



Product designation

Power contactor

Product type designation

BF65

Contact characteristics

Number of poles	Nr.	4
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	100
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A 100
	AC-1 ($\leq 55^\circ\text{C}$)	A 80
	AC-1 ($\leq 70^\circ\text{C}$)	A 70
	AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$)	A 65
	AC-4 (400V)	A 31
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW 38
	400V	kW 65
	500V	kW 82
	690V	kW 114
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A 50
	48V	A 50
	75V	A 50
	110V	A 8
	220V	A –
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	$\leq 24\text{V}$	A 70
	48V	A 70
	75V	A 70
	110V	A 60
	220V	A 9
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A 70
	48V	A 70
	75V	A 70
	110V	A 60
	220V	A 90
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	$\leq 24\text{V}$	A 70
	48V	A 70
	75V	A 70
	110V	A 70
	220V	A 110

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series

≤24V	A	35
48V	A	25
75V	A	25
110V	A	3
220V	A	–

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series

≤24V	A	45
48V	A	40
75V	A	40
110V	A	30
220V	A	5

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series

≤24V	A	55
48V	A	50
75V	A	50
110V	A	35
220V	A	52

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series

≤24V	A	60
48V	A	60
75V	A	60
110V	A	50
220V	A	65

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 650

Breaking capacity at voltage

440V	A	520
500V	A	425
690V	A	376

Resistance per pole (average value)

mΩ 0.8

Power dissipation per pole (average value)

Ith	W	8
AC3	W	3.4

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 mm² 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	1280
Conductor section			
AWG/kcmil conductor section	max		2
Operations			
Mechanical life		cycles	15000000
Electrical life		cycles	1400000
Safety related data			
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	1400000
	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	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
Dissipation at holding ≤20°C 50Hz		W	1...2.5
DC coil operating			
DC rated control voltage	min	V	20

DC rated control voltage		max	V	48
			V	24
DC operating voltage	pick-up	min	%Us	85 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
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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
	Closing NO	min	ms	40
		max	ms	85
	Opening NO	min	ms	20
		max	ms	55
	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	65
	at 600V	A	62
Yielded mechanical performance for three-phase AC motor	200/208V	HP	20
	220/230V	HP	25
	460/480V	HP	50
	575/600V	HP	60

General USE	Contactor	AC current	A	100
Short-circuit protection fuse, 600V High fault	Standard 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
	Standard fault	Short circuit current	kA	10
		Fuse rating	A	200
		Fuse class		RK5
	Standard fault	Short circuit current	kA	10

Ambient conditions

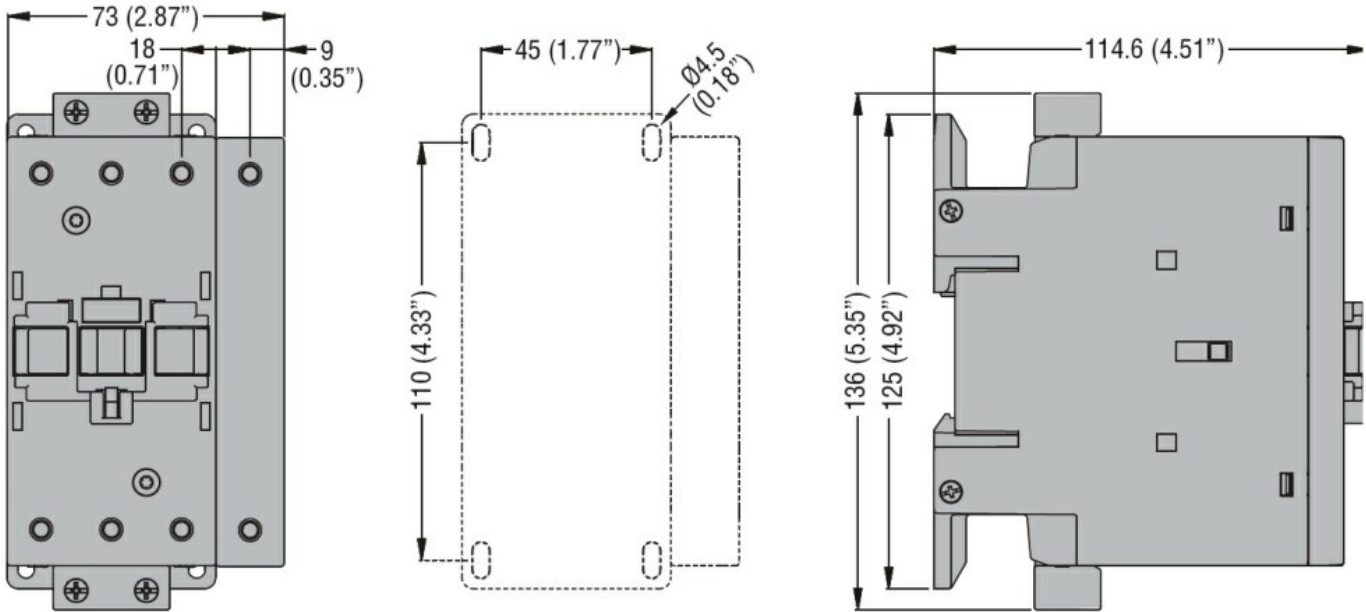
Temperature	Operating temperature			
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Storage temperature	min	°C	-40
	max	°C	70
Max altitude	min	°C	-50
	max	°C	80
		m	3000

Resistance & Protection

Pollution degree	3
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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
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