



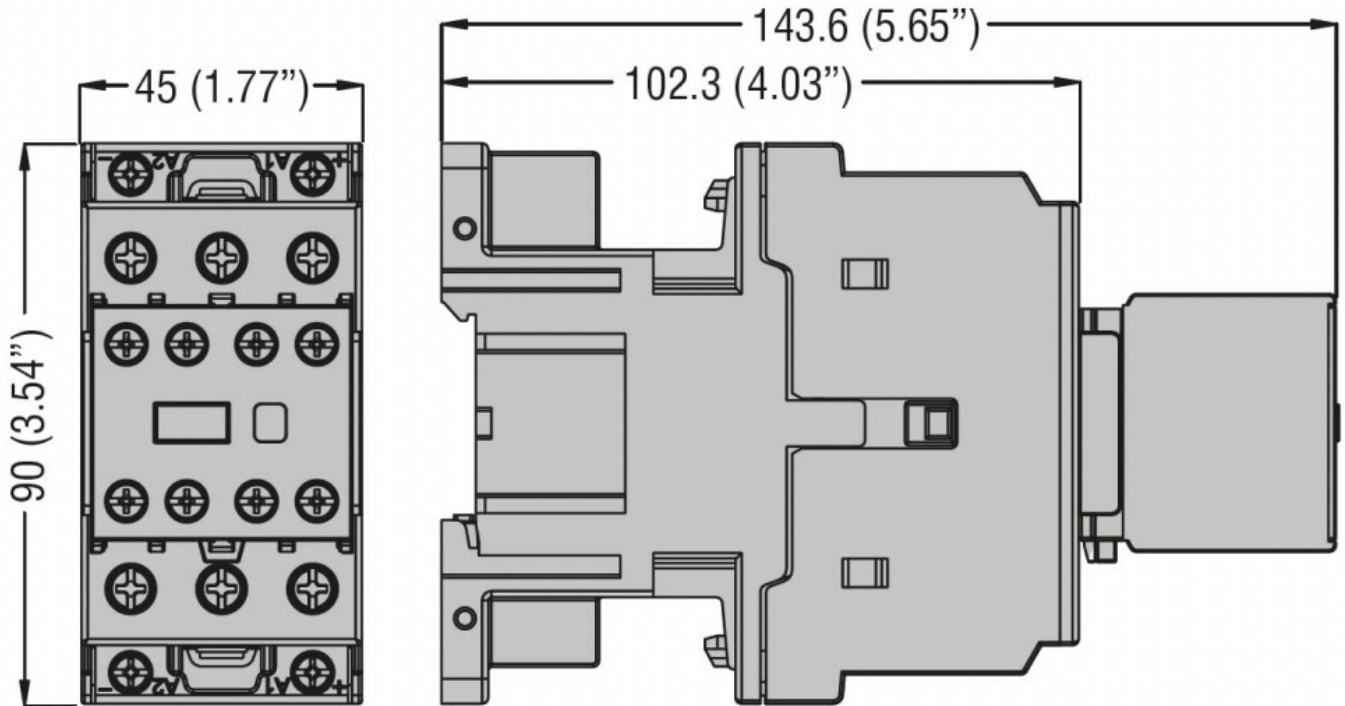
Product designation				Power contactor
Product type designation				BFS38
Contact characteristics				
Number of poles	Nr.			3
Rated insulation voltage U_i IEC/EN	V			690
Rated impulse withstand voltage U_{imp}	kV			6
Operational frequency	min	Hz	25	
	max	Hz	400	
IEC Conventional free air thermal current 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	60	
	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	48	
	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	42	
	AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$)	A	38	
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	AC-4 (400V)	A	15.5	
	230V	kW	11	
	400V	kW	18.5	
	415V	kW	18.5	
	440V	kW	18.5	
	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	35
48V		A	30	
75V		A	23	
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	36
	48V	A	34	
	75V	A	29	
	110V	A	32	
	220V	A	4	
	IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A	36

