



Product designation			Power contactor
Product type designation			BF50
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	THO/	A	90
Operational current le			
	AC-1 (≤40°C)	А	90
	AC-1 (≤55°C)	A	75
	AC-1 (≤70°C)	A	65
	AC-3 (≤440V ≤55°C)	A	50
	AC-4 (400V)	A	28
Rated operational current AC-3 (T≤55°C)	710 + (+001)	7.	20
	230V	А	50
	400V	A	50 50
	400V 415V	A	50
	440V	A	50
	500V	A	44
	690V	A	39
	1000V	A	23
Rated operational power AC-1 (T≤40°C)	10001		20
	230V	kW	34
	400V	kW	59
	500V	kW	74
	690V	kW	102
IEC max current le in DC1 with $L/R \le 1$ ms with 1 poles in series	0001		102
	≤24V	А	45
	48V	A	40
	75V	A	40
	110V	A	8
	220V	A	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	А	60
	48V	A	60
	75V	A	60
	110V	A	50
	220V	A	7
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series	2201		-
	≤24V	А	60
	48V	A	60
	46V 75V	A	60
	750		00

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FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 90A, AC COIL 50/60HZ, 48VAC

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	110V	А	55
	220V	А	75
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	А	60
	48V	А	60
	75V	А	60
	110V	А	60
	220V	А	90
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 1 poles in series			
	≤24V	А	30
	48V	А	25
	75V	А	22
	110V	А	3
	220V	А	-
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 2 poles in series			
	≤24V	А	35
	48V	А	35
	75V	А	30
	110V	А	25
	220V	А	5
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 3 poles in series			
	≤24V	А	50
	48V	А	50
	75V	А	45
	110V	А	30
	220V	А	40
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	А	55
	48V	А	55
	75V	А	55
	110V	А	45
	220V	А	50
Short-time allowable current for 10s (IEC/EN60947-1)		А	400
Protection fuse			
	gG (IEC)	А	100
	aM (IEC)	А	50
Making capacity (RMS value)		А	500
Breaking capacity at voltage			
	440V	А	400
	500V	А	352
	690V	А	312
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)			
· · · · · · · · · · · · · · · · · · ·	lth	W	6.5
	AC-3	W	2
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
	max		

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FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 90A, AC COIL 50/60HZ,

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		min	Ibin	0.8
		max	Ibin	0.74
Conductor section	simultaneously connectable		Nr.	2
	AWG/Kcmil			
	AWG/Renin	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
	ction according to IEC/EN 60529			IP20 front
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30° Screw / DIN rai
Fixing				35mm
Weight			g	1240
Conductor section			3	
	AWG/kcmil conductor section			
		max		2
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1400000
Safety related data				
Performance level B1	10d according to EN/ISO 13489-1			
		rated load	cycles	1400000
		rated load mechanical load	cycles cycles	15000000
	ling to IEC/EN 609474-4-1		•	15000000 yes
EMC compatibility	ling to IEC/EN 609474-4-1		•	15000000
EMC compatibility AC coil operating			cycles	15000000 yes yes
EMC compatibility AC coil operating Rated AC voltage at t	50/60Hz		•	15000000 yes
EMC compatibility AC coil operating	50/60Hz		cycles	15000000 yes yes
EMC compatibility AC coil operating Rated AC voltage at t	50/60Hz of 50/60Hz coil powered at 50Hz		cycles	15000000 yes yes
EMC compatibility AC coil operating Rated AC voltage at t	50/60Hz	mechanical load	V	15000000 yes yes 48
EMC compatibility AC coil operating Rated AC voltage at t	50/60Hz of 50/60Hz coil powered at 50Hz	mechanical load	v v %Us	15000000 yes yes 48 80
EMC compatibility AC coil operating Rated AC voltage at t	50/60Hz of 50/60Hz coil powered at 50Hz pick-up	mechanical load	V	15000000 yes yes 48
EMC compatibility AC coil operating Rated AC voltage at t	50/60Hz of 50/60Hz coil powered at 50Hz	mechanical load	v v %Us	15000000 yes yes 48 80
EMC compatibility AC coil operating Rated AC voltage at t	50/60Hz of 50/60Hz coil powered at 50Hz pick-up	mechanical load	v v %Us %Us	15000000 yes yes 48 80 110
EMC compatibility AC coil operating Rated AC voltage at t	50/60Hz of 50/60Hz coil powered at 50Hz pick-up	mechanical load	v v %Us %Us %Us	15000000 yes yes 48 80 110 20
EMC compatibility AC coil operating Rated AC voltage at {	50/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out	mechanical load	v v %Us %Us %Us	15000000 yes yes 48 80 110 20
EMC compatibility AC coil operating Rated AC voltage at {	50/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	mechanical load	v v %Us %Us %Us %Us	15000000 yes yes 48 48 80 110 20 55 85
EMC compatibility AC coil operating Rated AC voltage at t	50/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up	mechanical load	v v %Us %Us %Us %Us	15000000 yes yes 48 80 110 20 55
EMC compatibility AC coil operating Rated AC voltage at t	50/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	mechanical load	v v v v v v v v v v v v v v v v v v v	15000000 yes yes 48 48 80 110 20 55 85 110
EMC compatibility AC coil operating Rated AC voltage at {	50/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up	mechanical load	v v v v v v v v v v v v v v v v v v v	15000000 yes yes 48 48 80 110 20 55 55 85 110 40
EMC compatibility AC coil operating Rated AC voltage at AC operating voltage	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 48 48 80 110 20 55 85 110
EMC compatibility AC coil operating Rated AC voltage at t	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 48 48 80 110 20 55 55 85 110 40
EMC compatibility AC coil operating Rated AC voltage at AC operating voltage	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 48 48 80 110 20 55 55 85 110 40 55
EMC compatibility AC coil operating Rated AC voltage at AC operating voltage	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 48 48 80 110 20 55 55 85 110 40

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	of 50/60Hz coil pow	vered at 60Hz			
			in-rush	VA	195
			holding	VA	13
	of 60Hz coil powere	ed at 60Hz			
	I		in-rush	VA	210
			holding	VA	15
Dissipation at holding s	<20°C 50Hz		lioiding	W	5
Max cycles frequency					0
Mechanical operation				cycles/h	3600
Operating times				Cyclc3/II	3000
Average time for Us co	ontrol				
Average time for 03 cc	in AC				
	III AC				
		Closing NO			40
			min	ms	12
			max	ms	28
		Opening NO			
			min	ms	8
			max	ms	22
	in DC				
		Closing NO			
			min	ms	40
			max	ms	85
		Opening NO			
			min	ms	20
			max	ms	55
UL technical data				-	
Full-load current (FLA)	for three-phase AC r	notor			
			at 480V	А	52
			at 600V	A	41
Yielded mechanical pe	rformanco		41.0001		- T I
neideu mechanical pe		· ··· · · · ·			
	for single-phase AC	, motor	440/4001/		-
			110/120V	HP	5
			230V	HP	10
	for three-phase AC	motor			
			200/2001/	HP	15
			200/208V		
			220/230V	HP	20
			220/230V 460/480V	HP HP	20 40
			220/230V	HP	20
General USE			220/230V 460/480V	HP HP	20 40
General USE	Contactor		220/230V 460/480V	HP HP	20 40
General USE	Contactor		220/230V 460/480V	HP HP	20 40
General USE Short-circuit protection			220/230V 460/480V 575/600V	HP HP HP	20 40 40
	n fuse, 600V		220/230V 460/480V 575/600V	HP HP HP	20 40 40
			220/230V 460/480V 575/600V AC current	HP HP HP	20 40 40 90
	n fuse, 600V		220/230V 460/480V 575/600V AC current	HP HP A A	20 40 40 90 100
	n fuse, 600V		220/230V 460/480V 575/600V AC current Short circuit current Fuse rating	HP HP HP	20 40 40 90 100 150
	n fuse, 600V High fault		220/230V 460/480V 575/600V AC current	HP HP A A	20 40 40 90 100
	n fuse, 600V		220/230V 460/480V 575/600V AC current Short circuit current Fuse rating Fuse class	HP HP A A kA A	20 40 40 90 100 150 J
	n fuse, 600V High fault		220/230V 460/480V 575/600V AC current Short circuit current Fuse rating Fuse class Short circuit current	HP HP A A kA A	20 40 40 90 100 150 J 5
	n fuse, 600V High fault		220/230V 460/480V 575/600V AC current Short circuit current Fuse rating Fuse class Short circuit current Fuse rating	HP HP A A kA A	20 40 40 90 90 100 150 J 5 150
Short-circuit protection	n fuse, 600V High fault		220/230V 460/480V 575/600V AC current Short circuit current Fuse rating Fuse class Short circuit current	HP HP A A kA A	20 40 40 90 100 150 J 5
Short-circuit protection	n fuse, 600V High fault		220/230V 460/480V 575/600V AC current Short circuit current Fuse rating Fuse class Short circuit current Fuse rating	HP HP A A kA A	20 40 40 90 90 100 150 J 5 150
Short-circuit protection	n fuse, 600V High fault Standard fault		220/230V 460/480V 575/600V AC current Short circuit current Fuse rating Fuse class Short circuit current Fuse rating	HP HP A A kA A	20 40 40 90 90 100 150 J 5 150
Short-circuit protection	n fuse, 600V High fault	ure	220/230V 460/480V 575/600V AC current Short circuit current Fuse rating Fuse class Short circuit current Fuse rating	HP HP A A kA A	20 40 40 90 90 100 150 J 5 150

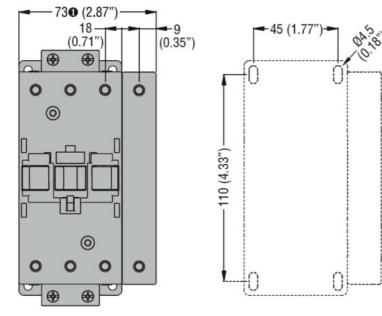
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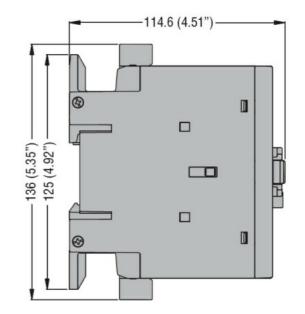
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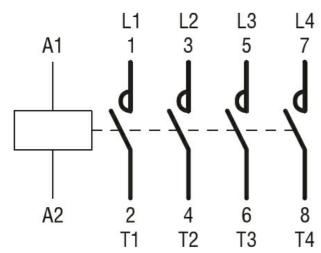
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions			





• BF80T2 82mm/3.23"

## Wiring diagrams



## Certifications and 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

Compliance

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	CCC	
	cULus	
ETIM classification		
		EC000066 -

EC000066 -Power contactor, AC switching