



Product designation Product type designation			Power contactor BF12
Contact characteristics			DITZ
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	5.5
	500V	kW	5
	690V	kW	5
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	A	17
	48V	A	15
	75V	A	13
	110V	A	6
IFC may autrent le in DC1 with L/D < 1 ma with 2 nales in series	220V	A	_
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series	<2414	۸	20
	≤24V	A	20
	48V 75V	A	20
	75V 110V	A A	18 13
	220V	A	1
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series	2200	A	1
	≤24V	А	22
	≤24∨ 48V	A	22
	48V 75V	A	20
	110V	A	16
	1100	~	10

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, AC COIL 50/60HZ, 48VAC, 1NO AUXILIARY CONTACT

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	220V	А	11
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series			
	≤24V	А	20
	48V	А	20
	75V	А	20
	110V	А	16
	220V	А	12
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	А	12
	48V	A	11
	75V	A	10
	110V	A	2
	220V	A	-
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	2201	A	
IEC max current le in DC3-DC3 with E/C3 T3ms with 2 poles in series	≤24V	А	15
	48V		
	48V 75V	A	13
		A	12
	110V	A	8
	220V	А	2
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 3 poles in series			
	≤24V	A	18
	48V	Α	18
	75V	A	15
	110V	А	12
	220V	A	6
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 4 poles in series			
	≤24V	А	15
	48V	А	15
	75V	А	15
	110V	А	16
	220V	Α	7
Short-time allowable current for 10s (IEC/EN60947-1)		Α	150
Protection fuse			
	gG (IEC)	А	32
	aM (IEC)	А	12
Making capacity (RMS value)		А	120
Breaking capacity at voltage			
	440V	А	96
	500V	А	96
	690V	А	94
Resistance per pole (average value)		mΩ	2.5
Power dissipation per pole (average value)			
· · · · · ·····	lth	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	Παλ		1.0
	min	Nim	0.8
	min	Nm	
	max min	Nm Ibin	1 0.8

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Max number of wires	simultaneously connectable	max	Ibin Nr.	0.74
Conductor section	simultaneously connectable		INF.	2
	AWG/Kcmil			
		max		10
	Flexible w/o lug conductor section	max		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
Power terminal prote	ction according to IEC/EN 60529			IP20 when
-				properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN ra 35mm
Waight			~	35mm 364
Weight Conductor section			g	304
Conductor section	AWG/kcmil conductor section			
	AWG/KCMII conductor section	mov		10
Auxiliary contact char	ractoristics	max		10
				10
Thermal current Ith			Δ	10
Thermal current Ith	esignation		A	10 A600 - P600
IEC/EN 60947-5-1 de	-		A	10 A600 - P600
	-	2301/		A600 - P600
IEC/EN 60947-5-1 de	-	230V 400V	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	215		A	A600 - P600 3
IEC/EN 60947-5-1 de	215	400V 500V	A A A	A600 - P600 3 1.9 1.4
IEC/EN 60947-5-1 de Operating current AC Operating current DC	C15 C12	400V	A A	A600 - P600 3 1.9
IEC/EN 60947-5-1 de Operating current AC	C15 C12	400V 500V	A A A	A600 - P600 3 1.9 1.4 5.7
IEC/EN 60947-5-1 de Operating current AC Operating current DC	C15 C12	400V 500V 110V	A A A A	A600 - P600 3 1.9 1.4
IEC/EN 60947-5-1 de 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
IEC/EN 60947-5-1 de 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
IEC/EN 60947-5-1 de 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
IEC/EN 60947-5-1 de Operating current AC Operating current DC	C15 C12	400V 500V 110V 24V 48V 60V 110V	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
IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC	C15 C12	400V 500V 110V 24V 48V 60V 110V 125V	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
IEC/EN 60947-5-1 de 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	A600 - P600 3 1.9 1.4 5.7 5.7 5.7 2.9 2.3 1.25 1.1 0.55
IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operations Mechanical life	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 2.9 2.3 1.25 1.1 0.55 0.2 20000000
IEC/EN 60947-5-1 de 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
IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data	215	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
IEC/EN 60947-5-1 de 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
IEC/EN 60947-5-1 de 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 2000000 2000000 2000000
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 B	215 212 213 10d according to EN/ISO 13489-1 me	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
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 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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THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, AC COIL 50/60HZ, 48VAC, 1NO AUXILIARY CONTACT

