BFS3222A024

THREE-POLE SAFETY CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 32A, AC COIL 50/60HZ, 24VAC, 2NO+2NC AUXILIARY CONTACT

Product designation			Power contactor
Product type designation			BFS32
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		A	56
Operational current Ie			
	AC-1 (≤40°C)	A	56
	AC-1 (≤40°C) with 16mm² wire and fork end lug	A	0
	AC-1 (≤55°C)	A	45
	AC-1 (≤55°C) with 16mm² wire and fork end lug	A	0
	AC-1 (≤70°C)	A	40
	AC-1 (≤70°C) with 16mm² wire and fork end lug	A	0
	AC-3 (≤440V ≤55°C)	A	32
	AC-4 (400V)	A	13.5
Rated operational power AC-3 (T≤55°C)			
	230V	kW	8.8
	400V	kW	16
	415V	kW	17
	440V	kW	17
	500V	kW	20
	690V	kW	22
Rated operational power AC-1 (T≤40°C)			
	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current Ie in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	A	30
	48V	A	26
	75V	A	22
	110V	A	8
	220V	A	–
IEC max current Ie in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	A	32
	48V	A	32
	75V	A	28
	110V	A	25
	220V	A	3
IEC max current Ie in DC1 with L/R ≤ 1ms with 3 poles in series			
	≤24V	A	32

	48V	A	32
	75V	A	32
	110V	A	27
	220V	A	23
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	–
	48V	A	–
	75V	A	–
	110V	A	–
	220V	A	–
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	20
	48V	A	17
	75V	A	15
	110V	A	2,5
	220V	A	–
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	25
	48V	A	22
	75V	A	20
	110V	A	15
	220V	A	3
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	30
	48V	A	28
	75V	A	28
	110V	A	20
	220V	A	23
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	–
	48V	A	–
	75V	A	–
	110V	A	–
	220V	A	–
Short-time allowable current for 10s (IEC/EN60947-1)		A	320
Protection fuse			
	gG (IEC)	A	63
	aM (IEC)	A	32
Making capacity (RMS value)		A	320
Breaking capacity at voltage			
	440V	A	256
	500V	A	240
	690V	A	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
	Ith	W	6
	AC-3	W	2
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
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		6
Flexible w/o lug conductor section			
	min	mm²	2.5
	max	mm²	16
Flexible c/w lug conductor section			
	min	mm²	1
	max	mm²	10
Flexible with insulated spade lug conductor section			
	min	mm²	1
	max	mm²	10
Power terminal protection according to IEC/EN 60529			IP20 when properly wired
Cable stripping lenght			
	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	432
Auxiliary contact characteristics			
Type of contact			0
Thermal current Ith		A	0
IEC/EN 60947-5-1 designation			A600 - Q600
Operating current AC15			
	230V	A	3
	400V	A	1.9
	500V	A	1.4
Operating current DC12			
	24V	A	0
	48V	A	0
	60V	A	0
	125V	A	0
	220V	A	0
	600V	A	0
Operating current DC13			
	125V	A	0.55
	600V	A	0.1
Operations			
Mechanical life		cycles	20000000
Electrical life		cycles	1600000
Safety related data			
Performance level B10d according to EN/ISO 13489-1			

		rated load	cycles	1600000
		mechanical load	cycles	20000000
EMC compatibility				yes
Electrical characteristics				
Operating current DC13				
		250V	A	0.27
		440V	A	0.15
		500V	A	0.13
AC coil operating				
Rated AC voltage at 50/60Hz			V	24
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
		min	%Us	20
		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 consumption 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
		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 consumption ≤20°C				
		in-rush	W	0
		holding	W	0
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us control				
	in AC			
	Closing NO			
		min	ms	8

