



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 (≤40°C)	A	100	
	AC-1 (≤55°C)	A	80	
	AC-1 (≤70°C)	A	70	
	AC-3 (≤440V ≤55°C)	A	65	
	AC-4 (400V)	A	31	
Rated operational power AC-3 (T≤55°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≤55°C)	230V	A	65	
	400V	A	65	
	415V	A	65	
	440V	A	65	
	500V	A	53	
	690V	A	47	
	1000V	A	25	
IEC max current I _e in DC1 with L/R ≤ 1ms with 1 poles in series	≤24V	A	50	
	48V	A	50	
	75V	A	50	
	110V	A	8	
	220V	A	–	
	IEC max current I _e in DC1 with L/R ≤ 1ms with 2 poles in series	≤24V	A	70
48V		A	70	
75V		A	70	
110V		A	60	
220V		A	9	
IEC max current I _e 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
<hr/>			
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
<hr/>			
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	–
<hr/>			
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
<hr/>			
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
<hr/>			
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
<hr/>			
Short-time allowable current for 10s (IEC/EN60947-1)		A	640
<hr/>			
Protection fuse	gG (IEC)	A	125
	aM (IEC)	A	80
<hr/>			
Making capacity (RMS value)		A	650
<hr/>			
Breaking capacity at voltage	440V	A	520
	500V	A	425
	690V	A	376
<hr/>			
Resistance per pole (average value)		mΩ	0.8
<hr/>			
Power dissipation per pole (average value)	Ith	W	8
	AC-3	W	3.4
<hr/>			
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

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 1020

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

V 230

AC operating voltage

of 50/60Hz coil powered at 50Hz
pick-up

min	%Us	80
max	%Us	110

drop-out

min	%Us	20
max	%Us	55

of 50/60Hz coil powered at 60Hz
pick-up

min	%Us	85
max	%Us	110

drop-out

min	%Us	40
max	%Us	55

AC average coil consumption at 20°C

of 50/60Hz coil powered at 50Hz

in-rush	VA	210
holding	VA	15

of 50/60Hz coil powered at 60Hz

in-rush	VA	195
holding	VA	13

of 60Hz coil powered at 60Hz

	in-rush	VA	210
	holding	VA	15
Dissipation at holding ≤20°C 50Hz		W	5

Max cycles frequency

Mechanical operation		cycles/h	3600
----------------------	--	----------	------

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

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

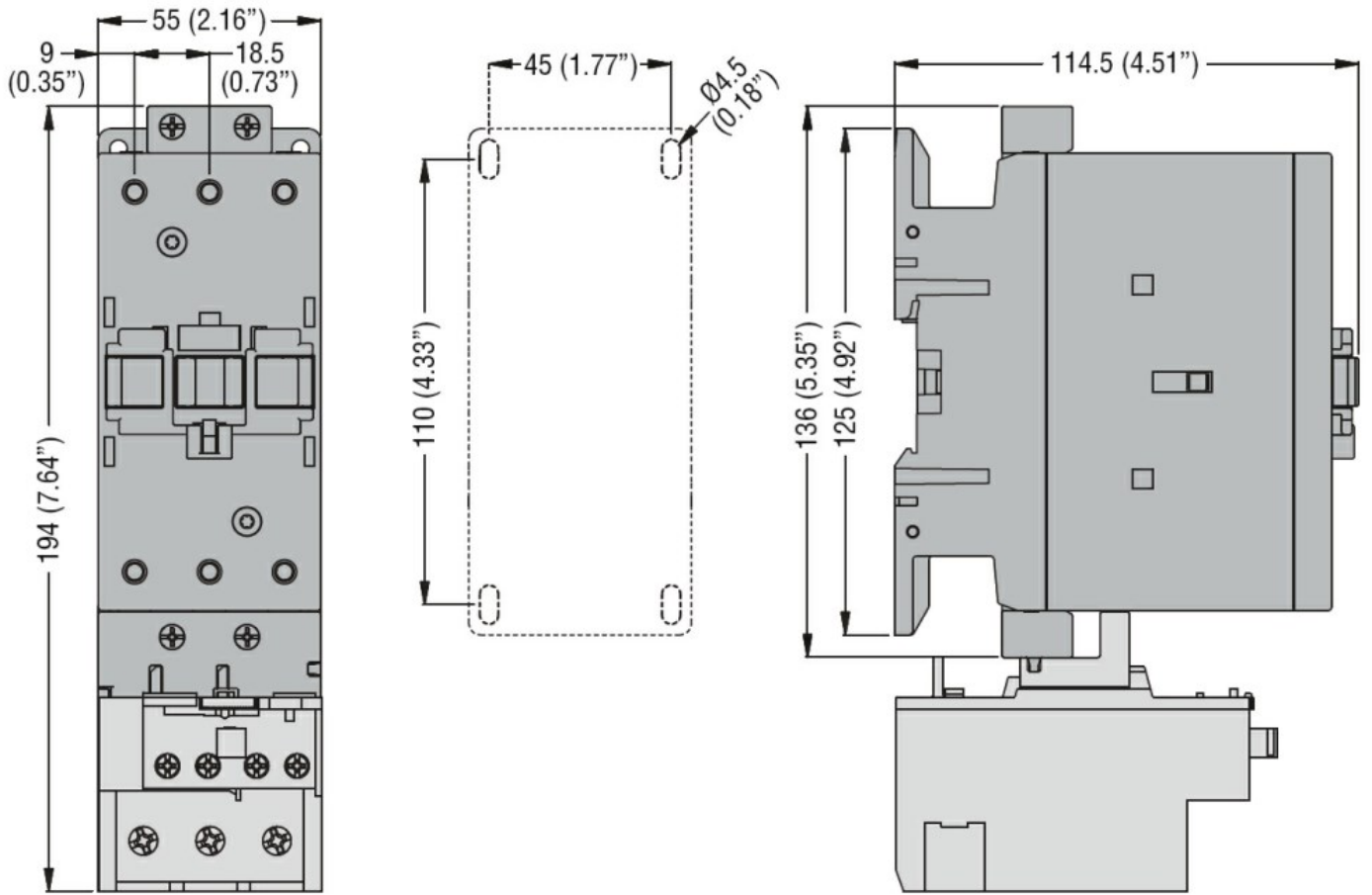
Temperature			
	Operating temperature		
		min	°C -50
		max	°C 70
	Storage temperature		
		min	°C -60
		max	°C 80

Max altitude		m	3000
--------------	--	---	------

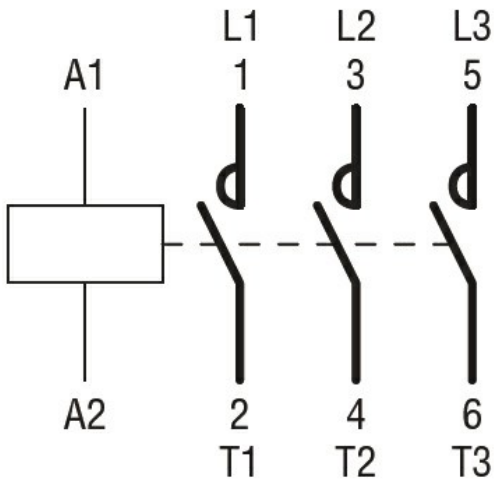
Resistance & Protection

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