

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 115A, AC COIL 60HZ, 460VAC



Product designation Power contactor Product type designation BF80

Contact characteristics Nr. 4 Rated insulation voltage Ui IEC/EN V 1000 Rated insulation voltage Uimp kV 8 Operational frequency min Hz 25 max Hz 400 IEC Conventional free air thermal current Ith A 115 Operational current Ie AC-1 (≤40°C) A 115 AC-1 (≤55°C) A 95 AC-1 (≤70°C) A 80 AC-3 (≤440°V ≤55°C) A 80 AC-4 (400°V) A 38 Rated operational current AC-3 (T≤55°C) 230°V A 80 AC-4 (400°V A A 80 AC-4 (400°V	Product type designation			BF80
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 A 115 Operational current Ie AC-1 (≤40°C) A 115 AC-1 (≤55°C) A 95 AC-1 (≤70°C) A 80 AC-3 (≤440°S5°C) A 80 AC-3 (≤400°S5°C) A 80 Rated operational current AC-3 (T≤55°C) 230V A 80 A 400V A 80 440V A 80 415V A 80 A 80 A 440V A 80 A 80 A 440V A 80 A 400V W 76 500V A 640	Contact characteristics			
Rated impulse withstand voltage Uimp	Number of poles		Nr.	4
Operational frequency min max Hz bit Hz 25 max Hz 20 max Hz 40 max 40 max	Rated insulation voltage Ui IEC/EN		V	1000
Min Hz 25 max Hz 400 EC Conventional free air thermal current lith	Rated impulse withstand voltage Uimp		kV	8
EC Conventional free air thermal current Ith	Operational frequency			
EC Conventional free air thermal current lth		min	Hz	25
Operational current le AC-1 (≤40°C) A 95 AC-1 (≤70°C) A 80 AC-1 (≤70°C) A 80 AC-1 (≤4400∨ ≤55°C) A 80 AC-3 (≤4400∨ ≤55°C) A 80 AC-3 (≤4400∨ ≤55°C) A 80 AC-3 (4000∨ A 38 AC-3 (4000∨ A 80 400∨ A 80 400∨ A 80 415°V A 80 440°V A 80 500∨ A 78 690°V A 57 1000∨ A 28 Rated operational power AC-1 (T≤40°C) 230V A 80 400 A 57 1000∨ A 28 AC-3 (400°C) Rated operational power AC-1 (T≤40°C) 230V kW 43 400 kW 76 500 kW 95 600 kW 95 600 kW 95 600 kW 120 AC-3 MW 120 AC-3 W 38 AC-3 W 3.8 Short-time allowable current for 10s (IEC/EN60947-1) A 640 AC-3 W 3.8 Protection fuse A 125 600 A		max	Hz	400
AC-1 (≤40°C)	IEC Conventional free air thermal current Ith		Α	115
AC-1 (≤55°C)	Operational current le			
AC-1 (≤70°C) A 80 AC-3 (≤440V ≤55°C) A 80 AC-4 (400V) A 38		AC-1 (≤40°C)	Α	115
AC-1 (≤70°C) A 80 AC-3 (≤440V ≤55°C) A 80 AC-4 (400V) A 38			Α	95
AC-3 (≤440V ≤55°C)		• • • • • • • • • • • • • • • • • • • •	Α	80
AC-4 (400V)				
Rated operational current AC-3 (T≤55°C) 230V A 80 400V A 80 415V A 80 444V A 80 500V A 78 690V A 57 1000V A 28 Rated operational power AC-1 (T≤40°C) 230V kW 43 400V kW 76 500V kW 95 690V kW 120 Short-time allowable current for 10s (IEC/EN60947-1) Protection fuse gG (IEC) A 125 aM (IEC) A 80 Making capacity (RMS value) Breaking capacity at voltage 440V A 640 500V A 625 690V A 456 Resistance per pole (average value) Resistance per pole (average value) Ith W 7.9 AC-3 W 3.8 Tightening torque for terminals min Nm 4		•		
230V	Rated operational current AC-3 (T≤55°C)	,		
\$\frac{400V}{415V} \ A & 80 \\ 415V \ A & 80 \\ 446V \ A & 80 \\ 500V \ A & 78 \\ 690V \ A & 57 \\ 1000V \ A & 28 \\ \$\frac{690V}{1000V} \ A & 28 \\ \$\frac{230V}{1000V} \ KW & 43 \\ 400V \ KW & 76 \\ 500V \ KW & 95 \\ 690V \ KW & 120 \\ \$\frac{690V}{1000V} \ KW & 120 \\ \$\frac{200V}{1000V} \ A & 640 \\ \$\frac{200V}{1000V} \ A & 640 \\ \$\frac{200V}{1000V} \ A & 625 \\ \$\frac{600V}{1000V} \ A & 625 \\ \$\frac{600V}{1000V} \ A & 625 \\ \$\frac{600V}{1000V} \ A & 456 \\ \$\frac{200V}{1000V} \ A & 456 \\	,	230V	Α	80
415V				
440V				
Soov A 78 690V A 57 1000V A 28				
690V A 57 1000V A 28 Rated operational power AC-1 (T≤40°C) 230V kW 43 400V kW 76 500V kW 95 690V kW 120 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 Nm 4				
Rated operational power AC-1 (T≤40°C) 230V kW 43 400V kW 76 500V kW 95 690V kW 120				
Rated operational power AC-1 (T≤40°C) 230V kW 43 400V kW 76 500V kW 95 690V kW 120 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				
230V kW 43 400V kW 76 500V kW 95 690V kW 120	Rated operational power AC-1 (T≤40°C)			
400V kW 76 500V kW 95 690V kW 120		230V	kW	43
Short-time allowable current for 10s (IEC/EN60947-1)				
Short-time allowable current for 10s (IEC/EN60947-1)				
Short-time allowable current for 10s (IEC/EN60947-1)				
Protection fuse gG (IEC)	Short-time allowable current for 10s (IEC/EN60947-1)	0001		
Making capacity (RMS value)	, ,			0.10
Making capacity (RMS value)	Trotoston rado	aG (IFC)	Α	125
Making capacity (RMS value) A 800 Breaking capacity at voltage 440V A 640 440V 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		<u> </u>		
Breaking capacity at voltage	Making capacity (RMS value)	a (.2 <i>0</i>)		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Produing dapasity at voltage	440V	Α	640
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				
Resistance per pole (average value) $ \begin{array}{ccccccccccccccccccccccccccccccccccc$				
Power dissipation per pole (average value) Ith W 7.9 AC-3 W 3.8 Tightening torque for terminals min Nm 4	Resistance per pole (average value)	000 V		
Ith W 7.9 AC-3 W 3.8 Tightening torque for terminals min Nm 4			11122	J.0
AC-3 W 3.8 Tightening torque for terminals min Nm 4	Tomor dissipation per pole (average value)	Ith	\//	7 9
Tightening torque for terminals min Nm 4				
min Nm 4	Tightening torque for terminals	AO-3	V V	0.0
	rightening torque for terminals	min	Nm	4
THAT TABLE				
		IIIdX	INIII	J



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

		min	lbin	2.95
		max	Ibin	3.69
Tightening torque for o	coil terminal			_
		min	Nm	0.8
		max	Nm	1
		min	lbin	0.8
		max	Ibin	0.74
Max number of wires	simultaneously connectable		Nr.	2
Conductor section	Simulation of the control of the con			
Conductor Section	AWG/Kcmil			
	AWG/KCIIII	may		0
	Electric de la constante de la	max		2
	Flexible w/o lug conductor section			
		min	mm²	1.5
		max	mm²	35
	Flexible c/w lug conductor section			
		min	mm²	1.5
		max	mm²	35
Power terminal protect	ction according to IEC/EN 60529			IP20 front
Mechanical features	· ·			
Operating position				
- p		normal		Vertical plan
		allowable		±30°
		allowable		Screw / DIN rail
Fixing				35mm
Weight				1360
Operations			g	1300
Mechanical life			ovelee	1500000
			cycles	15000000
Electrical life			cycles	1300000
Safety related data				
Performance level B1	0d according to EN/ISO 13489-1			
		rated load	cycles	1300000
		mechanical load	cycles	15000000
EMC compatibility		mechanical load	cycles	15000000 yes
EMC compatibility AC coil operating		mechanical load	cycles	
AC coil operating	60Hz	mechanical load	cycles	
AC coil operating Rated AC voltage at 6	i0Hz	mechanical load	·	yes
AC coil operating		mechanical load	·	yes
AC coil operating Rated AC voltage at 6	of 60Hz coil powered at 60Hz	mechanical load	·	yes
AC coil operating Rated AC voltage at 6			V	yes 460
AC coil operating Rated AC voltage at 6	of 60Hz coil powered at 60Hz	min	V %Us	yes 460 80
AC coil operating Rated AC voltage at 6	of 60Hz coil powered at 60Hz pick-up		V	yes 460
AC coil operating Rated AC voltage at 6	of 60Hz coil powered at 60Hz	min max	V %Us %Us	yes 460 80 110
AC coil operating Rated AC voltage at 6	of 60Hz coil powered at 60Hz pick-up	min max min	V %Us %Us %Us	yes 460 80 110 20
AC coil operating Rated AC voltage at 6 AC operating voltage	of 60Hz coil powered at 60Hz pick-up drop-out	min max	V %Us %Us	yes 460 80 110
AC coil operating Rated AC voltage at 6	of 60Hz coil powered at 60Hz pick-up drop-out umption at 20°C	min max min	V %Us %Us %Us	yes 460 80 110 20
AC coil operating Rated AC voltage at 6 AC operating voltage	of 60Hz coil powered at 60Hz pick-up drop-out	min max min max	V %Us %Us %Us %Us %Us	yes 460 80 110 20 55
AC coil operating Rated AC voltage at 6 AC operating voltage	of 60Hz coil powered at 60Hz pick-up drop-out umption at 20°C	min max min	V %Us %Us %Us	yes 460 80 110 20
AC coil operating Rated AC voltage at 6 AC operating voltage	of 60Hz coil powered at 60Hz pick-up drop-out umption at 20°C	min max min max	V %Us %Us %Us %Us %Us	yes 460 80 110 20 55
AC coil operating Rated AC voltage at 6 AC operating voltage	of 60Hz coil powered at 60Hz pick-up drop-out umption at 20°C of 60Hz coil powered at 60Hz	min max min max in-rush	V %Us %Us %Us %Us %Us	yes 460 80 110 20 55
AC coil operating Rated AC voltage at 6 AC operating voltage AC average coil const	of 60Hz coil powered at 60Hz pick-up drop-out umption at 20°C of 60Hz coil powered at 60Hz ≤20°C 50Hz	min max min max in-rush	V %Us %Us %Us %Us VA VA	yes 460 80 110 20 55 210 15
AC coil operating Rated AC voltage at 6 AC operating voltage AC average coil const Dissipation at holding Max cycles frequency	of 60Hz coil powered at 60Hz pick-up drop-out umption at 20°C of 60Hz coil powered at 60Hz ≤20°C 50Hz	min max min max in-rush	V %Us %Us %Us %Us VA VA VA	yes 460 80 110 20 55 210 15 5
AC coil operating Rated AC voltage at 6 AC operating voltage AC average coil const Dissipation at holding	of 60Hz coil powered at 60Hz pick-up drop-out umption at 20°C of 60Hz coil powered at 60Hz ≤20°C 50Hz	min max min max in-rush	V %Us %Us %Us %Us VA VA	yes 460 80 110 20 55 210 15 5

Average time for Us control

in AC



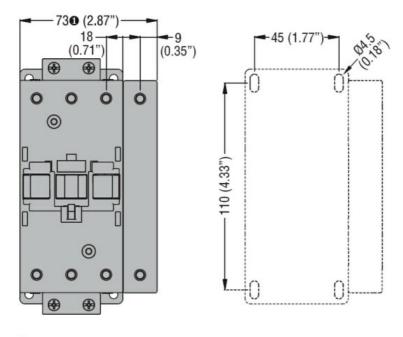


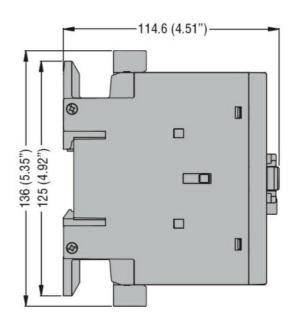
FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 115A, AC COIL 60HZ,

		Closing NO				
		5 - 5 - 5	min	ms	12	
			max	ms	28	
		Opening NO				
		, ,	min	ms	8	
			max	ms	22	
		Closing NC				
			min	ms	11	
			max	ms	29	
		Opening NC				
			min	ms	6	
			max	ms	14	
	in DC					
		Closing NO				
			min	ms	40	
			max	ms	85	
		Opening NO				
			min	ms	20	
			max	ms	55	
UL technical data						
Rated operational volta	ige AC (UL)			V	600	
Full-load current (FLA)	for three-phase AC	motor				
			at 480V	Α	77	
			at 600V	Α	77	
Yielded mechanical per	rformance					
	for three-phase AC	C motor				
	·		200/208V	HP	25	
	·		200/208V 220/230V	HP HP	25 30	
	·					
	,		220/230V	HP	30	
General USE	, 		220/230V 460/480V	HP HP	30 60	_
General USE	Contactor		220/230V 460/480V	HP HP	30 60	_
General USE	·		220/230V 460/480V	HP HP	30 60	
General USE Ambient conditions	·		220/230V 460/480V 575/600V	HP HP HP	30 60 75	_
	·		220/230V 460/480V 575/600V	HP HP HP	30 60 75	_
Ambient conditions	·		220/230V 460/480V 575/600V	HP HP HP	30 60 75	_
Ambient conditions	Contactor		220/230V 460/480V 575/600V	HP HP HP	30 60 75	_
Ambient conditions	Contactor		220/230V 460/480V 575/600V AC current	HP HP HP	30 60 75 115	_
Ambient conditions	Contactor	ature	220/230V 460/480V 575/600V AC current	HP HP HP A	30 60 75 115	-
Ambient conditions	Contactor Operating tempera	ature	220/230V 460/480V 575/600V AC current	HP HP HP A	30 60 75 115	_
Ambient conditions Temperature	Contactor Operating tempera	ature	220/230V 460/480V 575/600V AC current min max	HP HP HP A	30 60 75 115 -50 70 -60 80	_
Ambient conditions Temperature Max altitude	Contactor Operating temperatures Storage temperatures	ature	220/230V 460/480V 575/600V AC current min max	HP HP HP A	30 60 75 115 -50 70	_
Ambient conditions Temperature Max altitude Resistance & Protectio	Contactor Operating temperatures Storage temperatures	ature	220/230V 460/480V 575/600V AC current min max	HP HP HP A	30 60 75 115 -50 70 -60 80 3000	_
Ambient conditions Temperature Max altitude	Contactor Operating temperatures Storage temperatures	ature	220/230V 460/480V 575/600V AC current min max	HP HP HP A	30 60 75 115 -50 70 -60 80	

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

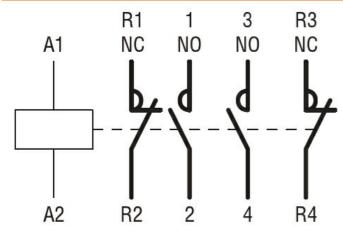






BF80T2 82mm/3.23"

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