	48V	A	34
	75V	A	33
	110V	A	34
	220V	A	30
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IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	36
	48V	A	34
	75V	A	33
	110V	A	34
	220V	A	38
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IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	24
	48V	A	20
	75V	A	17
	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	28
	48V	A	25
	75V	A	22
	110V	A	18
	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	32
	48V	A	28
	75V	A	28
	110V	A	23
	220V	A	25
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IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	32
	48V	A	28
	75V	A	28
	110V	A	23
	220V	A	15
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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	40
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Making capacity (RMS value)		A	380
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Breaking capacity at voltage			
	440V	A	304
	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	2.9
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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			

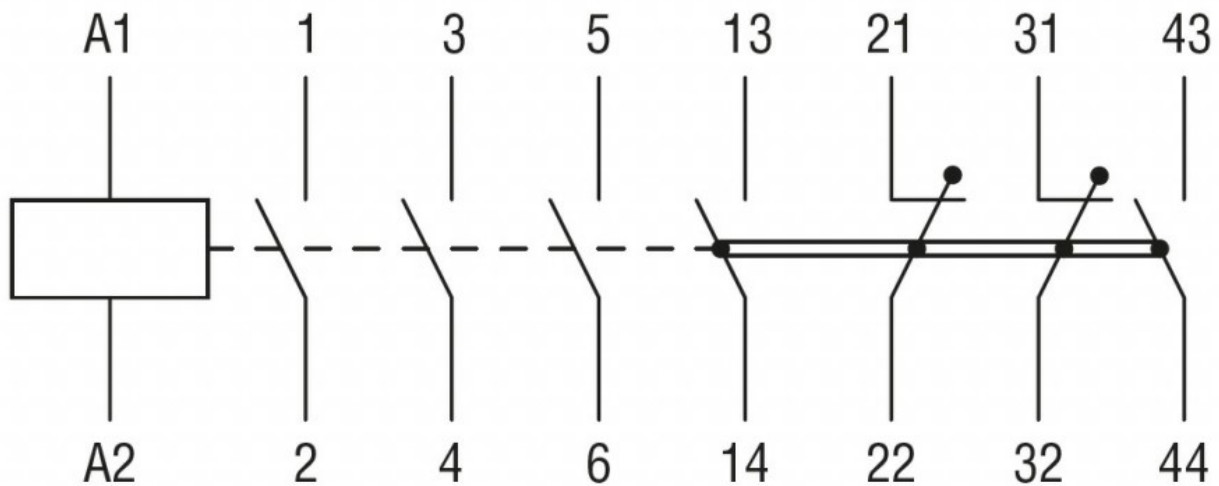
	min	Nm	0.8
	max	Nm	1
	min	I _{bin}	0.8
	max	I _{bin}	0.74
Max number of wires simultaneously connectable		Nr.	2
Conductor section	AWG/Kcmil		
	max		6
Flexible w/o lug conductor section	min	mm ²	2.5
	max	mm ²	16
Flexible c/w lug conductor section	min	mm ²	1
	max	mm ²	10
Flexible with insulated spade lug conductor section	min	mm ²	1
	max	mm ²	10
Power terminal protection according to IEC/EN 60529	IP20 when properly wired		
Cable stripping length	main circuit	mm	0
	command circuit	mm	0
	auxiliary circuit	mm	0
Mechanical features			
Operating position	normal allowable	Vertical plan ±30°	
Fixing	Screw / DIN rail 35mm		
Weight	g	554	
Auxiliary contact characteristics			
Type of contact	0		
Thermal current I _{th}	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	2000000	
Electrical life	cycles	1400000	
Safety related data			
Performance level B10d according to EN/ISO 13489-1			

	rated load	cycles	1400000
	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			
AC operating voltage	of 50/60Hz coil powered at 50Hz		
	drop-out		
	max	%Us	0
DC coil operating			
DC rated control voltage		V	24
DC operating voltage	pick-up		
	min	%Us	70
	max	%Us	125
	drop-out		
	min	%Us	10
	max	%Us	40
Average coil consumption $\leq 20^{\circ}\text{C}$	in-rush	W	5.4
	holding	W	5.4
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	54
	max	ms	66
	Opening NO		
	min	ms	14
	max	ms	17
	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	40
		at 600V	A	32
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	15
		460/480V	HP	30
		575/600V	HP	30
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	150
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



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