



Product designation Product type designation			Power contactor BFS12
Contact characteristics			2
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 (≤40°C) with 16mm² wire and fork end	lugA	0
	AC-1 (≤55°C)	Α	23
	AC-1 (≤55°C) with 16mm² wire and fork end	lugA	0
	AC-1 (≤70°C)	А	20
	AC-1 (≤70°C) with 16mm² wire and fork end		0
	AC-3 (≤440V ≤55°C)	A	12
	AC-4 (400V)	A	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)	0001/	1.147	4.0
	230V	kW	10
	400V	kW	18
	500V	kW	23
IFC may autrent le in DC1 with L/D < 1 ma with	690V	kW	32
IEC max current le in DC1 with $L/R \le 1$ ms wit	•	^	47
	≤24V 48V	A A	17 15
	48V 75V	A	13
	75V 110V	A	6
	220V	A	0 _
IEC max current le in DC1 with L/R ≤ 1ms wit		~	
	≤24V	А	20
	48V	A	20
	40V 75V	A	18
	110V	A	13
	220V	A	1
IEC max current le in DC1 with $L/R \le 1$ ms wit			
	≤24V	А	22
	-211		



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		_		
	48V	Α	22	
	75V	А	20	
	110V	А	16	
	220V	Α	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 se	eries			
'	≤24V	А	12	
	48V	A	11	
	75V	A	10	
	110V	A	2	
	220V	A	<u> </u>	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in se		Λ		
TEC max current le in DC3-DC3 with E/K = 15ms with 2 poles in se		۸	15	
	≤24V	A	15	
	48V	A	13	
	75V	A	12	
	110V	A	8	
	220V	Α	2	
IEC max current le in DC3-DC5 with L/R \leq 15ms with 3 poles in se				
	≤24V	А	18	
	48V	А	18	
	75V	А	15	
	110V	А	12	
	220V	Α	6	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in se	eries			
	≤24V	А	15	
	48V	А	15	
	75V	А	15	
	110V	А	16	
	220V	А	7	
Short-time allowable current for 10s (IEC/EN60947-1)		Α	150	
Protection fuse				
	gG (IEC)	А	32	
	aM (IEC)	A	12	
Making capacity (RMS value)		A	120	
		A	120	
Breaking capacity at voltage	440)/		00	
	440V	A	96	
	500V	A	96	
	690V	A	94	
Resistance per pole (average value)		mΩ	2.5	
Power dissipation per pole (average value)				
	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



	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8
	max	lbin	0.74
Max number of wires	simultaneously connectable	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
	max	mm²	4
	Flexible with insulated spade lug conductor section		
	min	mm²	1
	max	mm²	4
Dower terminal prote	ation apporting to IEC/EN 60520		IP20 when
Power terminal prote	ction according to IEC/EN 60529		properly wired
Cable stripping lengh	t		
	main circuit	mm	0
	command circuit	mm	0
	auxiliary circuit	mm	0
Mechanical features			
Operating position			
	normal		Vertical plan
	allowable		±30°
Fixing			Screw / DIN rail 35mm
Weight		g	354
Auxiliary contact char	racteristics		
Thermal current Ith		А	10
IEC/EN 60947-5-1 de	esignation		A600 - Q600
Operating current AC			
	230V	А	3
	400V	А	1.9
	500V	А	1.4
Operating current DC	212		
-	24V	А	0
	48V	А	0
	60V	А	0
	125V	А	0
	220V	А	0
	600V	А	0
Operating current DC			
-	110V	А	1.25
	125V	А	0.55
	600V	А	0.1
Operations			
Mechanical life		cycles	20000000
Electrical life		cycles	2000000
Safety related data		.,	
	10d according to EN/ISO 13489-1		
	rated load	cycles	2000000