Rated AC voltage at 5	0/60Hz		V	48
AC operating voltage				
	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	7005	55
	pick-up			
	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	:		75
		in-rush	VA VA	75
Dissipation at holding		holding	W	9 2.5
Max cycles frequency			VV	2.0
			cvcles/h	3600
Mechanical operation			cycles/h	3600
	ontrol		cycles/h	3600
Mechanical operation Operating times	ontrol in AC		cycles/h	3600
Mechanical operation Operating times			cycles/h	3600
Mechanical operation Operating times	in AC	min	cycles/h	8
Mechanical operation Operating times	in AC Closing NO	min max		
Mechanical operation Operating times	in AC	max	ms ms	8 24
Mechanical operation Operating times	in AC Closing NO	max	ms ms ms	8 24 10
Mechanical operation Operating times	in AC Closing NO Opening NO	max	ms ms	8 24
Mechanical operation Operating times	in AC Closing NO	max min max	ms ms ms ms	8 24 10 20
Mechanical operation Operating times	in AC Closing NO Opening NO	max min max min	ms ms ms ms ms	8 24 10 20 14
Mechanical operation Operating times	in AC Closing NO Opening NO Closing NC	max min max	ms ms ms ms	8 24 10 20
Mechanical operation Operating times	in AC Closing NO Opening NO	max min max min	ms ms ms ms ms	8 24 10 20 14
Mechanical operation Operating times	in AC Closing NO Opening NO Closing NC	max min max min max	ms ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times	in AC Closing NO Opening NO Closing NC	max min max min max min	ms ms ms ms ms ms	8 24 10 20 14 28 7
Mechanical operation Operating times Average time for Us c UL technical data	in AC Closing NO Opening NO Closing NC	max min max min max min	ms ms ms ms ms ms	8 24 10 20 14 28 7
Mechanical operation Operating times Average time for Us c UL technical data	in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min max at 480V	ms ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us co UL technical data Full-load current (FLA	in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min max	ms ms ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us c UL technical data	in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min max at 480V	ms ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us co 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 ms as	8 24 10 20 14 28 7 18 11 11
Mechanical operation Operating times Average time for Us co 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 ms A A	8 24 10 20 14 28 7 18 11 11 11
Mechanical operation Operating times Average time for Us co UL technical data Full-load current (FLA	in AC Closing NO Opening NO Closing NC Closing NC Opening NC opening NC	max min max min max min max at 480V at 600V	ms ms ms ms ms ms ms as	8 24 10 20 14 28 7 18 11 11
Mechanical operation Operating times Average time for Us co 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 ms A A	8 24 10 20 14 28 7 18 11 11 11

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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



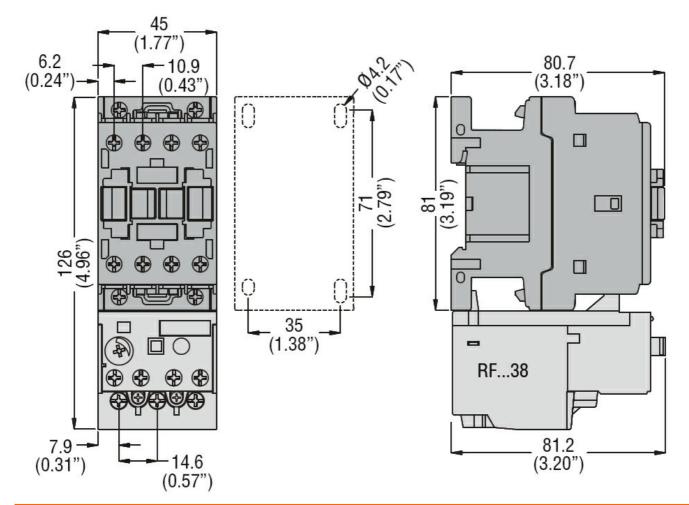
**BF1210A048** THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, AC COIL 50/60HZ, 48VAC, 1NO AUXILIARY CONTACT

		220/230V	HP	5
		460/480V	HP	7.5
		575/600V	HP	10
General USE				
	Contactor			
		AC current	А	28
	Auxiliary contacts			
		AC voltage	V	600
		AC current	А	10
		DC voltage	V	250
		DC current	А	1
Short-circuit protecti	ion 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	А	70
Contact rating of aux	kiliary 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 & Protect	ction			
Pollution degree				3
-				

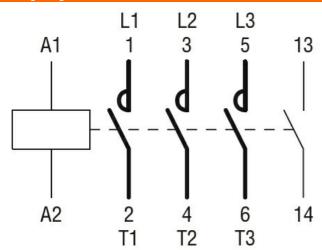
Dimensions

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Wiring diagrams



## Certifications and compliance

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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



**BF1210A048** THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, AC COIL 50/60HZ, 48VAC, 1NO AUXILIARY CONTACT

CULus EAC ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching