



Product designation				Power contactor
Product type designation				BFS32
Contact characteristics				
Number of poles	Nr.			3
Rated insulation voltage U_i IEC/EN	V			690
Rated impulse withstand voltage U_{imp}	kV			6
Operational frequency	min	Hz		25
	max	Hz		400
IEC Conventional free air thermal current I_{th}	A			56
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A		56
	AC-1 ($\leq 40^\circ\text{C}$) with 16mm ² wire and fork end lug	A		0
	AC-1 ($\leq 55^\circ\text{C}$)	A		45
	AC-1 ($\leq 55^\circ\text{C}$) with 16mm ² wire and fork end lug	A		0
	AC-1 ($\leq 70^\circ\text{C}$)	A		40
	AC-1 ($\leq 70^\circ\text{C}$) with 16mm ² wire and fork end lug	A		0
	AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$)	A		32
	AC-4 (400V)	A		13.5
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V	kW		8.8
	400V	kW		16
	415V	kW		17
	440V	kW		17
	500V	kW		20
	690V	kW		22
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW		21
	400V	kW		36
	500V	kW		45
	690V	kW		62
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A		30
	48V	A		26
	75V	A		22
	110V	A		8
	220V	A		–
	IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	$\leq 24\text{V}$	A	
48V		A		32
75V		A		28
110V		A		25
220V		A		3
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series		$\leq 24\text{V}$	A	

	48V	A	32
	75V	A	32
	110V	A	27
	220V	A	23
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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	–
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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	–
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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
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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
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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	–
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Short-time allowable current for 10s (IEC/EN60947-1)		A	320
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Protection fuse	gG (IEC)	A	63
	aM (IEC)	A	32
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Making capacity (RMS value)		A	320
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Breaking capacity at voltage	440V	A	256
	500V	A	240
	690V	A	192
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Resistance per pole (average value)		mΩ	2
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Power dissipation per pole (average value)	Ith	W	6
	AC-3	W	2
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Tightening torque for terminals	min	Nm	2.5
	max	Nm	3
	min	Ibin	1.8
	max	Ibin	2.2
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Tightening torque for coil terminal			

	min	Nm	0.8
	max	Nm	1
	min	Ibin	0.8
	max	Ibin	0.74
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil			
	max		6
Flexible w/o lug conductor section			
	min	mm ²	2.5
	max	mm ²	16
Flexible c/w lug conductor section			
	min	mm ²	1
	max	mm ²	10
Flexible with insulated spade lug conductor section			
	min	mm ²	1
	max	mm ²	10
Power terminal protection according to IEC/EN 60529			IP20 when properly wired
Mechanical features			
Operating position			
	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	424
Auxiliary contact characteristics			
Type of contact			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	2000000
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 230

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
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	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
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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
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Ambient conditions

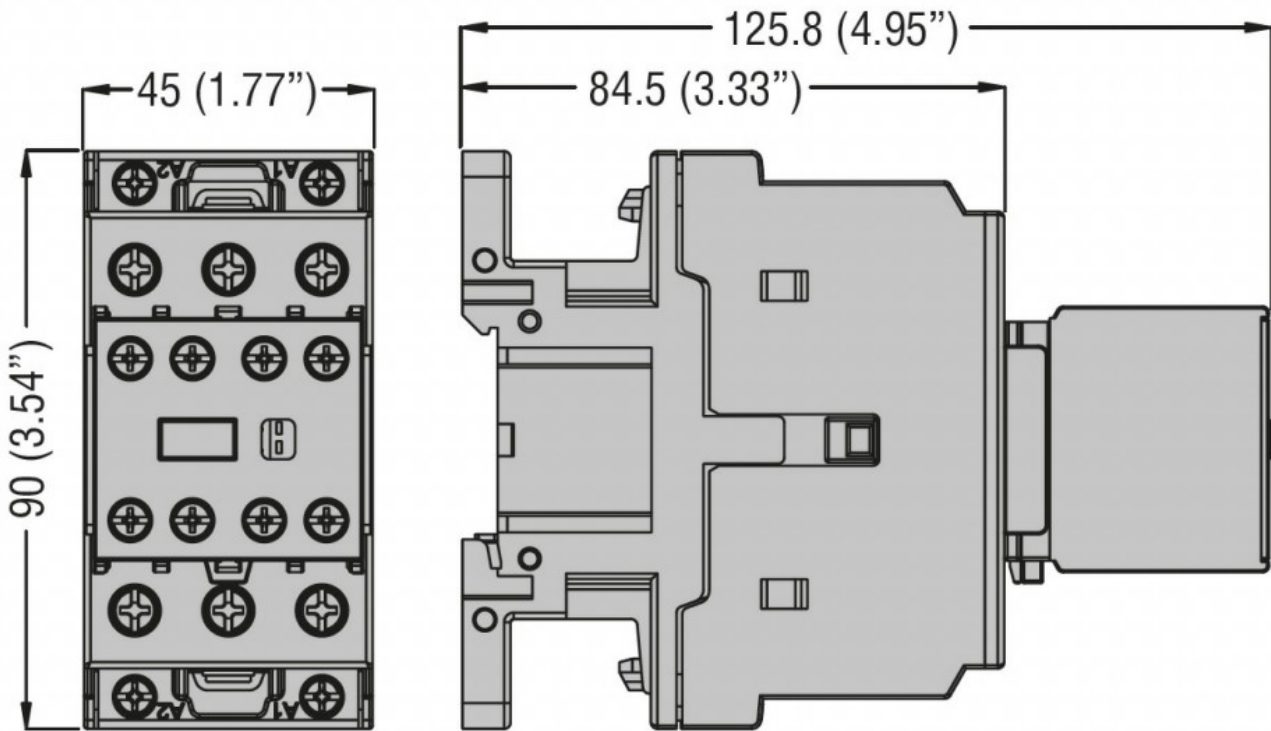
Temperature	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80

Max altitude		m		3000
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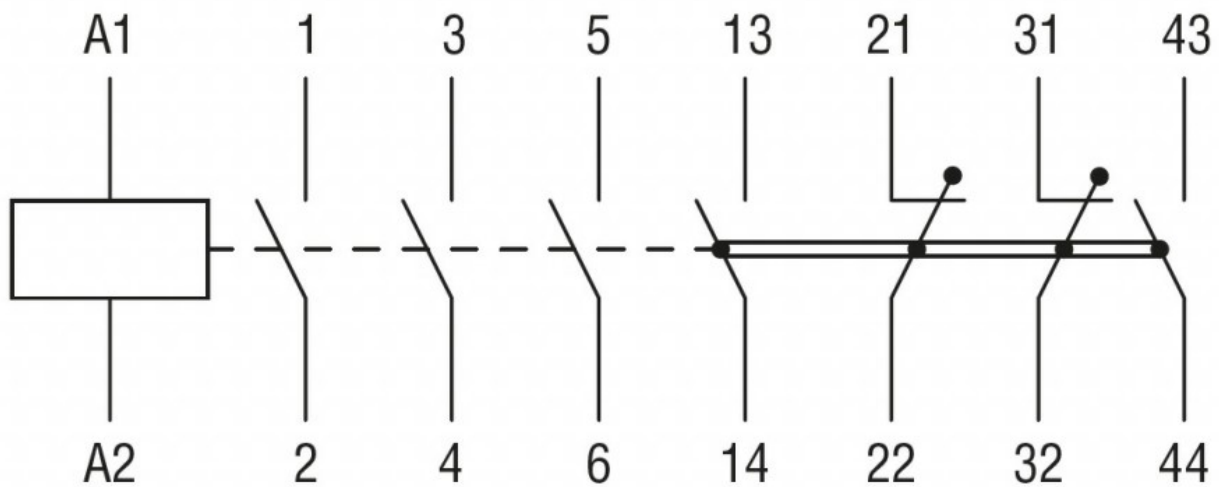
Resistance & Protection

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



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

THREE-POLE SAFETY CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 32A, AC COIL
50/60HZ, 230VAC, 2NO+2NC AUXILIARY CONTACT

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