



Product designation	Power contactor		
Product type designation	BF65		
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	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-3 ($T \leq 55^\circ\text{C}$)			
	230V	kW	18.5
	400V	kW	30
	415V	kW	37
	440V	kW	37
	500V	kW	37
	690V	kW	45
	1000V	kW	30
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			
	$\leq 24V$	A	70
	48V	A	70
	75V	A	70
	110V	A	70
	220V	A	110
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series			
	$\leq 24V$	A	35
	48V	A	25
	75V	A	25
	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			
	$\leq 24V$	A	45
	48V	A	40
	75V	A	40
	110V	A	30
	220V	A	5
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series			
	$\leq 24V$	A	55
	48V	A	50
	75V	A	50
	110V	A	35
	220V	A	52
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series			
	$\leq 24V$	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)			m? 0.8
Power dissipation per pole (average value)			
	I _{th}	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	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	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 609474-4-1	yes				
EMC compatibility	yes				
AC coil operating					
Rated AC voltage at 50/60Hz, 60Hz	min	V	60		
	max	V	110		
Rated AC voltage at 50/60Hz	V	110			
AC operating voltage					
of 50/60Hz coil powered at 50Hz					
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 $\leq 20^{\circ}\text{C}$ 50Hz		W	1...2.5
DC coil operating			
DC rated control voltage		min V	60
		max V	110
DC rated control voltage		V	110
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 $\leq 20^{\circ}\text{C}$		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	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			
	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

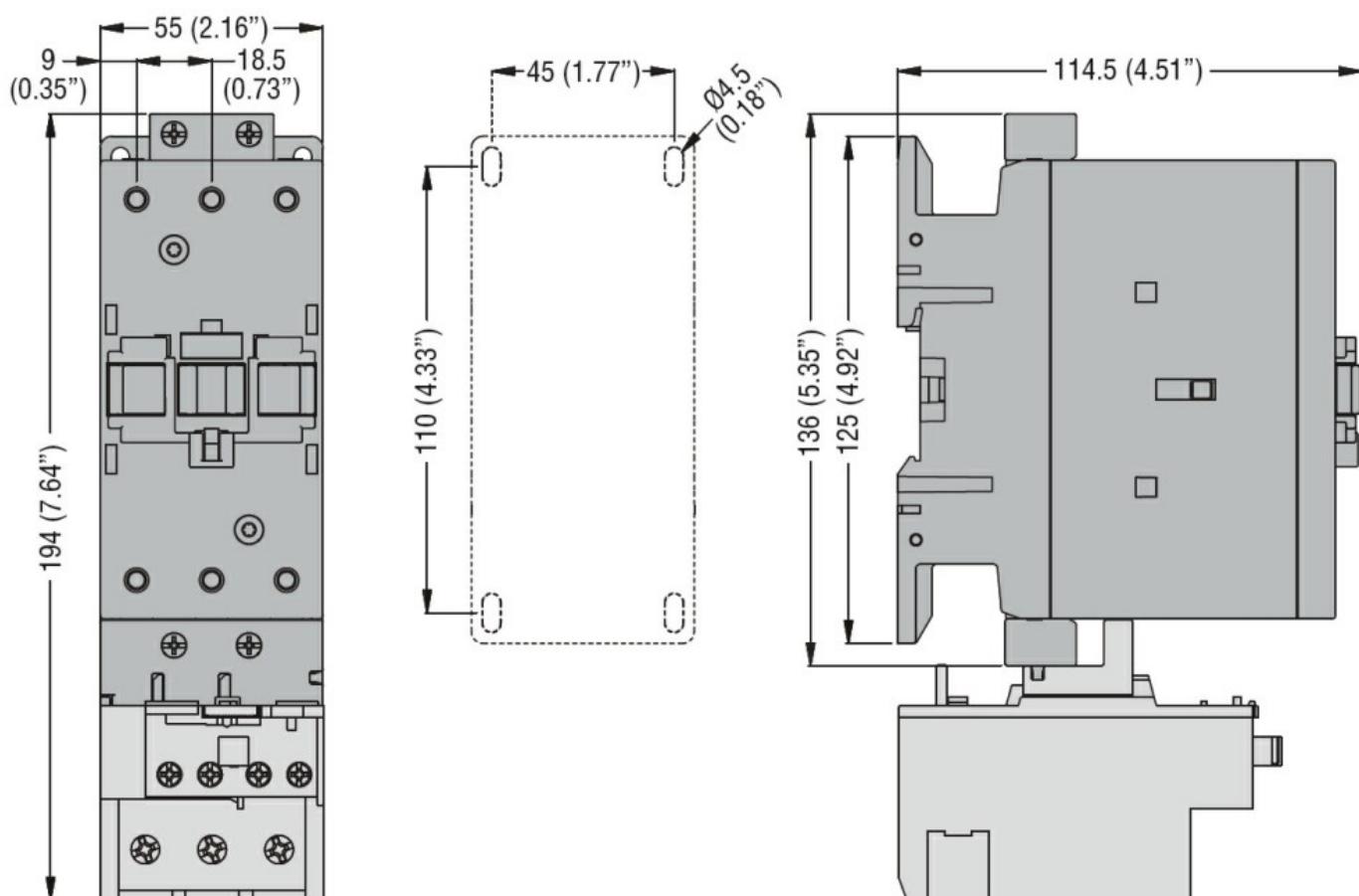
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Resistance & Protection

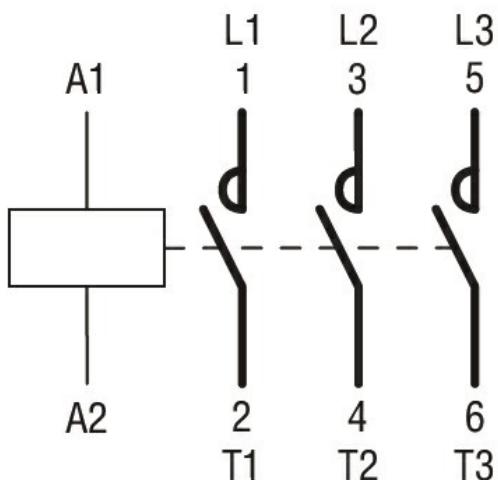
Pollution degree

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