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		mechanical load	cycles	2000000
Mirror contats according	ng to IEC/EN 609474-4-1			Yes
EMC compatibility				yes
Electrical characteristic				
Operating current DC1	3			
		250V	A	0.27
		440V	А	0.15
		500V	А	0.13
AC coil operating				
Rated AC voltage at 5	0/60Hz		V	230
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up		0/11-	00
		min	%Us %Us	80
	drop out	max	%08	110
	drop-out	min	%Us	20
		max	%Us %Us	20 55
	of 50/60Hz coil powered at 60Hz	Πdλ	/003	50
	pick-up			
	how ab	min	%Us	85
		max	%Us	110
	drop-out	Пах	/000	
		min	%Us	20
		max	%Us	55
AC average coil consu	Imption at 20°C			
U U	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
		holding	VA	9
Dissipation at holding	≤20°C 50Hz		W	2.5
DC coil operating				
DC operating voltage				
	pick-up			
		min	%Us	0
	· · · · · · · · · · · · · · · · · · ·	max	%Us	0
	drop-out			
		min	%Us	0
		max	%Us	0
Average coil consump	tion ≤20°C		147	0
		in-rush	W	0
Max avalas fragmente		holding	W	0
Max cycles frequency			ovolaa //-	2600
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us co	in AC			
	Closing NO	min	me	Q
		min	ms	8

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THREE-POLE SAFETY CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, AC COIL 50/60HZ, 230VAC, 2NO+3NC AUXILIARY CONTACT

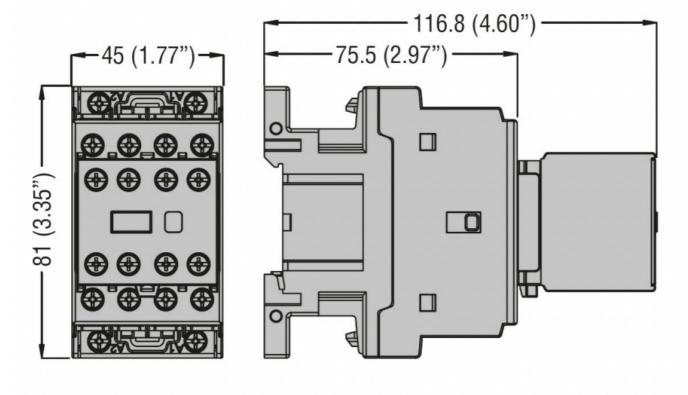
			max	ms	24
		Opening NO			
		oponing i to	min	ms	10
			max	ms	20
		Closing NC			
			min	ms	14
			max	ms	28
		Opening NC		-	-
		Opening NO			7
			min	ms	7
			max	ms	18
	in DC				
		Closing NO			
		5 5 5	min	ms	0
			max	ms	0
		Opening NO			
			min	ms	0
			max	ms	0
		Closing NC			
			~:-	ma	0
			min	ms	0
			max	ms	0
		Opening NC			
			min	ms	0
			max	ms	0
			IIIdA	1115	0
UL technical data					
Rated operational volt				V	600
Full-load current (FLA) for three-phase AC m	otor			
			at 480V	А	11
				А	11
			albuuv		
Violded mechanical p	orformanaa		at 600V	~	
Yielded mechanical p			at 600 v	~	
Yielded mechanical p	erformance for single-phase AC	motor			
Yielded mechanical p		motor	110/120V	HP	1
Yielded mechanical p		motor	110/120V	HP	1
Yielded mechanical p	for single-phase AC				
Yielded mechanical p			110/120V 230V	HP HP	1 2
Yielded mechanical p	for single-phase AC		110/120V 230V 200/208V	HP HP HP	1 2 5
Yielded mechanical p	for single-phase AC		110/120V 230V 200/208V 220/230V	HP HP HP HP	1 2 5 5
Yielded mechanical p	for single-phase AC		110/120V 230V 200/208V	HP HP HP	1 2 5
Yielded mechanical p	for single-phase AC		110/120V 230V 200/208V 220/230V	HP HP HP HP	1 2 5 5
	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V	HP HP HP HP HP	1 2 5 5 7.5
Yielded mechanical po	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V	HP HP HP HP HP	1 2 5 5 7.5
	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V	HP HP HP HP HP	1 2 5 5 7.5 10
	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V	HP HP HP HP HP	1 2 5 5 7.5
	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V	HP HP HP HP HP	1 2 5 5 7.5 10
	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current	HP HP HP HP HP	1 2 5 5 7.5 10
	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage	HP HP HP HP HP A	1 2 5 5 7.5 10 28 600
	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current	HP HP HP HP HP A	1 2 5 5 7.5 10 28 600 10
	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage	HP HP HP HP HP A V A V	1 2 5 5 7.5 10 28 600 10 250
General USE	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current	HP HP HP HP HP A	1 2 5 5 7.5 10 28 600 10
	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage	HP HP HP HP HP A V A V	1 2 5 5 7.5 10 28 600 10 250
General USE	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage	HP HP HP HP HP A V A V	1 2 5 5 7.5 10 28 600 10 250
General USE	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage DC current	HP HP HP HP HP V A V A	1 2 5 5 7.5 10 28 600 10 250 1
General USE	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage DC current	HP HP HP HP HP A V A V A V A	1 2 5 5 5 7.5 10 28 600 10 250 1
General USE	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage DC current Short circuit current Fuse rating	HP HP HP HP HP V A V A	1 2 5 5 5 7.5 10 28 600 10 250 1 1 100 30
General USE	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage DC current	HP HP HP HP HP A V A V A V A	1 2 5 5 5 7.5 10 28 600 10 250 1
General USE	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage DC current Short circuit current Fuse rating	HP HP HP HP HP A V A V A V A	1 2 5 5 5 7.5 10 28 600 10 250 1 1 100 30
General USE	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage DC current Short circuit current Fuse rating	HP HP HP HP HP A V A V A V A	1 2 5 5 5 7.5 10 28 600 10 250 1 1 100 30
General USE	for single-phase AC		110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage DC current Short circuit current Fuse rating Fuse class Short circuit current	HP HP HP HP HP A V A V A V A kA A kA	1 2 5 5 5 7.5 10 28 600 10 250 1 1 100 30 J 5
General USE	for single-phase AC for three-phase AC r Contactor Auxiliary contacts n fuse, 600V High fault Standard fault	notor	110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage DC current Short circuit current Fuse rating Fuse class	HP HP HP HP HP A V A V A V A kA A	1 2 5 5 5 7.5 10 28 600 10 250 1 1 100 30 J 5 70
General USE	for single-phase AC	notor	110/120V 230V 200/208V 220/230V 460/480V 575/600V AC current AC voltage AC current DC voltage DC current Short circuit current Fuse rating Fuse class Short circuit current	HP HP HP HP HP A V A V A V A kA A kA	1 2 5 5 5 7.5 10 28 600 10 250 1 1 100 30 J 5

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 BFS1223A230



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			
Impact resistance			0
Vibration resistance			0
Special thermic treatments			0
Pollution degree			3
Resistance to flame (GWT)			0
Flame retardant according to UL94			0
Dimensions			



Wiring diagrams

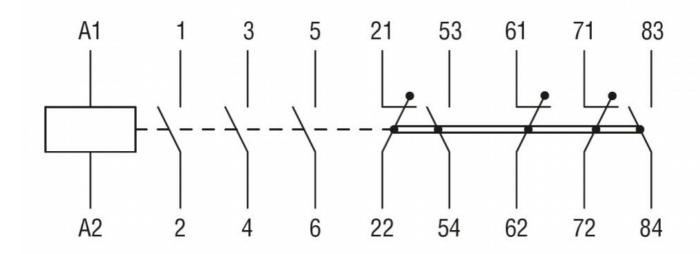
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BFS1223A230 THREE-POLE SAFETY CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, AC COIL

ENERGY AND AUTOMATION

50/60HZ, 230VAC, 2NO+3NC AUXILIARY CONTACT



Certifications and	d 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	
	IEC/EN/BS 60947-5-1	
	UL 60947-1	
	UL 60947-4-1	
Certificates		
	cULus	
	UL listed for USA and Canada	
ETIM classification	on	
		EC000066 -

ETIM 8.0

Power contactor, AC switching

BFS1223A230