

# FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 115A, AC COIL 50/60HZ, 230VAC



Product designation Product type designation			Power contactor BF80
Contact characteristics			
Number of poles		nr.	4
Rated insulation voltage Ui IEC/EN		V	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	115
Operational current le			
AC-	1 (≤40°C)	Α	115
	1 (≤55°C)	Α	95
	1 (≤70°C)	Α	80
AC-3 (≤440	V ≤55°C)	Α	80
	-4 (400V)	Α	38
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	Α	60
	110V	Α	8
	220V	A	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	Α	100
	48V	Α	100
	75V	Α	100
	110V	Α	80
	220V	Α	9
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		_	
	≤24V	Α	100
	48V	Α	100
	75V	A	100
	110V	A	85
150 H. DOA W. I. D. A. W. A. L.	220V	Α	95
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series	-0.0.1		100
	≤24V	A	100
	48V	A	100
	75V	A	100
	110V	A	100
	220V	Α	115



## FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 115A, AC COIL 50/60HZ, 230VAC

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	<u> </u>		
poiss in solice	≤24V	Α	60
	48V	A	50
	75V	A	50
	110V	A	40
	220V	A	5
IEC may current to in DC2 DC5 with L/D < 15mg with 2 polos in corios	220 V	^	3
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	<b>2041</b> /	۸	0.0
	≤24V	A	80
	48V	Α	70 
	75V	Α	70
	110V	Α	60
	220V	Α	64
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	90
	48V	Α	90
	75V	Α	90
	110V	Α	75
	220V	Α	80
Short-time allowable current for 10s (IEC/EN60947-1)		Α	640
Protection fuse			
	gG (IEC)	Α	125
	aM (IEC)	Α	80
Making capacity (RMS value)	,	Α	800
Breaking capacity at voltage			
3 - 1 - 1 - 2	440V	Α	640
	500V	Α	625
	690V	A	456
Resistance per pole (average value)	030 V	mΩ	0.6
Power dissipation per pole (average value)		11122	0.0
r ower dissipation per pole (average value)	lth	۱۸/	7.0
	Ith	W	7.9
Tights via a town to far town in all	AC3	W	3.8
Tightening torque for terminals		NI.	4
	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
	min	lbft	0.8
		lbft	0.74
	max		
Max number of wires simultaneously connectable	max	nr.	2
Max number of wires simultaneously connectable Conductor section	max		2
Conductor section	max		2
•		nr.	
Conductor section	max min max		1.5 35



### FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 115A, AC COIL 50/60HZ,

Power terminal protection according to IEC/EN 60529   Total Content of South			min	mm²	1.5
Mechanical features           Operating position         allowable states         Vertical plan states           Fixing         Screw / DIN rail states         35 mm           Weight         g 1240         1240           Operations         Vertical plan states         15000000           Belactrical life         cycles 15000000         15000000           Electrical life         cycles 15000000         15000000           Performance level B10d according to EN/ISO 13489-1         rated load mechanical load load states in the properties of 5000000         150000000         15000000         150000000         150000		U . 150/5N 0070	max	mm²	35
Operating position         Negretary position         Negretary position         Vertical plan state plan stat	· ·	tion according to IEC/EN 60529			IP20 front
Priving   Pri					
Fixing   Server   DIN rail   D	Operating position		•		
Fixing   Screw / DIN rail 35mm   Weight   g   1240					
FXING   9   1240			allowable		
Operations         Cycles         15000000           Electrical life         cycles         1300000           Safety related data         Performance level B10d according to EN/ISO 13489-1         rated load cycles         1300000 cycles         15000000           Mirror contats according to IEC/EN 609474-4-1         yes         15000000           EMC compatibility         yes         4C coll operating           AC coll operating         yes         4C coll operating           AC operating voltage         yes         4C coll operating           accompany         yes         4C coll operating           accompany         yes         4C coll operating           accompany         yes         55           accompany         yes	Fixing				
Mechanical life	Weight			g	1240
Electrical life Safety rolated data  Performance level B10d according to EN/ISO 13489-1    rated load mechanical load cycles   1300000     Mirror contats according to IEC/EN 609474-4-1   yes     EMC compatibility   yes     EMC compatibility   yes     EMC compatibility   yes     AC coll operating     AC coll operating voltage   of 50/60Hz   coil powered at 50Hz     pick-up					
Safety related data   Performance level B10d according to EN/ISO 13489-1   rated load mechanical load voycles   1300000   150000000   150000000   150000000   150000000   15000000000   150000000   150000000   150000000   150000000   150000000   1500000000   1500000000   150000000000	Mechanical life			cycles	15000000
Performance level B10d according to EN/ISO 13489-1   rated load cycles   1300000   mechanical load   cycles   15000000   mechanical load   cycles   150000000   mechanical load   cycles   1500000000000000000000000000000000000	Electrical life			cycles	1300000
Mirror contats according to IEC/EN 609474-4-1   yes   EMC compatibility   yes   yes   yes   EMC compatibility   yes	Safety related data				
Mirror contats according to IEC/EN 609474-4-1   yes	Performance level B10	Od according to EN/ISO 13489-1			
Mirror contats according to IEC/EN 609474-4-1   yes			rated load	cycles	1300000
EMC compatibility  AC coil operating  Rated AC voltage at 50/60Hz coil powered at 50Hz pick-up  max %Us 110  drop-out  min %Us 20 max %Us 55  of 50/60Hz coil powered at 60Hz pick-up  min min %Us 85 max %Us 110  drop-out  min will 84 55  of 50/60Hz coil powered at 60Hz pick-up  min will 84 55  AC operating voltage at 20°C of 50/60Hz coil powered at 50Hz  according voltage at 20°C of 50/60Hz coil powered at 50Hz  according voltage at 20°C of 50/60Hz coil powered at 50Hz  according voltage at 20°C of 50/60Hz coil powered at 60Hz  according voltage at 20°C of 50/60Hz coil powered at 60Hz  according voltage at 20°C of 50/60Hz coil powered at 60Hz  according voltage at 20°C blook according voltage at 20°C of 50/60Hz coil powered at 60Hz  according voltage at 20°C blook according voltage at 20°C of 50/60Hz coil powered at 60Hz  according voltage at 20°C blook according voltage at 20°C bl			mechanical load	cycles	15000000
EMC compatibility  AC coil operating  Rated AC voltage at 50/60Hz coil powered at 50Hz pick-up  max %Us 110  drop-out  min %Us 20 max %Us 55  of 50/60Hz coil powered at 60Hz pick-up  min min %Us 85 max %Us 110  drop-out  min will 84 55  of 50/60Hz coil powered at 60Hz pick-up  min will 84 55  AC operating voltage at 20°C of 50/60Hz coil powered at 50Hz  according voltage at 20°C of 50/60Hz coil powered at 50Hz  according voltage at 20°C of 50/60Hz coil powered at 50Hz  according voltage at 20°C of 50/60Hz coil powered at 60Hz  according voltage at 20°C of 50/60Hz coil powered at 60Hz  according voltage at 20°C of 50/60Hz coil powered at 60Hz  according voltage at 20°C blook according voltage at 20°C of 50/60Hz coil powered at 60Hz  according voltage at 20°C blook according voltage at 20°C of 50/60Hz coil powered at 60Hz  according voltage at 20°C blook according voltage at 20°C bl	Mirror contats according	ng to IEC/EN 609474-4-1			yes
AC coil operating         Rated AC voltage at 50/60Hz       V       230         AC operating voltage       of 50/60Hz coil powered at 50Hz pick-up       max       %Us       110         drop-out       min       %Us       55         of 50/60Hz coil powered at 60Hz pick-up       min       %Us       85 max         min pick-up       %Us       85 max       %Us       110         drop-out       min       %Us       85 max       %Us       55         AC operating voltage 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       210 holding       VA       15         of 60Hz coil powered at 60Hz       in-rush       VA       195 holding       VA       13       VA       10 holding       VA       15       VA					
Rated AC voltage at 50/60Hz         AC operating voltage       of 50/60Hz coil powered at 50Hz pick-up         drop-out       min %Us 20 max %Us 55         of 50/60Hz coil powered at 60Hz pick-up       min %Us 85 max %Us 110         drop-out       min %Us 40 max %Us 55         AC operating voltage at 20°C       min %Us 40 max %Us 55         AC operating voltage at 20°C       in-rush VA 210 holding VA 15         of 50/60Hz coil powered at 60Hz       in-rush VA 15 holding VA 13         of 60Hz coil powered at 60Hz       in-rush VA 210 holding VA 13         Dissipation at holding ≤20°C 50Hz       W 5         Max cycles frequency       W 5         Mechanical operation       cycles/h 3600         Operating times         Average time for Us control in AC       min ms 12					
AC operating voltage  of 50/60Hz coil powered at 50Hz pick-up  max %Us 110  drop-out  min %Us 20 max %Us 55  of 50/60Hz coil powered at 60Hz pick-up  min %Us 85 max %Us 110  drop-out  min %Us 85 max %Us 110  drop-out  min %Us 85 max %Us 110  drop-out  min %Us 85 max %Us 55  AC operating voltage at 20°C of 50/60Hz coil powered at 50Hz  of 50/60Hz coil powered at 50Hz  in-rush VA 210 holding VA 15  of 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  Max cycles frequency  Max cycles frequ		0/60Hz		V	230
of 50/60Hz coil powered at 50Hz pick-up  max		.,		<u> </u>	
Pick-up   max   %Us   110	, to operating vertage	of 50/60Hz coil powered at 50Hz			
Max   Mus   110   Min   Mus   20   Min   Mus   20   Min   Mus   55   Min   Mus   55   Min   Mus   55   Min   Mus   Mus   55   Min   Mus		•			
drop-out   min   %Us   20 max   %Us   55		ρίοι αρ	max	%Us	110
min   Mus   20   55     of 50/60Hz coil powered at 60Hz   pick-up   min   Mus   85   max   Mus   110     drop-out   min   Mus   40   max   Mus   55     AC operating voltage 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   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		dron-out	max	7000	110
Max   Mus   55		diop out	min	%Us	20
of 50/60Hz coil powered at 60Hz pick-up  min %Us 85 max %Us 110  drop-out  min %Us 40 max %Us 55  AC operating voltage 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  of 50/60Hz coil powered at 60Hz  in-rush VA 195 holding VA 15  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					
Pick-up   min   %Us   85   max   %Us   110   Morp-out   min   %Us   40   max   %Us   55   Max   Morp-out   min   %Us   55   Morp-out   min   %Us   55   Morp-out   max   %Us   55   Morp-out   morp-o		of 50/60Hz coil powered at 60Hz	Пих	7000	
Max cycles frequency   Mechanical operating times   Max cycles frequency   Max cycles fr		•			
Max   Mus		ρισκ-αρ	min	%Hc	95
AC operating voltage at 20°C   Of 50/60Hz coil powered at 50Hz   In-rush   VA   210   holding   VA   15   Nolding   VA   15   Nolding   VA   13   Nolding   VA   15   Nolding   VA   Nolding					
Min   Mus   40   Mus   55		dron-out	IIIax	/003	110
Max   Mus   55		diop-out	min	%Hc	40
AC operating voltage 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 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					
of 50/60Hz coil powered at 50Hz  in-rush	AC aparating valtage	at 20°C	IIIdX	70US	33
in-rush   VA   210   holding   VA   15	Ac operating voitage a				
holding		oi 50/60mz coii powered at 50mz		١/٨	210
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  Operating times  Average time for Us control  in AC  Closing NO  min ms 12					
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		-t 50/00H=11 1-4 00H	nolaing	VA	10
holding VA 13		oi 50/60Hz coii powered at 60Hz	*	١/٨	105
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					
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		. ( 0011	holding	VA	13
boldingVA15Dissipation at holding ≤20°C 50HzW5Max cycles frequencyMechanical operationcycles/h3600Operating timesAverage time for Us control in ACClosing NOmin ms12		or bultz coil powered at 60Hz		١/٨	040
Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation  Operating times  Average time for Us control  in AC  Closing NO  min ms 12					
Max cycles frequency  Mechanical operation cycles/h 3600  Operating times  Average time for Us control  in AC  Closing NO  min ms 12	Disabate Children	40000 FOLL	holding		
Mechanical operation cycles/h 3600  Operating times  Average time for Us control  in AC  Closing NO  min ms 12		≤20°C 50Hz		VV	5
Operating times  Average time for Us control  in AC  Closing NO  min ms 12	•				2222
Average time for Us control in AC Closing NO min ms 12	-			cycles/h	3600
in AC Closing NO min ms 12					
Closing NO min ms 12	Average time for Us co				
min ms 12					
		Closing NO			
max ms 28					
			max	ms	28

