



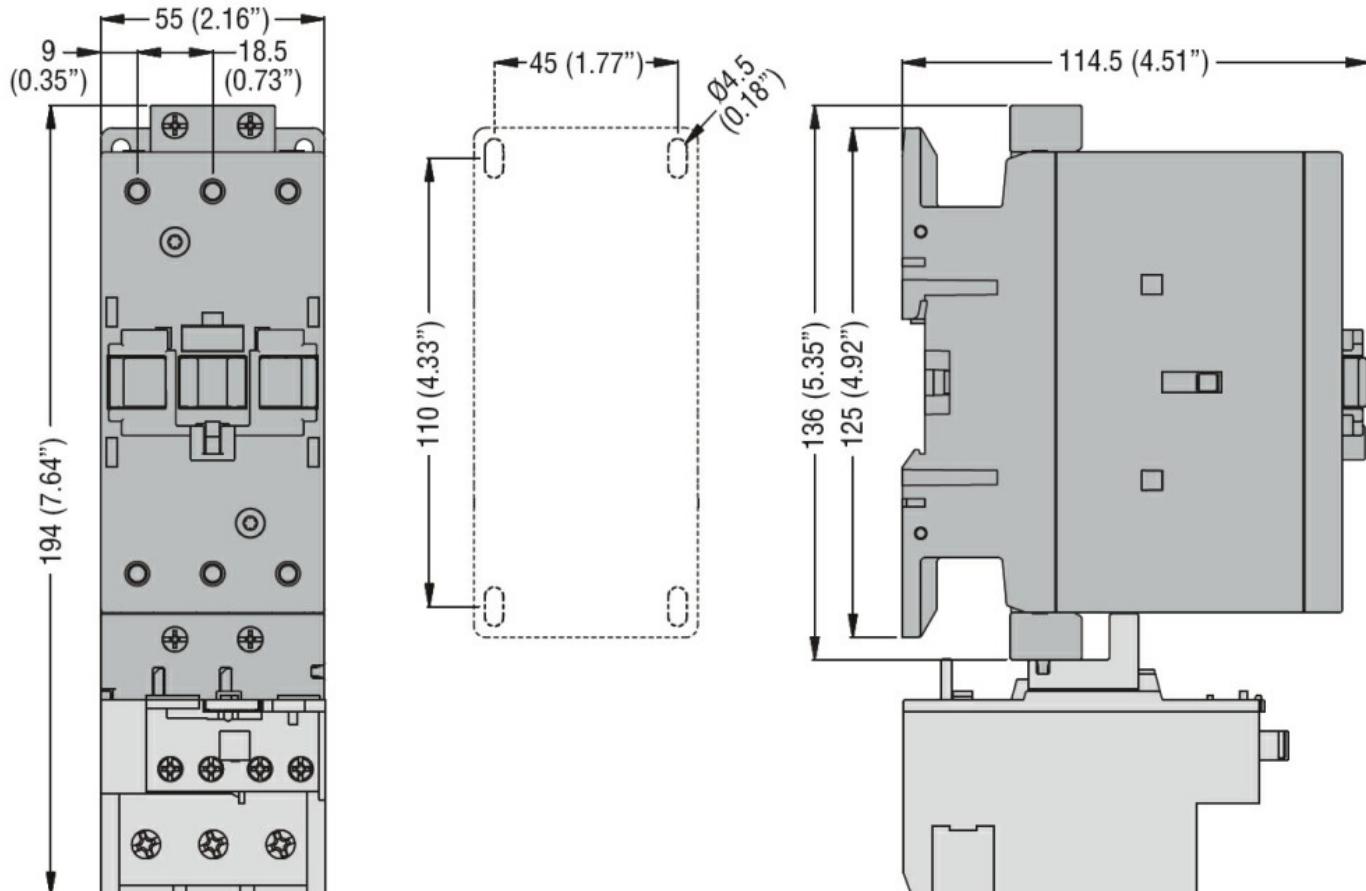
Product designation	Power contactor		
Product type designation	BF80		
Contact characteristics			
Number of poles	Nr. 3		
Rated insulation voltage U_i IEC/EN	V 1000		
Rated impulse withstand voltage U_{imp}	kV 8		
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current I_{th}	A 115		
Operational current I_e			
	AC-1 ($=40^\circ\text{C}$)	A	115
	AC-1 ($=55^\circ\text{C}$)	A	95
	AC-1 ($=70^\circ\text{C}$)	A	80
	AC-3 ($=440\text{V} = 55^\circ\text{C}$)	A	80
	AC-4 (400V)	A	38
Rated operational power AC-3 ($T=55^\circ\text{C}$)	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 ($T=40^\circ\text{C}$)	230V	kW	43
	400V	kW	76
	500V	kW	95
	690V	kW	120
IEC max current I_e in DC1 with $L/R = 1\text{ms}$ with 1 poles in series	=24V	A	70
	48V	A	60
	75V	A	60
	110V	A	8
	220V	A	—
IEC max current I_e in DC1 with $L/R = 1\text{ms}$ with 2 poles in series	=24V	A	100
	48V	A	100
	75V	A	100
	110V	A	80
	220V	A	9
IEC max current I_e in DC1 with $L/R = 1\text{ms}$ with 3 poles in series	=24V	A	100
	48V	A	100
	75V	A	100

	110V	A	85
	220V	A	95
IEC max current Ie in DC1 with L/R = 1ms with 4 poles in series			
	=24V	A	100
	48V	A	100
	75V	A	100
	110V	A	100
	220V	A	115
IEC max current Ie in DC3-DC5 with L/R = 15ms with 1 poles in series			
	=24V	A	40
	48V	A	30
	75V	A	30
	110V	A	3
	220V	A	—
IEC max current Ie in DC3-DC5 with L/R = 15ms with 2 poles in series			
	=24V	A	60
	48V	A	50
	75V	A	50
	110V	A	40
	220V	A	5
IEC max current Ie in DC3-DC5 with L/R = 15ms with 3 poles in series			
	=24V	A	80
	48V	A	70
	75V	A	70
	110V	A	60
	220V	A	64
IEC max current Ie in DC3-DC5 with L/R = 15ms with 4 poles in series			
	=24V	A	90
	48V	A	90
	75V	A	90
	110V	A	75
	220V	A	80
Short-time allowable current for 10s (IEC/EN60947-1)			A 640
Protection fuse			
	gG (IEC)	A	125
	aM (IEC)	A	80
Making capacity (RMS value)			A 800
Breaking capacity at voltage			
	440V	A	640
	500V	A	625
	690V	A	456
Resistance per pole (average value)			m? 0.6
Power dissipation per pole (average value)			
	I _{th}	W	7.9
	AC3	W	3.8
Tightening torque for terminals			
	min	Nm	4
	max	Nm	5
	min	lbin	2.95
	max	lbin	3.69
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1

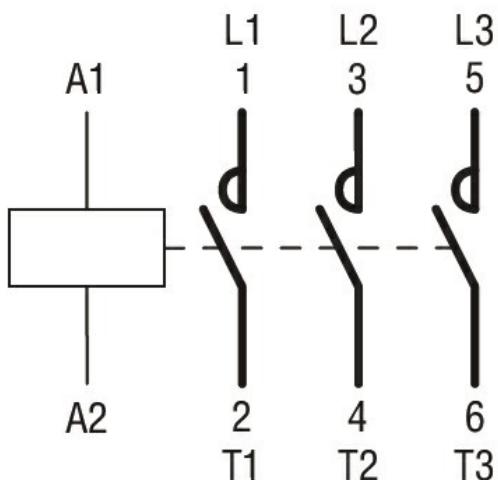
	min	Ibin	0.8
	max	Ibin	0.74
Max number of wires simultaneously connectable	Nr. 2		
Conductor section			
AWG/Kcmil	max		2
Flexible w/o lug conductor section	min	mm ²	1.5
	max	mm ²	35
Flexible c/w lug conductor section	min	mm ²	1.5
	max	mm ²	35
Power terminal protection according to IEC/EN 60529	IP20 front		
Mechanical features			
Operating position	normal allowable	Vertical plan ±30°	
Fixing	Screw / DIN rail 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 B10d according to EN/ISO 13489-1	rated load	cycles	1300000
	mechanical load	cycles	15000000
Mirror contacts according to IEC/EN 609474-4-1	yes		
EMC compatibility	yes		
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	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 consumption at 20°C			
of 50/60Hz coil powered at 50Hz	in-rush	VA	35...120

of 50/60Hz coil powered at 60Hz	holding	VA	1.5...3.7
	in-rush	VA	35...120
	holding	VA	1.5...3.7
Dissipation at holding =20°C 50Hz		W	1...2.5
DC coil operating			
DC rated control voltage		min	V 100
		max	V 250
DC rated control voltage			V 230
DC operating voltage			
pick-up	min	%Us	80 Us min
	max	%Us	110 Us max
drop-out	max	%Us	=70 Us min
Average coil consumption =20°C			
	in-rush	W	23...68
	holding	W	1.2...1,9
Max cycles frequency			
Mechanical operation			cycles/h 1500
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
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 motor			
	at 480V	A	77
	at 600V	A	77
Yielded 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
	Fuse rating	A	200

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



Wiring diagrams



Certifications and compliance

Compliance

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

Certificates

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching