



Product designation			Power contactor
Product type designation			BF80
Contact characteristics			
Number of poles		Nr.	3
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		А	115
Operational current le			
	AC-1 (≤40°C)	А	115
	AC-1 (≤55°C)	A	95
	AC-1 (≤70°C)	A	80
	AC-3 (≤440V ≤55°C)	A	80
	AC-4 (400V)	A	38
Rated operational power AC-3 (T≤55°C)			
	230V	kW	22
	400V	kW	45
	400V 415V	kW	45
	413V 440V	kW	45
	440V 500V	kW	45 55
	690V	kW	55
	1000V	kW	37
Rated operational power AC-1 (T≤40°C)	1000 v	K V V	57
	230V	kW	43
	230V 400V	kW	76
	400V 500V	kW	95
	690V	kW	120
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series	090 v	K V V	120
The max current le in DCT with $L/R \leq 100$ with 1 poles in series	-041/	۸	70
	≤24V 48V	A	70 60
	46V 75V	A	60
		A	
	110V	A	8
IF a many automatic in DC4 with 1/D < 4 may with 2 males in agrice	220V	A	_
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series	-041/	۸	100
	≤24V	A	100
	48V	A	100
	75V	A	100
	110V	A	80
	220V	A	9
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series			100
	≤24V	A	100
	48V	A	100
	75V	А	100



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	110V	А	85
	220V	A	95
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series			
	≤24V	A	100
	48V	A	100
	75V	A	100
	110V	A	100
	220V	A	115
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 1 poles in series	-0.0.4		10
	≤24V	A	40
	48V	A	30
	75V	A	30
	110V	A	3
$I_{\rm EC}$ may surrant la in DC2 DC5 with $1/D < 45$ may with 2 malas in series	220V	A	_
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 2 poles in series	<0417	۸	<u> </u>
	≤24V 48V	A	60 50
	48V 75V	A A	50 50
	110V	A	40
	220V	A	40 5
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 3 poles in series	2201	~	5
in contact current le in DC3-DC3 with L/IX 3 Toms with 3 poles in series	≤24V	А	80
	48V	A	70
	40V 75V	A	70
	110V	A	60
	220V	A	64
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 4 poles in series			•
	≤24V	А	90
	48V	A	90
	75V	А	90
	110V	А	75
	220V	А	80
Short-time allowable current for 10s (IEC/EN60947-1)		А	640
Protection fuse			
	gG (IEC)	А	125
	aM (IEC)	А	80
Making capacity (RMS value)		А	800
Breaking capacity at voltage			
	440V	А	640
	500V	А	625
	690V	Α	456
Resistance per pole (average value)		mΩ	0.6
Power dissipation per pole (average value)			
	Ith	W	7.9
	AC3	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



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		min	Ibin	0.8
		max	Ibin	0.74
Max number of wires	simultaneously connectable	Шал	Nr.	2
Conductor section			1.11.	2
	AWG/Kcmil			
		max		2
	Flexible w/o lug conductor section	max		-
		min	mm²	1.5
		max	mm²	35
	Flexible c/w lug conductor section			
		min	mm²	1.5
		max	mm²	35
Power terminal protec	tion according to IEC/EN 60529			IP20 front
Mechanical features	, i i i i i i i i i i i i i i i i i i i			
Operating position				
		normal		Vertical plan
		allowable		±30°
Fiving				Screw / DIN rai
Fixing				35mm
Weight			g	1060
Conductor section				
	AWG/kcmil conductor section			
		max		2
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1300000
Safety related data				
Performance level B1	0d according to EN/ISO 13489-1			
		rated load	cycles	1300000
		rated load mechanical load	cycles cycles	1300000 15000000
Mirror contats accordi	ing to IEC/EN 609474-4-1		•	
Mirror contats accordi EMC compatibility	ng to IEC/EN 609474-4-1		•	15000000
	ng to IEC/EN 609474-4-1		•	15000000 yes
EMC compatibility			•	15000000 yes
EMC compatibility AC coil operating			•	15000000 yes
EMC compatibility AC coil operating		mechanical load	cycles	15000000 yes yes
EMC compatibility AC coil operating Rated AC voltage at 5	50/60Hz, 60Hz	mechanical load	cycles V	15000000 yes yes 20
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5	50/60Hz, 60Hz	mechanical load	v V V	15000000 yes yes 20 48
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5	50/60Hz, 60Hz	mechanical load	v V V	15000000 yes yes 20 48
EMC compatibility AC coil operating	50/60Hz, 60Hz 50/60Hz	mechanical load	v V V	15000000 yes yes 20 48
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5	50/60Hz, 60Hz 50/60Hz of 50/60Hz coil powered at 50Hz	mechanical load	v V V	15000000 yes yes 20 48
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5	50/60Hz, 60Hz 50/60Hz of 50/60Hz coil powered at 50Hz	mechanical load min max	V V V V	15000000 yes yes 20 48 24
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5	50/60Hz, 60Hz 50/60Hz of 50/60Hz coil powered at 50Hz	mechanical load	v v v v v	15000000 yes yes 20 48 24 85 Us min
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5	50/60Hz, 60Hz 50/60Hz of 50/60Hz coil powered at 50Hz pick-up	mechanical load	v v v v v	15000000 yes yes 20 48 24 85 Us min
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5	50/60Hz, 60Hz 50/60Hz of 50/60Hz coil powered at 50Hz pick-up	mechanical load min max min max	v v v v v v	15000000 yes yes 20 48 24 85 Us min 110 Us max
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5	50/60Hz, 60Hz 50/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out	mechanical load min max min max	v v v v v v	15000000 yes yes 20 48 24 85 Us min 110 Us max
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5	50/60Hz, 60Hz 50/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	mechanical load min max min max	v v v v v v	15000000 yes yes 20 48 24 85 Us min 110 Us max
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5	50/60Hz, 60Hz 50/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	mechanical load min max min max max	V V V V %Us %Us %Us	15000000 yes yes 20 48 24 85 Us min 110 Us max ≤70 Us min
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5	50/60Hz, 60Hz 50/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	mechanical load min max min max max max max	v v v v v v v v s %Us %Us	15000000 yes yes 20 48 24 85 Us min 110 Us max ≤70 Us min 85 Us min
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5	50/60Hz, 60Hz 50/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up	mechanical load min max min max max max max	v v v v v v v v s %Us %Us	15000000 yes yes 20 48 24 85 Us min 110 Us max ≤70 Us min 85 Us min
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5 AC operating voltage	50/60Hz, 60Hz 50/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out	mechanical load	v v v v v v v v v v v v v v v v v v v	15000000 yes yes 20 48 24 85 Us min 110 Us max ≤70 Us min 110 Us max
EMC compatibility AC coil operating Rated AC voltage at 5 Rated AC voltage at 5	50/60Hz, 60Hz 50/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out	mechanical load	v v v v v v v v v v v v v v v v v v v	15000000 yes yes 20 48 24 85 Us min 110 Us max ≤70 Us min 110 Us max



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			holding	VA	1.53.7
	of 50/60Hz coil	powered at 60Hz			0.5 (0.0
			in-rush	VA	35120
			holding	VA	1.53.7
Dissipation at holding	≤20°C 50HZ			W	12.5
DC coil operating	20				
DC rated control volta	ige		min	V	20
			min	V V	20 48
DC rated control volta	20		max	 V	24
DC operating voltage	-			V	24
	pick-up				
	pick up		min	%Us	80 Us min
			max	%Us	110 Us max
	drop-out		тах	/000	110 00 110
			max	%Us	≤70 Us min
Average coil consum	otion ≤20°C				
5 concom			in-rush	W	2368
			holding	W	1.21,9
Max cycles frequency	,				,-
Mechanical operation				cycles/h	1500
Operating times				-	
Average time for Us o	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
		<b>A 1 1 1</b>	max	ms	85
		Opening NO			
			min	ms	20
			max	ms	55
UL technical data	) for three phase /	1C motor			
Full-load current (FLA	y ior inree-phase A		at 480V	٨	77
			at 480V at 600V	A A	77
Yielded mechanical p	erformance			A	11
noided mechanical p	for three-phase	AC motor			
	ior mee-phase		200/208V	HP	25
			200/200V 220/230V	HP	30
			460/480V	HP	60
			575/600V	HP	75
General USE			0,0001		. •
	Contactor				
			AC current	А	115
Short-circuit protectio	n fuse. 600V			,,	
	High fault				
	i ngi i tuat		Short circuit current	kA	100
			Fuse rating	A	200



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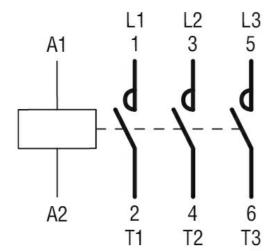
		Fuse class	J	
	Standard fault			
		Short circuit current	kA 10	
		Fuse rating	A 200	
		Fuse class	RK5	
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C -40	
		max	°C 70	
	Storage temperature			
		min	°C -50	
		max	°C 80	
Max altitude			m 3000	)
Resistance & Protection	bn			
Pollution degree			3	
Dimensions [mm (in)]				
(0.35") (0.		136 (5.35") 125 (4.92") 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	4.5 (4.51") —	

69 68

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## 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





Product designation			Power contactor
Product type designation			BF80
Contact characteristics			DFOU
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	1000
		kV	
Rated impulse withstand voltage Uimp		KV	8
Operational frequency			05
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		A	115
Operational current le			
	AC-1 (≤40°C)	A	115
	AC-1 (≤55°C)	A	95
	AC-1 (≤70°C)	А	80
	AC-3 (≤440V ≤55°C)	А	80
	AC-4 (400V)	Α	38
Rated operational power AC-3 (T≤55°C)			
	230V	kW	22
	400V	kW	45
	415V	kW	45
	440V	kW	45
	500V	kW	55
	690V	kW	55
	1000V	kW	37
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	А	70
	48V	A	60
	75V	A	60
	110V	A	8
	220V	A	-
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series	2201	~	
	≤24V	٨	100
	524V 48V	A	100
		A	
	75V	A	100
	110V	A	80
	220V	A	9
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series	<b>.</b>	-	100
	≤24V	A	100
	48V	A	100
	75V	А	100



	110V	А	85
	220V	А	95
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series			
	≤24V	А	100
	48V	А	100
	75V	А	100
	110V	А	100
	220V	А	115
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 1 poles in series			
	≤24V	А	40
	48V	А	30
	75V	А	30
	110V	А	3
	220V	А	-
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	А	60
	48V	А	50
	75V	A	50
	110V	A	40
	220V	A	5
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 3 poles in series			•
	≤24V	А	80
	48V	A	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		0-1
	≤24V	А	90
	48V	A	90
	48V 75V	A	90
	110V	A	75
	220V	A	80
Short-time allowable current for 10s (IEC/EN60947-1)	220 V	A	640
		A	040
Protection fuse		۸	405
	gG (IEC)	A	125
	aM (IEC)	<u>A</u>	80
Making capacity (RMS value)		А	800
Breaking capacity at voltage			0.40
	440V	A	640
	500V	A	625
	690V	<u>A</u>	456
Resistance per pole (average value)		mΩ	0.6
Power dissipation per pole (average value)			
	lth	W	7.9
	AC3	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



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			lla i a	0.0
		min	lbin Ibin	0.8 0.74
Max number of wires a	simultaneously connectable	max	Nr.	2
Conductor section			INI.	۷
	AWG/Kcmil			
	AWORKIM	max		2
	Flexible w/o lug conductor section	Пах		-
		min	mm²	1.5
		max	mm²	35
	Flexible c/w lug conductor section			
	, and the second s	min	mm²	1.5
		max	mm²	35
Power terminal protec	tion according to IEC/EN 60529			IP20 front
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rai
			-	35mm
Weight			g	1060
Conductor section				
	AWG/kcmil conductor section			2
Operations		max		2
Mechanical life			oveloc	15000000
Electrical life			cycles cycles	1300000
Safety related data			cycles	1300000
	0d according to EN/ISO 13489-1			
		rated load	cycles	1300000
		mechanical load	cycles	15000000
Mirror contats accordi	ng to IEC/EN 609474-4-1	moonamoarioad	0,0100	yes
EMC compatibility				yes
AC coil operating				<i>.</i> ,,
Rated AC voltage at 5	0/60Hz. 60Hz			
		min	V	60
		max	V	110
Rated AC voltage at 5	0/60Hz		V	110
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	, pick-up			
		min	%Us	80 Us min
		max	%Us	110 Us max
	drop-out			
		max	%Us	≤70 Us min
	of 50/60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80 Us min
		max	%Us	110 Us max
	drop-out			
		max	%Us	≤70 Us min
AC average coil consu	•			
	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	35120



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werage time for Us control in AC              Closing NO min max         ms         12 max           Amax         ms         28           Opening NO         min         ms         8 max           min         ms         8           max         ms         22           in DC         Closing NO         min         ms         40           max         ms         40         max         ms         85           Opening NO         min         ms         40         max         ms         55           Ut technical data         ms         20         max         ms         55           Ut technical data         ms         55         5         5         5           Vielded mechanical performance         at 480V         A         77           rielded mechanical performance         at 480V         A         77           // fielded mechanical performance         200/208V         HP         25           220/2030V         HP         30         460/480V         HP         60           575/600V         HP         75         30         30         30         30						
in-rush holding         VA VA VA VA VA VA VA VA VA VA VA VA VA V				holding	VA	1.53.7
$\begin{tabular}{ c c c c c c c } holding VA 1.53.7  c c c c c c c c c c c c c c c c c c c$		of 50/60Hz coil po	owered at 60Hz			
Dissipation at holding ≤20°C 50Hz         W         12.5           Oc oil operating OC rated control voltage         min         V         60           DC rated control voltage         w         12.5           DC rated control voltage         v         110           DC rated control voltage         v         110 Us max           drop-out         max         %Us         80 Us min           drop-out         max         %Us         100 Us max           Verage coil consumption ≤20°C         in-rush         W         2368           holding         W         1.21,9         462.860           Methanical operation         cycles/h         1500           Operating NO         min         ms         28           min DC         Closing NO         min         ms         8           in DC         Closing NO         min         ms         55           JL technical data         uin Oc         A         77 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
OC coll operating         min         V         60           Crated control voltage         v         110           CC rated control voltage         v         110           DC operating voltage         pick-up         v         110				holding		
NC rated control voltage         max         V         60           Crated control voltage         V         110           CC rated control voltage         V         110           CC operating voltage         V         110           pick-up         min         %US         80 US min           drop-out         max         %US         270 Us min           Werage coil consumption ≤20°C         max         %US         270 Us min           Max cycles frequency         v         121,9         MV         2368           Parting function         cycles/h         1500         900         1500           Parting function         cycles/h         1500         900         1500         900         1500         900         1500         900         1500         900         1500         900         1500         900         1500         900         1500         900         1500         900         1500         900         1500         900         1500         900         1500         1500         1500         1500         1500         1500         1500         1500         1500         1500         1500         1500         1500         1500         1500 <td< td=""><td></td><td>≤20°C 50Hz</td><td></td><td></td><td>W</td><td>12.5</td></td<>		≤20°C 50Hz			W	12.5
min         V         60 max         V         110           DC operating voltage         pick-up         110         100         100           DC operating voltage         pick-up         min         %US         80 Us min           drop-out         max         %US         80 Us min         100 Us max           werage coil consumption ≤20°C         in-rush         W         2368           holding         W         121,9         1500           Atax cycles fraquency         werage time for Us control         in-rush         W         2368           werage time for Us control         in AC         Closing NO         min         ms         12           Opening NO         min         ms         12         max         ms         28           Opening NO         min         ms         8         max         ms         22           in DC         Closing NO         min         ms         85         max         ms         55           L' technical data						
maxV110CC rated control voltageV110DC operating voltageinto Usepick-upmax%US80 Us mindrop-outmax%US\$70 Us minwerage coil consumption ≤20°Cin-rushW2368holdingW121,91500drop-outmax%US\$70 Us minwerage coil consumption ≤20°Cin-rushW2368holdingW121,91500drop-outmaxms12drop-outmaxms12drop-outmaxms28Operating timescycles/h1500Verage time for Us controlmaxms22in DCClosing NOminms8Opening NOminms8535U schlick datamaxms5535U schlick datatat 480VA774800Vidl-load current (FLA) for three-phase AC motor200/208VHP25200/208VHP25220/208VHP30460/480VHP60575/600VHP75General USEContactorAC currentA115ibnrt-circuit protection fuse, 600VHIgh faultShort circuit currentKA100	DC rated control voltage	ge			.,	
C rated control voltage         V         110           IC operating voltage         pick-up         min         %Us         80 Us min           drop-out         max         %Us         \$70 Us min         110 Us max           werage coil consumption \$20°C         in-rush         W         2368           holding         W         13.0.05         1500           As cycles frequency         www.asset         1500           Acchanical operation         cycles/h         1500           operating times         cycles/h         1500           werage time for Us control         in AC         max         ms         12           Closing NO         min         ms         8         max         ms         28           Opening NO         min         ms         8         max         ms         20           in DC         Closing NO         min         ms         40         max         ms         55           Ul- technical data         wms         55         10         10         10         10           UL technical data         min         ms         40         77         16         1600V         A         77           fielde						
NC operating voltage         pick-up         min         %Us         80 Us min           drop-out         max         %Us         \$70 Uls min           werage coil consumption ≤20°C         in-rush         W         2368           holding         W         2369           werage time for Us control in AC         cycles/h         1500           Opening NO         min         ms         28           Opening NO         min         ms         22           in DC         Closing NO         min         ms         22           in DC         Closing NO         min         ms         55           L technical data         min         ms         55           L technical data         max         ms         55           L technical data         200/208V         HP         25     <				max		
pick-up         min         %Us         80 Us min           drop-out         max         %Us         110 Us max           drop-out         max         %Us         \$70 Us min           werage coil consumption \$20°C         in-rush holding         W         2368           Max cycles frequency         w         2368         1.00           Aax cycles frequency         cycles/h         1500           Aechanical operation         cycles/h         1500           Operating times         werage time for Us control         min         ms         12           in AC         Closing NO         min         ms         8           Opening NO         min         ms         8           Max         ms         28         0           Opening NO         min         ms         28           Opening NO         min         ms         20           max         ms         20         max         ms           Opening NO         min         ms         20         max           Ull-load current (FLA) for three-phase AC motor         at 400V         A         77           Telded mechanical performance         for three-phase AC motor         200/208V		ge			V	110
$\frac{\operatorname{min}}{\operatorname{drop-out}} \\ \operatorname{max} \begin{array}{c} \end{subserved} \end{subserved} \end{subserved} \\ subserve$	DC operating voltage					
$\begin{tabular}{ c c c c } \hline max & \end{tabular} & tabu$		pick-up		min	% L le	90 Lle min
drop-out     max     %Us     ≤70 Us min       vverage coll consumption ≤20°C     in-rush W     2368       holding W     1.21,9       Aax cycles frequency       Aax cycles frequency       Verage time for Us control in AC       Closing NO       max     ms     12       Opening NO       min     ms     12       In DC     Closing NO       min     ms     20       Min     ms     12       In DC     Closing NO       min     ms     85       Opening NO     min     ms     20       In DC     Closing NO       min     ms     20       Min     ms     20       In DC     Closing NO     min     ms     20       IL technical data       200/208V     A						
max         %Us         ≤70 Us min           werage coll consumption ≤20°C         in-rush holding         W         2368           Max cycles frequency         w         121,9           Ack cycles frequency         cycles/h         1500           Werage time for Us control in AC         min         ms         12           Closing NO         min         ms         28           Opening NO         max         ms         8           in DC         Closing NO         min         ms         8           Opening NO         min         ms         8         20           Max         ms         20         max         ms         55           L technical data         max         ms         55         5           L technical performance         for three-phase AC motor         at 800V         A         77           fielded mechanical performance         for three-phase AC motor         200/208V         HP         25           200/208V         HP         30 <td></td> <td>dron-out</td> <td></td> <td>IIIdA</td> <td>/003</td> <td>110 03 1110</td>		dron-out		IIIdA	/003	110 03 1110
werage coil consumption \$20°C         in-rush holding         W         2368 holding           Max cycles frequency         W         1.21,9           Aexcharical operation         cycles/h         1500           Operating times         werage time for Us control         in AC           In AC         Closing NO         min         ms         12           Max ms         28         0         min         ms         28           Opening NO         min         ms         28         0           in DC         Closing NO         min         ms         28           Opening NO         min         ms         40           max         ms         25         0         max         ms         55           UL technical data         min         ms         20         max         ms         55           UL-load current (FLA) for three-phase AC motor         at 480V         A         77         77           // fielded mechanical performance for three-phase AC motor         20/208V         HP         25         22/20/203V         HP         30           46/00480V         HP         75         30         46/00480V         HP         75		ulop-out		max	%Us	<70 Lls min
in-rush holding         W         2368 W           Ax cycles frequency	Average coil consume	tion ≤20°C		IIIdA	/003	_ro 03 mm
holding         W         1.21,9           Aax cycles frequency         verage         isoo           Operating times         cycles/h         1500           werage time for Us control in AC         min         ms         12 max         ms         28           Opening NO         min         ms         12 max         ms         28           Opening NO         min         ms         22         max         ms         22           in DC         Closing NO         min         ms         40 max         ms         80 max         ms         22           Ut technical data         min         ms         20 max         ms         55           Ut technical data         min         ms         20 max         ms         55           Ut technical data         min         ms         20 max         ms         55           Ut technical performance for three-phase AC motor         at 480V         A         77 max         77           fielded mechanical performance for three-phase AC motor         200/208V         HP         25         200/208V         HP         30           General USE         Contactor         AC current         A         115         30	the stage con consump			in-rush	W	2368
Aax cycles frequency Aechanical operating times Verage time for Us 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 85 Opening NO min ms 20 max ms 55 JL technical data Closing NO min ms 20 max ms 55 JL technical data Closing NO min ms 20 max ms 55 JL technical data Closing NO Max ms 20 max ms 40 max ms 40 max ms 40 max ms 40 max ms 40 max ms 55 JL technical data Contactor Closing NO Max ms 40 max ms 55 JL technical data Closing NO Max ms 40 max ms 40 ma						
Adechanical operation         cycles/h         1500           >perating times	Max cyc <u>les frequency</u>					·_···,•
Operating times         werage time for Us control in AC         Closing NO         Max       ms         Opening NO         min       ms         max       ms         Opening NO         min       ms         max       ms         fielded mechanical performance       ms					cycles/h	1500
werage time for Us control in AC         Closing NO         min         ms         12           max         ms         28         max         ms         28           Opening NO         min         ms         8         22           in DC         Closing NO         min         ms         82           Opening NO         min         ms         82           In DC         Closing NO         max         ms         85           Opening NO         max         ms         55           UL technical data         max         ms         55           UL technical performance         at 480V         A         77           fielded mechanical performance         for three-phase AC motor         200/208V         HP         25           220/230V         HP         30         460/480V         HP         60           58ort circuit protection fuse, 600V         HP         75	Operating times				,	
Closing NO         min         ms         12           Max         ms         12           Opening NO         min         ms         8           max         ms         22           in DC         Closing NO         min         ms         40           max         ms         40         max         ms         85           Opening NO         min         ms         40         max         ms         85           Use chanced data         min         ms         20         max         ms         55           Use chanced data         min         ms         20         max         ms         55           Use chanced data         min         ms         20         max         ms         55           Use chanced current (FLA) for three-phase AC motor         at 480V         A         77         77           'fielded mechanical performance         goo/208V         HP         25         220/230V         HP         30           460/480V         HP         75         30         460         460         40         40         40           General USE         Contactor         AC current         A         1	Average time for Us co	ontrol				
$\begin{tabular}{ c c c c } & & & & & & & & & & & & & & & & & & &$		in AC				
Image: Provide a constraint of the set of t			Closing NO			
$\begin{tabular}{l l l l l l l l l l l l l l l l l l l $				min	ms	12
min ms 8 max ms 22 in DC Closing NO Min ms 40 max ms 85 Opening NO Min ms 20 max ms 55 JL technical data 				max	ms	28
max         ms         22           in DC         Closing NO         min         ms         40           Max         ms         85         60			Opening NO			
in DC Closing NO Min ms 40 max ms 85 Opening NO Min ms 20 max ms 55 JL technical data Full-load current (FLA) for three-phase AC motor full-load current (FLA) for three-phase AC motor at 480V A 77 at 600V A 77 (fielded mechanical performance for three-phase AC motor 200/208V HP 25 220/230V HP 30 460/480V HP 60 575/600V HP 75 Seneral USE Contactor AC current A 115 Short-circuit protection fuse, 600V High fault Short-circuit current KA 100				min	ms	
Closing NO         min         ms         40           max         ms         40           max         ms         85           Opening NO         min         ms         20           max         ms         55           JL technical data         ms         55           JL technical data         ms         55           JL technical data         ms         55           Julioad current (FLA) for three-phase AC motor         at 480V         A         77           fielded mechanical performance         at 600V         A         77           fielded mechanical performance         200/208V         HP         25           220/230V         HP         30         460/480V         HP         25           220/230V         HP         30         460/480V         HP         75           General USE         Contactor         AC current         A         115           Short-circuit protection fuse, 600V         HIgh fault         KA         100				max	ms	22
minms40 maxMinms85Minms20 maxminms20 max55JL technical dataFull-load current (FLA) for three-phase AC motorat 480VA77 at 600VAfielded mechanical performance for three-phase AC motor200/208VHP220/208VHP25 220/230VHP200/208VHP60 575/600VHP60575/600VHP75General USE ContactorAC currentA115Short-circuit protection fuse, 600V High faultShort circuit currentKA100		in DC	<b>.</b>			
Maxms85Nopening NOminms20maxms55JL technical dataFull-load current (FLA) for three-phase AC motorat 480VA77at 600VA77'fielded mechanical performance for three-phase AC motor200/208VHP25220/208VHP25220/208VHP30460/480VHP60575/600VHP75General USEContactorAC currentA115Short-circuit protection fuse, 600V High faultShort circuit currentKA100			Closing NO			10
Opening NO         min         ms         20           max         ms         55           JL technical data           Full-load current (FLA) for three-phase AC motor         at 480V         A         77           at 600V         A         77           'fielded mechanical performance         refor three-phase AC motor         200/208V         HP         25           220/230V         HP         30         460/480V         HP         60           575/600V         HP         75         5         5           Contactor           AC current         A         115           Short-circuit protection fuse, 600V           High fault         Short circuit current         KA         100						
min ms 20 max ms 55 JL technical data Full-load current (FLA) for three-phase AC motor at 480V A 77 at 600V A 77 (ielded mechanical performance for three-phase AC motor 200/208V HP 25 220/230V HP 30 460/480V HP 60 575/600V HP 75 Seneral USE Contactor AC current A 115 Short-circuit protection fuse, 600V High fault Short circuit current kA 100				max	ms	85
max         ms         55           JL technical data			Opening NO	min	me	20
JL technical data         Full-load current (FLA) for three-phase AC motor         at 480V       A       77         at 600V       A       77         'ielded mechanical performance       200/208V       HP       25         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						
Full-load current (FLA) for three-phase AC motor at 480V A 77 at 600V A 77 'ielded mechanical performance for three-phase AC motor 200/208V HP 25 220/208V HP 25 220/208V 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	UL technical data				1115	
at 480V       A       77         at 600V       A       77         'ielded mechanical performance		) for three-phase AC	2 motor			
at 600V       A       77         'ielded 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		,		at 480V	А	77
/ielded 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						
for three-phase AC motor 200/208V HP 25 220/230V HP 30 460/480V HP 60 575/600V HP 75 Seneral USE Contactor AC current A 115 Short-circuit protection fuse, 600V High fault Short circuit current kA 100	Yielded mechanical pe	erformance				
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	1		C motor			
220/230V       HP       30         460/480V       HP       60         575/600V       HP       75         General USE         Contactor         AC current       A         Short-circuit protection fuse, 600V         High fault       Short circuit current       KA         Short circuit current		,		200/208V	HP	25
575/600V     HP     75       General USE     Contactor     AC current     A     115       Short-circuit protection fuse, 600V     High fault     Short circuit current     KA     100					HP	
General USE Contactor AC current A 115 Short-circuit protection fuse, 600V High fault Short circuit current kA 100				460/480V	HP	60
Contactor AC current A 115 Short-circuit protection fuse, 600V High fault Short circuit current kA 100				575/600V	HP	75
AC current A 115 Short-circuit protection fuse, 600V High fault Short circuit current kA 100	General USE					
Short-circuit protection fuse, 600V High fault Short circuit current kA 100		Contactor				
High fault Short circuit current kA 100				AC current	А	115
Short circuit current kA 100	Short-circuit protectior					
		High fault				
Fuse rating A 200						
				Fuse rating	A	200



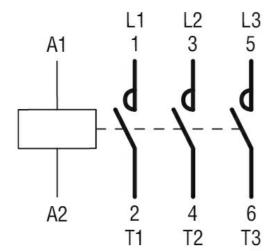
BF8000E110

		Fuse class		J
	Standard fault	Short circuit current Fuse rating Fuse class	kA A	10 200 RK5
Ambient conditions				
Temperature	Operating temperature Storage temperature	min max min	°C 2° 2°	-40 70 -50
		max	°C	80
Max altitude			m	3000
Resistance & Protection	n			
Pollution degree				3
Dimensions [mm (in)]				

Wiring diagrams



**BF8000E110** THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 80A, AC/DC COIL, 60...110VAC/DC



## 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





Draduat designation			Dowor contactor
Product designation Product type designation			Power contactor BF80
Contact characteristics			DI 00
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency		ΝV	0
Operational frequency	min	Hz	25
		Hz	400
IEC Conventional free air thermal current Ith	max	A	115
Operational current le		A	115
	$A \subset 1 (< 10^{\circ} C)$	۸	115
	AC-1 (≤40°C)	A	
	AC-1 (≤55°C)	A	95
	AC-1 (≤70°C) AC-3 (≤440V ≤55°C)	A	80 80
	AC-3 (S440V S55 C) AC-4 (400V)	A	38
Poted operational newsr AC 2 (T <e5°c)< td=""><td>AC-4 (400V)</td><td>A</td><td>30</td></e5°c)<>	AC-4 (400V)	A	30
Rated operational power AC-3 (T≤55°C)	2201/	L\\/	22
	230V 400V	kW kW	22
	400V 415V	кvv kW	45 45
	413V 440V	kW	45
	440V 500V	кvv kW	45 55
	690V	kW	55
	1000V	kW	37
Rated operational power AC-1 (T≤40°C)	1000 v	N V V	51
	230V	kW	43
	230V 400V	kW	43 76
	400V 500V	kW	95
	690V	kW	120
IEC max current le in DC1 with $L/R \le 1$ ms with 1 poles in series	030 v		120
The max current le in Der with E/K 3 mis with 1 poles in series	≤24V	А	70
	48V	A	60
	48V 75V	A	60
	110V	A	8
	220V	A	-
IEC max current le in DC1 with L/R $\leq$ 1ms with 2 poles in series	2201		
	≤24V	А	100
	48V	A	100
	48V 75V	A	100
	110V	A	80
	220V	A	9
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series	2201	Λ	5
	≤24V	А	100
	48V	A	100
	48V 75V	A	100
	750	Л	100



BF8000E230

	110V	А	85
	220V	А	95
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series			
	≤24V	А	100
	48V	А	100
	75V	А	100
	110V	А	100
	220V	A	115
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 1 poles in series			10
	≤24V	A	40
	48V	A	30
	75V	A	30
	110V	A	3
$I_{\rm EC}$ may summat be in DC2 DC5 with $1/D < 45$ may with 2 malas in series	220V	A	_
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 2 poles in series	<04)/	٨	<u> </u>
	≤24V	A	60 50
	48V 75V	A A	50 50
	75V 110V	A	50 40
	220V	A	5
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 3 poles in series	220 V	~	5
120 max current le in D03-D03 with L/1( 3 15m3 with 5 poles in series	≤24V	А	80
	48V	A	70
	75V	A	70
	110V	A	60
	220V	A	64
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 4 poles in series			
	≤24V	А	90
	48V	А	90
	75V	А	90
	110V	А	75
	220V	А	80
Short-time allowable current for 10s (IEC/EN60947-1)		А	640
Protection fuse			
	gG (IEC)	А	125
	aM (IEC)	А	80
Making capacity (RMS value)		Α	800
Breaking capacity at voltage			
	440V	А	640
	500V	А	625
	690V	A	456
Resistance per pole (average value)		mΩ	0.6
Power dissipation per pole (average value)			
	lth	W	7.9
	AC3	W	3.8
Tightening torque for terminals			
	min	Nm	4
	max	Nm	5
	min	lbin	2.95
<b>T</b> ' 1 ( ' (	max	lbin	3.69
Tightening torque for coil terminal		.,	
	min	Nm	0.8
	max	Nm	1



max       lbin       0.74         Max number of wires simultaneously connectable       Nr.       2         Conductor section       AWG/Kcmil       max       2         Flexible w/o lug conductor section       min       mm²       35         Flexible c/w lug conductor section       min       mm²       35         Flexible c/w lug conductor section       min       mm²       35         Power terminal protection according to IEC/EN 60529       IP20 front       IP20 front         Vechanical features       vertical plan       ±30°         Screw / DIN rai       35mm       Screw / DIN rai         Meight       g       1060         Conductor section       max       2         Meight       g       1060         Conductor section       max       2         Meight       g       1060         Conductor section       max       2         Mechanical life       cycles       1500000         Electrical life       cycles       1500000					
Wax number of wires simultaneously connectable       Nr.       2         Conductor section       AWG/Kcmil       max       2         Flexible w/o lug conductor section       min       mm²       1.5         max       mm²       35       1.5         Flexible c/w lug conductor section       min       mm²       35         Ower terminal protection according to IEC/EN 60529       IP20 front       1.5         Portaling position       normal       Vertical plan       allowable       4.30°         Screw / DIN rai       Screw / DIN rai       35mm       35mm         Portations       g       1060       35mm         Weight       g       1060       35mm         Conductor section       max       2       2         AWG/kcmil conductor section       max       2       35mm         Alter yielated data       cycles       1500000       15000000         Stately related data       cycles       1300000       15000000         Performance level B104 according to EI/ISO 13489-1       rated load       cycles       1300000         Micro contats according to IEC/EN 609474-4-1       yes       36       300000         Micro contats according to IEC/EN 609474-4-1       yes			min	Ibin	0.8
Conductor section       max       2         Flexible w/o lug conductor section       min       mm²       1.5         max       mm²       35       15         Flexible c/w lug conductor section       min       mm²       1.5         max       mm²       35       35         Power terminal protection according to IEC/EN 60529       IP20 front       IP20 front         Mechanical features       mormal       Vertical plan       35         Operating position       normal       Vertical plan       35         Fixing       Screw / DIN rai       35       35         Veright       g       1060       35m         Conductor section       max       2       2         Avegit       g       1060       35m         Conductor section       max       2       2         Avegit       g       1060       300000         Electrical life       cycles       15000000       15000000         Electrical life       cycles       15000000       160         Compatibility       yes       1300000       10000         Mechanical load       cycles       1300000       10000         Mechanical load	Max number of wires a		max		
AWG/Komil         max         2           Flexible w/o lug conductor section         min         mm²         1.5           max         mm²         35           Flexible c/w lug conductor section         mm²         1.5           max         mm²         1.5           max         mm²         1.5           Prevent terminal protection according to IEC/EN 60529         mm²         1.5           Weight         normal         screw / DIN rat           Screw / DIN rat         35         35           Prixing         Screw / DIN rat         35           Weight         g         1060         35mm           Conductor section         max         2         2           Coretations         max         2         2           Stery related data         cycles         1300000         15000000           Stery related data         cycles         1300000         15000000           Miror contats according to IEC/EN 609474-4-1         yes         35           MC compatibility         yes         30         30           MC compatibility         yes         30         30           AC contage at 50/60Hz, 60Hz         min         min         %				INF.	Z
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     1.5     35       Power terminal protection according to IEC/EN 60529     mm²     35       Doperating position     normal     1.5     35       Operating position     normal     allowable     +30°       Fixing     Screw / DIN rai     35       Neight     g     1060       Conductor section     max     2       Operations     g     100000       Conductor section     max     2       Operations     cycles     1300000       Electrical life     cycles     1300000       Screw / DIN rai     yes     5000000       Stafety related data     yes     100       Miror contats according to EN/ISO 13489-1     rated load     cycles     1300000       Miror contats according to EC/EN 609474-4-1     yes     yes       EMC compatibility     yes     yes       Act dotage at 50/60Hz     V     250       Rated AC voltage at 50/60Hz     v     250       Rated AC voltage at 50/60Hz     v     230 <t< td=""><td>Conductor Section</td><td>AWG/Kcmil</td><td></td><td></td><td></td></t<>	Conductor Section	AWG/Kcmil			
Flexible w/o lug conductor section       min       mm²       1.5         max       mm²       35         Flexible c/w lug conductor section       min       mm²       35         Power terminal protection according to IEC/EN 60529       IP20 front       IP20 front         Mechanical features       IP20 front       IP20 front         Operating position       normal       vertical plan         allowable       ± 330°       Screw / DIN rail         Prixing       Screw / DIN rail       Screw / DIN rail         AWG/kcmil conductor section       max       2         Operations       cycles       1500000         Mechanical life       cycles       1500000         Electrical life       cycles       1300000         Performance level B10d according to EN/ISO 13489-1       rated load       cycles       1300000         Performance level B10d according to EN/ISO 13489-1       rated load       cycles       1300000         Mitror contats according to IEC/EN 609474-4-1       yes       yes       Mc conpatibility       yes         MC conpatibility       yes       yes       if confoother       if confoother       if confoother         MC conpatibility       yes       s00 Us min       max       %Us <td></td> <td>AWO/Kemii</td> <td>max</td> <td></td> <td>2</td>		AWO/Kemii	max		2
min     mm²     1.5 max     mm²     35       Power terminal protection according to IEC/EN 60529     IP20 front       Mechanical features     IP20 front       Operating position     normal allowable     Vertical plan +30°       Fixing     Screw / DIN rai 35mm       Neight     g     1060       Conductor section     max     2       Operations     2       Wechanical life     cycles     1500000       Conductor section     max     2       Operations     2     15000000       Screw / DIN rai 35mm     35mm     2       Operations     vertical plan     2       Mechanical life     cycles     15000000       Screw / DIN rai 35mm     1300000     15000000       Screw / DIN rai 35mm     1300000     15000000       Screw / DIN rai 35mm     vertical plan     150       Conductor section     min     vertical plan     150       Conductor section     max     vertical plan     150       Conductor section     max     vertical plan     150       Conductor section     max     vertical plan     150       Screw / DIN rai     vertical plan     150     15000000       Mifer or contats according to IEC/EN 609474-4-1     vertical		Flexible w/o lug conductor section	тах		-
Flexible c/w lug conductor sectionminminmm²1.5Power terminal protection according to IEC/EN 60529IP20 frontWechanical featuresIP20 frontOperating positionnormalVertical plan allowable $\pm 30^{\circ}$ Fixing0Screw / DIN rai 35mmScrew / DIN rai 35mmWeightg1060Conductor sectionConductor sectionmax2Operationsvertical plant 35mm100000Wechanical lifecycles15000000Electrical lifecycles15000000Safety related datavertical plant 2000015000000Wertor contats according to EN/ISO 13489-1 rated load Coll operatingvertical plant 20000Wirror contats according to IEC/EN 609474-4-1yesEMC compatibilityyesVC coll operatingvertical plant 250Rated AC voltage at 50/60Hz, 60HzvVC operatingif 00000HzVC operatingvertical powered at 50Hzpick-upmin maxvick operatingvick s70 Us min maxof 50/60Hz coil powered at 50Hzvpick-upmin maxvick op-outmax maxvick op-outmax maxvick op-outmax maxvick op-outmax maxvick op-outmax maxvick op-outmax maxvick op-outmax maxvick op-outmax maxvick op-outmax max <td></td> <td>5</td> <td>min</td> <td>mm²</td> <td>1.5</td>		5	min	mm²	1.5
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			max	mm²	35
maxmm²35Power terminal protection according to IEC/EN 60529IP20 frontWethanical featuresnormalVertical plan allowableDiperating positionnormalVertical plan allowableinitial positionallowable $\pm 30^{\circ}$ Fixingg1060Conductor sectionmax2AWG/kcmil conductor sectionmax2Querationscycles15000000Electrical lifecycles1300000Electrical lifecycles1300000Electrical lifecycles1300000Safety related datarated loadcycles15000000Wirror contats according to EN/ISO 13489-1rated loadcycles15000000Wirror contats according to IEC/EN 609474-4-1yes5000000Wirror contats according to IEC/EN 609474-4-1yes20VC coll operatingyesyes100MaxV250V230AC operating voltage at 50/60Hz, 60Hzminmax%UsAC operating voltageof 50/60Hz coil powered at 50Hzmin%Us80 Us minmax%Uss70 Us minmin%Us80 Us mindrop-outmax%Uss70 Us minmaxdrop-outmax%Uss70 Us minmax%Uss70 Us minmax%Uss70 Us minAC average coil consumption at 20°C of 50/60Hz coil powered at 50Hzmax%Uss70 Us minAC average coil consumption at 20		Flexible c/w lug conductor section			
Power terminal protection according to IEC/EN 60529 IP20 front Vechanical features Deparating position IP20 front IP20 f			min		
Machanical features       normal allowable       Vertical plan ±30°         Screw / DIN rai allowable       ±30°         Fixing       g       1060         Neight       g         Conductor section         Max 2         Operations         Mechanical life       cycles       15000000         Electrical life       cycles       15000000         Electrical life       cycles       1300000         Conductor section         Mechanical life       cycles       1300000         Electrical life       cycles       1300000         Electrical load       cycles       1300000         Mechanical load       cycles       1300000         Mechanical load       cycles       1300000         Min velocity       velocity       15000000         Min velocity			max	mm²	
Depretating position       normal allowable       Vertical plan has to solve the state of the solve the s		tion according to IEC/EN 60529			IP20 front
normal allowable i 30° Fixing Vertical plan 35mm 35mm 35mm 35mm 35mm 35mm 35mm 35mm					
allowable $\pm 30^\circ$ FixingScrew / DIV rai 35mmNeightg1060Conductor sectionAWG/kcmil conductor sectionmax2OperationsWechanical lifecycles1500000Electrical lifecycles1300000Safety related dataPerformance level B10d according to EN/ISO 13489-1rated loadcycles1300000Mirror contats according to EN/ISO 13489-1rated loadcycles1300000Mirror contats according to EN/ISO 13489-1rated loadcycles1300000Mirror contats according to IEC/EN 609474-4-1yesAC coll operatingToto maxV230AC coll operatingMinV230AC operating voltageof 50/60Hz coil powered at 50Hzmin%Us470 Us minmax%UsAC coll powered at 50HzV230AC operating voltageof 50/60H	Operating position				
Fixing     Screw / DIN rai 35mm       Weight     g     1060       Conductor section     at 500000       AWG/kcmil conductor section     max     2       Operations     max     2       Mechanical life     cycles     1500000       Electrical life     cycles     1300000       Safety related data     Performance level B10d according to EN/ISO 13489-1     rated load       Performance level B10d according to EN/ISO 13489-1     rated load     cycles     1300000       Mirror contats according to IEC/EN 609474-4-1     yes     15000000       EMC compatibility     yes     15000000       Mated AC voltage at 50/60Hz, 60Hz     min     V     100       Rated AC voltage at 50/60Hz coil powered at 50Hz     v     230       AC operating voltage     of 50/60Hz coil powered at 50Hz     min     %Us     \$70 Us min       of 50/60Hz coil powered at 60Hz     min     %Us     \$70 Us min       max     %Us     110 Us max     %Us     110 Us max       drop-out     max     %Us     \$70 Us min       Max     %Us     \$70 Us min     max     %Us     \$70 Us min					
"Ming         35mm           Weight         g         1060           Conductor section         max         2           Operations         max         2           Mechanical life         cycles         1500000           Electrical life         cycles         130000           Safety related data			allowable		
Weight       g       1060         Conductor section       max       2         Operations       cycles       1500000         Bit of the sector of	Fixing				
Conductor section       max       2         Operations       max       2         Mechanical life       cycles       1500000         Electrical life       cycles       1300000         Safety related data       rated load       cycles       1300000         Performance level B10d according to EN/ISO 13489-1       rated load       cycles       1300000         Wirror contats according to IEC/EN 609474-4-1       yes       yes         EMC compatibility       yes       yes         AC coil operating       min       V       100         Rated AC voltage at 50/60Hz, 60Hz       w       250         Rated AC voltage at 50/60Hz coil powered at 50Hz       v       230         AC operating voltage       of 50/60Hz coil powered at 50Hz       w       80 Us min         max       %Us       \$10 Us max       max       %Us       \$10 Us max         drop-out       max       %Us       \$0 Us min       max       %Us       \$10 Us max         drop-out       max       %Us       \$0 Us min       max       %Us       \$10 Us max         drop-out       max       %Us       \$0 Us min       max       %Us       \$70 Us min         Max %Us       \$70 Us min </td <td>Weight</td> <td></td> <td></td> <td>n</td> <td></td>	Weight			n	
AWG/kcmil conductor section       max       2         Operations         Wechanical life       cycles       1500000         Electrical life       cycles       1300000         Safety related data       vertical load       cycles       1300000         Performance level B10d according to EN/ISO 13489-1       rated load       cycles       1300000         Micro contats according to EN/ISO 13489-1       yes         Performance level B10d according to EN/ISO 13489-1       yes         Compatibility       yes         AC coil operating       yes         AC coil operating       yes         AC coil operating       yes         AC coil operating       V       200         AC coil operating voltage at 50/60Hz       weign colspan="2">weign colspan="2"weign colspan="2"weign colspan="2"weign colspan="2"weign colspan	Conductor section			3	
max         2           Operations         volume         500000           Mechanical life         cycles         1500000           Electrical life         cycles         130000           Safety related data         rated load         cycles         130000           Performance level B10d according to EN/ISO 13489-1         rated load         cycles         130000           Mirror contats according to IEC/EN 609474-4-1         yes         1500000           Mirror contats according to IEC/EN 609474-4-1         yes         Yes           EMC compatibility         yes         Yes         Yes           AC ool operating         wes         Yes         Yes           Rated AC voltage at 50/60Hz, 60Hz         wes         Yes         Yes           AC operating voltage         of 50/60Hz coil powered at 50Hz         V         230           AC operating voltage         of 50/60Hz coil powered at 50Hz         v         230           AC operating voltage         of 50/60Hz coil powered at 50Hz         v         230           AC operating voltage         of 50/60Hz coil powered at 60Hz         pick-up         min         %Us         \$0 Us min           max         %Us         110 Us max         drop-out         max <td< td=""><td></td><td>AWG/kcmil conductor section</td><td></td><td></td><td></td></td<>		AWG/kcmil conductor section			
Operations       Mechanical life       cycles       15000000         Electrical life       cycles       1300000         Safety related data       rated load       cycles       1300000         Performance level B10d according to EN/ISO 13489-1       rated 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         AC coil operating       min       V       100       max       V       250         Rated AC voltage at 50/60Hz, 60Hz       min       V       230       AC operating voltage       V       230         AC operating voltage       of 50/60Hz coil powered at 50Hz       min       %Us       80 Us min         max       %Us       110 Us max       drop-out       max       %Us       <70 Us min			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 1300000 Mirror contats according to IEC/EN 609474-4-1 EMC compatibility AC coll operating Rated AC voltage at 50/60Hz, 60Hz accord operating voltage of 50/60Hz coil powered at 50Hz pick-up min %Us 80 Us min max %Us ≤70 Us min accord to us max drop-out min %Us 80 Us min max %Us ≤70 Us min max %Us ≤	Operations				
Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles 1300000 mechanical load cycles 15000000 Wirror contats according to IEC/EN 609474-4-1 yes Yes AC compatibility AC coll operating Rated AC voltage at 50/60Hz, 60Hz in V 100 max V 250 Rated AC voltage at 50/60Hz coll powered at 50Hz pick-up in %Us 80 Us min max %Us ≤70 Us min of 50/60Hz coll powered at 60Hz pick-up in %Us 80 Us min max %Us ≤70 Us min max %Us ≤	Mechanical life			cycles	15000000
Performance level B10d according to EN/ISO 13489-1 rated load cycles 1300000 mechanical load cycles 1500000 Wirror contats according to IEC/EN 609474-4-1 ves Compatibility Compatibility Compatibility Compatibility Rated AC voltage at 50/60Hz, 60Hz Compatibility Compa	Electrical life			cycles	1300000
rated load mechanical load         cycles cycles         130000 1500000           Wirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         yes           Rated AC voltage at 50/60Hz, 60Hz         min         V         100 max         V         250           Rated AC voltage at 50/60Hz         v         230         V         230           AC operating voltage         of 50/60Hz coil powered at 50Hz pick-up         v         230         V         230           AC operating voltage         of 50/60Hz coil powered at 50Hz pick-up         min         %Us         80 Us min 110 Us max           drop-out         max         %Us         ≤70 Us min           of 50/60Hz coil powered at 60Hz pick-up         min         %Us         80 Us min           Max         %Us         \$10 Us max         40 Us max           drop-out         max         %Us         \$10 Us max           drop-out         max         %Us         \$10 Us max           MC         average coil consumption at 20°C         max         %Us         \$70 Us min	Safety related data				
Mirror contats according to IEC/EN 609474-4-1       yes         EMC compatibility       yes         AC coil operating       yes         Rated AC voltage at 50/60Hz, 60Hz       min       V       100         Max       V       250       250         Rated AC voltage at 50/60Hz       V       230         AC operating voltage       of 50/60Hz coil powered at 50Hz       V       230         AC operating voltage       of 50/60Hz coil powered at 50Hz       min       %Us       80 Us min         Max       %Us       110 Us max       drop-out       max       %Us       ≤70 Us min         of 50/60Hz coil powered at 60Hz       pick-up       min       %Us       \$0 Us min       max         drop-out       max       %Us       \$110 Us max       drop-out       max       %Us       \$10 Us max         drop-out       max       %Us       \$10 Us max       drop-out       max       %Us       \$10 Us max         drop-out       max       %Us       \$70 Us min       max       %Us       \$70 Us min         AC average coil consumption at 20°C       of 50/60Hz coil powered at 50Hz       max       %Us       \$70 Us min	Performance level B1	0d according to EN/ISO 13489-1			
Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes AC coil operating Rated AC voltage at 50/60Hz, 60Hz Rated AC voltage at 50/60Hz AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz pick-up Min %Us 80 Us min max %Us ≤70 Us min Min %Us 80 Us min max %Us ≤70 Us min Min %Us 80 Us min max %Us 110 Us max drop-out Min %Us 80 Us min max %Us ≤70 Us min Min %Us 570 Us min Min %				•	
EMC compatibility yes AC coil operating Rated AC voltage at 50/60Hz, 60Hz Rated AC voltage at 50/60Hz AC voltage at 50/60Hz AC operating voltage of 50/60Hz coil powered at 50Hz pick-up Min %Us 80 Us min max %Us 110 Us max drop-out Max %Us \$70 Us min max %Us 110 Us max drop-out Max %Us \$70 Us min max %Us 110 Us max drop-out Max %Us \$70 Us min max %Us \$70 Us min			mechanical load	cycles	
AC coil operating Rated AC voltage at 50/60Hz, 60Hz min V 100 max V 250 Rated AC voltage at 50/60Hz V 230 AC operating voltage of 50/60Hz coil powered at 50Hz pick-up drop-out min %Us 80 Us min max %Us 110 Us max drop-out min %Us 80 Us min max %Us ≤70 Us min max %Us 110 Us max drop-out AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz		ng to IEC/EN 609474-4-1			
Rated AC voltage at 50/60Hz, 60Hz $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					yes
min maxV100 max100 max100 max100 max100 max100 250Rated AC voltage at 50/60HzV230V230AC operating voltage of 50/60Hz coil powered at 50Hz pick-upmin max%Us80 Us min max drop-outmin max%Us80 Us min max80 Us min max of 50/60Hz coil powered at 60Hz pick-upmax%Us<70 Us min max min drop-outmin max%Us80 Us min max MC average coil consumption at 20°C of 50/60Hz coil powered at 50Hzmax%Us<70 Us min					
max       V       250         Rated AC voltage at 50/60Hz       V       230         AC operating voltage       of 50/60Hz coil powered at 50Hz pick-up       min       %Us       80 Us min max         Max       %Us       110 Us max       %Us       110 Us max         drop-out       max       %Us       ≤70 Us min         of 50/60Hz coil powered at 60Hz pick-up       min       %Us       ≤70 Us min         of 50/60Hz coil powered at 60Hz pick-up       min       %Us       \$110 Us max         drop-out       max       %Us       \$110 Us max         drop-out       max       %Us       \$70 Us min         Max       %Us       \$110 Us max       %Us       \$110 Us max         AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz       max       %Us       <70 Us min	Raled AC vollage at 5	0/6082, 6082	min	V	100
Rated AC voltage at 50/60Hz       V       230         AC operating voltage       of 50/60Hz coil powered at 50Hz pick-up       min       %Us       80 Us min max         More -out       max       %Us       110 Us max         drop-out       max       %Us       ≤70 Us min         of 50/60Hz coil powered at 60Hz pick-up       min       %Us       ≤70 Us min         of 50/60Hz coil powered at 60Hz pick-up       min       %Us       80 Us min         More -out       min       %Us       80 Us min         Max       %Us       110 Us max       %Us       110 Us max         drop-out       min       %Us       50 Us min         Max       %Us       570 Us min       %Us       ≤70 Us min					
AC operating voltage of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up	Rated AC voltage at 5	0/60Hz	IIIdX		
of 50/60Hz coil powered at 50Hz pick-up min %Us 80 Us min max %Us 110 Us max drop-out of 50/60Hz coil powered at 60Hz pick-up min %Us 80 Us min max %Us 110 Us max Min %Us 80 Us min max %Us 110 Us max AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz	-			v	200
pick-up min %Us 80 Us min max %Us 110 Us max drop-out max %Us ≤70 Us min of 50/60Hz coil powered at 60Hz pick-up min %Us 80 Us min max %Us 110 Us max drop-out Max %Us ≤70 Us min max %Us ≤70 Us min max %Us ≤70 Us min		of 50/60Hz coil powered at 50Hz			
min%Us80 Us min maxdrop-outmax%Us110 Us maxof 50/60Hz coil powered at 60Hz pick-upmin %Us≤70 Us minmin%Us80 Us min max%Us110 Us maxdrop-outmin max%Us110 Us maxdrop-outmax%Us570 Us minAC average coil consumption at 20°C of 50/60Hz coil powered at 50Hzsourcesource		-			
drop-outmax%Us110 Us maxmax%Us≤70 Us minof 50/60Hz coil powered at 60Hz pick-upmin%Us80 Us minmin%Us80 Us minmax%Us110 Us maxdrop-outmax%Us110 Us maxAC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz50Hz50Hz			min	%Us	80 Us min
drop-out <u>max</u> %Us ≤70 Us min of 50/60Hz coil powered at 60Hz pick-up <u>min</u> %Us 80 Us min max %Us 110 Us max drop-out <u>max</u> %Us ≤70 Us min <u>max</u> %Us ≤70 Us min					
max%Us≤70 Us minof 50/60Hz coil powered at 60Hz pick-upmin%Us80 Us min maxmin%Us80 Us min max%Us110 Us maxdrop-outmax%Us≤70 Us minAC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz50Hz50Hz		drop-out		-	
pick-up min %Us 80 Us min max %Us 110 Us max drop-out <u>max %Us ≤70 Us min</u> AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz		•	max	%Us	≤70 Us min
min %Us 80 Us min max %Us 110 Us max drop-out <u>max %Us ≤70 Us min</u> AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz		of 50/60Hz coil powered at 60Hz			
max %Us 110 Us max drop-out max %Us ≤70 Us min AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz		pick-up			
drop-out max %Us ≤70 Us min AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz			min		
max %Us ≤70 Us min AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz			max	%Us	110 Us max
AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz		drop-out			
of 50/60Hz coil powered at 50Hz			max	%Us	≤70 Us min
·	AC average coil consu	-			
in-rush VA 35120		of 50/60Hz coil powered at 50Hz			
			in-rush	VA	35120



100...250VAC/DC

BF8000E230

			h a lalla a	\ /A	4 5 0 7
	of 50/60Hz coil r	powered at 60Hz	holding	VA	1.53.7
			in-rush	VA	35120
			holding	VA	1.53.7
Dissipation at holding	≤20°C 50Hz			W	12.5
DC coil operating					
DC rated control voltage	ge				
			min	V	100
			max	V	250
DC rated control voltage	ge			V	230
DC operating voltage					
	pick-up		_		
			min	%Us	80 Us min
	<u> </u>		max	%Us	110 Us max
	drop-out			0/11-	
	tion <200°C		max	%Us	≤70 Us min
Average coil consump	0001 ≥20 C		in-rush	W	2368
			holding	W	2368 1.21,9
Max cycles frequency				vv	1.21,ð
Max cycles nequency Mechanical operation				cycles/h	1500
Operating times				5,5100,11	
Average time for Us co	ontrol				
0	in AC				
		Closing NO			
		Ū	min	ms	12
			max	ms	28
		Opening NO			
			min	ms	8
			max	ms	22
	in DC	<b>•</b> ••••••			
		Closing NO			4.0
			min	ms	40
			max	ms	85
		Opening NO		<b>m</b> a	20
			min	ms	20 55
UL technical data			max	ms	55
Full-load current (FLA)	) for three-phase A	C motor			
	, 101 th to phase P		at 480V	А	77
			at 600V	A	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	А	115
Short-circuit protectior					
•	Ligh foult				
·	High fault				
	High lault		Short circuit current Fuse rating	kA A	100 200



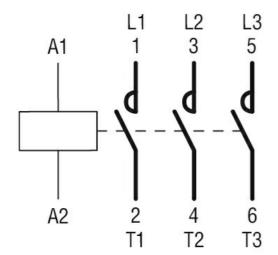
BF8000E230

		Fuse class	J	
	Standard fault	Short circuit current Fuse rating Fuse class	kA 10 A 200 RK5	
Ambient conditions				
Temperature	Operating temperature Storage temperature	min max	°C -40 °C 70	
	ololuge lemperature	min	°C -50	
		max	°C 80	
Max altitude			m 3000	
Resistance & Protection	on			
Pollution degree			3	
Dimensions [mm (in)]				

Wiring diagrams



BF8000E230 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 80A, AC/DC COIL, 100...250VAC/DC



## 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