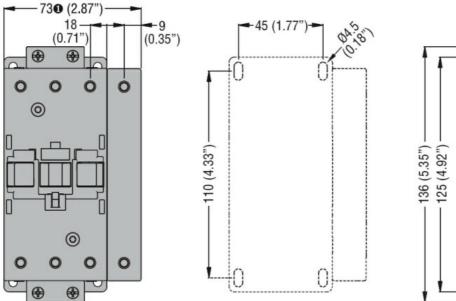


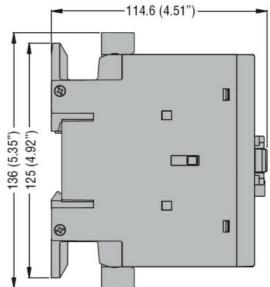
### FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 115A, AC COIL 50/60HZ, 230VAC

		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	4 1 1 1 1 1 1				
Full-load current (FLA)	for three-phase AC mot	or		_	
			at 480V	Α	77 
			at 600V	Α	77
Yielded mechanical performance					
	for three-phase AC mo	otor	/		
			200/208V	HP	25
			220/230V	HP	30
			460/480V	HP	60
0			575/600V	HP	75
General USE	0				
	Contactor		A.C. a	۸	445
Ambient conditions			AC current	Α	115
Ambient conditions					
Temperature	Operating temperature				
	Operating temperature	<b>;</b>	min	°C	-50
			max	°C	-30 70
	Storage temperature		IIIdx		70
	Storage temperature		min	°C	-60
			max	°C	80
Max altitude			IIIdA	 	3000
Resistance & Protection	n			111	
Pollution degree	<del>,,,,_</del>				3
Dimensions					
<del>Dimonono</del>					

**ENERGY AND AUTOMATION** 

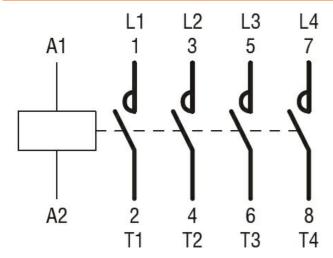
## FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 115A, AC COIL 50/60HZ, 230VAC





### 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 60947-1

IEC/EN 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

### ETIM classification

**ETIM 8.0** 

EC000066 -Power contactor, AC switching