electric Three-pole contactor, IEC operating current le (AC3) = 9A, AC coil 50/60Hz, 230VAC, 1NC auxiliary contact



Product designation			Power contactor
Product type designation			BF09
Contact characteristics		NI.	•
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)	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	Α	15
	48V	Α	13
	75V	Α	12
	110V	A	6
150 (1 : DO4 : 11 t/D 44 : 11 0 1 : : :	220V	Α	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		_	
	≤24V	Α	18
	48V	A	18
	75V	A	17
	110V	A	12
150	220V	Α	
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	15

Three-pole contactor, IEC operating current le (AC3) = 9A, AC coil 50/60Hz, 230VAC, 1NC auxiliary contact

	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	220 V		
The max current te in boo-boo with bit 2 forms with 2 poles in series	≤24V	Α	13
	48V		
	46 V 75 V	A	11
		A	10
	110V	A	7
IFC was a summent to in DC2 DC5 with L/D < 45 and with 2 and a few and a	220V	Α	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	-0.01	Δ.	4.5
	≤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	Α	72
	690V	Α	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	7.00	V V	U. <u>L</u>
rightering torque for terminale	min	Nm	1.5
		Nm	1.8
	max	lbin	1.0
	min	lbin	
Timbtoning town to favoral towns in al	max	IDIN	1.5
Tightening torque for coil terminal		N.L.	0.0
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8

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Three-pole contactor, IEC operating current le (AC3) = 9A, AC coil 50/60Hz, 230VAC, 1NC auxiliary contact

		max	lbin	0.74
Max number of wires	simultaneously connectable	max	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			
		min	mm²	1
	<del></del>	max	mm²	4
	Flexible with insulated spade lug conductor section		2	
		min	mm²	1
Dayyar tarminal prata	ation according to IEC/EN COECO	max	mm²	4 IP20 when wired
Mechanical features	ction according to IEC/EN 60529			iP20 when wired
Operating position				
Operating position		normal		Vertical plan
		allowable		±30°
		allowable		Screw / DIN rail
Fixing				35mm
Weight			g	356
Conductor section				
	AWG/kcmil conductor section			
		max		10
Auxiliary contact char	acteristics			
Thermal current Ith			Α	10
IEC/EN 60947-5-1 de	esignation			A600 - P600
Operating current AC	15			
		230V	Α	3
		400V	Α	1.9
<u> </u>		500V	A	1.4
Operating current DC	12	4401/		
0 " 100	10	110V	Α	5.7
Operating current DC	13	0.417	۸	r 7
		24V 48V	A	5.7
		48 V 60 V	A A	2.9 2.3
		110V	A	2.3 1.25
		125V	A	1.1
		220V	A	0.55
		600V	Α	0.2
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	2000000
Safety related data				
Performance level B1	0d according to EN/ISO 13489-1			
		rated load	cycles	2000000
		mechanical load	cycles	20000000
	ing to IEC/EN 609474-4-1			yes
EMC compatibility				yes
AC coil operating				
Rated AC voltage at \$	50/60Hz		V	230

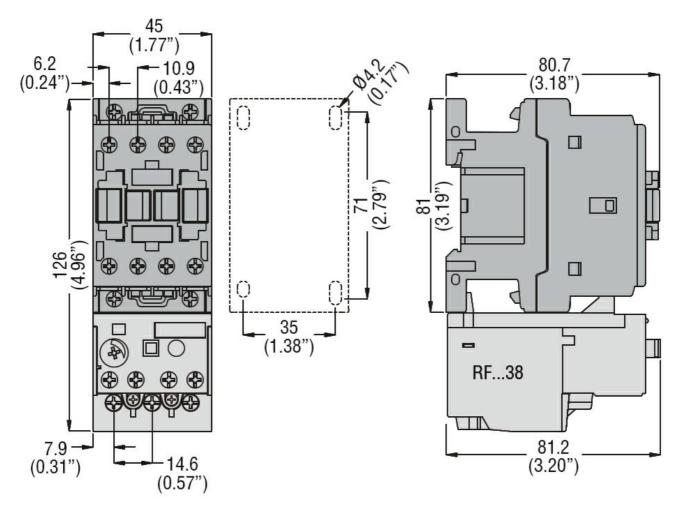
Three-pole contactor, IEC operating current le (AC3) = 9A, AC coil 50/60Hz, 230VAC, 1NC auxiliary contact

AC operating voltage				
7.0 operating vertage	of 50/60Hz coil powered at 50Hz			
	pick-up			
	рюк-ир	min	%Us	80
		max	%Us	110
	drop out	IIIdx	/005	110
	drop-out	!	0/11-	00
		min	%Us	20
	- <del> </del>	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
AC average coil consu	umption at 20°C			
	of 50/60Hz coil powered at 50Hz			
	•	in-rush	VA	75
		holding	VA	9
	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	70
		holding	VA	6.5
	of 60Hz coil powered at 60Hz	Tiolding	٧,١	3.0
	or our iz con powered at our iz	in-rush	VA	75
				9
Discipation at halding	<20°C FOLI-	holding	VA	
Dissipation at holding	S20 C 50H2		W	2.5
Max cycles frequency				
				0000
Mechanical operation			cycles/h	3600
Operating times			cycles/h	3600
			cycles/h	3600
Operating times	in AC		cycles/h	3600
Operating times			cycles/h	3600
Operating times	in AC	min	cycles/h	3600 8
Operating times	in AC	min max		
Operating times	in AC		ms	8
Operating times	in AC Closing NO		ms	8
Operating times	in AC Closing NO	max	ms ms	8 24
Operating times	in AC Closing NO	max min	ms ms	8 24 10
Operating times	in AC Closing NO Opening NO	max min max	ms ms ms	8 24 10 20
Operating times	in AC Closing NO Opening NO	max min max min	ms ms ms ms	8 24 10 20
Operating times	in AC Closing NO Opening NO Closing NC	max min max	ms ms ms	8 24 10 20
Operating times	in AC Closing NO Opening NO	max min max min max	ms ms ms ms	8 24 10 20 14 28
Operating times	in AC Closing NO Opening NO Closing NC	max min max min max min	ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us c	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 c	in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min	ms ms ms ms	8 24 10 20 14 28
Operating times Average time for Us c	in AC Closing NO Opening NO Closing NC	max min max min max min max	ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us c	in AC Closing NO Opening NO Closing NC Opening NC	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 c  UL technical data Full-load current (FLA	in AC Closing NO Opening NO Closing NC Opening NC Opening NC	max min max min max min max	ms ms ms ms ms	8 24 10 20 14 28 7 18
Operating times Average time for Us c	in AC Closing NO Opening NO Closing NC Opening NC Opening NC Opening NC	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 c  UL technical data Full-load current (FLA	in AC Closing NO Opening NO Closing NC Opening NC Opening NC	max min max min max min max at 480V at 600V	ms ms ms ms ms A	8 24 10 20 14 28 7 18
Operating times Average time for Us c  UL technical data Full-load current (FLA	in AC Closing NO Opening NO Closing NC Opening NC Opening NC Opening NC	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 7.6 0.375
Operating times Average time for Us c  UL technical data Full-load current (FLA	in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min max at 480V at 600V	ms ms ms ms ms A	8 24 10 20 14 28 7 18
Operating times Average time for Us c  UL technical data Full-load current (FLA	in AC Closing NO Opening NO Closing NC Opening NC Opening NC Opening NC	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 7.6 0.375
Operating times Average time for Us c  UL technical data Full-load current (FLA	in AC Closing NO Opening NO Closing NC Opening NC	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 7.6 0.375
Operating times Average time for Us c  UL technical data Full-load current (FLA	in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min max  at 480V at 600V  110/120V 230V	ms ms ms ms ms A A	8 24 10 20 14 28 7 18 7.6 0.375

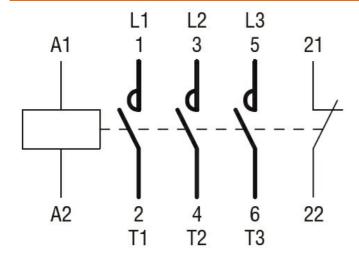
Three-pole contactor, IEC operating current le (AC3) = 9A, AC coil 50/60Hz, 230VAC, 1NC auxiliary contact

		460/480V	HP	5
		575/600V	HP	7.5
General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
	,	AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protect	tion fuse, 600V			
'	High fault			
	9	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		<u> </u>		A600 - P600
Ambient conditions				
Temperature				
	Operating temperature			
	op a company of the contract	min	°C	-50
		max	°C	70
	Storage temperature			
	Grand temperature	min	°C	-60
		max	°C	80
Max altitude		max	m	3000
Resistance & Prote	ction			3000
Pollution degree				3
Dimensions				

Three-pole contactor, IEC operating current le (AC3) = 9A, AC coil 50/60Hz, 230VAC, 1NC auxiliary contact



# Wiring diagrams



#### Certifications and compliance

## Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN 60947-1

IEC/EN 60947-4-1

UL 60947-1

UL 60947-4-1

#### Certificates



### BF0901A230

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Three-pole contactor, IEC operating current le (AC3) = 9A, AC coil 50/60Hz, 230VAC, 1NC auxiliary contact

CCC			

ETIM classification

cULus EAC

ETIM 8.0

EC000066 -Power contactor, AC switching