



Product designation

Power contactor

Product type designation

BF80

**Contact characteristics**

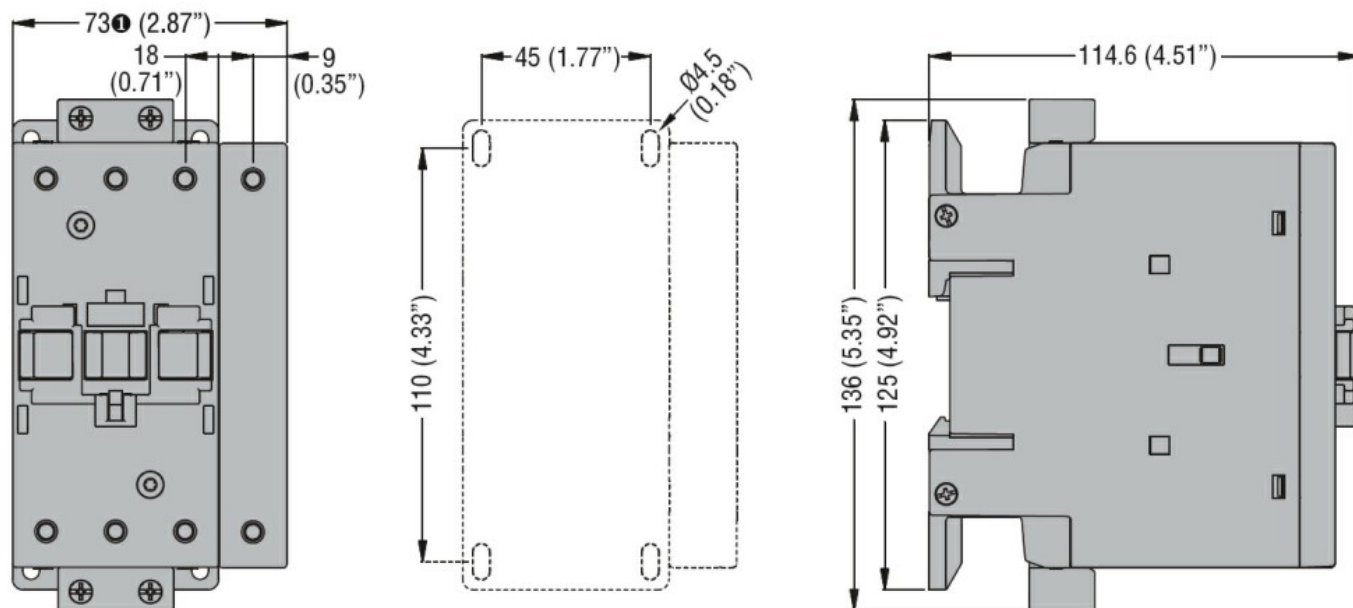
Number of poles	Nr.	4
Rated insulation voltage $U_i$ IEC/EN	V	1000
Rated impulse withstand voltage $U_{imp}$	kV	8
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current $I_{th}$	A	115
Operational current $I_e$		
	AC-1 ( $\leq 40^\circ\text{C}$ )	A 115
	AC-1 ( $\leq 55^\circ\text{C}$ )	A 95
	AC-1 ( $\leq 70^\circ\text{C}$ )	A 80
	AC-3 ( $\leq 440\text{V } \leq 55^\circ\text{C}$ )	A 80
	AC-4 (400V)	A 38
Rated operational current AC-3 ( $T \leq 55^\circ\text{C}$ )		
	230V	A 80
	400V	A 80
	415V	A 80
	440V	A 80
	500V	A 78
	690V	A 57
	1000V	A 28
Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )		
	230V	kW 43
	400V	kW 76
	500V	kW 95
	690V	kW 120
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series		
	$\leq 24\text{V}$	A 70
	48V	A 60
	75V	A 60
	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 100
	48V	A 100
	75V	A 100
	110V	A 80
	220V	A 9
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series		
	$\leq 24\text{V}$	A 100
	48V	A 100
	75V	A 100

