



Product designation Power contactor Product type designation **BF80** Contact characteristics 4 Number of poles Nr. Rated insulation voltage Ui IEC/EN ٧ 1000 k√ Rated impulse withstand voltage Uimp 8 Operational frequency min Η 25 max Hz 400 IEC Conventional free air thermal current Ith 115 Α Operational current le AC-1 (≤40°C) Α 115 AC-1 (≤55°C) Α 95 AC-1 (≤70°C) Α 80 AC-3 (≤440V ≤55°C) Α 80 AC-4 (400V) 38 Rated operational current AC-3 (T≤55°C) 230V Α 80 400V 80 Α 415V Α 80 440V Α 80 500V Α 78 690V Α 57 1000V 28 Α Rated operational power AC-1 (T≤40°C) 230V kW 43 400V kW 76 500V kW 95 690V kW 120 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V Α 70 48V Α 60 75V 60 Α 110V Α 8 220V Α IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V Α 100 48V 100 Α 100 75V Α 110V Α 80 220V 9 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V Α 100 48V Α 100 75V 100 Α





	110V	Α	85
	220V	Α	95
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	100
	48V	Α	100
	75V	Α	100
	110V	Α	100
	220V	Α	115
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	40
	48V	Α	30
	75V	Α	30
	110V	Α	3
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	60
	48V	Α	50
	75V	Α	50
	110V	Α	40
	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	80
	48V	Α	70
	75V	A	70
	110V	A	60
	220V	A	64
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	220 V		<u> </u>
The max current to in 600-600 with E/TC = 10m3 with 4 poics in 30m63	≤24V	Α	90
	48V	A	90
	75V	A	90
	110V	A	75
	220V	A	80
Short-time allowable current for 10s (IEC/EN60947-1)	220 V	A	640
Protection fuse			040
Protection ruse	«C (IEC)	۸	105
	gG (IEC)	A	125
Malifer and arity (DMC value)	aM (IEC)	A	80
Making capacity (RMS value)		Α	800
Breaking capacity at voltage	4.403.4		0.40
	440V	A	640
	500V	A	625
	690V	Α	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	lbin	2.95
	max	lbin	3.69
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1



AWG/Kcmil Flexible w/o lug conductor section Flexible c/w lug c/w lug conductor section Flexible c/w lug c/w lug c/w lug conductor section Flexible c/w lug			min	Ibin	0.8
AWG/Kcmil			max	lbin	0.74
AWG/Kcmil Flexible w/o lug conductor section Flexible c/w lug c/w lug conductor section Flexible c/w lug c/w lug c/w lug conductor section Flexible c/w lug	Max number of wires	simultaneously connectable		Nr.	2
Flexible w/o lug conductor section	Conductor section				
Flexible w/o lug conductor section		AWG/Kcmil			
Minimax			max		2
Plexible c/w lug conductor section   min   mm²   1.5   max   mm²   3.5   mm		Flexible w/o lug conductor section			
Flexible c/w lug conductor section			min		
Minimax   Min			max	mm²	35
Prower terminal protection according to IEC/EN 60529		Flexible c/w lug conductor section		2	
Power terminal protection according to IEC/EN 60529  Mochanical features  Operating position    normal allowable   330°     Screw / DIN rail 35mm     Weight   g   1240     Conductor section     AWG/kcmil conductor section     Tax					
According to letter	<del></del>		max	mm²	
Operating position         normal allowable         Vertical plan 130°           Fixing         Screw / DIN rail 35mm           Weight         g         1240           Conductor section         max         2           Operations           Mechanical life         cycles         15000000           Electrical life         cycles         15000000           Safety related data         Performance level B10d according to EN/ISO 13489-1         rated load related and recommendation of cycles         15000000           Mirror contats according to IEC/EN 609474-4-1         yes         5           EMC conjustibility         yes         5           AC coil poserating         v         230           AC coil poserating         v         230           AC color perating voltage         yes         4           AC operating voltage         rmin         %Us         80           AC average coil consumption at 20°C         rmin         %Us         50           AC average coil consumption at 20°C         of 60Hz coil powered at 60Hz         in-rush holding         VA         210 holding           AC average coil consumption at 20°C         rich policing         VA         210 holding           AC average coil consumption at		ction according to IEC/EN 60529			IP20 front
Normal allowable   Vertical plan ±30°					
Fixing   Screw / Ditn rail   Screw / Ditn Ditn Ditn rail   Screw / Ditn Ditn rail   Ditn rail   Ditn rail   Ditn rail   Ditn rail   Ditn r	Operating position				M. C. L.L.
Screw / DIN rail 35mm   35m					
Meight   g   1240			allowable		
AWG/kcmil conductor section    max	Fixing				
AWG/kcmil conductor section    max	Weight	-		g	1240
Machanical life         cycles         15000000           Electrical life         cycles         15000000           Safety related data           Performance level B10d according to EN/ISO 13489-1         rated load cycles         1300000 cycles         1300000 cycles         15000000 cycle	Conductor section				
Operations         According to Electrical life         cycles         15000000           Electrical life         cycles         1300000           Safety related data           Performance level B10d according to EN/ISO 13489-1           rated load mechanical load mechanical load cycles         1300000 cycles         15000000           Mirror contats according to IEC/EN 609474-4-1         yes         yes           EMC compatibility         yes         yes           AC coil operating           Rated AC voltage at 60Hz         y         230           AC operating voltage           of 60Hz coil powered at 60Hz         min         %Us         80           max         %Us         110           drop-out         min         %Us         20           AC average coil consumption at 20°C         of 60Hz coil powered at 60Hz         in-rush         VA         210           AC average coil consumption at 20°C 50Hz         W         5           Dissipation at holding ≤20°C 50Hz         W         5           Max cycles frequency           Mechanical operation         cycles/h         3600		AWG/kcmil conductor section			
Mechanical life         cycles         15000000           Electrical life         cycles         1300000           Safety related data           rated load cycles         1300000           Mechanical load         cycles         15000000           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating           Rated AC voltage at 60Hz         v         230           AC operating voltage         min         %Us         80           AC operating voltage         min         %Us         110           drop-out         min         %Us         20           AC average coil consumption at 20°C         of 60Hz coil powered at 60Hz         in-rush         VA         210           AC average coil consumption at 20°C         in-rush         VA         210           holding         VA         15           Dissipation at holding ≤20°C 50Hz         w         5           Max cycles frequency           Mechanical operation         cycles/h         3600			max		2
Electrical life cycles 1300000  Safety related data  Performance level B10d according to EN/ISO 13489-1  rated load cycles 1300000  mechanical load cycles 15000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility yes  AC coil operating  Rated AC voltage at 60Hz  of 60Hz coil powered at 60Hz  pick-up  min %Us 80  max %Us 110  drop-out  min %Us 20  max %Us 55  AC average coil consumption at 20°C  of 60Hz coil powered at 60Hz  of 60Hz coil powered at 60Hz  in-rush VA 210  holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation cycles/h 3600  Operating times	•				
Safety related data         Performance level B10d according to EN/ISO 13489-1       rated load mechanical load cycles       1300000 mechanical load cycles       1300000 mechanical load cycles       15000000         Mirror contats according to IEC/EN 609474-4-1       yes       yes         EMC compatibility       yes       yes         AC coil operating       V       230         AC operating voltage       min       %Us       80         AC operating voltage       min       %Us       80         Max       %Us       110         drop-out       min       %Us       20         max       %Us       55         AC average coil consumption at 20°C       of 60Hz coil powered at 60Hz       in-rush holding       VA       210         holding       VA       15       Dissipation at holding ≤20°C 50Hz       W       5         Max cycles frequency       Mechanical operation       cycles/h       3600				cycles	
Performance level B10d according to EN/ISO 13489-1  rated load mechanical load cycles 1300000 mechanical load cycles 15000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility yes  AC coil operating  Rated AC voltage at 60Hz  AC operating voltage  of 60Hz coil powered at 60Hz  pick-up  min %Us 80  max %Us 110  drop-out  min %Us 20  max %Us 55  AC average coil consumption at 20°C  of 60Hz coil powered at 60Hz  in-rush VA 210  holding VA 15  Dissipation at holding ≤20°C 50Hz  Mechanical operation  Cycles/h 3600  Operating times				cycles	1300000
rated load mechanical load mechanical load mechanical load mechanical load mechanical load vycles         1300000 15000000           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         V         230           AC operating voltage         min         %Us         80           AC operating voltage         min         %Us         110           drop-out         min         %Us         20           Max         %Us         55           AC average coil consumption at 20°C         in-rush holding         VA         210           AC average coil consumption at holding ≤20°C 50Hz         W         5           Max cycles frequency         W         5           Mechanical operation         cycles/h         3600	•				
Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         V         230           Rated AC voltage at 60Hz         V         230           AC operating voltage         min         %Us         80           Pick-up         min         %Us         110           Mcrop-out         min         %Us         20           Max         %Us         55           AC average coil consumption at 20°C         in-rush         %U         210           Mc average coil consumption at 20°C of 60Hz coil powered at 60Hz         in-rush         VA         210           Dissipation at holding ≤20°C 50Hz         W         5           Max cycles frequency         W         5           Mechanical operation         cycles/h         3600	Performance level B1	0d according to EN/ISO 13489-1			
Mirror contats according to IEC/EN 609474-4-1  EMC compatibility  AC coil operating  Rated AC voltage at 60Hz  AC operating voltage  of 60Hz coil powered at 60Hz  pick-up  min %Us 80  max %Us 110  drop-out  min %Us 20  max %Us 55  AC average coil consumption at 20°C  of 60Hz coil powered at 60Hz  in-rush VA 210  holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation  Operating times				-	
EMC compatibility  AC coil operating  Rated AC voltage at 60Hz  AC operating voltage  of 60Hz coil powered at 60Hz  pick-up  min %Us 80  max %Us 110  drop-out  min %Us 20  max %Us 55  AC average coil consumption at 20°C  of 60Hz coil powered at 60Hz  in-rush VA 210  holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation  Cycles/h 3600  Operating times	NA' I'		mechanical load	cycles	
AC coil operating  Rated AC voltage at 60Hz  AC operating voltage  of 60Hz coil powered at 60Hz  pick-up  min %Us 80  max %Us 110  drop-out  min %Us 20  max %Us 55  AC average coil consumption at 20°C  of 60Hz coil powered at 60Hz  in-rush VA 210  holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation  Cycles/h 3600  Operating times		ing to IEC/EN 609474-4-1			•
Rated AC voltage at 60Hz         AC operating voltage         min your pick-up         min max       %Us your street         min max       %Us your street         Max       %Us your street         AC average coil consumption at 20°C       of 60Hz coil powered at 60Hz         In-rush holding VA 15         Dissipation at holding ≤20°C 50Hz       W 5         Max cycles frequency         Mechanical operation       cycles/h 3600         Operating times					yes
AC operating voltage  of 60Hz coil powered at 60Hz pick-up  min %Us 80 max %Us 110  drop-out  min %Us 20 max %Us 55  AC average coil consumption at 20°C 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		2011-		V	000
of 60Hz coil powered at 60Hz pick-up  min %Us 80 max %Us 110  drop-out  min %Us 20 max %Us 55  AC average coil consumption at 20°C of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation  Cycles/h 3600  Operating times		60HZ		V	230
pick-up  min %Us 80 max %Us 110  drop-out  min %Us 20 max %Us 55  AC average coil consumption at 20°C of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation  Cycles/h 3600  Operating times	AC operating voltage				
min   %Us   80   max   %Us   110					
drop-out    max   %Us   110     min   %Us   20     max   %Us   55     AC average coil consumption at 20°C     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		ріск-ир		0/116	0.0
drop-out  min %Us 20 max %Us 55  AC average coil consumption at 20°C of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation  cycles/h 3600  Operating times					
min %Us 20 max %Us 55  AC average coil consumption at 20°C of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation cycles/h 3600  Operating times		drop out	IIIdX	70US	110
max %Us 55  AC average coil consumption at 20°C		diop-out	min	%l le	20
AC average coil consumption at 20°C  of 60Hz coil powered at 60Hz  in-rush VA 210  holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation cycles/h 3600  Operating times					
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	AC average coil cons	umption at 20°C	Παλ	/003	
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	A average con cons	·			
holdingVA15Dissipation at holding ≤20°C 50HzW5Max cycles frequencyStreetCycles/h3600Mechanical operationCycles/h3600Operating times		or our iz con powered at our iz	in-rush	\/Δ	210
Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation  Cycles/h 3600  Operating times					
Max cycles frequency Mechanical operation cycles/h 3600 Operating times	Dissination at holding	<20°C 50Hz	notaling		
Mechanical operation cycles/h 3600 Operating times				v v	
Operating times				cycles/h	3600
				3,3.00/11	
AVGIQUE IIIIE IVI DA GUITUI	Average time for Us of	control			

in AC Closing NO

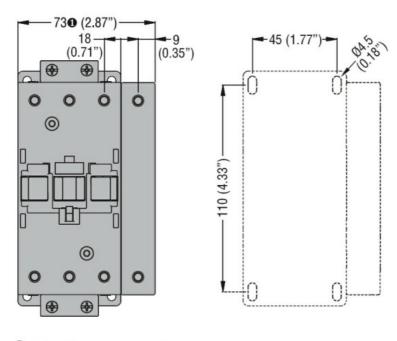


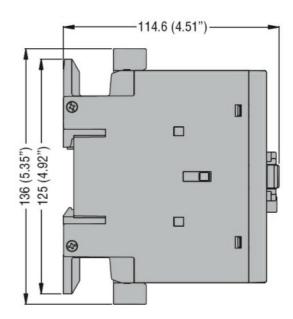


		min	ms	12
		max	ms	28
	Opening NO			
		min	ms	8
		max	ms	22
	in DC			
	Closing NO			
		min	ms	40
		max	ms	85
	Opening NO			
		min	ms	20
		max	ms	55
UL technical data				
Full-load current (FLA)	for three-phase AC motor			
		at 480V	Α	77
		at 600V	Α	77
Yielded mechanical pe	erformance			
	for three-phase AC motor			
		200/208V	HP	25
		220/230V	HP	30
		460/480V	HP	60
		575/600V	HP	75
General USE				
	Contactor			
		AC current	Α	115
Short-circuit protection	fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	200
		Fuse class		J
	Standard fault			
		Short circuit current	kA	10
		Fuse rating	Α	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	on			
Pollution degree				3
Dimensions				

**ENERGY AND AUTOMATION** 

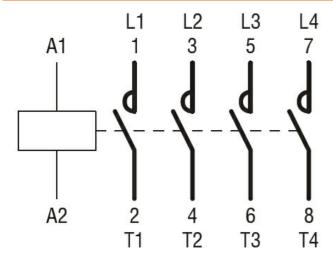
FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 115A, AC COIL 60HZ, 230VAC





#### 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