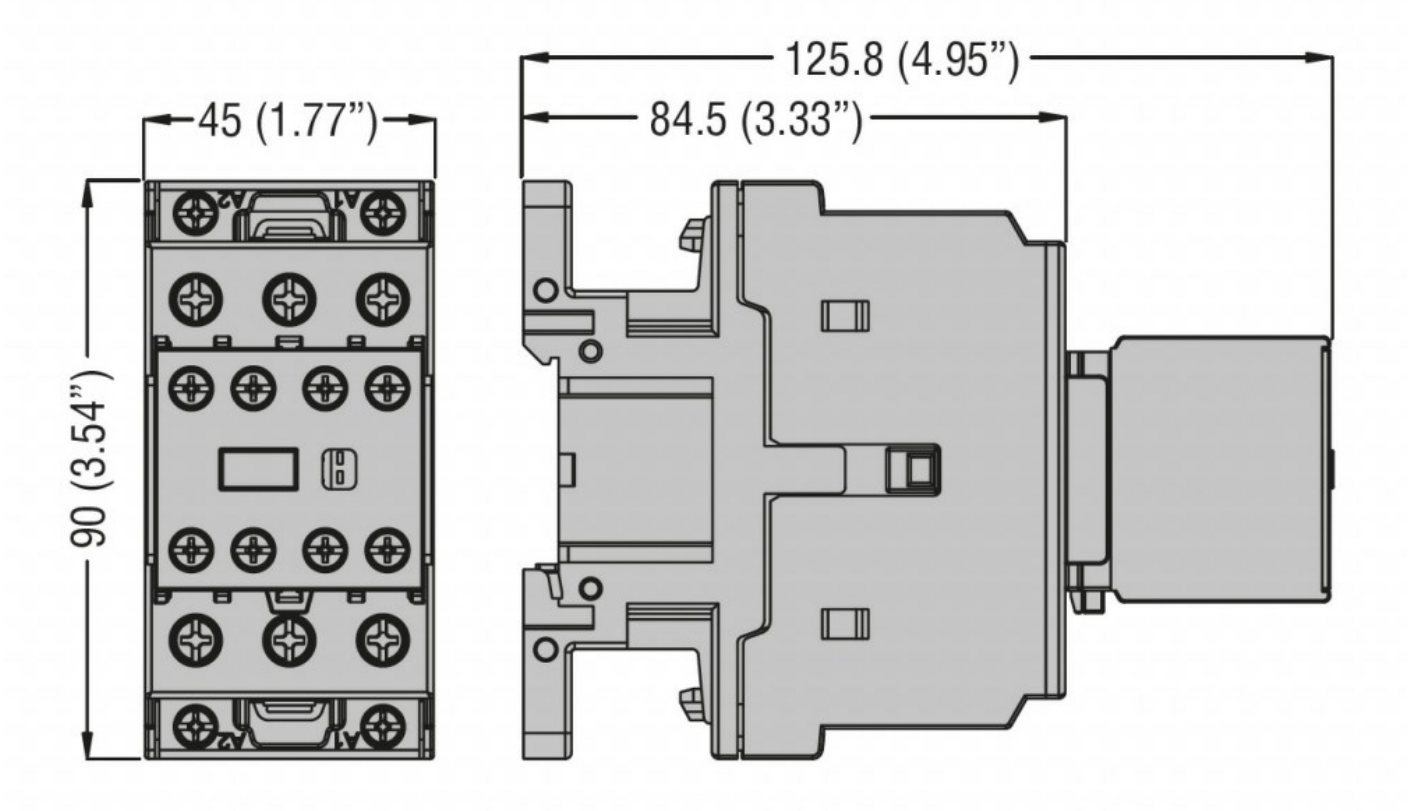
			max	ms	24
		Opening NO			
			min	ms	5
			max	ms	15
		Closing NC			
			min	ms	9
			max	ms	20
		Opening NC			
			min	ms	9
			max	ms	17
	in DC				
		Closing NO			
			min	ms	0
			max	ms	0
		Opening NO			
			min	ms	0
			max	ms	0
		Closing NC			
			min	ms	0
			max	ms	0
		Opening NC			
			min	ms	0
			max	ms	0
UL technical data					
Rated operational voltage AC (UL)				V	600
Full-load current (FLA) for three-phase AC motor					
			at 480V	A	27
			at 600V	A	27
Yielded mechanical performance					
	for single-phase AC motor				
			110/120V	HP	3
			230V	HP	7.5
	for three-phase AC motor				
			200/208V	HP	10
			220/230V	HP	10
			460/480V	HP	20
			575/600V	HP	25
General USE					
	Contactor				
			AC current	A	55
Short-circuit protection fuse, 600V					
	High fault				
			Short circuit current	kA	100
			Fuse rating	A	100
			Fuse class		J
	Standard fault				
			Short circuit current	kA	5
			Fuse rating	A	125
Contact rating of auxiliary contacts according to UL					A600 - Q600
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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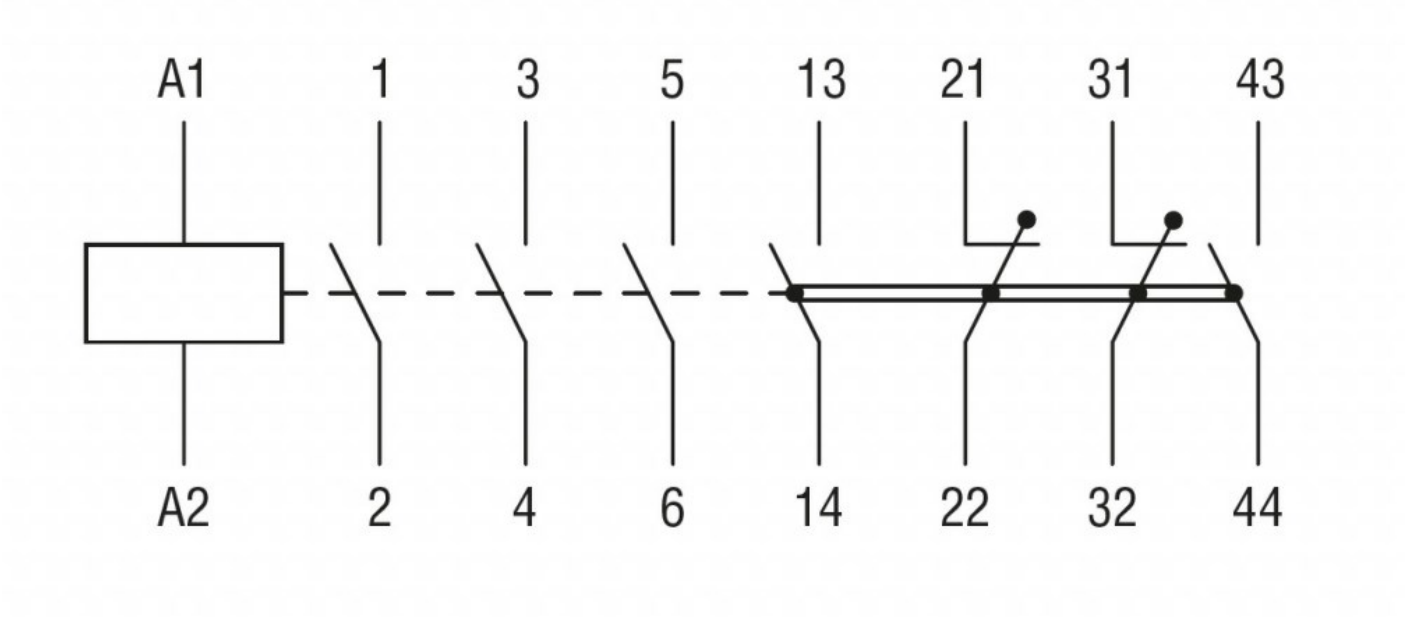

Certifications and compliance

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
IEC/EN/BS 60947-5-1
UL 60947-1
UL 60947-4-1

Certificates

cULus
UL listed for USA and Canada

ETIM classification

ETIM 8.0	EC000066 - Power contactor, AC switching