![Lovato electric — ENERGY AND AUTOMATION]

Product designation			Power contactor
Product type designation			BF18
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		A	32
Operational current Ie			
	AC-1 (≤40°C)	A	32
	AC-1 (≤55°C)	A	26
	AC-1 (≤70°C)	A	23
	AC-3 (≤440V ≤55°C)	A	18
	AC-4 (400V)	A	8.5
Rated operational power AC-1 (T≤40°C)			
	230V	kW	12
	400V	kW	21
	500V	kW	26
	690V	kW	36
Short-time allowable current for 10s (IEC/EN60947-1)		A	200
Protection fuse			
	gG (IEC)	A	32
	aM (IEC)	A	20
Making capacity (RMS value)		A	180
Breaking capacity at voltage			
	440V	A	144
	500V	A	120
	690V	A	94
Resistance per pole (average value)		mΩ	2.5
Power dissipation per pole (average value)			
	Ith	W	2.6
	AC-3	W	0.8
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
	max	lbin	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

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 32A, DC COIL, 12VDC, 2NO AND 2NC

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
Power terminal protection according to IEC/EN 60529				IP20 when properly wired

Mechanical features			
Operating position			
	normal		Vertical plan
	allowable		±30°
Fixing			Screw / DIN rail 35mm
Weight		g	495
Conductor section			
	AWG/kcmil conductor section		
		max	10

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
Mirror contats according to IEC/EN 609474-4-1			YES
EMC compatibility			yes

DC coil operating			
DC rated control voltage		V	12
DC operating voltage			
	pick-up		
		min	%Us	70
		max	%Us	125
	drop-out		
		min	%Us	10
		max	%Us	40
Average coil consumption ≤20°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	10	
	max	ms	20	
Closing NC				
	min	ms	14	
	max	ms	28	
Opening NC				
	min	ms	7	
	max	ms	18	
in DC				
Closing NO				
	min	ms	54	
	max	ms	66	
Opening NO				
	min	ms	14	
	max	ms	17	
Closing NC				
	min	ms	24	
	max	ms	30	
Opening NC				
	min	ms	47	
	max	ms	57	

UL technical data

Full-load current (FLA) for three-phase AC motor				
	at 480V	A	14	
	at 600V	A	17	
Yielded mechanical performance				
for single-phase AC motor				
	110/120V	HP	1	
	230V	HP	3	
for three-phase AC motor				
	200/208V	HP	5	
	220/230V	HP	5	
	460/480V	HP	10	
	575/600V	HP	15	
General USE				
Contactor				
	AC current	A	32	

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

Pollution degree			3	

Dimensions
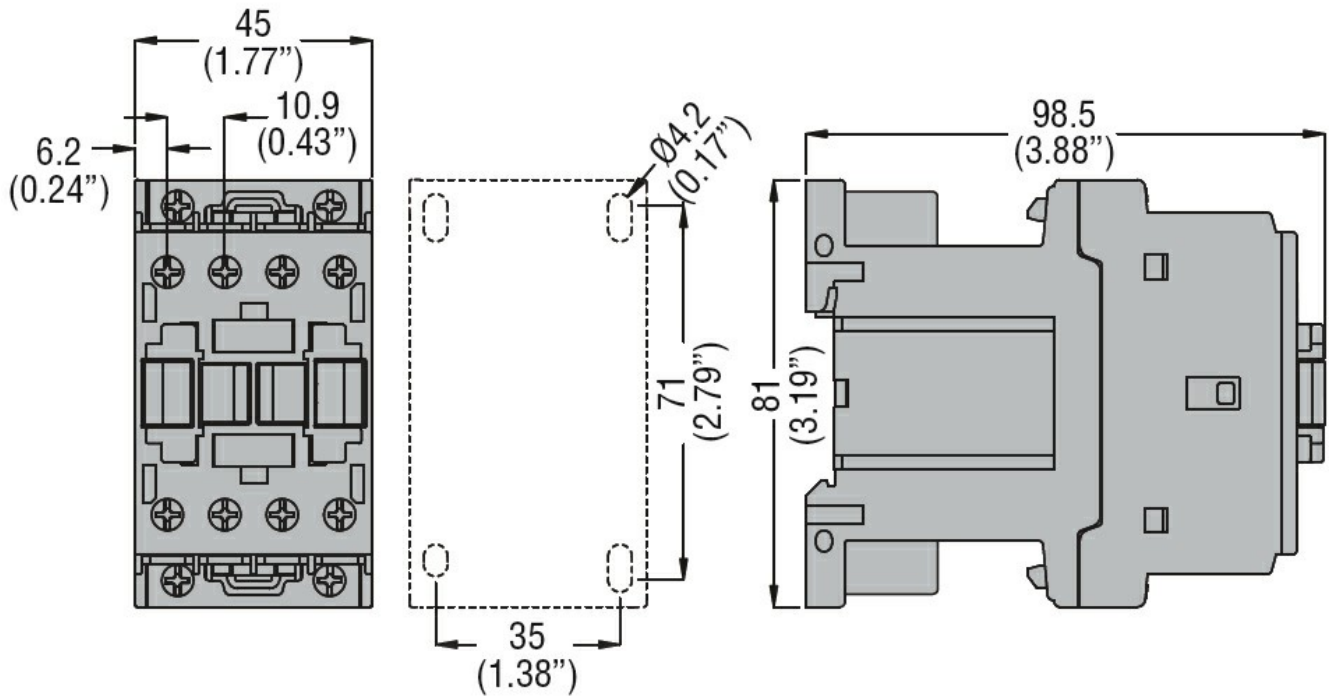
Wiring diagrams
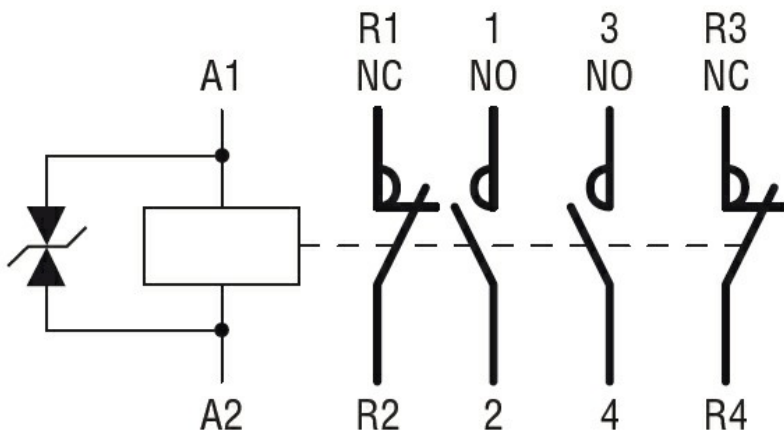
Certifications and compliance

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
UL 60947-1
UL 60947-4-1

Certificates

CCC
cULus
EAC

ETIM classification

ETIM 8.0	EC000066 - Power contactor, AC switching