



Product designation			Power contactor
Product type designation			BF12
Contact characteristics			· ·
Number of poles		Nr.	4
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	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-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	А	13
	110V	А	6
	220V	Α	_
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			
	≤24V	А	20
	48V	А	20
	75V	А	18
	110V	А	13
	220V	Α	1
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series			
	≤24V	А	22
	48V	А	22
	75V	А	20
	110V	А	16
	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

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IEC max current le in DC3-DC5 with L/R \leq 15ms with 1 poles in series			
	≤24V	А	12
	48V	А	11
	75V	А	10
	110V	А	2
	220V	А	_
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 2 poles in series			
	≤24V	А	15
	48V	А	13
	75V	А	12
	110V	А	8
	220V	А	2
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 3 poles in series			
	≤24V	А	18
	48V	А	18
	75V	А	15
	110V	А	12
	220V	А	6
IEC max current le in DC3-DC5 with L/R \leq 15ms with 4 poles in series			-
	≤24V	А	15
	48V	A	15
	75V	A	15
	110V	A	16
	220V	A	7
Short-time allowable current for 10s (IEC/EN60947-1)	2201	A	150
Protection fuse			
	gG (IEC)	А	32
	aM (IEC)	A	12
Making capacity (RMS value)		A	120
Breaking capacity at voltage		7.	120
Broaking supusity at voltage	440V	А	96
	500V	A	96
	690V	A	94
Resistance per pole (average value)	0001	mΩ	2.5
Power dissipation per pole (average value)		11132	2.0
	lth	W	2
	AC-3	W	0.4
Tightening torque for terminals	A0-3	vv	0.4
	min	Nm	1.5
	max	Nm Ibin	1.8
	min	lbin Ibin	1.1 1.5
Tightening torque for coil terminal	max	Ibin	1.0
Tightening torque for coil terminal		N lur-	0.9
	min	Nm	0.8
	max	Nm	1
	min	lbin Ibin	0.8
May number of wirog aimultaneously connectable	max	lbin Nr	0.74
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil			10
	max		10
Flexible w/o lug conductor section		2	
	min	mm²	1

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FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 28A, AC COIL 50/60HZ, 110VAC

				<u>^</u>
	Elevible o/w lug conductor apption	max	mm²	6
	Flexible c/w lug conductor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor s			7
	T lexible with insulated space by conductor s	min	mm²	1
		max	mm²	4
		Пах		IP20 when
Power terminal protec	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			
		max		10
Operations				
Mechanical life			cycles	2000000
Electrical life			cycles	2000000
Safety related data				
Performance level B1	0d according to EN/ISO 13489-1			
		rated load	cycles	2000000
		mechanical load	cycles	2000000
	ng to IEC/EN 609474-4-1			yes
EMC compatibility				yes
AC coil operating	0/001-		M	440
Rated AC voltage at 5	0/60H2		V	110
AC operating voltage	of 50/001 to optime ware diet 501 to			
	of 50/60Hz coil powered at 50Hz			
	pick-up	min	%Us	80
			%Us %Us	110
	drop-out	max	/005	110
	diop-out	min	%Us	20
		max	%Us	55
	of 50/60Hz coil powered at 60Hz	max	,000	~~
	pick-up			
	breit ab	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			
		in-rush	VA	75

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BF12T4A110 FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 28A, AC COIL 50/60HZ, 110VAC

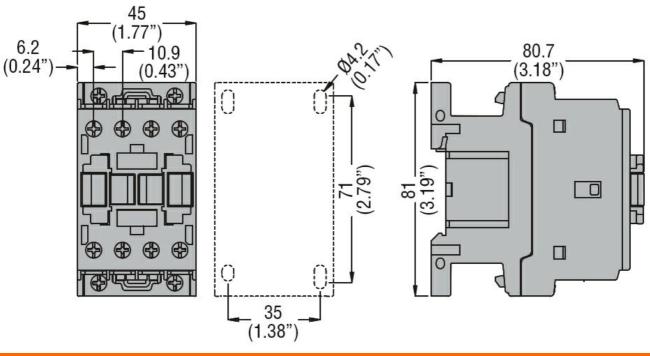
Mechanical operation cycles/h 3600 Operating times verage time for Us control in AC verage time for MS 24 Opening NO min ms 14 verage time for Us control in AC 14 Usechnical data min ms 7 verage time for Us 11 fielded mechanical performance for single-phase AC motor at 4800V A 11 11 fielded mechanical performance 110/120V HP 1 11 11 fielded mechanical performance 110/120V HP 1 11 11 11 fielded mechanical performance 110/120V HP 1 11 11 11 fielded mechanical performance 110/120V HP 1 11 11 11 11 11 11			holding	VA	9
Mechanical operation cycles/h 3600 Operating times verage time for Us control in AC verage time for MS 24 Opening NO min ms 14 verage time for Us control in AC 14 Usechnical data min ms 7 verage time for Us 11 fielded mechanical performance for single-phase AC motor at 4800V A 11 11 fielded mechanical performance 110/120V HP 1 11 11 fielded mechanical performance 110/120V HP 1 11 11 11 fielded mechanical performance 110/120V HP 1 11 11 11 fielded mechanical performance 110/120V HP 1 11 11 11 11 11 11		≤20°C 50Hz		W	2.5
Sperating times Warage time for Us control in AC Closing NO min ms Max ms Opening NO min ms Closing NC min ms Max ms Opening NC min ms Opening NC min ms Minitian ms Opening NC min ms Minitian ms Opening NC min ms Minitian ms Minitian ms Minitian ms Minitian ms Minitian minitian Mini	Max cycles frequency				
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in AC Closing NO max ms 24 Opening NO min ms 10 max ms 20 min ms 10 max ms 20 min ms 14 max ms 28 Opening NC min ms 7 max ms 18 24 max ms 18 28 Opening NC min ms 7 max ms 18 28 Opening NC min ms 7 max ms 18 28 0 max ms 18 18 28 0 max ms 18 18 28 0 max ms 18 18 28 0 max ms 18 18 28 0 max ms 18 18 28 0 max ms 18 18 28 0 10 10 10 10 10 10 10 10 10		under al			
Closing NO min	Average time for Us co				
min ms 8 Opening NO min ms 10 max ms 20 1 Closing NC min ms 10 max ms 20 1 Closing NC min ms 14 max ms 28 1 Opening NC max ms 18 UILload current (FLA) for three-phase AC motor at 600V A 11 fielded mechanical performance for single-phase AC motor 110/120V HP 1 200/208V HP 5 220/230V HP 5 220/230V HP 5 220/230V HP 5 3hort-circuit protection fuse, 600V High fault KA 100 Fuse rating A 30 Short circuit current KA 100 Fuse rating A 70 Ambient conditions Fuse rating A 70 To Fineperature min °C -50 </td <td></td> <td></td> <td></td> <td></td> <td></td>					
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Opening NO max ms 10 max ms 20 Closing NC min ms 14 min ms 28 Opening NC min ms 7 max ms 18 7 Used current (FLA) for three-phase AC motor at 480V A 11 fielded mechanical performance at 600V A 11 fielded mechanical performance for three-phase AC motor 200/208V HP 1 2200/208V HP 5 220/203V HP 5 for three-phase AC motor 200/208V HP 5 220/203V HP 5 for three-phase AC motor 200/208V HP 5 220/203V HP 5 for three-phase AC motor 200/208V HP 5 220/203V HP 5 for three-phase AC motor 200/208V HP 5 220/203V HP 5 general USE Contactor KA 2					
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Interview max ms 18 JL technical data		Opening NC			_
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$\begin{array}{c c c c c c c } & 110'120V & HP & 1 \\ & 230V & HP & 2 \\ \hline for three-phase AC motor & 200/208V & HP & 5 \\ & 220/230V & HP & 5 \\ & 220/230V & HP & 5 \\ & 460/480V & HP & 7.5 \\ & 575/600V & HP & 10 \\ \hline \end{array}$	neided mechanical pe				
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$\begin{array}{c c c c c c c } 200/208V & HP & 5 \\ 220/230V & HP & 5 \\ 460/480V & HP & 7.5 \\ 575/600V & HP & 10 \\ \hline \end{array}$		for three-phase AC motor			-
$\begin{array}{c c c c c c c } 220/230V & HP & 5 \\ 460/480V & HP & 7.5 \\ 575/600V & HP & 10 \end{array}$ Seneral USE $\begin{array}{c c c c c } Contactor & & & & & & & & & & & & & & & & & & &$			200/208V	HP	5
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Contactor AC current A 28 Short-circuit protection fuse, 600V High fault Short circuit current kA 100 Fuse rating A 30 30 Fuse rating A 30 30 Standard fault Short circuit current kA 5 Standard fault Short circuit current kA 5 Ambient conditions Fuse rating A 70 Ambient conditions Operating temperature min °C -50 Max °C 70 70 70 Storage temperature min °C -60 70 Max altitude m 3000 3000			575/600V	HP	10
AC current A 28 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 A 70 Ambient conditions Temperature Operating temperature Operating temperature Max attitude min °C -50 max °C 70 Storage temperature Max attitude m 3000	General USE				
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 A 70 Ambient conditions Femperature Operating temperature Max altitude min °C -60 max °C 80 Max altitude min 3000		Contactor			
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Short circuit current kA 100 Fuse rating A 30 Fuse class J Standard fault Short circuit current kA 5 Fuse rating A 70 Ambient conditions Fuse rating A 70 Ambient conditions Fuse rating A 70 Coperating temperature min °C -50 max °C 70 Storage temperature min °C -60 Max altitude m 3000 Resistance & Protection m 3000	Short-circuit protection				
Fuse rating Fuse class A 30 Standard fault J Short circuit current Fuse rating KA 5 Ambient conditions Fuse rating A 70 Ambient conditions V V V Temperature Operating temperature V -50 Max °C -50 -50 Max °C 70 -70 Storage temperature V -70 Max altitude min °C -60 Max altitude m 3000 Resistance & Protection V -10		High fault			400
Fuse class J Standard fault Short circuit current kA 5 Fuse rating A 70 Ambient conditions Femperature min °C -50 Coperating temperature min °C -50 Storage temperature min °C -60 Max altitude m 3000 Resistance & Protection Wataltitude The storage temperature					
Standard fault Short circuit current kA 5 Fuse rating A 70 Ambient conditions Fuse rating A 70 Temperature Operating temperature min °C -50 Max °C 70 70 70 Storage temperature min °C -60 Max altitude m 3000 3000 Resistance & Protection Fortection Fortection Fortection			-	А	
Short circuit current Fuse rating kA 5 Ambient conditions A 70 Temperature Operating temperature min °C -50 max °C 70 70 Storage temperature min °C -60 max °C 80 80 Max altitude m 3000 Resistance & Protection Value Value		Standard fault	Fuse class		J
Fuse rating A 70 Ambient conditions		Stanuaru iauli	Short circuit current	kΔ	5
Ambient conditions Femperature Operating temperature min °C -50 max °C 70 Storage temperature min °C -60 max °C 80 Max altitude m 3000 Resistance & Protection Fortection					
Femperature Min °C -50 min °C 70 Storage temperature min °C -60 max °C 80 Max altitude m 3000 Resistance & Protection	Ambient conditions			~	
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min °C -50 max °C 70 Storage temperature min °C -60 max °C 80 Max altitude m 3000 Resistance & Protection -50 -50		Operating temperature			
max °C 70 Storage temperature min °C -60 max °C 80 Max altitude m 3000			min	°C	-50
Storage temperature min °C -60 max °C 80 Max altitude m 3000 Resistance & Protection Water Content of the second					
min °C -60 max °C 80 Max altitude m 3000 Resistance & Protection Wassian constraints		Storage temperature			
Max altitude m 3000 Resistance & Protection			min	°C	-60
Resistance & Protection			max	°C	80
	Max altitude			m	3000
Pollution degree 3		n			
	Pollution degree				3

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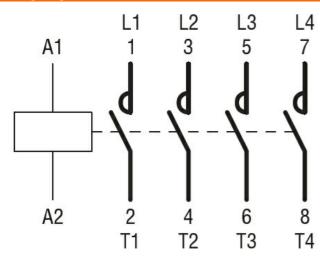
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Dimensions



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	
	cULus	
	EAC	
ETIM classification		
		EC000066 -
ETIM 8.0		Power contactor,
		AC switching