



			10 10 10
Product designation			Power contactor
Product type designation			BF50
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		Α	90
Operational current le			
	AC-1 (≤40°C)	Α	90
	AC-1 (≤55°C)	Α	75
	AC-1 (≤70°C)	Α	65
	AC-3 (≤440V ≤55°C)	Α	50
	AC-4 (400V)	Α	28
Rated operational power AC-3 (T≤55°C)			
· · · · · · · · · · · · · · · · · · ·	230V	kW	15
	400V	kW	22
	415V	kW	30
	440V	kW	30
	500V	kW	30
	690V	kW	37
	1000V	kW	22
Rated operational current AC-3 (T≤55°C)	10001		
Traise operational current to o (1=00 0)	230V	Α	50
	400V	A	50
	415V	A	50
	440V	A	50
	500V	A	44
	690V	A	39
	1000V	A	23
Rated operational power AC-1 (T≤40°C)	1000 V		20
Nated operational power AO-1 (1240 O)	230V	kW	34
	400V	kW	59
	500V	kW	74
	690V	kW	102
IEC may current to in DC1 with L/D < 1 mg with 1 poles in series	090 V	KVV	102
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series	-21/1	٨	1E
	≤24V	A	45
	48V	A	40
	75V	A	40
	110V	A	8
150	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		_	
	≤24V	Α	60



	48V	Α	60
	75V	Α	60
	110V	Α	50
	220V	A	7
IFC may current le in DC1 with L/D < 1 mg with 2 mglgs in series	220 V		
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	1041/		00
	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	55
	220V	Α	75
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	60
	220V	A	90
150	2201	A	90
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			00
	≤24V	Α	30
	48V	Α	25
	75V	Α	22
	110V	Α	3
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
'	≤24V	Α	35
	48V	Α	35
	75V	A	30
	110V	A	25
	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	50
	48V	Α	50
	75V	Α	45
	110V	Α	30
	220V	Α	40
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	55
	48V	Α	55
	75V		55 55
		A	
	110V	A	45
	220V	A	50
Short-time allowable current for 10s (IEC/EN60947-1)		Α	400
Protection fuse			
	gG (IEC)	Α	100
	aM (IEC)	Α	50
Making capacity (RMS value)		Α	500
Breaking capacity at voltage			
	440V	Α	400
	500V	Α	352
	690V	Α	312
Resistance per pole (average value)	000 v	mΩ	0.8
		11177	0.0
Power dissipation per pole (average value)	1.1	147	0.5
	Ith	W	6.5
	AC-3	W	2
Tightening torque for terminals			

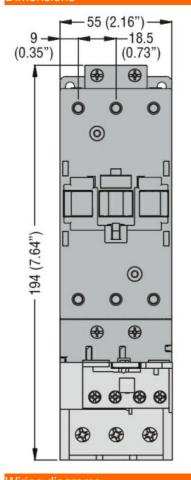


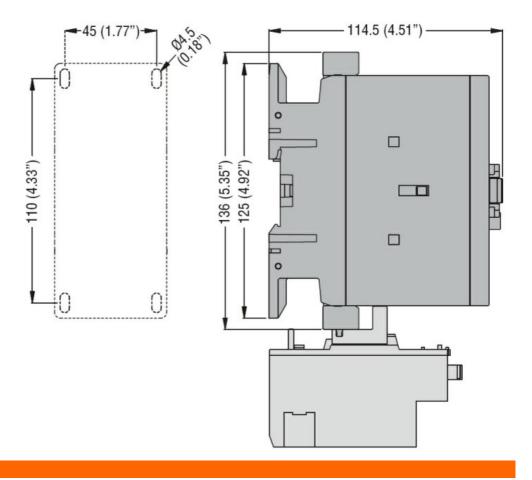
		min	Nm	4
		max	Nm	5
		min	Ibin	2.95
		max	Ibin	3.69
Tightening torque for o	coil terminal			
		min	Nm	0.8
		max	Nm	1
		min	Ibin	0.8
		max	Ibin	0.74
Max number of wires s	simultaneously connectable		Nr.	2
Conductor section	·			
	AWG/Kcmil			
	, t.v. <b>G</b> , r.torr	max		2
	Flexible w/o lug conductor section	max		
	rickible w/o lag conductor section	min	mm²	1.5
		max	mm²	35
	Flevible a/w lug conductor coation	Παλ	111111	33
	Flexible c/w lug conductor section	min	mama <sup>2</sup>	1 5
		min	mm²	1.5
D	('	max	mm²	35
	tion according to IEC/EN 60529			IP20 front
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail
				35mm
Weight			g	1060
Conductor section				
	AWG/kcmil conductor section			
		max		2
Operations		max		2
Operations Mechanical life		max	cycles	15000000
		max	cycles cycles	
Mechanical life		max		15000000
Mechanical life Electrical life Safety related data	0d according to EN/ISO 13489-1	max		15000000
Mechanical life Electrical life Safety related data	0d according to EN/ISO 13489-1		cycles	15000000 1400000
Mechanical life Electrical life Safety related data	0d according to EN/ISO 13489-1	rated load	cycles	15000000 1400000 1400000
Mechanical life Electrical life Safety related data Performance level B10			cycles	1500000 140000 140000 1500000
Mechanical life Electrical life Safety related data Performance level B1	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1	rated load	cycles	15000000 1400000 1400000 15000000 yes
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility		rated load	cycles	1500000 140000 140000 1500000
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating	ng to IEC/EN 609474-4-1	rated load	cycles	15000000 1400000 1400000 15000000 yes
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility	ng to IEC/EN 609474-4-1	rated load mechanical load	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating	ng to IEC/EN 609474-4-1	rated load mechanical load min	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	ng to IEC/EN 609474-4-1	rated load mechanical load	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating	ng to IEC/EN 609474-4-1 0/60Hz, 60Hz	rated load mechanical load min	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz	rated load mechanical load min	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	ng to IEC/EN 609474-4-1 0/60Hz, 60Hz	rated load mechanical load min max	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes 100 250
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz	rated load mechanical load min	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz drop-out	rated load mechanical load min max	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes 100 250
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz	rated load mechanical load min max	cycles cycles cycles	15000000 1400000 1400000 150000000 yes yes 100 250
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz drop-out	rated load mechanical load min max	cycles cycles v v v	15000000 1400000 1400000 15000000 yes yes 100 250 ≤70 Us min
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz drop-out  of 50/60Hz coil powered at 60Hz pick-up	rated load mechanical load min max	cycles cycles cycles	15000000 1400000 1400000 150000000 yes yes 100 250
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz drop-out	rated load mechanical load  min max  min	cycles cycles v v v s WUs	15000000 1400000 1400000 15000000 yes yes 100 250 ≤70 Us min 110 Us max
Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz drop-out  of 50/60Hz coil powered at 60Hz pick-up	rated load mechanical load  min max  min	cycles cycles v v v	15000000 1400000 1400000 15000000 yes yes 100 250 ≤70 Us min



AC average coil consu	ımption at 20°C				
	of 50/60Hz coil p	owered at 50Hz			
			in-rush	VA	35120
			holding	VA	1.53.7
	of 50/60Hz coil p	owered at 60Hz			
			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 operating voltage					
	pick-up				
			min	%Us	80 Us min
			max	%Us	110 Us max
	drop-out				
			max	%Us	≤70 Us min
Average coil consump	tion ≤20°C				
			in-rush	W	2368
			holding	W	1.21,9
Max cycles frequency					
Mechanical operation				cycles/h	1500
Operating times					
Average time for Us co	ontrol				
	in AC				
		Closing NO			
			min	ms	12
			max	ms	28
		Opening NO			
			min	ms	8
			max	ms	22
	in DC				
		Closing NO			
			min	ms	40
			max	ms	85
		Opening NO			
			min	ms	20
			max	ms	55
UL technical data		_			
Full-load current (FLA)	for three-phase A	J motor		_	
			at 480V	A	52
Na 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			at 600V	Α	41
Yielded mechanical pe					
	for single-phase	AC motor			_
			110/120V	HP	5
			230V	HP	10
	for three-phase A	AC motor			
			200/208V	HP	15
			220/230V	HP	20
			460/480V	HP	40
			575/600V	HP	40
General USE					
	Contactor				

		AC current	Α	90
Short-circuit protecti	on fuse, 600V			
•	High fault			
	-	Short circuit current	kA	100
		Fuse rating	Α	150
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	150
		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 & Protect	ction			
Pollution degree				3
Dimensions				

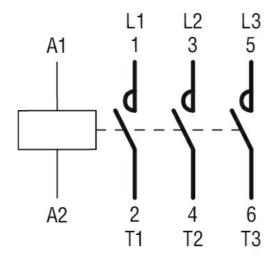




Wiring diagrams

**ENERGY AND AUTOMATION** 

### THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 50A, 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