	110V	A	85
	220V	A	95
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	100
	48V	A	100
	75V	A	100
	110V	A	100
	220V	A	115
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	40
	48V	A	30
	75V	A	30
	110V	A	3
	220V	A	–
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	60
	48V	A	50
	75V	A	50
	110V	A	40
	220V	A	5
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	80
	48V	A	70
	75V	A	70
	110V	A	60
	220V	A	64
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	90
	48V	A	90
	75V	A	90
	110V	A	75
	220V	A	80
Short-time allowable current for 10s (IEC/EN60947-1)		A	640
Protection fuse			
	gG (IEC)	A	125
	aM (IEC)	A	80
Making capacity (RMS value)		A	800
Breaking capacity at voltage			
	440V	A	640
	500V	A	625
	690V	A	456
Resistance per pole (average value)		mΩ	0.6
Power dissipation per pole (average value)			
	Ith	W	7.9
	AC-3	W	3.8
Tightening torque for terminals			
	min	Nm	4
	max	Nm	5
	min	Ibin	2.95
	max	Ibin	3.69
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1

		min	I <sub>bin</sub>	0.8
		max	I <sub>bin</sub>	0.74
Max number of wires simultaneously connectable			Nr.	2
Conductor section	AWG/Kcmil			
		max		2
Flexible w/o lug conductor section		min	mm <sup>2</sup>	1.5
		max	mm <sup>2</sup>	35
Flexible c/w lug conductor section		min	mm <sup>2</sup>	1.5
		max	mm <sup>2</sup>	35
Power terminal protection according to IEC/EN 60529				IP20 front
<b>Mechanical features</b>				
Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	1240
<b>Operations</b>				
Mechanical life			cycles	15000000
Electrical life			cycles	1300000
<b>Safety related data</b>				
Performance level B10d according to EN/ISO 13489-1		rated load	cycles	1300000
		mechanical load	cycles	15000000
EMC compatibility				yes
<b>AC coil operating</b>				
Rated AC voltage at 50/60Hz			V	24
AC operating voltage	of 50/60Hz coil powered at 50Hz			
	pick-up	min	%U <sub>s</sub>	80
		max	%U <sub>s</sub>	110
	drop-out	min	%U <sub>s</sub>	20
		max	%U <sub>s</sub>	55
	of 50/60Hz coil powered at 60Hz			
	pick-up	min	%U <sub>s</sub>	85
		max	%U <sub>s</sub>	110
	drop-out	min	%U <sub>s</sub>	40
		max	%U <sub>s</sub>	55
AC average coil consumption at 20°C	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	210
		holding	VA	15
	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	195
		holding	VA	13
	of 60Hz coil powered at 60Hz			
		in-rush	VA	210

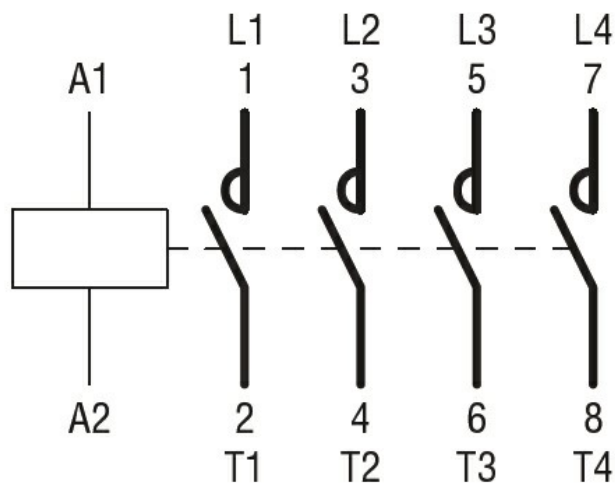
	holding	VA	15
Dissipation at holding ≤20°C 50Hz		W	5
Max cycles frequency			
Mechanical operation		cycles/h	3600
Operating times			
Average time for Us control			
in AC			
	Closing NO		
	min	ms	12
	max	ms	28
	Opening NO		
	min	ms	8
	max	ms	22
in DC			
	Closing NO		
	min	ms	40
	max	ms	85
	Opening NO		
	min	ms	20
	max	ms	55
UL technical data			
Rated operational voltage AC (UL)		V	600
Full-load current (FLA) for three-phase AC motor			
	at 480V	A	77
	at 600V	A	77
Yielded mechanical performance			
for three-phase AC motor			
	200/208V	HP	25
	220/230V	HP	30
	460/480V	HP	60
	575/600V	HP	75
General USE			
Contactor			
	AC current	A	115
Short-circuit protection fuse, 600V			
High fault			
	Short circuit current	kA	100
	Fuse rating	A	200
	Fuse class		J
Standard fault			
	Short circuit current	kA	10
	Fuse rating	A	200
	Fuse class		RK5
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



① BF80T2 82mm/3.23"

## 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

## ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching