



Product designation

Power contactor

Product type designation

BF65

Contact characteristics

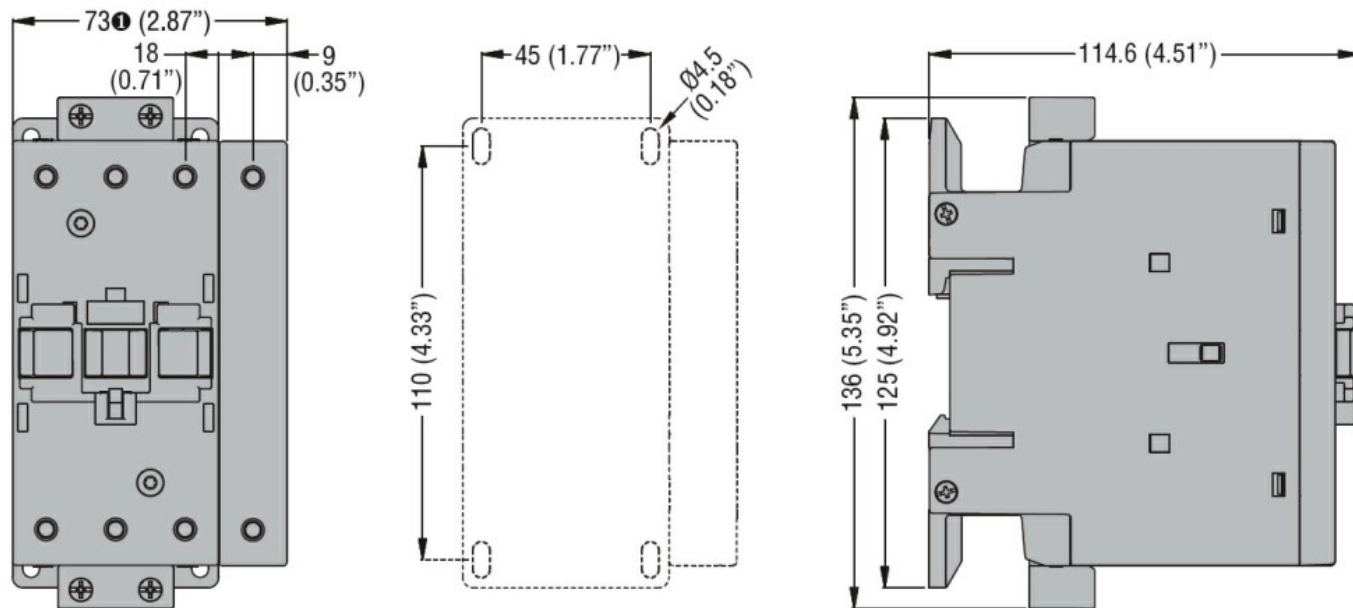
Number of poles	Nr.	4
Rated insulation voltage U_i IEC/EN	V	1000
Rated impulse withstand voltage U_{imp}	kV	8
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current I_{th}	A	100
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A 100
	AC-1 ($\leq 55^\circ\text{C}$)	A 80
	AC-1 ($\leq 70^\circ\text{C}$)	A 70
	AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$)	A 65
	AC-4 (400V)	A 31
Rated operational current AC-3 ($T \leq 55^\circ\text{C}$)	230V	A 65
	400V	A 65
	415V	A 65
	440V	A 65
	500V	A 53
	690V	A 47
	1000V	A 25
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW 38
	400V	kW 65
	500V	kW 82
	690V	kW 114
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A 50
	48V	A 50
	75V	A 50
	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 70
	48V	A 70
	75V	A 70
	110V	A 60
	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 70
	48V	A 70
	75V	A 70

	110V	A	60
	220V	A	90
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	70
	48V	A	70
	75V	A	70
	110V	A	70
	220V	A	110
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	35
	48V	A	25
	75V	A	25
	110V	A	3
	220V	A	–
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	45
	48V	A	40
	75V	A	40
	110V	A	30
	220V	A	5
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	55
	48V	A	50
	75V	A	50
	110V	A	35
	220V	A	52
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	60
	48V	A	60
	75V	A	60
	110V	A	50
	220V	A	65
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	650
Breaking capacity at voltage			
	440V	A	520
	500V	A	425
	690V	A	376
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)			
	Ith	W	8
	AC-3	W	3.4
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}	0.8
		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	1240
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1400000
Safety related data				
Performance level B10d according to EN/ISO 13489-1		rated load	cycles	1400000
		mechanical load	cycles	15000000
EMC compatibility				yes
AC coil operating				
Rated AC voltage at 50/60Hz			V	48
AC operating voltage	of 50/60Hz coil powered at 50Hz			
	pick-up	min	%U _s	80
		max	%U _s	110
	drop-out	min	%U _s	20
		max	%U _s	55
	of 50/60Hz coil powered at 60Hz			
	pick-up	min	%U _s	85
		max	%U _s	110
	drop-out	min	%U _s	40
		max	%U _s	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

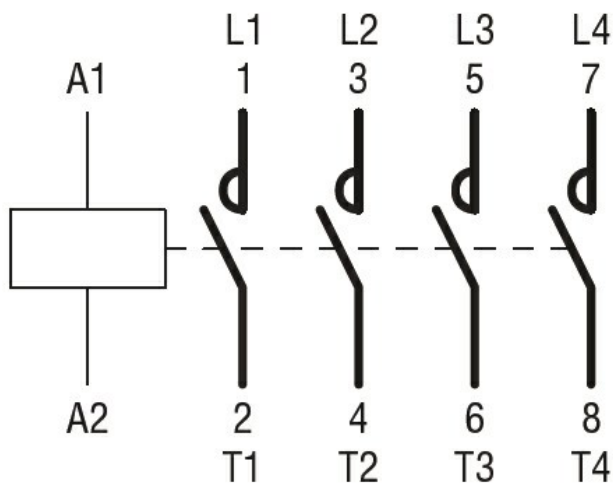
		holding	VA	15
Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz			W	5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times				
Average time for U_s control				
in AC				
	Closing NO	min	ms	12
		max	ms	28
	Opening NO	min	ms	8
		max	ms	22
in DC				
	Closing NO	min	ms	40
		max	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		65
	at 600V	A		62
Yielded mechanical performance				
for three-phase AC motor				
	200/208V	HP		20
	220/230V	HP		25
	460/480V	HP		50
	575/600V	HP		60
General USE				
Contactor				
	AC current	A		100
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	$^{\circ}\text{C}$		-50
	max	$^{\circ}\text{C}$		70
Storage temperature				
	min	$^{\circ}\text{C}$		-60
	max	$^{\circ}\text{C}$		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