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
IEC max current Ie in DC1 with L/R ≤ 1ms with 1 poles in series		
≤24V	A	17
48V	A	15
75V	A	15
110V	A	6
220V	A	–
IEC max current Ie in DC1 with L/R ≤ 1ms with 2 poles in series		
≤24V	A	20
48V	A	20
75V	A	20
110V	A	13
220V	A	1
IEC max current Ie in DC1 with L/R ≤ 1ms with 3 poles in series		
≤24V	A	22
48V	A	22
75V	A	20
110V	A	16
220V	A	11
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series		
≤24V	A	22
48V	A	22
75V	A	20
110V	A	18
220V	A	13

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	12
	48V	A	11
	75V	A	11
	110V	A	2
	220V	A	–
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	15
	48V	A	13
	75V	A	13
	110V	A	8
	220V	A	2
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	18
	48V	A	18
	75V	A	16
	110V	A	12
	220V	A	6
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	18
	48V	A	18
	75V	A	16
	110V	A	13
	220V	A	8
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	Ibin	1.1
	max	Ibin	1.5
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		10
Flexible w/o lug conductor section			
	min	mm²	1

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	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	502

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	24

DC operating voltage

pick-up

	min	%Us	80
	max	%Us	110

drop-out

	min	%Us	10
	max	%Us	40

Average coil consumption ≤20°C

	in-rush	W	2.4
	holding	W	2.4

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	75	
	max	ms	91	
Opening NO				
	min	ms	15	
	max	ms	19	

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
Short-circuit protection fuse, 600V			
High fault			
	Short circuit current	kA	100
	Fuse rating	A	60
	Fuse class		J
Standard fault			
	Short circuit current	kA	5
	Fuse rating	A	80

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

Lovato electric
ENERGY AND AUTOMATION
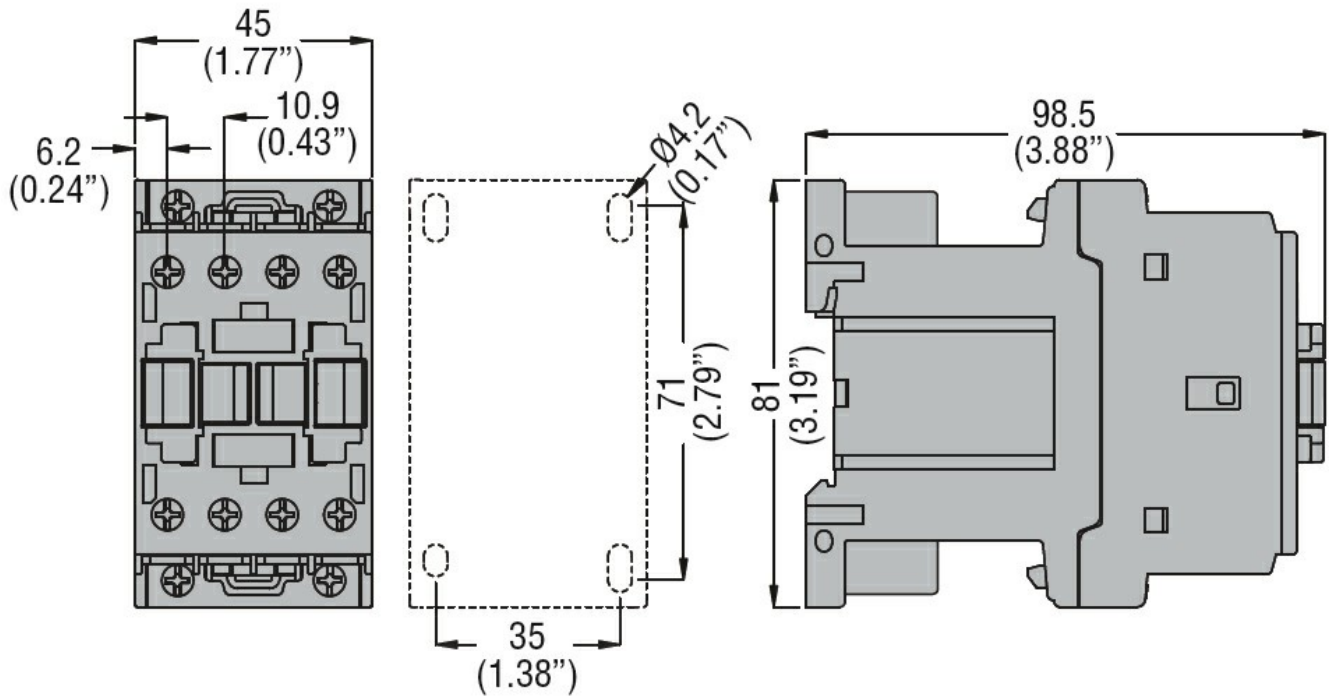
Wiring diagrams
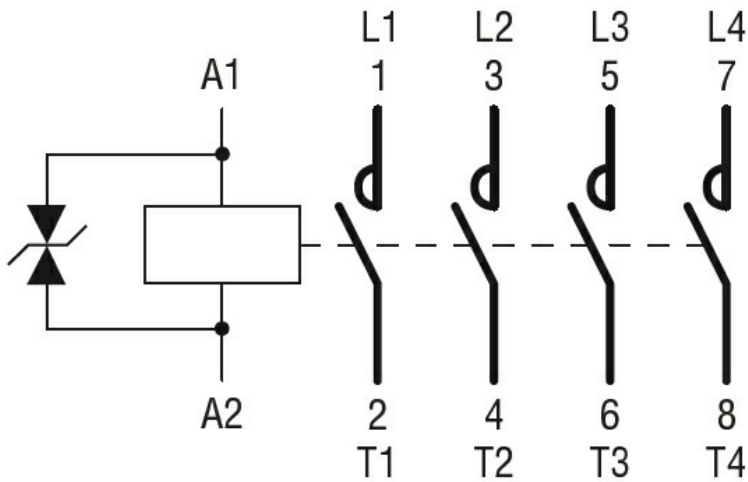
Certifications and compliance

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

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