



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	
Rated operational power AC-1 (T≤40°C)	230V	kW	38	
	400V	kW	65	
	500V	kW	82	
	690V	kW	114	
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
<hr/>			
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 I _e 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 I _e 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 I _e 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 I _e 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 I _e 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)	I _{th}	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
<hr/>			
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	Ibin	0.8
	max	Ibin	0.74
<hr/>			
Max number of wires simultaneously connectable			Nr. 2
<hr/>			
Conductor section			
AWG/Kcmil			
	max		2
<hr/>			
Flexible w/o lug conductor section			
	min	mm ²	1.5
	max	mm ²	35
<hr/>			
Flexible c/w lug conductor section			
	min	mm ²	1.5
	max	mm ²	35
<hr/>			
Power terminal protection according to IEC/EN 60529			IP20 front
<hr/>			
Mechanical features			
Operating position			
	normal allowable		Vertical plan ±30°
<hr/>			
Fixing			Screw / DIN rail 35mm
<hr/>			
Weight			g 1020
<hr/>			
Conductor section			
AWG/kcmil conductor section			
	max		2
<hr/>			
Operations			
Mechanical life			cycles 15000000
Electrical life			cycles 1400000
<hr/>			
Safety related data			
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	1400000
	mechanical load	cycles	15000000
<hr/>			
Mirror contacts according to IEC/EN 60947-4-1			yes
EMC compatibility			yes
<hr/>			
AC coil operating			
Rated AC voltage at 60Hz			V 230
<hr/>			
AC operating voltage			
of 60Hz coil powered at 60Hz			
pick-up			
	min	%Us	80
	max	%Us	110
<hr/>			
drop-out			
	min	%Us	20
	max	%Us	55
<hr/>			
AC average coil consumption at 20°C			
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

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	-50
	max	°C	70

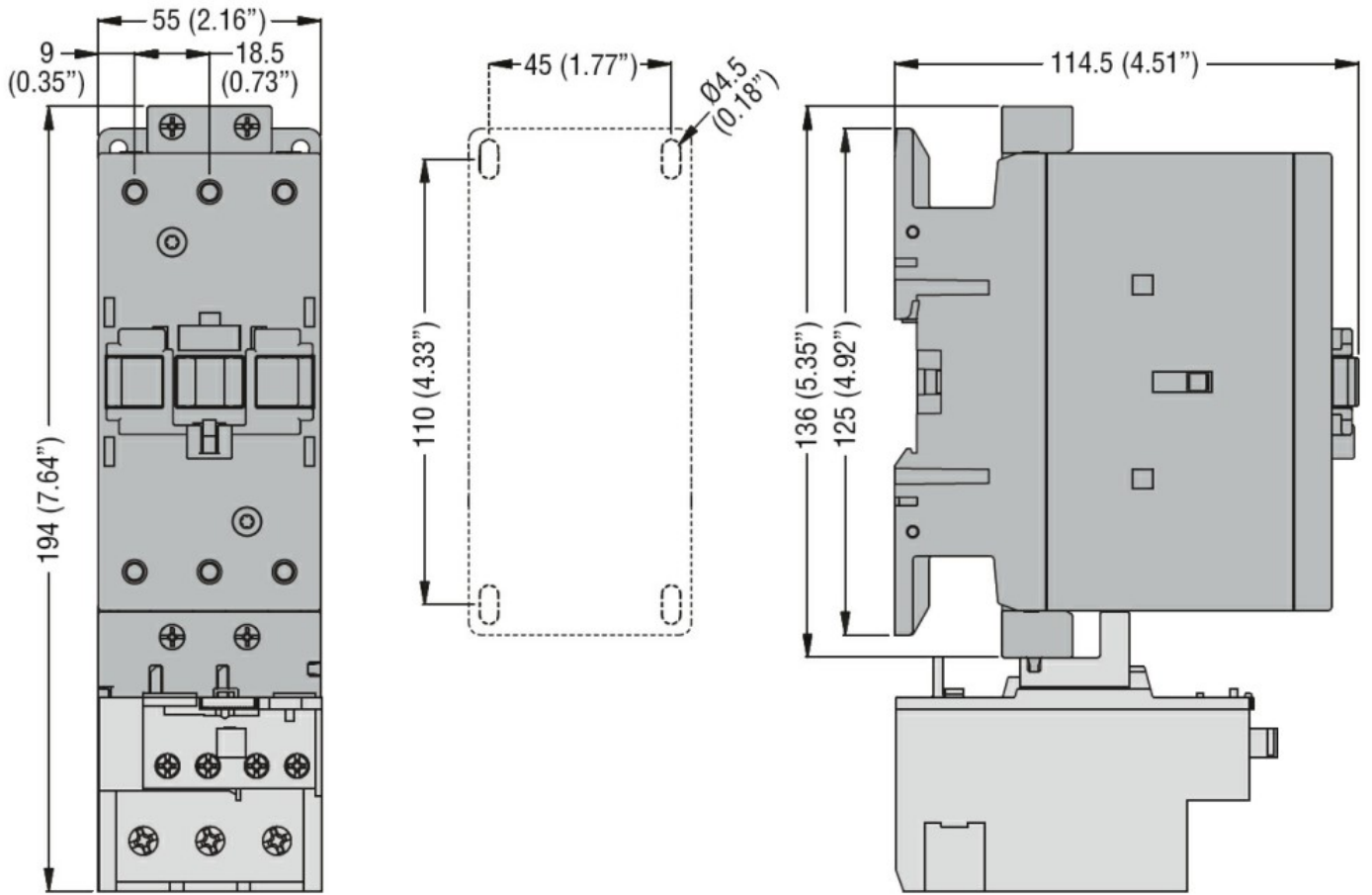
Storage temperature	min	°C	-60
	max	°C	80

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

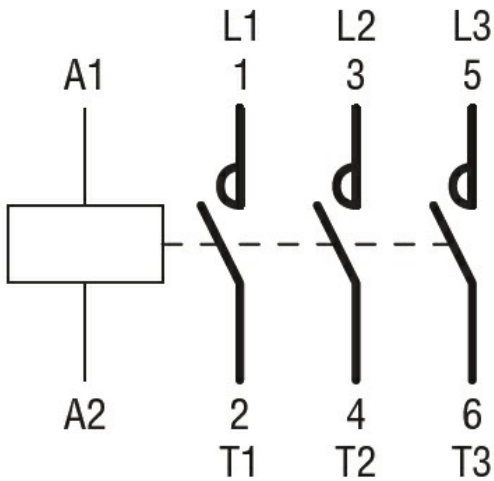
Resistance & Protection		
------------------------------------	--	--

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