



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 current AC-3 ( $T \leq 55^\circ\text{C}$ )	230V	A 65
	400V	A 65
	415V	A 65
	440V	A 65
	500V	A 53
	690V	A 47
	1000V	A 25
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 Ie in DC1 with L/R ≤ 1ms with 3 poles in series			
	≤24V	A	70
	48V	A	70
	75V	A	70
	110V	A	60
	220V	A	90
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	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
	AC-3	W	3.4
Tightening torque for terminals			

		min	Nm	4
		max	Nm	5
		min	Ibin	2.95
		max	Ibin	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 <sup>2</sup>	1.5
		max	mm <sup>2</sup>	35
Flexible c/w lug conductor section				
		min	mm <sup>2</sup>	1.5
		max	mm <sup>2</sup>	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 60947-4-1				yes
EMC compatibility				yes
AC coil operating				
Rated AC voltage at 50/60Hz, 60Hz				
		min	V	100
		max	V	250
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

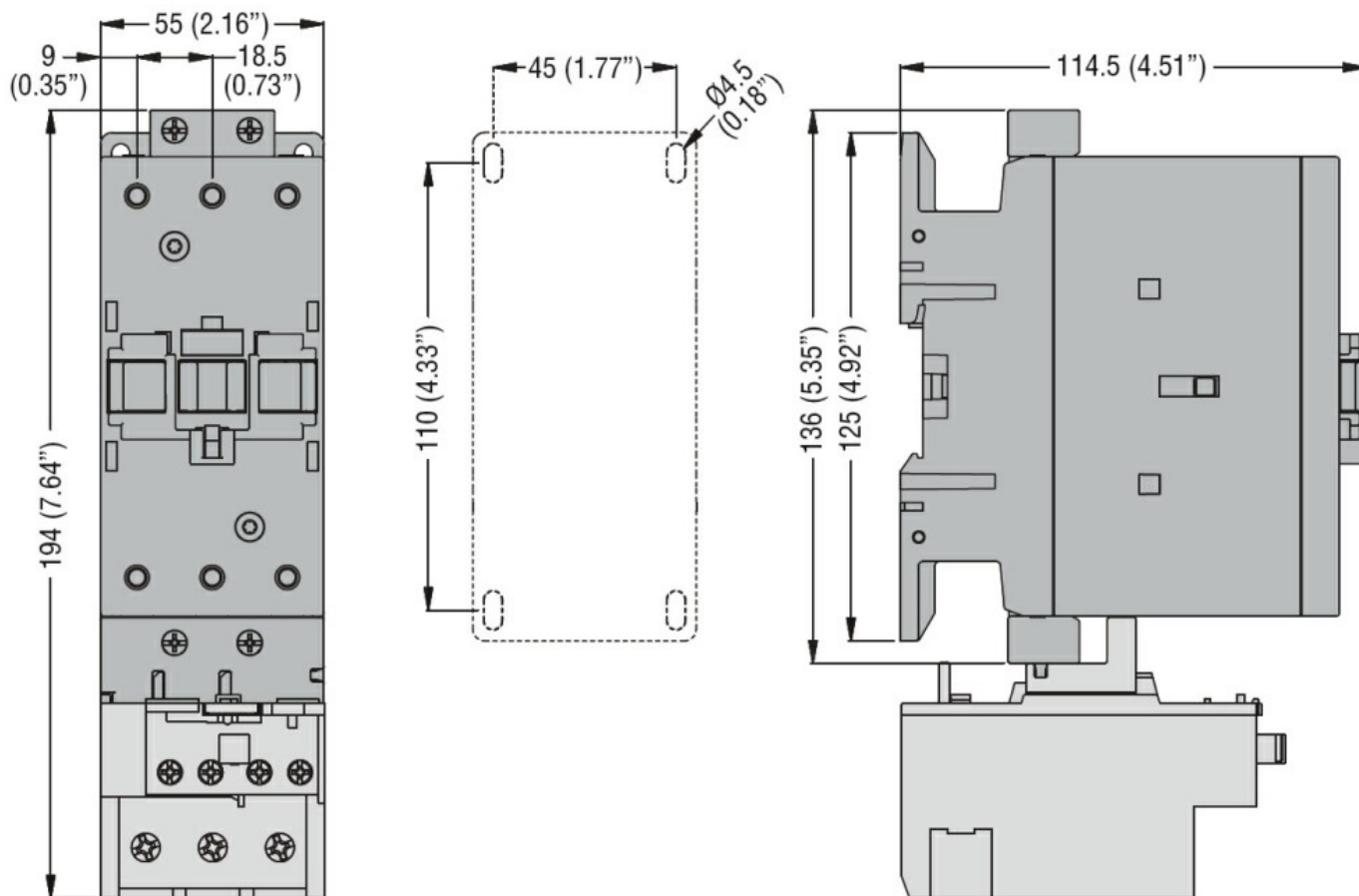
		max	%Us	110 Us max
drop-out		max	%Us	≤70 Us min
AC average coil consumption at 20°C				
of 50/60Hz coil powered at 50Hz		in-rush	VA	35...120
		holding	VA	1.5...3.7
of 50/60Hz coil powered at 60Hz				
		in-rush	VA	35...120
		holding	VA	1.5...3.7
Dissipation at holding ≤20°C 50Hz			W	1...2.5
DC coil operating				
DC rated control voltage				
		min	V	100
		max	V	250
DC 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	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		m		3000

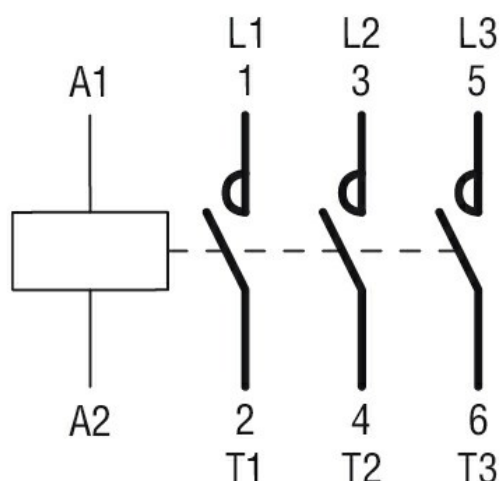
#### Resistance & Protection

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/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

### Certificates

CCC

cULus

## ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching