² mm²	1 6
	Flexible c/w lug conductor section	max	ППП	0
	Flexible C/W lug colludctor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section		111111	-
	r lexible with insulated space lug conductor section	min	mm²	1
		max	mm²	4
		max		IP20 when
Power terminal protect	tion according to IEC/EN 60529			properly wired
Mechanical features				,
Operating position				
. 51		normal		Vertical plan
		allowable		±30°
Finds a				Screw / DIN rail
Fixing				35mm
Weight			g	362
Conductor section				
	AWG/kcmil conductor section			
		max		10
		11107		• •
Auxiliary contact chara	acteristics	THAN		
Auxiliary contact chara Thermal current Ith	acteristics	max	A	10
Thermal current Ith		max	A	
Thermal current Ith IEC/EN 60947-5-1 de	signation		Α	10
Thermal current Ith IEC/EN 60947-5-1 de	signation	230V	A	10 A600 - P600
Thermal current Ith IEC/EN 60947-5-1 de	signation	230V 400V		10 A600 - P600 3 1.9
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	signation 15	230V	A	10 A600 - P600
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	signation 15	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	signation 15	230V 400V	A A	10 A600 - P600 3 1.9
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	signation 15	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	signation 15	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	signation 15	230V 400V 500V 110V 24V 48V	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	signation 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
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	signation 15	230V 400V 500V 110V 24V 48V 60V 110V	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	signation 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
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	signation 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
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC	signation 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
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC	signation 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
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	signation 15	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A 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 Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC Operating current DC Electrical life	signation 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
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	signation 15 12 13	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A 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 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	signation 15	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 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	signation 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
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Electrical life Electrical life Safety related data Performance level B1	signation 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
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 B1 Mirror contats accordi	signation 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
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Electrical life Electrical life Safety related data Performance level B1	signation 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



Rated AC voltage at 5	50/60Hz		V	24
AC operating voltage				
, ,	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
		min	%Us	20
		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 %Us	55
AC average coil cons	umntion at 20°C	IIIax	7003	33
A average con cons	of 50/60Hz coil powered at 50Hz			
	51 50/001 12 6011 powered at 501 12	in-rush	VA	75
		holding	VA	9
	of 50/60Hz coil powered at 60Hz		***	
	o. co, co co pec. a. co	in-rush	VA	70
		holding	VA	6.5
	of 60Hz coil powered at 60Hz			
	•	in-rush	VA	75
		holding	VA	9
Dissipation at holding	≤20°C 50Hz		W	2.5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times			cycles/h	3600
	ontrol		cycles/h	3600
Operating times	ontrol in AC		cycles/h	3600
Operating times	ontrol			
Operating times	ontrol in AC	min	ms	8
Operating times	ontrol in AC Closing No	min max		
Operating times	ontrol in AC	min max O	ms ms	8 24
Operating times	ontrol in AC Closing No	min max O min	ms ms	8 24 10
Operating times	ontrol in AC Closing No Opening N	min max O min max	ms ms	8 24
Operating times	ontrol in AC Closing No	min max O min max	ms ms ms	8 24 10 20
Operating times	ontrol in AC Closing No Opening N	min max O min max C min	ms ms ms ms	8 24 10 20
Operating times	ontrol in AC Closing No Opening N	min max O min max C min max	ms ms ms	8 24 10 20
Operating times	ontrol in AC Closing No Opening No Closing No	min max O min max C min max	ms ms ms ms	8 24 10 20
Operating times	ontrol in AC Closing No Opening No Closing No	min max O min max C min max C	ms ms ms ms	8 24 10 20 14 28
Operating times	ontrol in AC Closing No Opening No Closing No	min max O min max C min max C min max C min max C	ms ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us of the control	ontrol in AC Closing No Opening No Closing No	min max O min max C min max C min max C min max C	ms ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us of the control	ontrol in AC Closing No Opening No Closing No Opening No	min max O min max C min max C min max C min max C	ms ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us of the control	ontrol in AC Closing No Opening No Closing No Opening No	min max O min max C min max C min max C min max	ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of the control	ontrol in AC Closing No Opening No Closing No Opening No Open	min max O min max C min max C min max C at 480V	ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of the control	ontrol in AC Closing No Opening No Closing No Opening No	min max O min max C min max C min max C at 480V at 600V	ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of the control	ontrol in AC Closing No Opening No Closing No Opening No Open	min max O min max C min max C min max C at 480V at 600V	ms ms ms ms ms A A	8 24 10 20 14 28 7 18 7.6 0.375
Operating times Average time for Us of the control	ontrol in AC Closing No Opening No Closing No Opening No open	min max O min max C min max C min max C at 480V at 600V	ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of the control	ontrol in AC Closing No Opening No Closing No Opening No Open	min max O min max C min max C min max C min max C 110/120V 230V	ms ms ms ms ms ms hs	8 24 10 20 14 28 7 18 7.6 0.375
Operating times Average time for Us of the control	ontrol in AC Closing No Opening No Closing No Opening No open	min max O min max C min max C min max C at 480V at 600V	ms ms ms ms ms A A	8 24 10 20 14 28 7 18 7.6 0.375

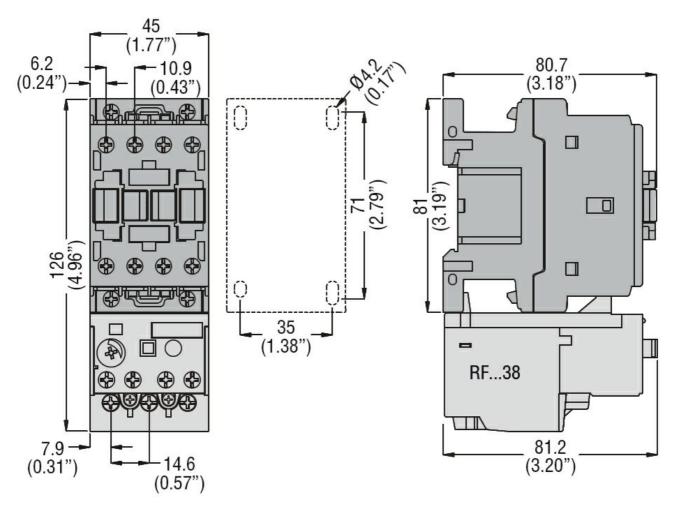




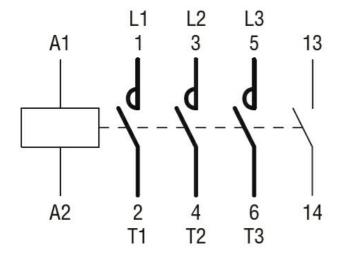
		220/230V	HP	3
		460/480V	HP	5
		575/600V	HP	7.5
General USE		0.0,000		
301101ai 332	Contactor			
	Contactor	AC current	Α	25
	Auviliant agests ata	AC current	<u> </u>	25
	Auxiliary contacts	A Q		000
		AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protect	tion fuse, 600V			
	High fault			
	9	Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault	1 400 01400		
	Standard radit	Short circuit current	kA	5
		Fuse rating	Α	60
	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		max	m	3000
Resistance & Prote	ction		111	3000
	CHOIT			3
Pollution degree				3
Dimensions				

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 50/60HZ, 24VAC, 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



BF0910A024

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 50/60HZ, 24VAC, 1NO AUXILIARY CONTACT

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	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	22U 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	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	ANA(O/I/C : 1)			
	AWG/Kcmil			4.0
	Florible w/o han one duston costion	max		10
	Flexible w/o lug conductor section		2	4
		min	mm² mm²	1 6
	Flexible c/w lug conductor section	max	ППП	0
	Flexible C/W lug colludctor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section		111111	-
	r lexible with insulated space lug conductor section	min	mm²	1
		max	mm²	4
		max		IP20 when
Power terminal protect	tion according to IEC/EN 60529			properly wired
Mechanical features				,
Operating position				
. 51		normal		Vertical plan
		allowable		±30°
Finds a				Screw / DIN rail
Fixing				35mm
Weight			g	362
Conductor section				
	AWG/kcmil conductor section			
		max		10
		11107		• •
Auxiliary contact chara	acteristics	THAN		
Auxiliary contact chara Thermal current Ith	acteristics	max	A	10
Thermal current Ith		max	A	
Thermal current Ith IEC/EN 60947-5-1 de	signation		Α	10
Thermal current Ith IEC/EN 60947-5-1 de	signation	230V	A	10 A600 - P600
Thermal current Ith IEC/EN 60947-5-1 de	signation	230V 400V		10 A600 - P600 3 1.9
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	signation 15	230V	A	10 A600 - P600
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	signation 15	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	signation 15	230V 400V	A A	10 A600 - P600 3 1.9
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	signation 15	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	signation 15	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	signation 15	230V 400V 500V 110V 24V 48V	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	signation 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
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	signation 15	230V 400V 500V 110V 24V 48V 60V 110V	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	signation 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
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	signation 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
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC	signation 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
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC	signation 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
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	signation 15	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A 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 Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC Operating current DC Electrical life	signation 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
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	signation 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
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	signation 15	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 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	signation 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
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Electrical life Electrical life Safety related data Performance level B1	signation 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
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 B1 Mirror contats accordi	signation 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
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Electrical life Electrical life Safety related data Performance level B1	signation 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



Rated AC voltage at 5	50/60Hz		V	48
AC operating voltage	757 551 12		•	10
are aparamaga amaga	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up		0/11	0.5
		min	%Us	85
	dran aut	max	%Us	110
	drop-out	min	0/116	20
		min	%Us %Us	55
AC average coil cons	umption at 20°C	max	/008	
AC average con cons	of 50/60Hz coil powered at 50Hz			
	of 30/00112 con powered at 30/12	in-rush	VA	75
		holding	VA	9
	of 50/60Hz coil powered at 60Hz	noiding	V/ \	
	01 00/001 12 0011 poworod at 001 12	in-rush	VA	70
		holding	VA	6.5
	of 60Hz coil powered at 60Hz			
		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 NC	min max		
Mechanical operation Operating times	ontrol in AC	min max O	ms ms	8 24
Mechanical operation Operating times	ontrol in AC Closing NC	min max O min	ms ms	8 24 10
Mechanical operation Operating times	ontrol in AC Closing NC Opening N	min max O min max	ms ms	8 24
Mechanical operation Operating times	ontrol in AC Closing NC	min max O min max	ms ms ms	8 24 10 20
Mechanical operation Operating times	ontrol in AC Closing NC Opening N	min max O min max C min max C min	ms ms ms ms	8 24 10 20
Mechanical operation Operating times	ontrol in AC Closing NC Opening N	min max O min max C min max C min max	ms ms ms	8 24 10 20
Mechanical operation Operating times	ontrol in AC Closing NC Opening N Closing NC	min max O min max C min max C min max	ms ms ms ms	8 24 10 20
Mechanical operation Operating times	ontrol in AC Closing NC Opening N Closing NC	min max O min max C min max C	ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times	ontrol in AC Closing NC Opening N Closing NC	min max O min max C min max C min max C min max	ms ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times Average time for Us of	ontrol in AC Closing NC Opening N Closing NC	min max O min max C min max C min max C min max	ms ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times Average time for Us of	ontrol in AC Closing NC Opening N Closing NC	min max O min max C min max C min max C 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 NC Opening N Closing NC Opening N Opening N	min max O min max C min max C min max	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 NC Opening N Closing NC Opening N Opening N Opening N	min max O min max C min max C min max C 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 NC Opening N Closing NC Opening N Opening N	min max O min max C min max C min max C at 480V at 600V	ms 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 NC Opening N Closing NC Opening N Opening N Opening N	min max O min max min max C min max C min max C 110/120V	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 NC Opening N Closing NC Opening N Opening N of three-phase AC motor erformance for single-phase AC motor	min max O min max C min max C min max C at 480V at 600V	ms 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 NC Opening N Closing NC Opening N Opening N Opening N	min max O min max C min max C min max C at 480V at 600V 110/120V 230V	ms ms ms ms ms ms hs	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 NC Opening N Closing NC Opening N Opening N of three-phase AC motor erformance for single-phase AC motor	min max O min max min max C min max C min max C 110/120V	ms ms ms ms ms A A	8 24 10 20 14 28 7 18 7.6 0.375

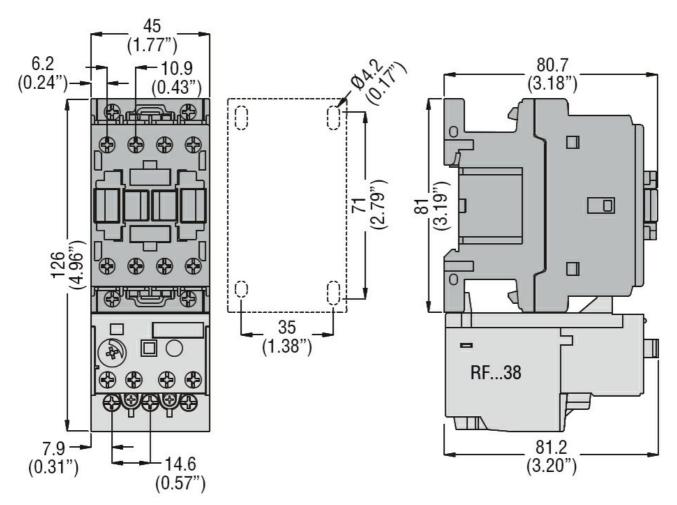




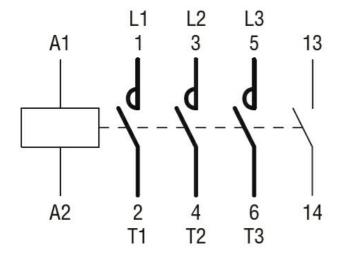
		220/230V	HP	3
		460/480V	HP	5
		575/600V	HP	7.5
General USE				
	Contactor			
	Contactor	AC current	Α	25
	Auxiliary contacts	AO carrent		20
	Auxiliary contacts	AC valtage	17	600
		AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protect	ion fuse, 600V			
	High fault			
	_	Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault	. 400 0.400		
	Staridara radit	Short circuit current	kA	5
			A	60
Ocate at action of con-	Silon, contento consulion to I II	Fuse rating	A	
	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		THEX.	 	3000
Resistance & Protection	ction			
	5.1011			3
Pollution degree				ა
Dimensions				

ENERGY AND AUTOMATION

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



BF0910A048

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 50/60HZ, 48VAC, 1NO AUXILIARY CONTACT

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	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	220 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)			-
	lth	W	1.6
	AC3	W	0.2
Tightening torque for terminals	7,00	• •	V. <u> </u>
ngmoning torque for terminals	min	Nm	1.5
	max	Nm	1.8
	min	Ibin	1.1
Tightoning torque for coil torminal	max	Ibin	1.5
Tightening torque for coil terminal		N I.a.:	0.0
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8





		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	AMAO # 4			
	AWG/Kcmil			4.0
	Flavilla/a has an dastan a stica	max		10
	Flexible w/o lug conductor section			4
		min	mm² mm²	1 6
	Flexible c/w lug conductor section	max	ШШ	O
	Flexible C/W lug colludctor Section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section	IIIax	111111	
	Trexible with insulated space by conductor section	min	mm²	1
		max	mm²	4
		max		IP20 when
Power terminal protect	ction according to IEC/EN 60529			properly wired
Mechanical features				, , ,
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing a				Screw / DIN rail
Fixing				35mm
Weight			g	360
Conductor section				
Conductor section	AWG/kcmil conductor section			
Conductor section	AWG/kcmil conductor section	max		10
Conductor section Auxiliary contact chara		max		10
Auxiliary contact char 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	max	A	10 A600 - P600
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de	acteristics esignation	230V	A	10 A600 - P600
Auxiliary contact chara Thermal current Ith IEC/EN 60947-5-1 de	acteristics esignation	230V 400V		10 A600 - P600 3 1.9
Auxiliary contact charanteermal current Ith IEC/EN 60947-5-1 de Operating current AC	esignation 15	230V	A	10 A600 - P600
Auxiliary contact charanteermal 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 chart 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 chart 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 chart Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 15	230V 400V 500V 110V	A A A	10 A600 - P600 3 1.9 1.4 5.7
Auxiliary contact chart Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 15	230V 400V 500V 110V 24V 48V	A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7
Auxiliary contact chart 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	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3
Auxiliary contact chart 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	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25
Auxiliary contact chart 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	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 chart 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	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 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	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 charantermal current Ith 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	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 charanteemal current Ith IEC/EN 60947-5-1 de Operating current ACOPerating current DCOPerating current DCOPerating current DCOPERATION COPERATION COPERATION Mechanical life	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 charanteemal 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	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 charantermal current Ith IEC/EN 60947-5-1 de Operating current DC Operating current DC Operating current DC Operating current DC Operating current DC Second	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 charantermal 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 Safety related data	esignation 15	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 charantermal 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 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 20000000 20000000
Auxiliary contact charantermal 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 Safety related data	esignation 15 12 13 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 2000000
Auxiliary contact charantermal current lth IEC/EN 60947-5-1 de Operating current DC Operating current DC Operating current DC Operating current DC Electrical life Safety related data Performance level B1	esignation 15 12 13 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
Auxiliary contact charantermal 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 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





Rated AC voltage at 5	50/60Hz		V	110
AC operating voltage			<u> </u>	
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out		0/11-	00
		min	%Us %Us	20 55
	of 50/60Hz coil powered at 60Hz	max	7008	55
	pick-up			
	pion up	min	%Us	85
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
AC average coil cons	•			
	of 50/60Hz coil powered at 50Hz			7.5
		in-rush	VA	75
	of FO/COLL- acil represed at COLL-	holding	VA	9
	of 50/60Hz coil powered at 60Hz	in-rush	VA	70
		holding	VA	6.5
	of 60Hz coil powered at 60Hz	110.011.19	• • • • • • • • • • • • • • • • • • • •	0.0
	o. co co poc.ca a. co	in-rush	VA	75
		holding	VA	9
Dissipation at holding	≤20°C 50Hz		W	2.5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times			cycles/h	3600
	ontrol		cycles/h	3600
Operating times	ontrol in AC	0	cycles/h	3600
Operating times	ontrol			
Operating times	ontrol in AC	min	ms	8
Operating times	ontrol in AC Closing N	min max		
Operating times	ontrol in AC	min max	ms	8
Operating times	ontrol in AC Closing N	min max NO	ms ms	8 24
Operating times	ontrol in AC Closing N	min max NO min max	ms ms	8 24 10
Operating times	ontrol in AC Closing N Opening I	min max NO min max	ms ms	8 24 10 20
Operating times	ontrol in AC Closing N Opening I Closing N	min max NO min max C min max	ms ms ms	8 24 10 20
Operating times	ontrol in AC Closing N Opening I	min max NO min max C min max NC	ms ms ms ms	8 24 10 20 14 28
Operating times	ontrol in AC Closing N Opening I Closing N	min max NO min max C min max NC min max	ms ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us of	ontrol in AC Closing N Opening I Closing N	min max NO min max C min max NC	ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us of	ontrol in AC Closing N Opening I Closing N Opening I	min max NO min max C min max NC min max	ms ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us of	ontrol in AC Closing N Opening I Closing N	min max NO min max C min max NC min max	ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of	ontrol in AC Closing N Opening I Closing N Opening I	min max NO min max C min max NC min max NC at 480V	ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of the control	ontrol in AC Closing N Opening I Closing N Opening I	min max NO min max C min max NC min max	ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of	ontrol in AC Closing N Opening I Closing N Opening I	min max NO min max C min max NC min max NC at 480V	ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of the control	ontrol in AC Closing N Opening I Closing N Opening I Opening I	min max NO min max C min max NC min max NC at 480V	ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of the control	ontrol in AC Closing N Opening I Closing N Opening I Opening I	min max NO min max C min max NC min max NC at 480V at 600V	ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of the control	ontrol in AC Closing N Opening I Closing N Opening I Opening I	min max NO min max C min max NC min max NC min max 1480V at 600V 110/120V 230V	ms ms ms ms ms ms hs	8 24 10 20 14 28 7 18 7.6 0.375
Operating times Average time for Us of the control	ontrol in AC Closing N Opening I Closing N Opening I opening I for three-phase AC motor erformance for single-phase AC motor	min max NO min max C min max NC min max AC min max AC min max At 480V at 600V	ms ms ms ms ms A A	8 24 10 20 14 28 7 18 7.6 0.375

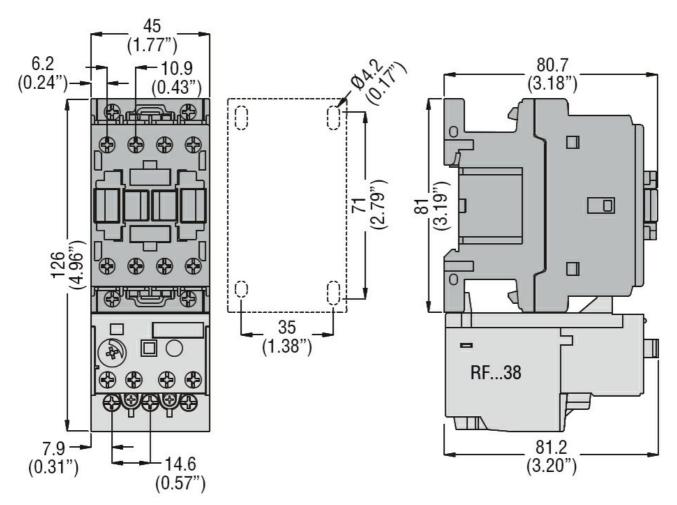




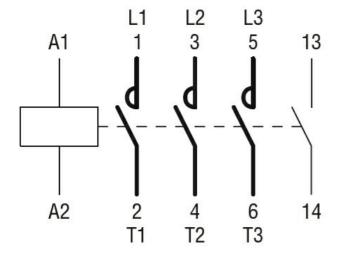
		220/230V	HP	3
		460/480V	HP	5
		575/600V	HP	7.5
General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
	•	AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protec	tion fuse, 600V			
	High fault			
	· ·	Short circuit current	kA	100
		Fuse rating	Α	30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

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 50/60HZ, 110VAC, 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



BF0910A110

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 50/60HZ, 110VAC, 1NO AUXILIARY CONTACT

cULus			
EAC			

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation Product type designation			Power contactor 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	220V	Α	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	-0.43.4		
	≤24V	A	18
	48V	A	18
	75V	A	17
	110V	A	12
IEC may current to in DC1 with 1/D < 1 mg with 2 notes in cories	220V	A	
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	~0.AV	۸	20
	≤24V	A	20
	48V 75V	A	20
	75V 110V	A A	20 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	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	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	ANAO (14			
	AWG/Kcmil			4.0
	Florible w/s live and director and the	max		10
	Flexible w/o lug conductor section			4
		min	mm² mm²	1 6
	Flexible c/w lug conductor section	max	111111	O
	Flexible C/W lug conductor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section		111111	
	Tiexible with insulated spade lag conductor section	min	mm²	1
		max	mm²	4
		max		IP20 when
Power terminal prote	ection according to IEC/EN 60529			properly wired
Mechanical features				, <u></u>
Operating position				
. 51		normal		Vertical plan
		allowable		±30°
Eiving				Screw / DIN rail
Fixing				35mm
Weight			g	358
Conductor section				
	AWG/kcmil conductor section			
		max		10
Auxiliary contact cha	racteristics			
Thermal current Ith			Α	10
IEC/EN 60947-5-1 d	-		Α	10 A600 - P600
IEC/EN 60947-5-1 d	-		A	A600 - P600
IEC/EN 60947-5-1 d	-	230V	A	A600 - P600 3
IEC/EN 60947-5-1 d	-	400V	A A	A600 - P600 3 1.9
IEC/EN 60947-5-1 de Operating current AC	215		A	A600 - P600 3
IEC/EN 60947-5-1 de Operating current AC	215	400V 500V	A A A	3 1.9 1.4
IEC/EN 60947-5-1 de Operating current AC Operating current DC	C15	400V	A A	A600 - P600 3 1.9
IEC/EN 60947-5-1 de Operating current AC Operating current DC	C15	400V 500V 110V	A A A	3 1.9 1.4 5.7
IEC/EN 60947-5-1 decorption of the company of the c	C15	400V 500V 110V 24V	A A A	3 1.9 1.4 5.7
IEC/EN 60947-5-1 decorption of the company of the c	C15	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	C15	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	C15	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
Thermal current Ith IEC/EN 60947-5-1 decorating current AC Operating current DC Operating current DC	C15	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	C15	400V 500V 110V 24V 48V 60V 110V 125V 220V	A 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 DO Operating current DO Operating current DO	C15	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 DO	C15	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 Operations Mechanical life	C15	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 DO Operations Mechanical life Electrical life	C15	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 Operations Mechanical life Electrical life Safety related data	C12 C13	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	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 Safety related data	C15	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 Operations Mechanical life Electrical life Safety related data	212 213 213 10d according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A 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 Operations Mechanical life Electrical life Safety related data Performance level B	212 213 10d according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A 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 DO Operations Mechanical life Electrical life Safety related data Performance level B	212 213 213 10d according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A 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



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	0/116	20
		min max	%Us %Us	20 55
	of 50/60Hz coil powered at 60Hz	IIIax	/003	33
	pick-up			
	P. 200	min	%Us	85
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
AC average coil cons				
	of 50/60Hz coil powered at 50Hz		3.78	75
		in-rush	VA	75
	of 50/60Hz coil powered at 60Hz	holding	VA	9
	oi 50/60Hz coii powered at 60Hz	in-rush	VA	70
		holding	VA	6.5
	of 60Hz coil powered at 60Hz			
	5. 55.1 <u>2</u> 55.1 p 5.1.5.1 d 5.1.2	in-rush	VA	75
		holding	VA	9
Dissipation at holding	≤20°C 50Hz		W	2.5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times			cycles/h	3600
	ontrol		cycles/h	3600
Operating times	ontrol in AC		cycles/h	3600
Operating times	ontrol	min		
Operating times	ontrol in AC	min max	ms	8
Operating times	ontrol in AC	max		
Operating times	ontrol in AC Closing NO	max	ms	8
Operating times	ontrol in AC Closing NO Opening NO	max)	ms ms	8 24
Operating times	ontrol in AC Closing NO	max) min max	ms ms ms	8 24 10 20
Operating times	ontrol in AC Closing NO Opening NO	max min max min	ms ms ms ms	8 24 10 20
Operating times	ontrol in AC Closing NO Opening NC Closing NC	max min max min max	ms ms ms	8 24 10 20
Operating times	ontrol in AC Closing NO Opening NO	max min max min max	ms ms ms ms	8 24 10 20 14 28
Operating times	ontrol in AC Closing NO Opening NC Closing NC	max min max min max min max min	ms ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us of	ontrol in AC Closing NO Opening NC Closing NC	max min max min max	ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us of	ontrol in AC Closing NO Opening NC Closing NC Opening NC	max min max min max min max min	ms ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us of	ontrol in AC Closing NO Opening NC Closing NC	max min max min max min max max min max	ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of	ontrol in AC Closing NO Opening NC Closing NC Opening NC	max min max min max min max min	ms ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us of	ontrol in AC Closing NO Opening NC Closing NC Opening NC Opening NC	max min max min max min max min max at 480V	ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of the control	ontrol in AC Closing NO Opening NC Closing NC Opening NC Opening NC	max min max min max min max min max at 480V	ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of the control	ontrol in AC Closing NO Opening NC Closing NC Opening NC Opening NC	min max min max min max min max min max at 480V at 600V	ms ms ms ms ms A A	8 24 10 20 14 28 7 18 7.6 0.375
Operating times Average time for Us of the control	ontrol in AC Closing NO Opening NC Closing NC Opening NC	min max min max min max min max at 480V at 600V	ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us of the control	ontrol in AC Closing NO Opening NC Closing NC Opening NC Opening NC	max min max min max min max min max at 480V at 600V 110/120V 230V	ms ms ms ms ms ms hs	8 24 10 20 14 28 7 18 7.6 0.375
Operating times Average time for Us of the control	ontrol in AC Closing NO Opening NC Closing NC Opening NC	min max min max min max min max min max at 480V at 600V	ms ms ms ms ms A A	8 24 10 20 14 28 7 18 7.6 0.375

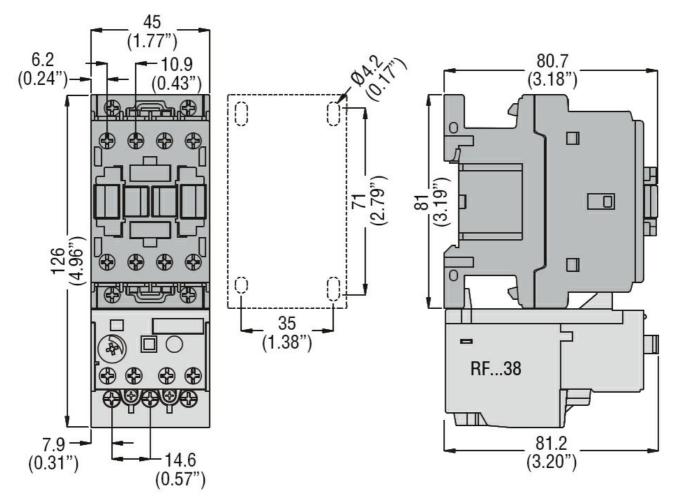




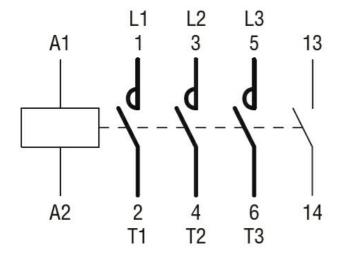
		220/230V	HP	3
		460/480V	HP	5
		575/600V	HP	7.5
General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
	•	AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protec	tion fuse, 600V			
	High fault			
	· ·	Short circuit current	kA	100
		Fuse rating	Α	30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







Product designation			Power contactor
Product type designation			BF09
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	25
Operational current le			
	AC-1 (≤40°C)	Α	25
	AC-1 (≤55°C)	Α	20
	AC-1 (≤70°C)	Α	18
	AC-3 (≤440V ≤55°C)	Α	9
	AC-4 (400V)	Α	4.9
Rated operational power AC-3 (T≤55°C)			
	230V	kW	2.2
	400V	kW	4.2
	415V	kW	4.5
	440V	kW	4.8
	500V	kW	5.5
	690V	kW	7.5
Rated operational power AC-1 (T≤40°C)			
	230V	kW	9.5
	400V	kW	16
	500V	kW	21
	690V	kW	27
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	Α	15
	48V	Α	13
	75V	Α	12
	110V	Α	6
	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	Α	18
	48V	Α	18
	75V	Α	17
	110V	Α	12
	220V	Α	1
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
	≤24V	Α	20
	48V	Α	20
	75V	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	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/T = 13ms with 2 poles in series	≤24V	Α	13	
	48V			
	46 V 75 V	A	11 10	
		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.	Α.	4.5	
	≤24V	Α	15	
	48V	Α	15	
	75V	Α	13	
	110V	Α	11	
	220V	Α	6	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series				
	≤24V	Α	15	
	48V	Α	15	
	75V	Α	15	
	110V	Α	12	
	220V	Α	7	
Short-time allowable current for 10s (IEC/EN60947-1)		Α	150	
Protection fuse				
	gG (IEC)	Α	25	
	aM (IEC)	Α	10	
Making capacity (RMS value)	, ,	Α	90	
Breaking capacity at voltage				
	440V	Α	72	
	500V	A	72	
	690V	Α	71	
Resistance per pole (average value)	330 V	mΩ	2.5	
Power dissipation per pole (average value)		11122	۷.0	
i owei dissipation per pole (average value)	Ith	W	1.6	
	AC3	W	0.2	
Tightening to you of an to you in all	ACS	VV	0.2	
Tightening torque for terminals		Nime	1 E	
	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	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 loxiloto mar inculated opado lag contadeter cocilen	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		A	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	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



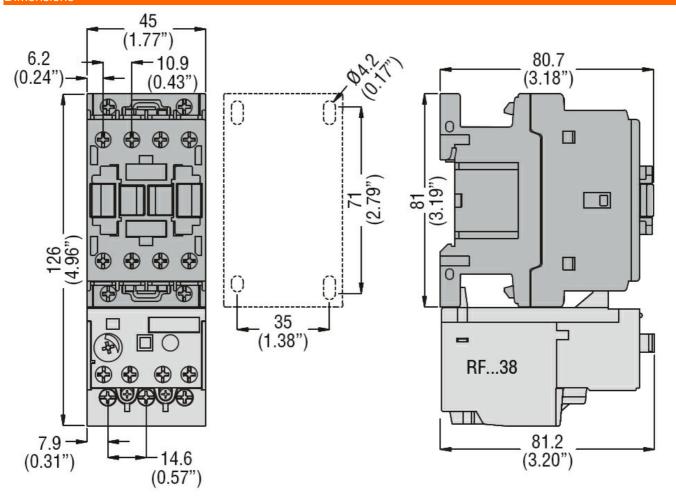


Rated AC voltage at 60Hz		V	230
AC operating voltage			
of 60Hz coil powered at 60Hz			
pick-up		0/11	
	min	%Us	80
dana aut	max	%Us	110
drop-out		0/116	20
	min	%Us %Us	20 55
AC average coil consumption at 20°C	max	/605	55
of 60Hz coil powered at 60Hz			
or our iz con powered at our iz	in-rush	VA	75
	holding	VA	9
Dissipation at holding ≤20°C 50Hz	nolang	W	2.5
Max cycles frequency		• • • • • • • • • • • • • • • • • • • •	2.0
Mechanical operation		cycles/h	3600
Operating times		3, 5.55/11	
Average time for Us control			
in AC			
Closing NO			
•	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
III de la stantina	max	ms	18
UL technical data			
Full-load current (FLA) for three-phase AC motor	ot 400\/	۸	7.0
	at 480V	A	7.6
Wielded machanical performance	at 600V	Α	0.375
Yielded mechanical performance			
for single-phase AC motor	110/120V	HP	0.75
	230V	пе HP	2
for three-phase AC motor	230 V	1 11	<u></u>
ioi tillee-pilase Ao illotoi	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
	DC current		•
Short-circuit protection fuse, 600V	DC current		·



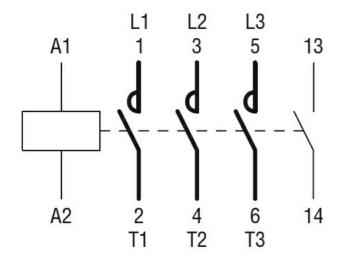


	Short circuit current	kA	100
	Fuse rating	Α	30
	Fuse class		J
Standard fault			·
	Short circuit current	kA	5
	Fuse rating	Α	60
Contact rating of auxiliary contacts according to UL			A600 - P600
Ambient conditions			
Temperature			
Operating temperature			
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions			



Wiring diagrams





Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60335-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching







Product designation Product type designation			Power contactor 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	220V	Α	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	40 AV /		4.0
	≤24V	A	18
	48V	A	18
	75V	A	17
	110V	A	12 1
IEC may current to in DC1 with L/B < 1mg with 2 notes in series	220V	Α	1
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	~2A\/	٨	20
	≤24V 48V	A	20
	48 V 75 V	A A	20 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 somes	≤24V	Α	13
	48V	Α	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			
	440V	Α	72
	500V	A	72
	690V	Α	71
Resistance per pole (average value)	3001	mΩ	2.5
Power dissipation per pole (average value)		11122	2.0
i ower dissipation per pole (average value)	Ith	W	1.6
		W	
Tightoning torque for torminals	AC3	٧٧	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	Ibin	0.8





		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	ANA(0.114			
	AWG/Kcmil			4.0
	Florible w/s live and distance stice	max		10
	Flexible w/o lug conductor section			4
		min	mm² mm²	1 6
	Flexible c/w lug conductor section	max	111111	O
	Flexible C/W lug colludctor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section		111111	
	Tiexible with insulated spade lag 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				
. 01		normal		Vertical plan
		allowable		±30°
Finis				Screw / DIN rail
Fixing				35mm
Weight			g	366
Conductor section				
	AWG/kcmil conductor section			
		max		10
Auxiliary contact char	racteristics			
Thermal current Ith			Α	10
IEC/EN 60947-5-1 de	esignation			A600 - P600
Operating current AC	215			
		230V	Α	3
		400V	Α	1.9
		E001/	Α	1.4
		500V	- ' '	1.4
Operating current DC	212			
		110V	A	5.7
		110V		5.7
		110V 24V	A A	5.7 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
Operating current DC Operating current DC		110V 24V 48V 60V 110V 125V	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	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
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 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 cycles	5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 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 cycles	5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000





	t 50/60Hz		V	400
AC operating voltag				
	of 50/60Hz coil powered at 50Hz			
	pick-up	min	%Us	80
		min max	%Us %Us	110
	drop-out	Παλ	/003	110
	αιορ σαι	min	%Us	20
		max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	, pick-up			
		min	%Us	85
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
C average coil co	nsumption at 20°C			
	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	75
		holding	VA	9
	of 50/60Hz coil powered at 60Hz		3.70	7.0
		in-rush	VA	70
	of COLLE acil represed at COLLE	holding	VA	6.5
	of 60Hz coil powered at 60Hz	in-rush	VA	75
		holding	VA VA	9
Dissipation at holdir	ng <20°C 50Hz	notaling	W	2.5
Max cycles frequen	-		VV	2.0
Mechanical operation			cycles/h	3600
			cycles/h	3600
Operating times	on		cycles/h	3600
Operating times	on		cycles/h	3600
perating times	on s control		cycles/h	3600
Operating times	on s control in AC	min	cycles/h ms	8
perating times	on s control in AC Closing NO	min max		
Operating times	on s control in AC	max	ms	8 24
Operating times	on s control in AC Closing NO	max min	ms ms	8 24 10
Operating times	on s control in AC Closing NO Opening NO	max	ms ms	8 24
Operating times	on s control in AC Closing NO	max min max	ms ms ms	8 24 10 20
Operating times	on s control in AC Closing NO Opening NO	max min max min	ms ms ms ms	8 24 10 20
Operating times	on s control in AC Closing NO Opening NO Closing NC	max min max	ms ms ms	8 24 10 20
Operating times	on s control in AC Closing NO Opening NO	max min max min max	ms ms ms ms	8 24 10 20 14 28
Operating times	on s control in AC Closing NO Opening NO Closing NC	max min max min max min	ms ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us	on s control in AC Closing NO Opening NO Closing NC	max min max min max	ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us JL technical data	s control in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min	ms ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us JL technical data	on s control in AC Closing NO Opening NO Closing NC	max min max min max min	ms ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us JL technical data	s control in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min max	ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Decrating times Average time for Us JL technical data Full-load current (Fl	s control in AC Closing NO Opening NO Closing NC Opening NC Opening NC	max min max min max min max at 480V	ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us JL technical data Full-load current (Fl	s control in AC Closing NO Opening NO Closing NC Opening NC Opening NC	max min max min max min max at 480V	ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Derating times Average time for Us JL technical data Full-load current (Fl	s control in AC Closing NO Opening NO Closing NC Opening NC Opening NC I performance	max min max min max min max at 480V	ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us JL technical data Full-load current (Fl	s control in AC Closing NO Opening NO Closing NC Opening NC Opening NC I performance	min max min max min max at 480V at 600V	ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Derating times Average time for Us JL technical data Full-load current (Fl	s control in AC Closing NO Opening NO Closing NC Opening NC Opening NC I performance	min max min max min max at 480V at 600V	ms ms ms ms ms ms A	8 24 10 20 14 28 7 18 7.6 0.375

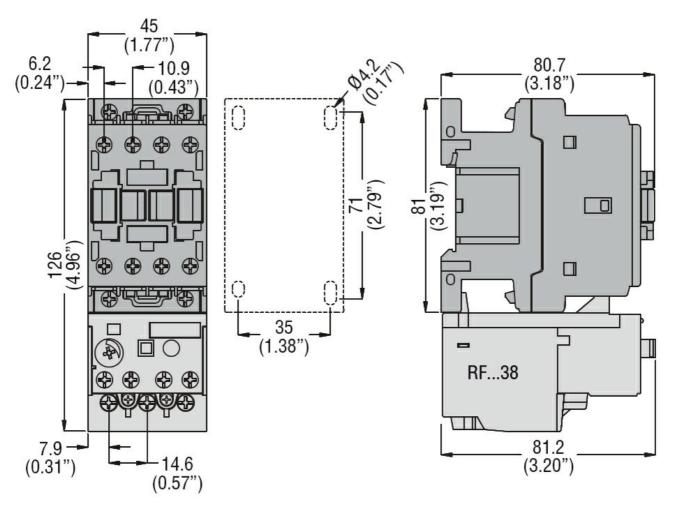




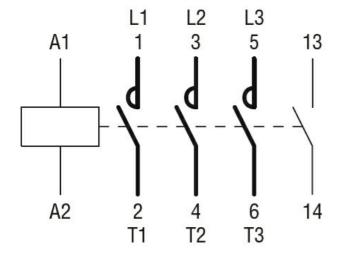
		220/230V	HP	3
		460/480V	HP	5
		575/600V	HP	7.5
General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
	•	AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protect	tion fuse, 600V		<u> </u>	
Chart and an process	High fault			
	- ngiriaan	Short circuit current	kA	100
		Fuse rating	Α	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	i use raing		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, 400VAC, 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



BF0910A400

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 50/60HZ, 400VAC, 1NO AUXILIARY CONTACT

cULus			
EAC			

ETIM classification

ETIM 8.0

BF0910A400

EC000066 -Power contactor, AC switching







Contact characteristics Number of poles Nr. 3 3 Rated insulation voltage Ui IEC/EN V 690 8 Rated insulation voltage Uimp kV 6 6 Operational frequency min Hz 255 4 max Hz 400 Hz 400 1 IEC Conventional free air thermal current lth A 25 25 Operational current le AC-1 (≤40°C) A 25 A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440°C) A 9 AC-3 (≤440°C) A 4.9 A 9 AC-4 (400°C) 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 5.5 690V kW 7.5 5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 40V kW 2.2 40V kW 2.2 40V kW 2.7 5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 40V kW 2.7 5 IEC max current le in D	Product designation Product type designation			Power contactor BF09
Rated insulation voltage U 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 (≤4400 ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 400V kW 4.9 Rated operational power AC-3 (T≤40°C) 230V kW 4.5 440V kW 4.5 440V kW 4.5 440V kW 4.5 440V kW 7.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 7.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 1.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5				
Rated impulse withstand voltage Uimp	Number of poles		Nr.	3
Operational frequency min max bit with the max bi	Rated insulation voltage Ui IEC/EN		V	690
Min	Rated impulse withstand voltage Uimp		kV	6
EC Conventional free air thermal current lth	Operational frequency			
EC Conventional free air thermal current lth		min	Hz	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) 230V kW 2.2 400V kW 4.2 415V kW 4.5 440V 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 16 500V 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 - 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 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 18 48V A 18 48V A 12 20 75V A 20		max	Hz	400
AC-1 (≤40°C)	IEC Conventional free air thermal current Ith		Α	25
AC-1 (≤55°C)	Operational current le			
AC-1 (≤55°C)		AC-1 (≤40°C)	Α	25
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 16 500V kW 27 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 1110V A 12 220V A 1 110V A 12 220V A 1		· · ·	Α	20
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 EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series 524V A 15 48V A 13 75V A 12 110V A 6 220V A - EC max current le in DC1 with L/R ≤ 1ms with 2 poles in series 524V 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 524V 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 524V A 20 48V A 20 75V A 20 48V A 20 75V A 20 48V A 20 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V		,	Α	18
Rated operational power AC-3 (T≤55°C) 230V kW 2.2 440V kW 4.5 445V 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 22 220V A 1 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			Α	9
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 8 7.5 7.5 8 7.5 7.5 8 7 7.5 8 7 7.5 8 7 7 7 7 7 7 7 7 7		AC-4 (400V)	Α	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 kW 4.5 440V kW 4.8 500V kW 5.5 690V kW 7.5		230V	kW	2.2
A440V kW 4.8 500V kW 5.5 690V kW 7.5		400V	kW	4.2
S00V kW 5.5		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		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 17 110V 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		500V	kW	5.5
		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 ≤24V		400V	kW	16
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 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	21
		690V	kW	27
	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
		220V	Α	_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
		≤24V	Α	18
220V A 1		75V	Α	17
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	12
≤24V A 20 48V A 20 75V A 20		220V	Α	1
≤24V A 20 48V A 20 75V A 20	IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
48V A 20 75V A 20		≤24V	Α	20
		48V	Α	
110V A 15		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	A	2	
150	220V	Α	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	<0.417	Δ.	40	
	≤24V	A	13	
	48V 75V	A A	11 10	
	75 V 110 V	A	10 7	
	220V	A	2	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	22U V			
120 max current to in 200-200 with 2/1(2 forms with 6 poics in series	≤24V	Α	15	
	48V	Α	15	
	75V	Α	13	
	110V	Α	11	
	220V	Α	6	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series				
	≤24V	Α	15	
	48V	Α	15	
	75V	Α	15	
	110V	Α	12	
	220V	Α	7	
Short-time allowable current for 10s (IEC/EN60947-1)		Α	150	
Protection fuse				
	gG (IEC)	Α	25	
	aM (IEC)	Α	10	
Making capacity (RMS value)		Α	90	
Breaking capacity at voltage	4.401.4			
	440V	A	72 70	
	500V	A	72 74	
Desistance normale (evenes valve)	690V	A	71	
Resistance per pole (average value)		mΩ	2.5	
Power dissipation per pole (average value)	Ith	W	1.6	
	AC3	W	0.2	
Tightening torque for terminals	703	v v	0.2	
Tightoning torquo for terminals	min	Nm	1.5	
	max	Nm	1.8	
	min	lbin	1.1	
	max	Ibin	1.5	
Tightening torque for coil terminal			-	
<u> </u>	min	Nm	0.8	
	max	Nm	1	
	min	lbin	0.8	
	* * * * * *			





Conductor section			max	lbin	0.74
AWG/Kcmil Flexible w/o lug conductor section Flexible w/o lug conductor section Flexible c/w lug conductor section max		simultaneously connectable		Nr.	2
Plexible w/o lug conductor section	Conductor section				
Flexible w/o lug conductor section		AWG/Kcmil			
Flexible c/w lug conductor section			max		10
Persible c/w lug conductor section		Flexible w/o lug conductor section		2	
Flexible c/w lug conductor section					
Pickible with insulated spade lug conductor section			max	mm²	6
Plexible with insulated spade lug conductor section min max mm² 1 1 1 1 1 1 1 1 1		Flexible c/w lug conductor section		2	
Flexible with insulated spade lug conductor section min mm² 1 max mm² 4 mm²					
Min				mm²	4
Max		Flexible with insulated spade lug conductor section		2	
P20 when properly wired properly wired properly wired properly wired properly wired properly wired wired wired properly wired wired wired properly wired wired wired properly wired wire					
### Property wired wired ### Property ### Property wired ### Property ### Property wired ### Property			max	mm ²	
Property wire of the part of	Power terminal prote	ction according to IEC/EN 60529			
Departing position	Machanical factures	-			properly wired
Normal allowable Screw / DIN rail allowab					
Screw Din rail	operating position		normal		Vertical plan
Screw / DIN rail 35mm 35					
Meight			allowable		
Medight	Fixing				
AWG/kcmil conductor section	Weight			a	
AWG/kcmil conductor section Max				9	000
Maxiliary contact characteristics	Conductor Section	AWG/kemil conductor section			
Auxiliary contact characteristics Thermal current Ith EC/EN 60947-5-1 designation Departing current AC15 230V A 3 400V A 1.9 500V A 1.4 Departing current DC12 110V A 5.7 Departing current DC13 24V A 5.7 48V A 2.9 60V A 2.3 110V A 2.3 110V A 2.3 110V A 2.3 110V A 1.25 125V A 1.1 220V A 2.3 110V A 1.25 125V A 1.1 220V A 0.55 600V B 0		AVVO/ACITIII CONQUCTOR SECTION	may		10
Thermal current Ith	Auxiliary contact char	racteristics	max		10
EC/EN 60947-5-1 designation Departing current AC15 230V A 3 400V A 1.9 500V A 1.4 Departing current DC12 110V A 5.7 Departing current DC13 24V A 5.7 A8W A 2.9 60V A 1.25 110V A 1.25 125V A 1.1 220V A 1.25 125V A 1.1 220V A 0.55 600V A 0.55				Α	10
Disperating current AC15 230V A 3 400V A 1.9 500V A 1.4		esignation			
230V					7.000 . 000
A 00V A 1.9	operaning carroins to		230V	Α	3
Soov A 1.4 1.4 1.4 1.4 1.5					
Departing current DC12					
110V A 5.7	Operating current DC	212			
Departing current DC13	operaning carroin 2 c	· · -	110V	Α	5.7
24V	Operating current DC	213	1.07	,,	
A 8V	- F J. S 19 Gallon De	· · ·	24\/	А	5.7
60V A 2.3 110V A 1.25 125V A 1.1 125V A 0.55 600V A 0.2 0.55 0.55 600V A 0.2 0.55 0					
110V					
125V A 1.1 220V A 0.55 600V A 0.2					
220V A 0.55					
Departions Mechanical life cycles 20000000 Electrical life cycles 20000000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles 2000000 mechanical load cycles 20000000 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility yes					
Departions Mechanical life cycles 20000000 Electrical life cycles 20000000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles 2000000 mechanical load cycles 20000000 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility yes					
Mechanical life cycles 20000000 Electrical life cycles 2000000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles 2000000 mechanical load cycles 20000000 mechanical load cycles 20000000 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility yes	Operations			,,	J.=
Electrical life cycles 2000000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles 2000000 mechanical load cycles 20000000 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility yes				cycles	20000000
Performance level B10d according to EN/ISO 13489-1 rated load cycles 2000000 mechanical load cycles 20000000 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility yes					
Performance level B10d according to EN/ISO 13489-1 rated load cycles 2000000 mechanical load cycles 20000000 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility yes				2,0.00	
rated load cycles 2000000 mechanical load cycles 20000000 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility rated load cycles 20000000 yes		10d according to EN/ISO 13489-1			
mechanical load cycles 20000000 Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes	. s.romanoo lovoi D	. 33 3300 anig to 2.1/100 10 100 1	rated load	cycles	2000000
Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes				-	
EMC compatibility yes	Mirror contats accord		moonamoa load	Oy OlO3	
· · · · · · · · · · · · · · · · · · ·		ang to 100/11 000-11-1-1			-
	AC coil operating				усз



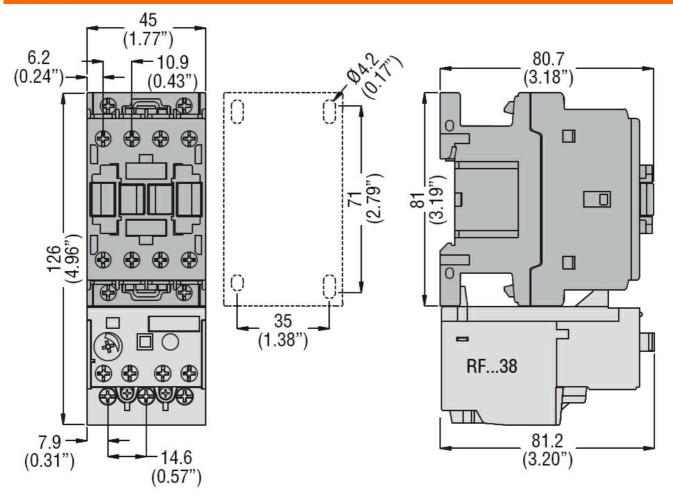


Rated AC voltage at 60Hz		V	24
AC operating voltage			
of 60Hz coil powered at 60Hz			
pick-up			
	min	%Us	80
	max	%Us	110
drop-out			
	min	%Us	20
	max	%Us	55
AC average coil consumption at 20°C			
of 60Hz coil powered at 60Hz			
	in-rush	VA	75
	holding	VA	9
Dissipation at holding ≤20°C 50Hz		W	2.5
Max cycles frequency		. "	
Mechanical operation		cycles/h	3600
Operating times			
Average time for Us control			
in AC			
Closing NO			0
	min	ms	8 24
Opening NO	max	ms	24
Opening NO	min	ms	10
	max	ms	20
Closing NC	IIIdx	1113	20
Clossing 140	min	ms	14
	max	ms	28
Opening NC			
aham. A	min	ms	7
	max	ms	18
UL technical data			
Full-load current (FLA) for three-phase AC motor			
·	at 480V	Α	7.6
	at 600V	Α	0.375
Yielded mechanical performance			
for single-phase AC motor			
	110/120V	HP	0.75
	230V	HP	2
for three-phase AC motor			
	200/208V	HP	3
	220/230V	HP	3
	460/480V	HP	5
	575/600V	HP	7.5
General USE			
Contactor			
	AC current	Α	25
Auxiliary contacts			
	AC voltage	V	600
	AC current	Α	10
	DC voltage	V	250
	DC current	Α	1
Short-circuit protection fuse, 600V			
High fault			



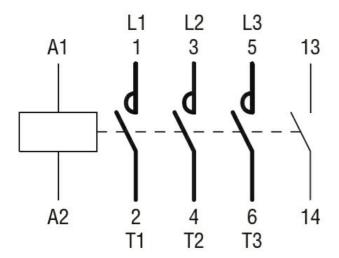


	Short circuit current	kA	100
	Fuse rating	A	30
	•	^	
	Fuse class		J
Standard fault			
	Short circuit current	kA	5
	Fuse rating	Α	60
Contact rating of auxiliary contacts according to UL			A600 - P600
Ambient conditions			
Temperature			
Operating temperature			
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions			



Wiring diagrams





Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching







			_
Product designation			Power contactor
Product type designation			BF09
Contact characteristics		N I	2
Number of poles		Nr. V	3
Rated insulation voltage Ui IEC/EN			690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency		1.1-	0.5
	min	Hz	25
IFC Conventional free air the model assured the	max	Hz	400
IEC Conventional free air thermal current Ith		Α	25
Operational current le	AC 1 (<10°C)	۸	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) AC-4 (400V)	A	9
Detect energtional newer AC 2 (T <fe°c)< td=""><td>AC-4 (400V)</td><td>A</td><td>4.9</td></fe°c)<>	AC-4 (400V)	A	4.9
Rated operational power AC-3 (T≤55°C)	2201/	LANA	2.2
	230V 400V	kW kW	2.2
	400V 415V	kW	4.2 4.5
	440V	kW	4.8
	500V	kW	4.0 5.5
	690V	kW	7.5
Rated operational power AC-1 (T≤40°C)	030 V	IXVV	7.0
Trated operational power AO-1 (1240 O)	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			
120 max carrent to in 201 mar 27x = this mar 1 poise in conce	≤24V	Α	15
	48V	Α	13
	75V	A	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	A	2	
150	220V	Α	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	<0.417	Δ.	40	
	≤24V	A	13	
	48V 75V	A A	11 10	
	75 V 110 V	A	10 7	
	220V	A	2	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	22U V			
120 max current to in 200-200 with 2/1(2 forms with 6 poics in series	≤24V	Α	15	
	48V	Α	15	
	75V	Α	13	
	110V	Α	11	
	220V	Α	6	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series				
	≤24V	Α	15	
	48V	Α	15	
	75V	Α	15	
	110V	Α	12	
	220V	Α	7	
Short-time allowable current for 10s (IEC/EN60947-1)		Α	150	
Protection fuse				
	gG (IEC)	Α	25	
	aM (IEC)	Α	10	
Making capacity (RMS value)		Α	90	
Breaking capacity at voltage	4.401.4			
	440V	A	72 70	
	500V	A	72 74	
Desistance normale (evenes valve)	690V	A	71	
Resistance per pole (average value)		mΩ	2.5	
Power dissipation per pole (average value)	Ith	W	1.6	
	AC3	W	0.2	
Tightening torque for terminals	703	v v	0.2	
Tightoning torquo for terminals	min	Nm	1.5	
	max	Nm	1.8	
	min	lbin	1.1	
	max	lbin	1.5	
Tightening torque for coil terminal			-	
<u> </u>	min	Nm	0.8	
	max	Nm	1	
	min	lbin	0.8	
	* * * * * *			





		max	lbin	0.74
	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			4.0
	Florible wile has a contracted a section	max		10
	Flexible w/o lug conductor section	min	mm²	1
		min max	mm²	6
	Flexible c/w lug conductor section	IIIdx	111111	0
	Tiexible 6/W lug conductor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section			•
		min	mm²	1
		max	mm²	4
Dower terminal prote	etion according to IFC/FN 60520			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	362
Conductor section				
	AWG/kcmil conductor section			
		max		10
Auxiliary contact char	acteristics			
Thermal current Ith	 		Α	10
IEC/EN 60947-5-1 de				A600 - P600
Operating current AC	715	0001/		•
		230V	A	3
		400V	A	1.9
Operating current DC	<u> </u>	500V	Α	1.4
Operating current DC	,12	110V	۸	5.7
Operating current DC	<u> </u>	1100	A	5.7
Operating current DC	/1U	24V	Α	5.7
		48V	A	2.9
		60V	A	2.3
		110V	A	1.25
		125V	A	1.1
		220V	Α	0.55
		600V	Α	0.2
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	2000000
Safety related data				
Performance level B	10d according to EN/ISO 13489-1			
		rated load	cycles	2000000
		nechanical load	cycles	20000000
	ling to IEC/EN 609474-4-1			yes
				VOC
EMC compatibility AC coil operating				yes



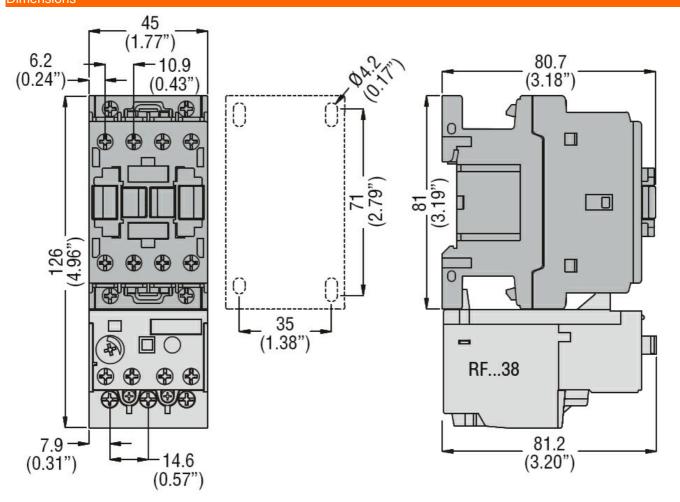


Rated AC voltage at 6	0Hz			V	48
AC operating voltage					
	of 60Hz coil powered a	t 60Hz			
		pick-up			
			min	%Us	80
			max	%Us	110
		drop-out			
			min	%Us	20
			max	%Us	55
AC average coil consu	·				
	of 60Hz coil powered a	t 60Hz			
			in-rush	VA	75
	.0000 5011		holding	VA	9
Dissipation at holding	≤20°C 50Hz			W	2.5
Max cycles frequency				. "	2000
Mechanical operation				cycles/h	3600
Operating times	- of mal				
Average time for Us of					
	in AC	Obstantia			
		Closing NO			
			min	ms	8
		On and an NO	max	ms	24
		Opening NO			40
			min	ms	10
		Obs. de NO	max	ms	20
		Closing NC			4.4
			min	ms	14
		0 N0	max	ms	28
		Opening NC			7
			min	ms	7
UL technical data			max	ms	18
) for three-phase AC moto	or.			
Tull-load culterit (TEA) for timee-phase AC moto	וכ	at 480V	Α	7.6
			at 600V	A	0.375
Yielded mechanical pe	arformance		at 000 v		0.575
riolada mediamida pe	for single-phase AC mo	otor			
	ioi sirigie-priase AC IIIC	лог	110/120V	HP	0.75
			230V	HP	2
	for three-phase AC mo	tor	200 V		
	ioi anos phase Ao mo		200/208V	HP	3
			220/230V	HP	3
			460/480V	HP	5
			575/600V	HP	7.5
General USE			3.0,000 V		- · · ·
	Contactor				
	231140101		AC current	Α	25
	Auxiliary contacts		, to duriont		_
	. tartinary our table		AC voltage	V	600
			AC current	Å	10
			DC voltage	V	250
			DC current	Å	1
Short-circuit protection	n fuse, 600V		2004110111		
2 Sirodic protoction	High fault				
	- ngi iddit				



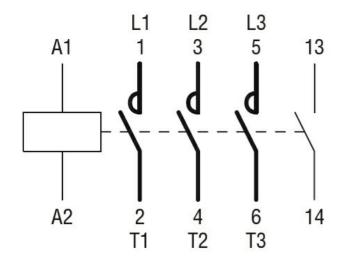


		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
Contact rating of auxilia	ary contacts according to UL			A600 - P600
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protection	on			
Pollution degree				3
Dimensions				



Wiring diagrams





Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching







Contact characteristics Number of poles Nr. 3 3 Rated insulation voltage Ui IEC/EN V 690 8 Rated insulation voltage Uimp kV 6 6 Operational frequency min Hz 255 4 max Hz 400 Hz 400 1 IEC Conventional free air thermal current lth A 25 25 Operational current le AC-1 (≤40°C) A 25 A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440°C) A 9 AC-3 (≤440°C) A 4.9 A 9 AC-4 (400°C) 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 5.5 690V kW 7.5 5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 40V kW 2.2 40V kW 2.2 40V kW 2.7 5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 40V kW 2.7 5 IEC max current le in D	Product designation Product type designation			Power contactor BF09
Rated insulation voltage U 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 (≤4400 ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 400V kW 4.9 Rated operational power AC-3 (T≤40°C) 230V kW 4.5 440V kW 4.5 440V kW 4.5 440V kW 4.5 440V kW 7.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 7.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 1.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5				
Rated impulse withstand voltage Uimp	Number of poles		Nr.	3
Operational frequency min max bit with the max bi	Rated insulation voltage Ui IEC/EN		V	690
Min	Rated impulse withstand voltage Uimp		kV	6
EC Conventional free air thermal current lth	Operational frequency			
EC Conventional free air thermal current lth		min	Hz	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) 230V kW 2.2 400V kW 4.2 415V kW 4.5 440V 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 16 500V 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 - 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 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 18 48V A 18 48V A 12 20 75V A 20		max	Hz	400
AC-1 (≤40°C)	IEC Conventional free air thermal current Ith		Α	25
AC-1 (≤55°C)	Operational current le			
AC-1 (≤55°C)		AC-1 (≤40°C)	Α	25
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 16 500V kW 27 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 1110V A 12 220V A 1 110V A 12 220V A 1		· · ·	Α	20
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 EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series 524V A 15 48V A 13 75V A 12 110V A 6 220V A - EC max current le in DC1 with L/R ≤ 1ms with 2 poles in series 524V 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 524V 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 524V A 20 48V A 20 75V A 20 48V A 20 75V A 20 48V A 20 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V		,	Α	18
Rated operational power AC-3 (T≤55°C) 230V kW 2.2 440V kW 4.5 445V 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 22 220V A 1 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			Α	9
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 8 7.5 7.5 8 7.5 7.5 8 7 7.5 8 7 7.5 8 7 7 7 7 7 7 7 7 7		AC-4 (400V)	Α	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 kW 4.5 440V kW 4.8 500V kW 5.5 690V kW 7.5		230V	kW	2.2
A440V kW 4.8 500V kW 5.5 690V kW 7.5		400V	kW	4.2
S00V kW 5.5		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		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 17 110V 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		500V	kW	5.5
		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 ≤24V		400V	kW	16
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 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	21
		690V	kW	27
	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
		220V	Α	_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
		≤24V	Α	18
220V A 1		75V	Α	17
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	12
≤24V A 20 48V A 20 75V A 20		220V	Α	1
≤24V A 20 48V A 20 75V A 20	IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
48V A 20 75V A 20		≤24V	Α	20
		48V	Α	
110V A 15		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	A	2	
150	220V	Α	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	<0.417	Δ.	40	
	≤24V	A	13	
	48V 75V	A A	11 10	
	75 V 110 V	A	10 7	
	220V	A	2	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	220 V			
120 max current to in 200-200 with 2/1(2 forms with 6 poics in series	≤24V	Α	15	
	48V	Α	15	
	75V	Α	13	
	110V	Α	11	
	220V	Α	6	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series				
	≤24V	Α	15	
	48V	Α	15	
	75V	Α	15	
	110V	Α	12	
	220V	Α	7	
Short-time allowable current for 10s (IEC/EN60947-1)		Α	150	
Protection fuse				
	gG (IEC)	Α	25	
	aM (IEC)	Α	10	
Making capacity (RMS value)		Α	90	
Breaking capacity at voltage	4.401.4			
	440V	A	72 70	
	500V	A	72 74	
Desistance normale (evenes valve)	690V	A	71	
Resistance per pole (average value)		mΩ	2.5	
Power dissipation per pole (average value)	Ith	W	1.6	
	AC3	W	0.2	
Tightening torque for terminals	703	v v	0.2	
Tightoning torquo for terminals	min	Nm	1.5	
	max	Nm	1.8	
	min	lbin	1.1	
	max	lbin	1.5	
Tightening torque for coil terminal			-	
<u> </u>	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		2	
		min	mm²	1
	Florida video de la constanta	max	mm²	6
	Flexible c/w lug conductor section		2	4
		min	mm²	1
	Florible with involuted and deliver and destance atting	max	mm²	4
	Flexible with insulated spade lug conductor section		· · 2	4
		min	mm² mm²	1 4
		max	111111	IP20 when
Power terminal prote	ction according to IEC/EN 60529			properly wired
Mechanical features				property whea
Operating position				
. 01		normal		Vertical plan
		allowable		±30°
Fixing a				Screw / DIN rail
Fixing				35mm
Weight			g	354
Conductor section				
	AWG/kcmil conductor section			
		max		10
Auxiliary contact char	racteristics			
Thermal current Ith			Α	10
IEC/EN 60947-5-1 de				A600 - P600
Operating current AC	C15			
		230V	Α	3
		400V	Α	1.9
		500V	A	1.4
Operating current DC	C12			
		110V	Α	5.7
Operating current DC	213			
		24V	Α	5.7
		48V	A	2.9
		60V	A	2.3
		110V	A	1.25
		125V	A	1.1
		220V 600V	A A	0.55 0.2
				U.Z
Operations		000 V	A	
		000 V		
Mechanical life		000 V	cycles	20000000
Mechanical life Electrical life		0001		
Mechanical life Electrical life Safety related data	10d according to EN/ISO 13/80-1	0001	cycles	20000000
Mechanical life Electrical life Safety related data	10d according to EN/ISO 13489-1		cycles cycles	20000000 2000000
Mechanical life Electrical life Safety related data	-	rated load	cycles cycles	20000000 2000000 2000000
Mechanical life Electrical life Safety related data Performance level B	me		cycles cycles	2000000 2000000 2000000 20000000
	-	rated load	cycles cycles	20000000 2000000 2000000



