

Product designation			Power contactor
Product type designation Contact characteristics			BF09
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
operational moduloney	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)	(/		
1 1 (/	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			· ·
sanda in a control in a control in a control	≤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	A	20	
	75V	A	20	
	110V 220V	A	16	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series	2200	Α	12	
TEC max current le in DC3-DC3 with L/R \(\) Toms with 1 poles in series	≤24V	Α	10	
	≤24 V 48 V	A	9	
	75V	A	8	
	110V	A	2	
	220V	A	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	220 V			
TEO HIEX GUITER TO IT DOG DOG WILL ETT = TOTAL WILL E POICE IT SOLICE	≤24V	Α	13	
	48V	Α	11	
	75V	A	10	
	110V	Α	7	
	220V	A	2	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	220 V			
TEC MAX can six to in Eco Eco Mai En C Tomo Man o poloci in consc	≤24V	Α	15	
	48V	Α	15	
	75V	Α	13	
	110V	Α	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)		mΩ	2.5	
Power dissipation per pole (average value)				
	lth	W	1.6	
	AC-3	W	0.2	
Tightening torque for terminals				
	min	Nm	1.5	
	max	Nm	1.8	
	min	Ibin	1.1	
	max	lbin	1.5	
Tightening torque for coil terminal				
	min	Nm	0.8	
	max	Nm	1	
	min	lbin	0.8	



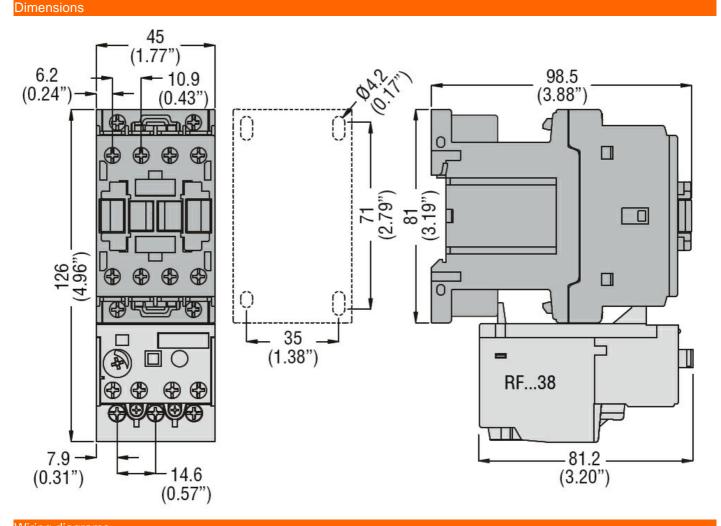
Max number of wires simultaneously connectable Conductor section AWG/Kcmil Flexible w/o lug conductor section m Flexible c/w lug conductor section flexible with insulated spade lug conductor section m Flexible with insulated spade lug conductor section fresible with insulated spade lug conductor section m Mechanical features Operating position Normallowab Fixing Weight Auxiliary contact characteristics Thermal current lth IEC/EN 60947-5-1 designation Operating current AC15 236 406 506 Operating current DC12	n m x m n m x m x m x m v m v m v m v m	nm² nm² nm² nm² g A	10 1 6 1 4 1 4 IP20 when properly wired Vertical plan ±30° Screw / DIN rail 35mm 492 10 A600 - P600
AWG/Kcmil Flexible w/o lug conductor section Flexible c/w lug conductor section Flexible c/w lug conductor section Flexible with insulated spade lug conductor section Flexible with insulated spade lug conductor section m Power terminal protection according to IEC/EN 60529 Mechanical features Operating position norm allowate Fixing Weight Auxiliary contact characteristics Thermal current lth IEC/EN 60947-5-1 designation Operating current AC15 236 406 506 Operating current DC12	n m x m n m x n n m x n n m x v v v	mm² mm² mm² mm² mm² mm² mm² mm²	1 4 1 4 IP20 when properly wired Vertical plan ±30° Screw / DIN rail 35mm 492 10 A600 - P600
Flexible w/o lug conductor section The section of	n m x m n m x n n m x n n m x v v v	mm² mm² mm² mm² mm² mm² mm² mm²	1 4 1 4 IP20 when properly wired Vertical plan ±30° Screw / DIN rail 35mm 492 10 A600 - P600
Flexible w/o lug conductor section The stable c/w lug conductor section Flexible c/w lug conductor section The stable with insulated spade lug conductor section The stable	n m x m n m x n n m x n n m x v v v	mm² mm² mm² mm² mm² mm² mm² mm²	1 4 1 4 IP20 when properly wired Vertical plan ±30° Screw / DIN rail 35mm 492 10 A600 - P600
Flexible c/w lug conductor section Flexible with insulated spade lug conductor section Flexible with insulated spade lug conductor section Flexible with insulated spade lug conductor section m Power terminal protection according to IEC/EN 60529 Wechanical features Operating position norm allowab Fixing Weight Auxiliary contact characteristics Thermal current Ith EC/EN 60947-5-1 designation Operating current AC15 236 406 506 Operating current DC12	n mx mn mx m	mm² mm² mm² mm² mm² mm² mm² mm²	1 4 1 4 IP20 when properly wired Vertical plan ±30° Screw / DIN rail 35mm 492 10 A600 - P600
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Flexible with insulated spade lug conductor section Flexible with insulated spade lug conductor section m Power terminal protection according to IEC/EN 60529 Mechanical features Operating position norm allowab Fixing Weight Auxiliary contact characteristics Thermal current lth EC/EN 60947-5-1 designation Operating current AC15 236 406 506 Operating current DC12	n mx m	mm² mm² mm²	1 4 IP20 when properly wired Vertical plan ±30° Screw / DIN rail 35mm 492 10 A600 - P600
Flexible with insulated spade lug conductor section The prover terminal protection according to IEC/EN 60529 Mechanical features Departing position The provided representation of the	n mx m	mm² mm² mm²	1 4 IP20 when properly wired Vertical plan ±30° Screw / DIN rail 35mm 492 10 A600 - P600
Flexible with insulated spade lug conductor section m m Power terminal protection according to IEC/EN 60529 Mechanical features Operating position normallowate Fixing Weight Auxiliary contact characteristics Thermal current Ith EC/EN 60947-5-1 designation Operating current AC15 230 400 500 Operating current DC12	n mx m	mm² mm²	1 4 IP20 when properly wired Vertical plan ±30° Screw / DIN rail 35mm 492 10 A600 - P600
Power terminal protection according to IEC/EN 60529 Mechanical features Operating position norm allowab Fixing Weight Auxiliary contact characteristics Thermal current Ith EC/EN 60947-5-1 designation Operating current AC15 230 400 500 Operating current DC12	x m	g A	4 IP20 when properly wired Vertical plan ±30° Screw / DIN rail 35mm 492 10 A600 - P600
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Mechanical features Operating position norm allowab Fixing Weight Auxiliary contact characteristics Thermal current lth EC/EN 60947-5-1 designation Operating current AC15 230 400 500 Operating current DC12	e VVV	A A	Vertical plan ±30° Screw / DIN rail 35mm 492 10 A600 - P600
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Operating position normallowate Fixing Weight Auxiliary contact characteristics Thermal current Ith EC/EN 60947-5-1 designation Operating current AC15 230 400 500 Operating current DC12	e VVV	A A	±30° Screw / DIN rail 35mm 492 10 A600 - P600
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Auxiliary contact characteristics Thermal current Ith IEC/EN 60947-5-1 designation Operating current AC15 230 400 500 Operating current DC12	V V	A A	10 A600 - P600
Thermal current Ith EC/EN 60947-5-1 designation Operating current AC15 230 400 500 Operating current DC12	V V	A	A600 - P600
EC/EN 60947-5-1 designation Operating current AC15 230 400 500 Operating current DC12	V V	A	A600 - P600
Operating current AC15 230 400 500 Operating current DC12	V		
230 400 500 Operating current DC12	V		3
400 500 Operating current DC12	V		3
Operating current DC12		Α	1.9
Operating current DC12	\ /	A	1.4
· ·			
110	V	Α	5.7
Operating current DC13	•		<u> </u>
24	V	Α	5.7
48		Α	2.9
60	V	Α	2.3
110	V	Α	1.25
125	V	Α	1.1
220	V	Α	0.55
600	V	Α	0.2
Operations			
Mechanical life		cles	20000000
Electrical life	су	/cles	2000000
Safety related data			
Performance level B10d according to EN/ISO 13489-1			
rated los	•	/cles	2000000
mechanical lo	d cy	cles	20000000
EMC compatibility			yes
DC coil operating		\ /	40
DC rated control voltage		V	48
DC operating voltage			
pick-up			
n	n º//	%Us	70



		max	%Us	125
	drop-out			_
		min	%Us	10
		max	%Us	40
Average coil consumpt	ion ≤20°C			
		in-rush	W	5.4
May avalog fraguesay		holding	W	5.4
Max cycles frequency			ovoloo/b	3600
Mechanical operation Operating times			cycles/h	3600
Average time for Us co	ntrol			
Average time for 03 co	in AC			
	Closing NO			
	2.00mg 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
	in DC			
	Closing NO			
		min	ms	54
	On anima NO	max	ms	66
	Opening NO	min	me	14
		max	ms ms	17
UL technical data		IIIAX	1113	17
Rated operational volta	ge AC (UL)		V	600
	for three-phase AC motor		•	
		at 480V	Α	7.6
		at 600V	Α	9
Yielded mechanical pe	formance			
, -	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	40	Α.	0.5
	A. william a sentente	AC current	A	25
	Auxiliary contacts	۸ ۲	17	600
		AC ourrent	V	600
		AC current DC voltage	A V	10 250
		DC voltage DC current	V A	1
Short-circuit protection	fuse 600V	DO Guilelle		•

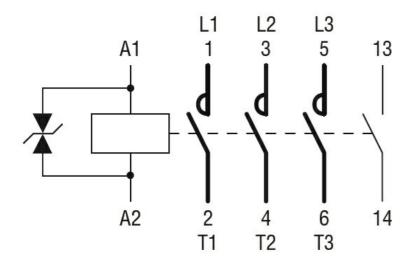
ENERGY AND AUTOMATION

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



Wiring diagrams

ENERGY AND AUTOMATION



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