



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 _{bin}	0.59
		max	I _{bin}	0.74
Max number of wires simultaneously connectable			Nr.	2
Conductor section	AWG/Kcmil			
		max		2
Flexible w/o lug conductor section		min	mm ²	1.5
		max	mm ²	35
Flexible c/w lug conductor section		min	mm ²	1.5
		max	mm ²	35
Power terminal protection according to IEC/EN 60529				IP20 front
Mechanical features				
Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	1280
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1300000
Safety related data				
Performance level B10d according to EN/ISO 13489-1		rated load	cycles	1300000
		mechanical load	cycles	15000000
EMC compatibility				yes
AC coil operating				
Rated AC voltage at 50/60Hz, 60Hz		min	V	20
		max	V	48
AC operating voltage	of 50/60Hz coil powered at 50Hz			
	pick-up	min	%U _s	85 U _s min
		max	%U _s	110 U _s max
	drop-out	max	%U _s	≤70 U _s min
	of 50/60Hz coil powered at 60Hz			
	pick-up	min	%U _s	85 U _s min
		max	%U _s	110 U _s max
	drop-out	max	%U _s	≤70 U _s min
AC average coil consumption at 20°C	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	35...120
		holding	VA	1.5...3.7
	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	35...120
		holding	VA	1.5...3.7
	of 60Hz coil powered at 60Hz			
		in-rush	VA	210

		holding	VA	15		
Dissipation at holding ≤20°C 50Hz			W	1...2.5		
DC coil operating						
DC rated control voltage		min	V	20		
		max	V	48		
DC operating voltage						
pick-up		min	%Us	80 Us min		
		max	%Us	110 Us max		
drop-out						
		max	%Us	≤70 Us min		
Average coil consumption ≤20°C						
		in-rush	W	23...68		
		holding	W	1.2...1.9		
Max cycles frequency						
Mechanical operation			cycles/h	1500		
Operating times						
Average time for Us control						
in AC	Closing NO	min	ms	40		
		max	ms	85		
	Opening NO	min	ms	20		
		max	ms	55		
	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

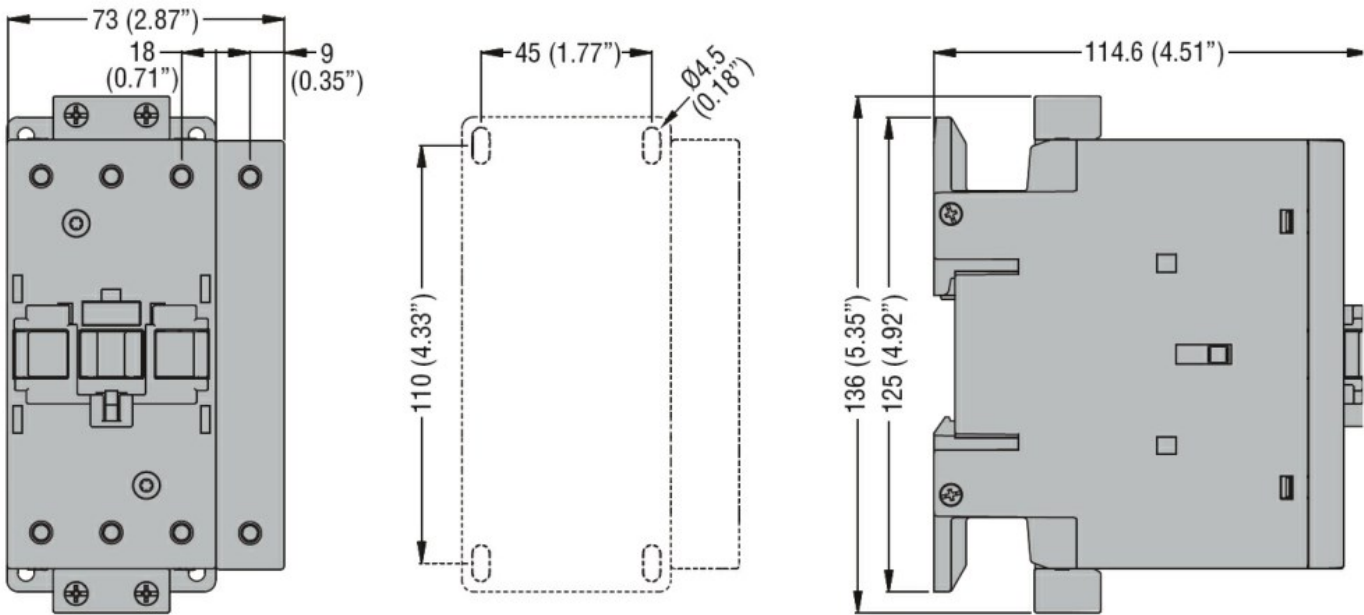
Ambient conditions

Temperature	Operating temperature		
	min	°C	-40
	max	°C	70
	Storage temperature		
	min	°C	-50
	max	°C	80
Max altitude	m		3000

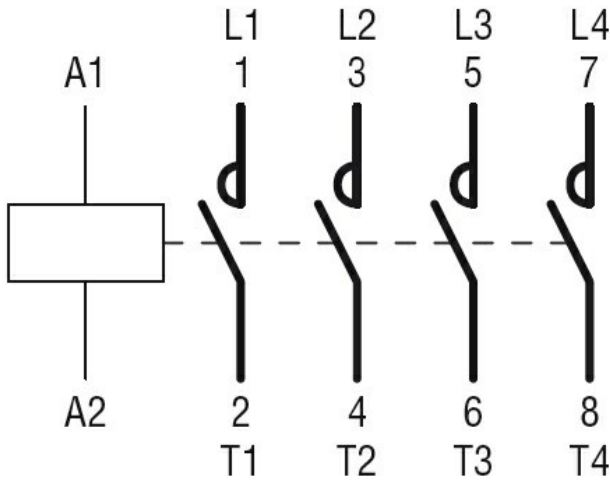
Resistance & Protection

Pollution degree	3
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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

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching