



Product designation	Power contactor		
Product type designation	BF80		
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		A	115
Operational current Ie			
	AC-1 ($\leq 40^{\circ}\text{C}$)	A	115
	AC-1 ($\leq 55^{\circ}\text{C}$)	A	95
	AC-1 ($\leq 70^{\circ}\text{C}$)	A	80
	AC-3 ($\leq 440\text{V} \leq 55^{\circ}\text{C}$)	A	80
	AC-4 (400V)	A	38
Rated operational power AC-1 ($T \leq 40^{\circ}\text{C}$)			
	230V	kW	43
	400V	kW	76
	500V	kW	95
	690V	kW	120
IEC max current Ie in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series			
	$\leq 24\text{V}$	A	70
	48V	A	60
	75V	A	60
	110V	A	8
	220V	A	—
IEC max current Ie in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series			
	$\leq 24\text{V}$	A	100
	48V	A	100
	75V	A	100
	110V	A	80
	220V	A	9
IEC max current Ie in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series			
	$\leq 24\text{V}$	A	100
	48V	A	100
	75V	A	100
	110V	A	85
	220V	A	95
IEC max current Ie in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series			
	$\leq 24\text{V}$	A	100
	48V	A	100
	75V	A	100
	110V	A	100
	220V	A	115

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series

$\leq 24\text{V}$	A	40
48V	A	30
75V	A	30
110V	A	3
220V	A	—

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series

$\leq 24\text{V}$	A	60
48V	A	50
75V	A	50
110V	A	40
220V	A	5

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series

$\leq 24\text{V}$	A	80
48V	A	70
75V	A	70
110V	A	60
220V	A	64

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series

$\leq 24\text{V}$	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	lbin	0.59
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

Flexible c/w lug conductor section	max	mm ²	35
	min	mm ²	1.5
	max	mm ²	35
Power terminal protection according to IEC/EN 60529	IP20 front		
Mechanical features			
Operating position	normal	Vertical plan ±30°	
Fixing	Screw / DIN rail 35mm		
Weight	g	1280	
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	20
	max	V	48
Rated AC voltage at 50/60Hz	V 24		
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
of 60Hz coil powered at 60Hz	in-rush	VA	210
	holding	VA	15
Dissipation at holding ≤20°C 50Hz	W	1...2.5	

DC coil operating

DC rated control voltage

min	V	20
max	V	48

DC rated control voltage

V 24

DC operating voltage

pick-up

min	%Us	85 Us min
max	%Us	110 Us max

drop-out

max %Us \leq 70 Us min

Average coil consumption \leq 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	40
max	ms	85

Opening NO

min	ms	20
max	ms	55

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

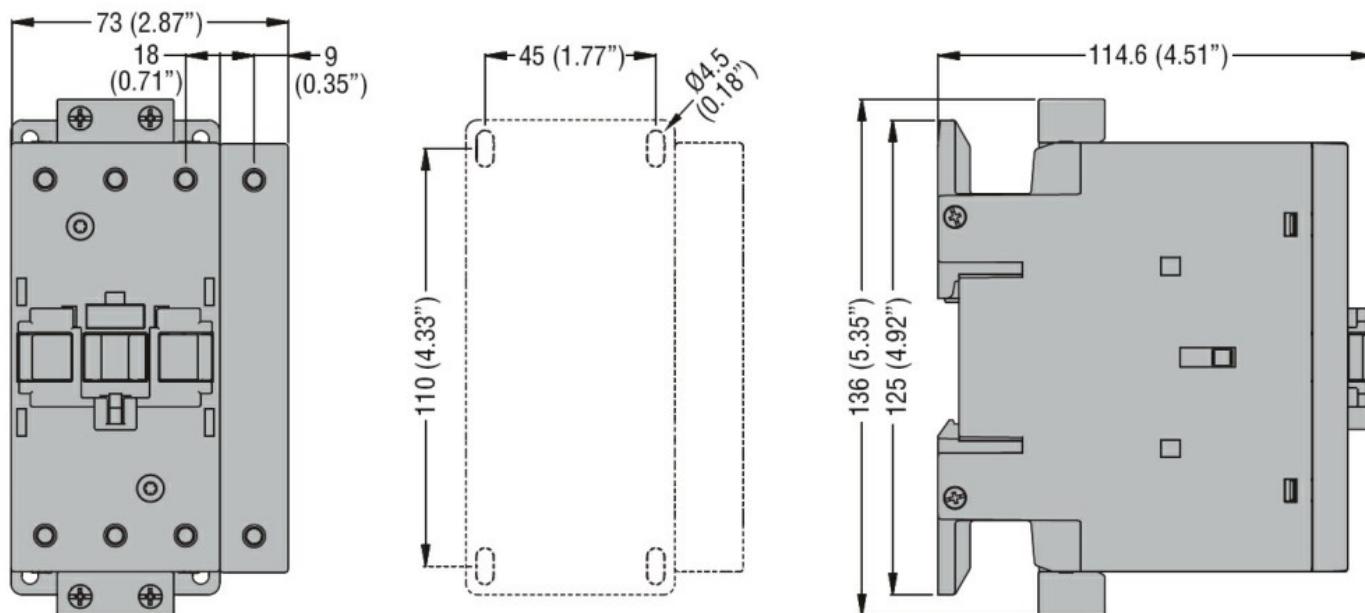
m 3000

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