



Product designation				Power contactor
Product type designation				BF50
Contact characteristics				
Number of poles	nr.			3
Rated insulation voltage U _i IEC/EN	V			1000
Rated impulse withstand voltage U _{imp}	kV			8
Operational frequency	min	Hz	25	
	max	Hz	400	
Conventional free air thermal current I _{th} IEC/EN	A			90
Operational current I _e	AC-1 (≤40°C)	A	90	
	AC-3 (≤440V ≤55°C)	A	50	
	AC-4 (400V)	A	28	
Rated operational power AC-1 (T≤40°C)	230V	kW	34	
	400V	kW	59	
	500V	kW	74	
	690V	kW	102	
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	
Short-time allowable current for 10s (IEC/EN60947-1)	A			400
Protection fuse	gG (IEC)	A	100	
	aM (IEC)	A	50	
Making capacity (RMS value)	A			500
Breaking capacity at voltage	440V	A	400	
	500V	A	352	
	690V	A	312	
Resistance per pole (average value)	mΩ			0.8
Power dissipation per pole (average value)	I _{th}	W	6.5	
	AC3	W	2	
Tightening torque for terminals	min	Nm	4	
	max	Nm	5	
	min	I _{bin}	2.95	
	max	I _{bin}	3.69	

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1
min	lbft	0.8
max	lbft	0.74

Max number of wires simultaneously connectable

nr.	2
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Conductor section

AWG

/kcmil min	14
/kcmil max	2

Flexible w/o lug conductor section

min	mm ²	1.5
max	mm ²	35

Flexible c/w lug conductor section

min	mm ²	1.5
max	mm ²	35

Power terminal protection according to IEC/EN 60529

IP20 front

Auxiliary contact characteristics

Operational current I_e AC-1 (≤40°C)

A	90
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Operating current DC13

110V	A	Screw / DIN rail 35mm
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Ambient conditions

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

m	3000
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Operational position

Operating position normal
Operating position allowable

Vertical plan
±30°

Fixing

Screw / DIN rail
35mm

Weight

g	1.02
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Operations

Mechanical life

Cycles	15000000
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Electrical life

Cycles	1400000
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Safety related data

Performance level B10d according to EN/ISO 13489-1

rated load	Cicli	1400000
mechanical load	Cicli	15000000

Mirror contacts according to IEC/EN 60947-4-1

yes

EMC compatibility

yes

AC coil operating

AC operating voltage

of 50/60Hz coil powered at 50Hz
pick-up

min	%Us	0.8
max	%Us	1.1

drop-out

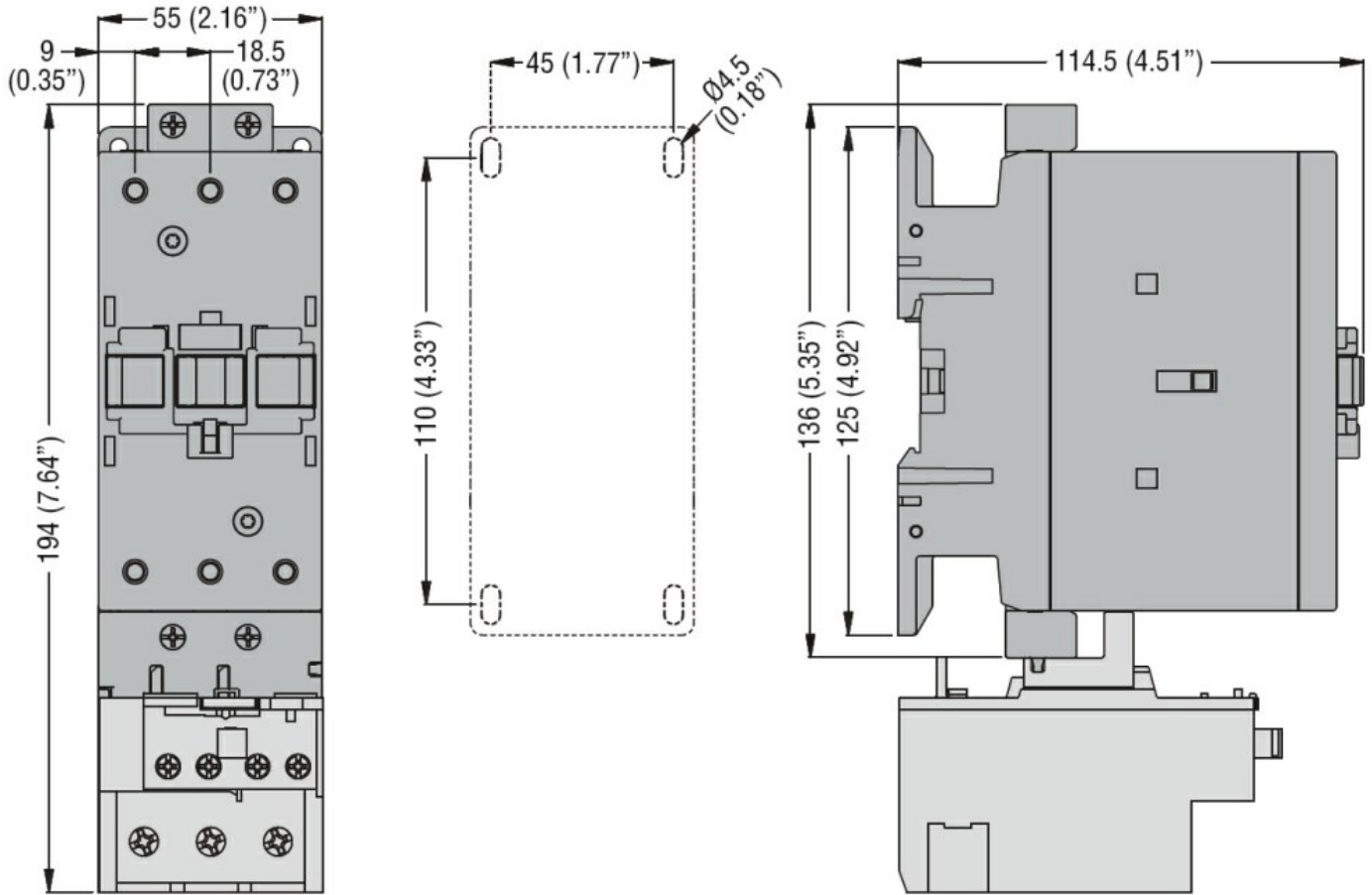
		min	%Us	0.2
		max	%Us	0.55
of 50/60Hz coil powered at 60Hz				
	pick-up	min	%Us	0.85
		max	%Us	1.1
	drop-out	min	%Us	0.4
		max	%Us	0.55
of 60Hz coil powered at 60Hz				
	pick-up	min	%Us	0.8
		max	%Us	1.1
	drop-out	min	%Us	0.2
		max	%Us	0.55
AC operating voltage				
of 50/60Hz coil powered at 50Hz				
		in-rush	VA	210
		holding	VA	15
of 50/60Hz coil powered at 60Hz				
		in-rush	VA	195
		holding	VA	13
of 60Hz coil powered at 60Hz				
		in-rush	VA	210
		holding	VA	15
Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz				
			W	5.0
Max cycles frequency				
Mechanical operations Cycles/h 3600				
Operating times				
Average time for Us control				
	in AC			
	Closing NO	min	ms	12
		max	ms	28
	Opening NO	min	ms	8
		max	ms	22
UL technical data				
Full-load current (FLA) for three-phase AC motor				
		at 480V	A	52
		at 600V	A	41
Yielded mechanical performance for				
	for single-phase AC motor			
		Yielded mechanical performance 110/120V	hp	5
		Yielded mechanical performance 230V	hp	10
	for three-phase AC motor			
		Yielded mechanical performance 200/208V	hp	15
		Yielded mechanical performance 220/230V	hp	20
		Yielded mechanical performance 460/480V	hp	40
		Yielded mechanical performance 575/600V	hp	40
General USE				
	Contactor			
		AC current	A	32

Other features

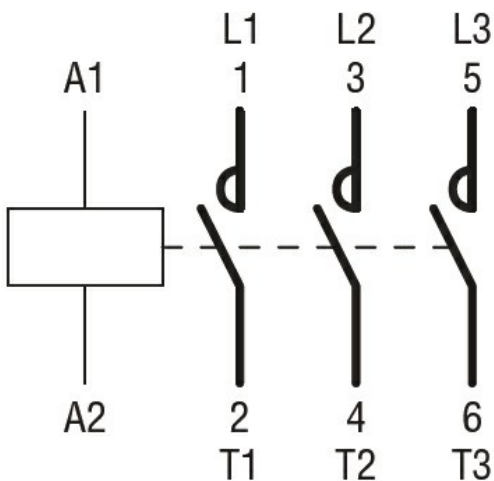
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Certifications

- CSA C22.2 n° 60947-1
- CSA C22.2 n° 60947-4-1
- IEC/EN 60947-1
- IEC/EN 60947-4-1
- UL 60947-1

UL 60947-4-1

Compliance

CCC

cULus

ETIM 6 classification

EC000066 - Power contactor, AC switching