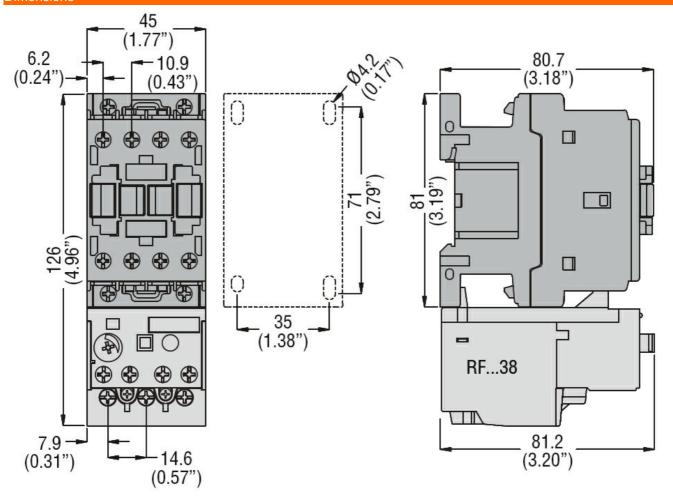


Rated AC voltage at 6	50Hz		V	120
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
		min	%Us	20
AO		max	%Us	55
AC average coil cons				
	of 60Hz coil powered at 60Hz	in ruch	VA	75
		in-rush holding	VA VA	75 9
Dissipation at holding	<20°C 50H-7	Holding	W	2.5
Max cycles frequency			VV	2.5
Mechanical operation			cycles/h	3600
Operating times			Cycles/II	3000
Average time for Us c	control			
	in AC			
	Closing NO			
		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
III de abrica dada		max	ms	18
UL technical data) for three phase AC motor			
ruii-ioad current (FLA) for three-phase AC motor	at 480V	Α	7.6
		at 600V	A	0.375
Yielded mechanical po	erformance	at 000 v		0.575
rieided mediamidai pi	for single-phase AC motor			
	ioi single-phase AC motor	110/120V	HP	0.75
		230V	HP	2
	for three-phase AC motor	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				
	High fault			



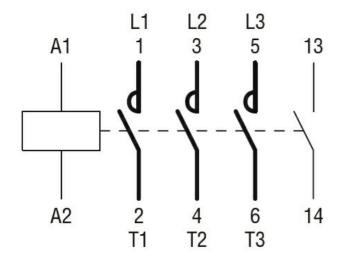


	Short circuit current	kA	100
	Fuse rating	Α	30
	Fuse class		J
Standard fault			·
	Short circuit current	kA	5
	Fuse rating	Α	60
Contact rating of auxiliary contacts according to UL			A600 - P600
Ambient conditions			
Temperature			
Operating temperature			
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions			



Wiring diagrams





Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching







Contact characteristics Number of poles Nr. 3 3 Rated insulation voltage Ui IEC/EN V 690 8 Rated insulation voltage Uimp kV 6 6 Operational frequency min Hz 255 4 max Hz 400 Hz 400 1 IEC Conventional free air thermal current lth A 25 25 Operational current le AC-1 (≤40°C) A 25 A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440°C) A 9 AC-3 (≤440°C) A 4.9 A 9 AC-4 (400°C) 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 5.5 690V kW 7.5 5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 40V kW 2.2 40V kW 2.2 40V kW 2.7 5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 40V kW 2.7 5 IEC max current le in D	Product designation Product type designation			Power contactor BF09
Rated insulation voltage U 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 (≤4400 ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 400V kW 4.9 Rated operational power AC-3 (T≤40°C) 230V kW 4.5 440V kW 4.5 440V kW 4.5 440V kW 4.5 440V kW 7.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 7.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 1.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5				
Rated impulse withstand voltage Uimp	Number of poles		Nr.	3
Operational frequency min max bit with the max bi	Rated insulation voltage Ui IEC/EN		V	690
Min	Rated impulse withstand voltage Uimp		kV	6
EC Conventional free air thermal current lth	Operational frequency			
EC Conventional free air thermal current lth		min	Hz	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) 230V kW 2.2 400V kW 4.2 415V kW 4.5 440V 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 16 500V 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 - 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 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 18 48V A 18 48V A 12 20 75V A 20		max	Hz	400
AC-1 (≤40°C)	IEC Conventional free air thermal current Ith		Α	25
AC-1 (≤55°C)	Operational current le			
AC-1 (≤55°C)		AC-1 (≤40°C)	Α	25
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 16 500V kW 27 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 1110V A 12 220V A 1 110V A 12 220V A 1		· · ·	Α	20
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 EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series 524V A 15 48V A 13 75V A 12 110V A 6 220V A - EC max current le in DC1 with L/R ≤ 1ms with 2 poles in series 524V 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 524V 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 524V A 20 48V A 20 75V A 20 48V A 20 75V A 20 48V A 20 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V		,	Α	18
Rated operational power AC-3 (T≤55°C) 230V kW 2.2 440V kW 4.5 445V 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 22 220V A 1 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			Α	9
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 8 7.5 7.5 8 7.5 7.5 8 7 7.5 8 7 7.5 8 7 7 7 7 7 7 7 7 7		AC-4 (400V)	Α	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 kW 4.5 440V kW 4.8 500V kW 5.5 690V kW 7.5		230V	kW	2.2
A440V kW 4.8 500V kW 5.5 690V kW 7.5		400V	kW	4.2
S00V kW 5.5		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		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 17 110V 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		500V	kW	5.5
		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 ≤24V		400V	kW	16
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 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	21
		690V	kW	27
	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
		220V	Α	_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
		≤24V	Α	18
220V A 1		75V	Α	17
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	12
≤24V A 20 48V A 20 75V A 20		220V	Α	1
≤24V A 20 48V A 20 75V A 20	IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
48V A 20 75V A 20		≤24V	Α	20
		48V	Α	
110V A 15		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	A	2	
150	220V	Α	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	<0.417	^	40	
	≤24V	A	13	
	48V 75V	A A	11 10	
	75 V 110 V	A	10 7	
	220V	A	2	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	220 V			
120 max current to in 200-200 with 2/1(2 forms with 6 poics in series	≤24V	Α	15	
	48V	Α	15	
	75V	Α	13	
	110V	Α	11	
	220V	Α	6	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series				
	≤24V	Α	15	
	48V	Α	15	
	75V	Α	15	
	110V	Α	12	
	220V	Α	7	
Short-time allowable current for 10s (IEC/EN60947-1)		Α	150	
Protection fuse				
	gG (IEC)	Α	25	
	aM (IEC)	Α	10	
Making capacity (RMS value)		Α	90	
Breaking capacity at voltage	4.401.4			
	440V	A	72 70	
	500V	A	72 74	
Desistance normale (evenes valve)	690V	A	71	
Resistance per pole (average value)		mΩ	2.5	
Power dissipation per pole (average value)	Ith	W	1.6	
	AC3	W	0.2	
Tightening torque for terminals	703	v v	0.2	
Tightoning torquo for terminals	min	Nm	1.5	
	max	Nm	1.8	
	min	lbin	1.1	
	max	lbin	1.5	
Tightening torque for coil terminal			-	
<u> </u>	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
	=	max	mm²	4
	Flexible with insulated spade lug conductor section		2	
		min	mm²	1
		max	mm²	4
Power terminal prote	ection according to IEC/EN 60529			IP20 when
Machanical factures	-			properly wired
Mechanical features Operating position				
Operating position		normal		Vertical plan
		allowable		±30°
		allowable		Screw / DIN rail
Fixing				35mm
Weight			g	350
Conductor section			9	000
Solidación section	AWG/kcmil conductor section			
	AVVO/ACITIII CONDUCTOR SECTION	max		10
Auxiliary contact cha	racteristics	max		10
Thermal current Ith			Α	10
IEC/EN 60947-5-1 d	esignation		- , ,	A600 - P600
Operating current AC				7.000
operaning carrent re		230V	Α	3
		400V	A	1.9
		500V	A	1.4
Operating current DO	C12			
operaning carrein 2 t	· · <u>-</u>	110V	Α	5.7
Operating current D0	213	1101	- , ,	
oporating carroin be				
		24\/	Α	5.7
		24V 48V	A A	5.7 2.9
		48V	Α	2.9
		48V 60V	A A	2.9 2.3
		48V 60V 110V	A A A	2.9 2.3 1.25
		48V 60V 110V 125V	A A A	2.9 2.3 1.25 1.1
		48V 60V 110V 125V 220V	A A A A	2.9 2.3 1.25 1.1 0.55
		48V 60V 110V 125V	A A A	2.9 2.3 1.25 1.1
Operations		48V 60V 110V 125V 220V	A A A A	2.9 2.3 1.25 1.1 0.55 0.2
Operations Mechanical life		48V 60V 110V 125V 220V	A A A A A cycles	2.9 2.3 1.25 1.1 0.55 0.2
Operations Mechanical life Electrical life		48V 60V 110V 125V 220V	A A A A	2.9 2.3 1.25 1.1 0.55 0.2
Operations Mechanical life Electrical life Safety related data		48V 60V 110V 125V 220V	A A A A A cycles	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	48V 60V 110V 125V 220V 600V	A A A A A Cycles	2.9 2.3 1.25 1.1 0.55 0.2 20000000 2000000
Operations Mechanical life Electrical life Safety related data	10d according to EN/ISO 13489-1	48V 60V 110V 125V 220V 600V	A A A A A Cycles cycles	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	48V 60V 110V 125V 220V 600V	A A A A A Cycles	2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000 20000000 200000000
Operations Mechanical life Electrical life Safety related data Performance level B	10d according to EN/ISO 13489-1	48V 60V 110V 125V 220V 600V	A A A A A Cycles cycles	2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000



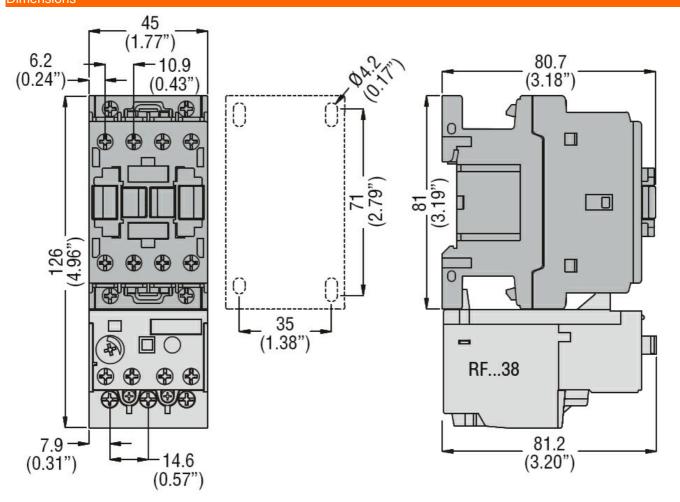


	60Hz		V	220
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	pick-up	min	0/ I Io	90
		min	%Us %Us	80 110
	drop-out	max	70US	110
	diop-out	min	%Us	20
		max	%Us	55
AC average coil con	sumption at 20°C	max	7000	
	of 60Hz coil powered at 60Hz			
	5. 55. <u>1</u>	in-rush	VA	75
		holding	VA	9
Dissipation at holdin	g ≤20°C 50Hz	<u> </u>	W	2.5
Max cycles frequenc	-			
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us	control			
	in AC			
	Closing NO			
		min	ms	8
		max	ms	24
	Opening NO			
		min	ms	10
	01 1 110	max	ms	20
	Closing NC			4.4
		min	ms	14
	Opening NC	max	ms	28
	Opening NC	min	ms	7
		max	ms	, 18
JL technical data		IIIdA	1113	10
	A) for three-phase AC motor			
	, , , , , , , , , , , , , , , , , , , ,	at 480V	Α	7.6
		at 600V	Α	0.375
/iolded machanical	performance			
neided mechanical				
rieided mechanical	for single-phase AC motor			
neided mechanical		110/120V	HP	0.75
Telded Mechanical		110/120V 230V	HP HP	0.75 2
neided mechanical				
neided mechanical	for single-phase AC motor			3
neided mechanical	for single-phase AC motor	230V 200/208V 220/230V	HP HP HP	3 3
neided mechanical	for single-phase AC motor	230V 200/208V 220/230V 460/480V	HP HP HP	3 3 5
	for single-phase AC motor	230V 200/208V 220/230V	HP HP HP	3 3
	for single-phase AC motor for three-phase AC motor	230V 200/208V 220/230V 460/480V	HP HP HP	3 3 5
	for single-phase AC motor	230V 200/208V 220/230V 460/480V 575/600V	HP HP HP HP	3 3 5 7.5
	for single-phase AC motor for three-phase AC motor Contactor	230V 200/208V 220/230V 460/480V	HP HP HP	3 3 5
	for single-phase AC motor for three-phase AC motor	230V 200/208V 220/230V 460/480V 575/600V	HP HP HP HP	2 3 3 5 7.5
	for single-phase AC motor for three-phase AC motor Contactor	230V 200/208V 220/230V 460/480V 575/600V AC current	HP HP HP HP	2 3 3 5 7.5 25
	for single-phase AC motor for three-phase AC motor Contactor	230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current	HP HP HP HP	3 3 5 7.5 25 600 10
General USE	for single-phase AC motor for three-phase AC motor Contactor	230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage	HP HP HP A V A V	2 3 3 5 7.5 25 600 10 250
	for single-phase AC motor for three-phase AC motor Contactor Auxiliary contacts	230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current	HP HP HP HP	2 3 3 5 7.5 25 600 10



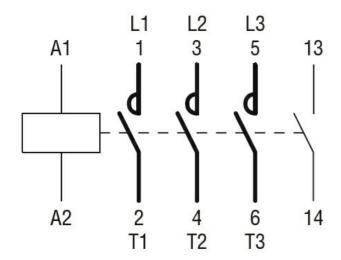


		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
Contact rating of auxilia	ary contacts according to UL			A600 - P600
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protection	on			
Pollution degree				3
Dimensions				



Wiring diagrams





Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching







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 IEC 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 (≤50°C) A 18 AC-3 (≤400°V ≤55°C) A 9 AC-3 (≤400°V ≤55°C) A 9 AC-3 (≤400°V ≤55°C) A 9 AC-3 (≤400°V &W 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 A00°V kW 4.2 A15°V kW 4.5 A15°V kW 4.6 A15°V kW 4.6 A10°V kW 16 A00°V kW 2.7 A16°V kW 2.2 A16°V kW 2.	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 (≤70°C) A 18 AC-2 (≤400°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤5°C) A 9 AC-4 (4000V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 440V kW 4.2 4415V kW 4.5 444V 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 16 500V kW 21 690V kW 21				
Rated impulse withstand voltage Ulimp				
Operational frequency min max Hz Hz Hz Hz 400 Hz Hz Hz 400 Hz Hz Hz 400 Hz Hz Hz 400 Hz Hz Hz Hz 400 Hz Hz Hz Hz 400 Hz Hz Hz Hz Hz Hz 400 Hz				
EC Conventional free air thermal current lith			kV	6
EC Conventional free air thermal current Ith	Operational frequency			
ECC 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 (≤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 4.5 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 16 500V 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 12		max		
AC-1 (≤40°C)			Α	25
AC-1 (S55°C)	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 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 400V kW 16 500V 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 1 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		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 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 2 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 4.8 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 2 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			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 \text{\$\circ}}{\text{48V}} \times \text{\$\circ}}{\text{48V}} \times \text{\$\circ}} IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series \$\frac{\text{\$\circ}}{\text{48V}} \times \text{\$\circ}}{\text{48V}} \times \text{\$\circ}}{\text{48V}} \times \text{\$\circ}} IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series \$\frac{\text{\$\circ}}{\text{48V}} \times \text{\$\circ}}{\text{110V}} \times \text{\$\circ}}{\text{110V}} \times \text{\$\circ}} IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series \$\frac{\text{\$\circ}}{\text{22V}} \times \text{\$\circ}}{\text{110V}} \times \text{\$\circ}}{\text{22VV}} \times \text{\$\circ}} IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series \$\frac{\text{\$\circ}}{\text{24V}} \times \text{\$\circ}}{\text{22VV}} \times \text{\$\circ}}{\text{22VV}} \times \text{\$\circ}}{\text{22VV}} \times \text{\$\circ}} \$\frac{\text{\$\circ}}{\text{22VV}} \times \text{\$\circ}}{\text{22VV}} \times \text			Α	9
230V kW 2.2 400V kW 4.2 415V kW 4.5 445V kW 4.5 440V 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 440V kW 4.8 500V kW 5.5 690V kW 5.5 690V kW 7.5	Rated operational power AC-3 (T≤55°C)			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		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 48V A 18 75V A 17 110V 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				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	9	690V	kW	7.5
	Rated operational power AC-1 (T≤40°C)			
Soov kW 21 690V kW 27 27				
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V				
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	
			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 12 110V A				
Section Sec				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 ≤ 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	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





	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)			-
	lth	W	1.6
	AC3	W	0.2
Tightening torque for terminals	7,00	• •	V. <u> </u>
ngmoning torque for terminals	min	Nm	1.5
	max	Nm	1.8
	min	Ibin	1.1
Tightoning torque for coil torminal	max	Ibin	1.5
Tightening torque for coil terminal		N I.a.:	0.0
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8





		max	lbin	0.74
	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			
	Ele The delicered streets	max		10
	Flexible w/o lug conductor section			4
		min	mm²	1
	Florible a/w lug conductor coation	max	mm²	6
	Flexible c/w lug conductor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section	IIIdx	111111	
	Tiexible with insulated space tag conductor section	min	mm²	1
		max	mm²	4
		max		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	352
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 DC	212			
		110V	Α	5.7
Operating current DO	213			
		24V	Α	5.7
		48V	Α	2.9
		60V	A	2.3
			Α	1.25
		110V		4 4
		125V	Α	1.1
		125V 220V	A A	0.55
Operations		125V	Α	
		125V 220V	A A A	0.55 0.2
Mechanical life		125V 220V	A A A cycles	0.55 0.2 20000000
Mechanical life Electrical life		125V 220V	A A A	0.55 0.2
Mechanical life Electrical life Safety related data	10d according to EN//SO 12490 1	125V 220V	A A A cycles	0.55 0.2 20000000
Mechanical life Electrical life Safety related data	10d according to EN/ISO 13489-1	125V 220V 600V	A A A cycles	0.55 0.2 20000000 2000000
Mechanical life Electrical life Safety related data	•	125V 220V 600V rated load	A A A Cycles cycles	0.55 0.2 20000000 2000000 2000000
Mechanical life Electrical life Safety related data Performance level B	me	125V 220V 600V	A A A cycles	0.55 0.2 20000000 2000000 2000000 20000000
	•	125V 220V 600V rated load	A A A Cycles cycles	0.55 0.2 20000000 2000000 2000000

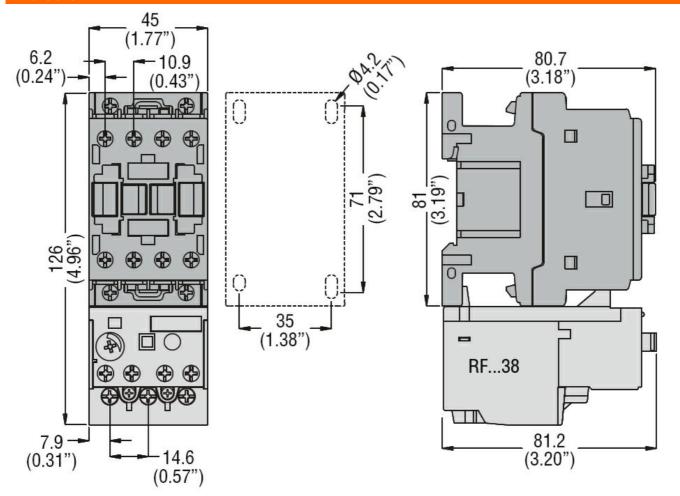




	60Hz		V	230
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	pick-up	min	0/ L Io	90
		min	%Us %Us	80 110
	drop-out	max	%US	110
	urop-out	min	%Us	20
		max	%Us	55
AC average coil con	sumption at 20°C	max	7000	00
to avorage con con	of 60Hz coil powered at 60Hz			
	0. 001 12 001 po volou at 001 12	in-rush	VA	75
		holding	VA	9
Dissipation at holdin	g ≤20°C 50Hz	<u> </u>	W	2.5
Max cycles frequenc				
Mechanical operation			cycles/h	3600
Operating times				
verage time for Us	control			
	in AC			
	Closing NO			
		min	ms	8
	_	max	ms	24
	Opening NO			
		min	ms	10
	01 1 110	max	ms	20
	Closing NC			4.4
		min	ms	14
	Opening NC	max	ms	28
	Opening NC	min	ms	7
		max	ms	, 18
JL technical data		max	1113	10
	A) for three-phase AC motor			
(. =	, y, i.e. allies prises / i.e. allies	at 480V	Α	7.6
		at 600V	Α	0.375
rielded mechanical	performance			
	for single-phase AC motor			
	ioi single phase Ao motor			
	for single phase Ao motor	110/120V	HP	0.75
	ioi single phase Ao motor	110/120V 230V	HP HP	0.75 2
	for three-phase AC motor			
		230V 200/208V 220/230V	HP HP HP	3 3
		230V 200/208V 220/230V 460/480V	HP HP HP	3 3 5
		230V 200/208V 220/230V	HP HP HP	3 3
General USE	for three-phase AC motor	230V 200/208V 220/230V 460/480V	HP HP HP	3 3 5
General USE		230V 200/208V 220/230V 460/480V 575/600V	HP HP HP HP	3 3 5 7.5
General USE	for three-phase AC motor Contactor	230V 200/208V 220/230V 460/480V	HP HP HP	3 3 5
General USE	for three-phase AC motor	230V 200/208V 220/230V 460/480V 575/600V	HP HP HP HP	2 3 3 5 7.5
General USE	for three-phase AC motor Contactor	230V 200/208V 220/230V 460/480V 575/600V AC current	HP HP HP HP	2 3 3 5 7.5 25
Seneral USE	for three-phase AC motor Contactor	230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current	HP HP HP HP V A	3 3 5 7.5 25 600 10
General USE	for three-phase AC motor Contactor	230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage	HP HP HP A V A V	2 3 3 5 7.5 25 600 10 250
General USE	for three-phase AC motor Contactor Auxiliary contacts	230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current	HP HP HP HP V A	2 3 3 5 7.5 25 600 10

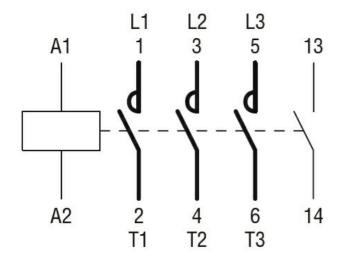


	Short circuit current	kA	100
	Fuse rating	A	30
	•	^	
	Fuse class		J
Standard fault			
	Short circuit current	kA	5
	Fuse rating	Α	60
Contact rating of auxiliary contacts according to UL			A600 - P600
Ambient conditions			
Temperature			
Operating temperature			
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions			



Wiring diagrams





Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching







Product designation Product type designation			Power contactor 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	220V	Α	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	40 AV /		4.0
	≤24V	A	18
	48V	A	18
	75V	A	17
	110V	A	12 1
IEC may current to in DC1 with L/B < 1mg with 2 notes in series	220V	Α	1
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	~2A\/	٨	20
	≤24V 48V	A	20
	48 V 75 V	A A	20 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		
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
	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			
	Ele The delicered streets	max		10
	Flexible w/o lug conductor section			4
		min	mm²	1
	Florible a/w lug conductor coation	max	mm²	6
	Flexible c/w lug conductor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section	IIIdx	111111	
	Tiexible with insulated space tag conductor section	min	mm²	1
		max	mm²	4
		max		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	352
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 DC	212			
		110V	Α	5.7
Operating current DO	213			
		24V	Α	5.7
		48V	Α	2.9
		60V	A	2.3
			Α	1.25
		110V		4 4
		125V	Α	1.1
		125V 220V	A A	0.55
Operations		125V	Α	
		125V 220V	A A A	0.55 0.2
Mechanical life		125V 220V	A A A cycles	0.55 0.2 20000000
Mechanical life Electrical life		125V 220V	A A A	0.55 0.2
Mechanical life Electrical life Safety related data	10d according to EN//SO 12490 1	125V 220V	A A A cycles	0.55 0.2 20000000
Mechanical life Electrical life Safety related data	10d according to EN/ISO 13489-1	125V 220V 600V	A A A cycles	0.55 0.2 20000000 2000000
Mechanical life Electrical life Safety related data	•	125V 220V 600V rated load	A A A Cycles cycles	0.55 0.2 20000000 2000000 2000000
Mechanical life Electrical life Safety related data Performance level B	me	125V 220V 600V	A A A cycles	0.55 0.2 20000000 2000000 2000000 20000000
	•	125V 220V 600V rated load	A A A Cycles cycles	0.55 0.2 20000000 2000000 2000000



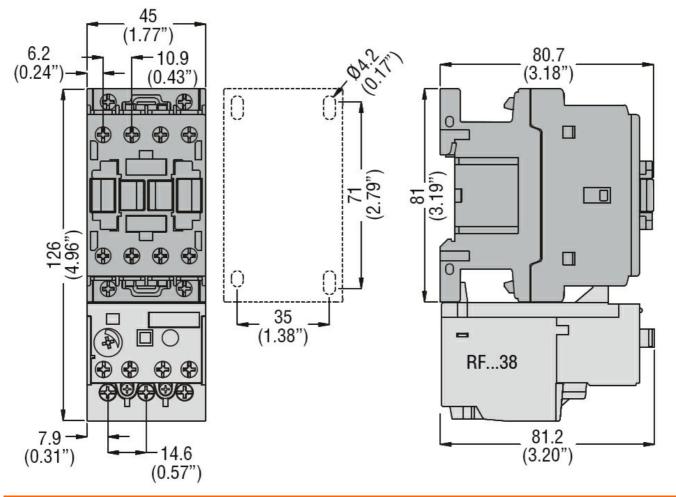


Rated AC voltage at 6	50Hz		V	460
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out		0/11	0.0
		min	%Us	20
AC average sail same	umantian at 20°C	max	%Us	55
AC average coil cons				
	of 60Hz coil powered at 60Hz	in-rush	VA	75
		holding	VA	9
Dissipation at holding	<20°C 50Hz	Holding	W	2.5
Max cycles frequency			VV	2.5
Mechanical operation			cycles/h	3600
Operating times			0,0100/11	
Average time for Us of	control			
	in AC			
	Closing NO			
	- 7 9	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
III ta dania data		max	ms	18
UL technical data) for three phase AC mater			
rull-load current (FLA) for three-phase AC motor	at 480V	Α	7.6
		at 600V	A	0.375
Yielded mechanical p	erformance	at 000 v		0.575
rielded medianical p	for single-phase AC motor			
	ioi single-phase AC motor	110/120V	HP	0.75
		230V	HP	2
	for three-phase AC motor	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 protectio				
	High fault			



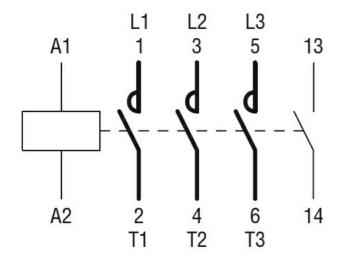


		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
Contact rating of auxilia	ary contacts according to UL			A600 - P600
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protection	on			
Pollution degree				3
Dimensions				



Wiring diagrams





Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching







Contact characteristics Number of poles Nr. 3 3 Rated insulation voltage Ui IEC/EN V 690 8 Rated insulation voltage Uimp kV 6 6 Operational frequency min Hz 255 4 max Hz 400 Hz 400 1 IEC Conventional free air thermal current lth A 25 25 Operational current le AC-1 (≤40°C) A 25 A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440°C) A 9 AC-3 (≤440°C) A 4.9 A 9 AC-4 (400°C) 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 5.5 690V kW 7.5 5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 40V kW 2.2 40V kW 2.2 40V kW 2.7 5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 40V kW 2.7 5 IEC max current le in D	Product designation Product type designation			Power contactor BF09
Rated insulation voltage U 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 (≤4400 ≤55°C) A 9 AC-4 (400V) A 4.9 Rated operational power AC-3 (T≤55°C) 230V kW 2.2 400V kW 4.9 Rated operational power AC-3 (T≤40°C) 230V kW 4.5 440V kW 4.5 440V kW 4.5 440V kW 4.5 440V kW 7.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 7.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5 400V kW 1.5 Rated operational power AC-1 (T≤40°C) 230V kW 9.5				
Rated impulse withstand voltage Uimp	Number of poles		Nr.	3
Operational frequency min max bit with the max bi	Rated insulation voltage Ui IEC/EN		V	690
Min	Rated impulse withstand voltage Uimp		kV	6
EC Conventional free air thermal current lth	Operational frequency			
EC Conventional free air thermal current lth		min	Hz	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) 230V kW 2.2 400V kW 4.2 415V kW 4.5 440V 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 16 500V 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 - 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 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 18 48V A 18 48V A 12 20 75V A 20		max	Hz	400
AC-1 (≤40°C)	IEC Conventional free air thermal current Ith		Α	25
AC-1 (≤55°C)	Operational current le			
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 410V 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 440V kW 16 500V kW 27 EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series 524V A 15 48V A 13 75V A 12 110V A 6 220V A 7 1110V A 18 48V A 18 75V A 17 1110V A 12 220V A 1 110V A 20 48V A 20 75V A 20 48V A 20 75V A 20		AC-1 (≤40°C)	Α	25
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 16 500V kW 27 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 1110V A 12 220V A 1 110V A 12 220V A 1		· · ·	Α	20
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 524V 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 524V 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 524V 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 524V A 20 48V A 20 75V A 20 48V A 20 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V 75V		,	Α	18
Rated operational power AC-3 (T≤55°C) 230V kW 2.2 440V kW 4.5 445V 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 22 220V A 1 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			Α	9
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 8 7.5 7.5 8 7.5 7.5 8 7 7.5 8 7 7.5 8 7 7 7 7 7 7 7 7 7		AC-4 (400V)	Α	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 kW 4.5 440V kW 4.8 500V kW 5.5 690V kW 7.5		230V	kW	2.2
A440V kW 4.8 500V kW 5.5 690V kW 7.5		400V	kW	4.2
S00V kW 5.5		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		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 17 110V 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		500V	kW	5.5
		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 ≤24V		400V	kW	16
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 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	21
		690V	kW	27
	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
		220V	Α	_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
		≤24V	Α	18
220V A 1		75V	Α	17
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	12
≤24V A 20 48V A 20 75V A 20		220V	Α	1
≤24V A 20 48V A 20 75V A 20	IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
48V A 20 75V A 20		≤24V	Α	20
		48V	Α	
110V A 15		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	A	2	
150	220V	Α	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	<0.417	Δ.	40	
	≤24V	A	13	
	48V 75V	A A	11 10	
	75 V 110 V	A	10 7	
	220V	A	2	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	220 V			
120 max current to in 200-200 with 2/1(2 forms with 6 poics in series	≤24V	Α	15	
	48V	Α	15	
	75V	Α	13	
	110V	Α	11	
	220V	Α	6	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series				
	≤24V	Α	15	
	48V	Α	15	
	75V	Α	15	
	110V	Α	12	
	220V	Α	7	
Short-time allowable current for 10s (IEC/EN60947-1)		Α	150	
Protection fuse				
	gG (IEC)	Α	25	
	aM (IEC)	Α	10	
Making capacity (RMS value)		Α	90	
Breaking capacity at voltage	4.401.4			
	440V	A	72 70	
	500V	A	72 74	
Desistance normale (evenes valve)	690V	A	71	
Resistance per pole (average value)		mΩ	2.5	
Power dissipation per pole (average value)	Ith	W	1.6	
	AC3	W	0.2	
Tightening torque for terminals	703	v v	0.2	
Tightoning torquo for terminals	min	Nm	1.5	
	max	Nm	1.8	
	min	lbin	1.1	
	max	lbin	1.5	
Tightening torque for coil terminal			-	
<u> </u>	min	Nm	0.8	
	max	Nm	1	
	min	lbin	0.8	
	* * * * * *			





		max	lbin	0.74
	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			4.0
	Fig. 21	max		10
	Flexible w/o lug conductor section			4
		min	mm²	1
	Flexible c/w lug conductor section	max	mm²	6
	Flexible C/W lug corludctor Section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section	IIIax	111111	4
	r lexible with insulated space lug conductor section	min	mm²	1
		max	mm²	4
		max	111111	IP20 when
Power terminal prote	ction according to IEC/EN 60529			properly wired
Mechanical features				propony mod
Operating position				
. 01		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight				346
Conductor section			g	340
Conductor Section	AWG/kcmil conductor section			
	AVVG/KCITIII COTIQUCTOT Section	may		10
Auxiliary contact char	ractoristics	max		10
Thermal current Ith	acionalica		А	10
IEC/EN 60947-5-1 de	esignation			A600 - P600
Operating current AC				7,000 1 000
oporating ourroint re		230V	Α	3
		400V	A	1.9
Operating current DC		500V	A	1.4
Operating current DC	712	500V	Α	1.4
		500V	Α	5.7
		500V 110V	A A	1.4
		500V 110V 24V	A A	1.45.75.7
		500V 110V 24V 48V	A A A	5.7 5.7 2.9
		500V 110V 24V 48V 60V	A A A A	5.7 5.7 2.9 2.3
		500V 110V 24V 48V 60V 110V	A A A A A	5.7 5.7 2.9 2.3 1.25
		500V 110V 24V 48V 60V 110V 125V	A A A A A A	5.7 5.7 2.9 2.3 1.25 1.1
Operating current DC		500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55
Operating current DC		500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55
Operating current DC Operations Mechanical life Electrical life		500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	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 Safety related data	213	500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	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 Safety related data		500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A Cycles	1.4 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	213	500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	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 Safety related data Performance level B	10d according to EN/ISO 13489-1	500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A Cycles cycles	1.4 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000
Mirror contats accord	10d according to EN/ISO 13489-1	110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A Cycles cycles	1.4 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 cycles	1.4 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000 20000000 200000000



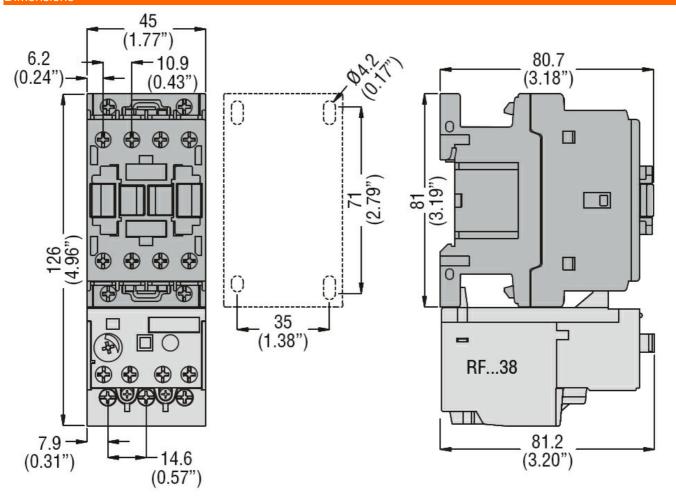


Rated AC voltage at 6	50Hz		V	575
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out	_		
		min	%Us	20
		max	%Us	55
AC average coil cons				
	of 60Hz coil powered at 60Hz	مامد سر من	1//	7.5
		in-rush	VA VA	75
Dissinction at halding	<20°C F0U-	holding	W	9
Dissipation at holding			VV	2.5
Max cycles frequency			oveloc/b	3600
Mechanical operation Operating times			cycles/h	3000
Average time for Us of	control			
, orago umo ioi os o	in AC			
	Closing NO			
	2.35mg 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
		max	ms	18
UL technical data) from the contract of the first term of the contract of the c			
Full-load current (FLA) for three-phase AC motor	-1.4001/	Δ.	7.0
		at 480V	A	7.6
Violate di monthe minelin		at 600V	A	0.375
Yielded mechanical p				
	for single-phase AC motor	110/120V	HP	0.75
		230V	HP	2
	for three-phase AC motor	230 V	111	
	ioi unoo phaoo Ao motor	200/208V	HP	3
		220/230V	HP	3
		460/480V	HP	5
		575/600V	HP	7.5
General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
		AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protectio				
	High fault			





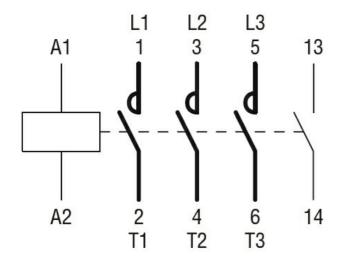
	Short circuit current	kA	100
	Fuse rating	Α	30
	Fuse class		J
Standard fault			·
	Short circuit current	kA	5
	Fuse rating	Α	60
Contact rating of auxiliary contacts according to UL			A600 - P600
Ambient conditions			
Temperature			
Operating temperature			
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions			



Wiring diagrams

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 60HZ, 575VAC, 1NO AUXILIARY CONTACT



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching