



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°C)	A 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
	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 I_e in DC1 with L/R = 1ms 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 = 1ms 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 = 1ms 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)			
	Ith	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	lbin	0.8
	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	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 60947-4-1			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

		holding	VA	1.5...3.7
of 50/60Hz coil powered at 60Hz		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	°C	-40
max	°C	70

Storage temperature

min	°C	-50
max	°C	80

Max altitude

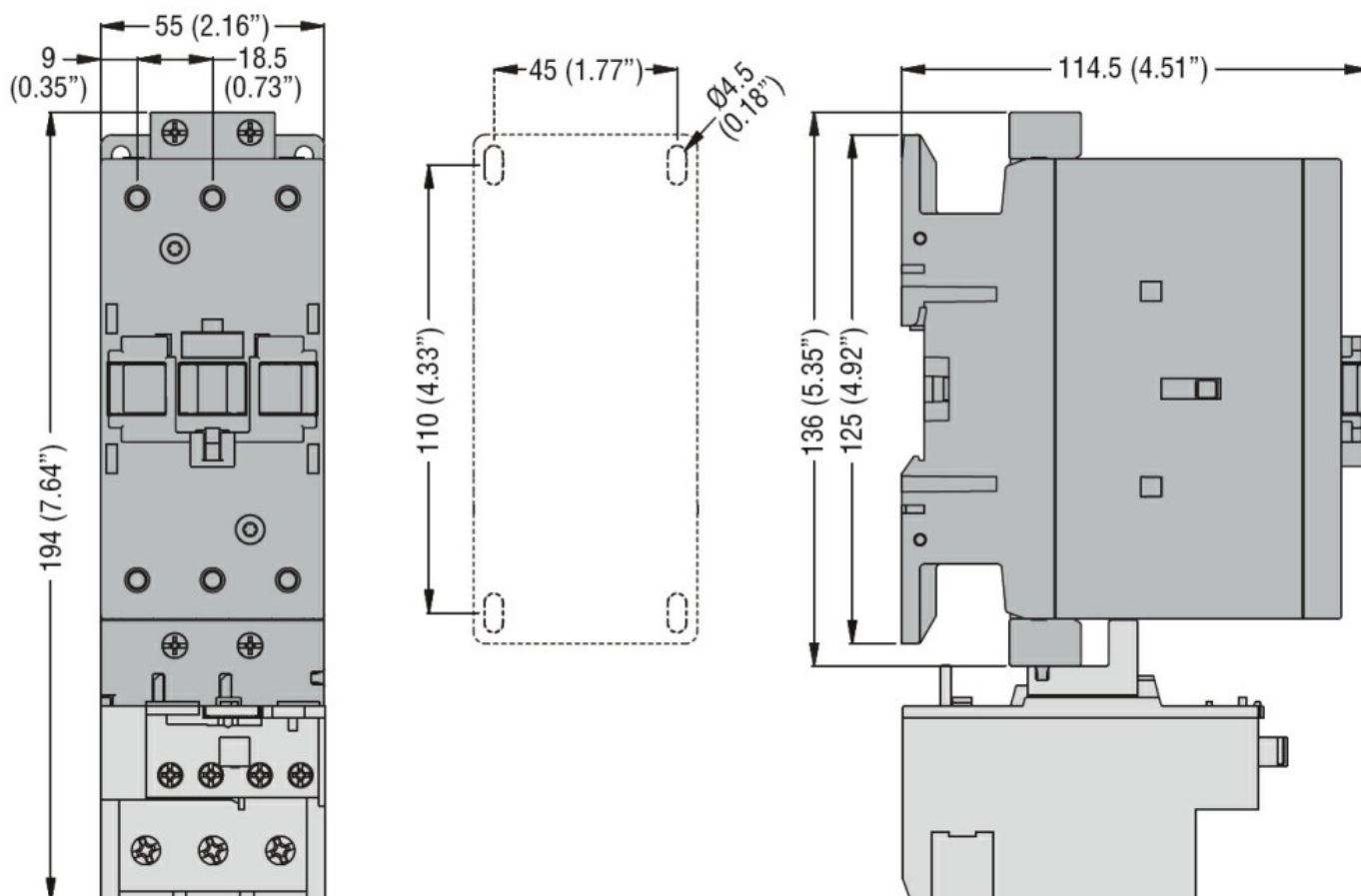
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Resistance & Protection

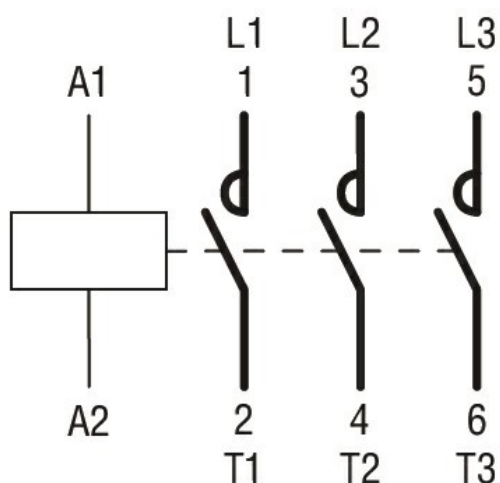
Pollution degree

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