



Product designation		Power contactor
Product type designation		BF12
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	А	28
Operational current le		
AC-1 (≤40°C)	А	28
AC-1 (≤55°C)	А	23
AC-1 (≤70°C)	А	20
AC-3 (≤440V ≤55°C)	А	12
AC-4 (400V)	А	7.9
Rated operational power AC-3 (T≤55°C)		
230V	kW	3.2
400V	kW	5.7
415V	kW	6.2
440V	kW	6.2
500V	kW	7.5
690V	kW	10
Rated operational power AC-1 (T≤40°C)		
230V	kW	10
400V	kW	18
500V	kW	23
690V	kW	32
IEC max current le in DC1 with $L/R \le 1$ ms with 1 poles in series		
≤24V	А	17
48V	А	15
75V	Α	13
110V	Α	6
220V	Α	_
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series		
≤24V	Α	20
48V	Α	20
75V	Α	18
110V	А	13
220V	Α	1
IEC max current le in DC1 with L/R \leq 1ms with 3 poles in series		
≤24V	А	22
48V	А	22
75V	А	20
110V	А	16

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, DC COIL, 12VDC, 1NC AUXILIARY CONTACT

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	220V	Α	11
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	А	20
	48V	A	20
	46 V 75 V	A	20
	110V	A	16
	220V	A	12
IEC max current le in DC3-DC5 with L/R \leq 15ms with 1 poles in series			
	≤24V	Α	12
	48V	А	11
	75V	А	10
	110V	А	2
	220V	A	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	2201		
TEC max current te in DC5-DC5 with E/T = 15ms with 2 poles in series	<2417	^	4 5
	≤24V	A	15
	48V	А	13
	75V	А	12
	110V	Α	8
	220V	А	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
•	≤24V	А	18
	48V	A	18
	75V	A	15
	110V	A	12
	220V	Α	6
IEC max current le in DC3-DC5 with L/R \leq 15ms with 4 poles in series			
	≤24V	Α	15
	48V	Α	15
	75V	А	15
	110V	А	16
	220V	A	7
Short-time allowable current for 10s (IEC/EN60947-1)		A	150
Protection fuse		Λ	100
FIOLECHOITIUSE		•	
	gG (IEC)	Α	32
	aM (IEC)	A	12
Making capacity (RMS value)		Α	120
Breaking capacity at voltage			
	440V	А	96
	500V	А	96
	690V	A	94
Resistance per pole (average value)		mΩ	2.5
		11152	2.0
Power dissipation per pole (average value)	1.1	147	0
	Ith	W	2
	AC-3	W	0.4
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	Ibin	1.1
	max	Ibin	1.5
Tightening torque for coil terminal			··
rightening torque for our terminar			
	min	Nim	0.0
	min	Nm	0.8
	min max min	Nm Nm Ibin	0.8 1 0.8



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, DC COIL, 12VDC, 1NC AUXILIARY CONTACT

Max number of wires	simultaneously connectable	max	Ibin Nr.	0.74
Conductor section			INF.	2
	AWG/Kcmil			
	AWG/KCIIII	max		10
	Flexible w/o lug conductor section	Шал		10
		min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section			•
		min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section			
	· · · · · · · · · · · · · · · · · · ·	min	mm²	1
		max	mm²	4
				IP20 when
Power terminal prote	ection according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rai
TXITY				35mm
Weight			g	496
Conductor section				
	AWG/kcmil conductor section			
		max		10
Auxiliary contact cha	racteristics			
Thermal current Ith			Α	10
			A	10
EC/EN 60947-5-1 d	-		A	A600 - P600
	-		A	
EC/EN 60947-5-1 d	-	230V	A	
EC/EN 60947-5-1 d	-	400V		A600 - P600
EC/EN 60947-5-1 d Operating current AC	215		A	A600 - P600 3
EC/EN 60947-5-1 d	215	400V	A A	A600 - P600 3 1.9
EC/EN 60947-5-1 d Operating current AC Operating current DC	C15 C12	400V	A A	A600 - P600 3 1.9
EC/EN 60947-5-1 d Operating current AC	C15 C12	400V 500V 110V	A A A	A600 - P600 3 1.9 1.4 5.7
EC/EN 60947-5-1 d Operating current AC Operating current DC	C15 C12	400V 500V 110V 24V	A A A A	A600 - P600 3 1.9 1.4 5.7 5.7
EC/EN 60947-5-1 d Operating current AC Operating current DC	C15 C12	400V 500V 110V 24V 48V	A A A A A	A600 - P600 3 1.9 1.4 5.7 5.7 2.9
EC/EN 60947-5-1 d Operating current AC Operating current DC	C15 C12	400V 500V 110V 24V 48V 60V	A A A A A A A	A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3
EC/EN 60947-5-1 d Operating current AC Operating current DC	C15 C12	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
EC/EN 60947-5-1 d Operating current AC Operating current DC	C15 C12	400V 500V 110V 24V 48V 60V 110V 125V	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
EC/EN 60947-5-1 d Operating current AC Operating current DC	C15 C12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A A A A	A600 - P600 3 1.9 1.4 5.7 5.7 5.7 2.9 2.3 1.25 1.1 0.55
EC/EN 60947-5-1 d Operating current AC Operating current DC	C15 C12	400V 500V 110V 24V 48V 60V 110V 125V	A 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
EC/EN 60947-5-1 d Operating current AC Operating current DC Operating current DC	C15 C12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A 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
EC/EN 60947-5-1 d Operating current AC Operating current DC Operating current DC Operations Vechanical life	C15 C12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A 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 20000000
EC/EN 60947-5-1 d Operating current AC Operating current DC Operating current DC Operations Mechanical life Electrical life	C15 C12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A 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
EC/EN 60947-5-1 d Operating current AC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data	C15 C12 C13	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A 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 20000000
EC/EN 60947-5-1 d Operating current AC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data	C15 C12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A 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 20000000
EC/EN 60947-5-1 d Operating current AC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data	C15 C12 C13	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A 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 20000000
EC/EN 60947-5-1 d Operating current AC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data	215 212 213 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 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 2000000
EC/EN 60947-5-1 d Operating current AC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B	215 212 213 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 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 2000000 2000000 2000000

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1NC AUXILIARY CONTACT

				.,	10
DC rated control voltage	je			V	12
DC operating voltage					
	pick-up		min	%Us	70
				%Us %Us	125
	drop-out		max	/005	125
	ulop-out		min	%Us	10
			max	%Us	40
Average coil consump	tion ≤20°C			,	
5 1			in-rush	W	5.4
			holding	W	5.4
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us co	ontrol				
	in AC				
		Closing NO			
			min	ms	8
			max	ms	24
		Opening NO			4.0
			min	ms	10
			max	ms	20
		Closing NC	min	ma	14
			max	ms ms	28
		Opening NC	IIIdA	1115	20
		opening No	min	ms	7
			max	ms	18
	in DC			_	
		Closing NO			
		Ũ	min	ms	54
			max	ms	66
		Opening NO			
			min	ms	14
			max	ms	17
		Closing NC			
			min	ms	24
			max	ms	30
		Opening NC	min	ms	47
			max	ms	57
UL technical data			Шах	1110	01
	for three-phase AC mo	otor			
			at 480V	А	11
			at 600V	А	11
Yielded mechanical pe	rformance				
	for single-phase AC r	notor			
			110/120V	HP	1
			230V	HP	2
	for three-phase AC m	notor			
			200/208V	HP	5
			220/230V	HP	5
			460/480V	HP	7.5
			575/600V	HP	10

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The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding

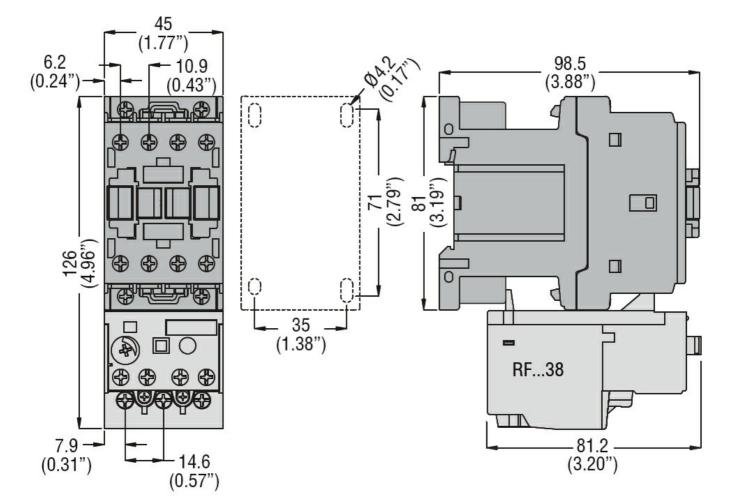


General USE			
Contactor			
	AC current	А	28
Auxiliary contacts			
	AC voltage	V	600
	AC current	А	10
	DC voltage	V	250
	DC current	Α	1
Short-circuit protection fuse, 600V			
High fault			
	Short circuit current	kA	100
	Fuse rating	А	30
	Fuse class		J
Standard fault			
	Short circuit current	kA	5
	Fuse rating	Α	70
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			

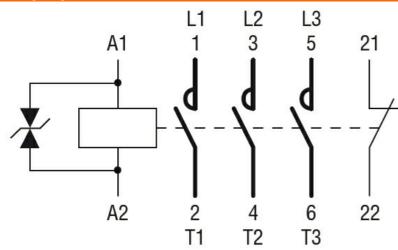
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Wiring diagrams



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	

Certificates



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