



			10 10 10
Product designation			Power contactor
Product type designation			BF65
Contact characteristics			2.00
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency			-
21. 2 20. 2 10. 2 10.	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	100
Operational current le			
•	AC-1 (≤40°C)	Α	100
	AC-1 (≤55°C)	Α	80
	AC-1 (≤70°C)	Α	70
	AC-3 (≤440V ≤55°C)	Α	65
	AC-4 (400V)	Α	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)			
1	230V	Α	65
	400V	Α	65
	415V	Α	65
	440V	Α	65
	500V	Α	53
	690V	Α	47
	1000V	Α	25
Rated operational power AC-1 (T≤40°C)			
	230V	kW	38
	400V	kW	65
	500V	kW	82
	690V	kW	114
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	Α	50
	48V	Α	50
	75V	Α	50
	110V	A	8
	220V	A	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	Α	70
			. •



	48V	Α	70
	75V	Α	70
	110V	A	60
150	220V	Α	9
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		_	
	≤24V	Α	70
	48V	Α	70
	75V	Α	70
	110V	Α	60
	220V	Α	90
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
'	≤24V	Α	70
	48V	Α	70
	75V	A	70
	110V	A	70
	220V	Α	110
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	35
	48V	Α	25
	75V	Α	25
	110V	Α	3
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			_
120 max carrent to in 200 200 mar 2/10 1 forms with 2 points in control	≤24V	Α	45
	48V		
		A	40
	75V	Α	40
	110V	Α	30
	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	55
	48V	Α	50
	75V	Α	50
	110V	Α	35
	220V	Α	52
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	220 V		<u> </u>
TEC max current le in DC3-DC3 with L/N \(\) 13ms with 4 poles in series	<24\/	۸	60
	≤24V	A	60
	48V	Α	60
	75V	Α	60
	110V	Α	50
	220V	Α	65
Short-time allowable current for 10s (IEC/EN60947-1)		Α	640
Protection fuse			
	gG (IEC)	Α	125
	aM (IEC)	Α	80
Making capacity (RMS value)		A	650
Breaking capacity (time value)		, ,	
Distantly supports at voltage	440V	Α	520
	500V	A	425
	690V	Α	376
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)			
	lth	W	8
	AC-3	W	3.4
Tightening torque for terminals			



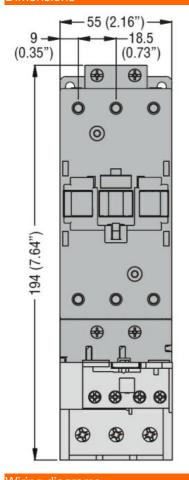
		min	Nm	4
		max	Nm	5
		min	Ibin	2.95
		max	Ibin	3.69
Tightening torque for o	coil terminal			
rigintorning torquo for c		min	Nm	0.8
		max	Nm	1
			Ibin	
		min		0.8
NA		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			
		max		2
	Flexible w/o lug conductor section			
		min	mm²	1.5
		max	mm²	35
	Flexible c/w lug conductor section			
		min	mm²	1.5
		max	mm²	35
Dower terminal protect	tion according to IEC/EN 60520	IIIdX	111(11	IP20 front
	tion according to IEC/EN 60529			1F2U 11U11L
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	1060
Conductor section				
Conductor section	AWG/kcmil conductor section			
Conductor section	AWG/kcmil conductor section	max		2
	AWG/kcmil conductor section	max		2
Operations	AWG/kcmil conductor section	max	ovelos	
Operations Mechanical life	AWG/kcmil conductor section	max	cycles	15000000
Operations Mechanical life Electrical life	AWG/kcmil conductor section	max	cycles cycles	
Operations Mechanical life Electrical life Safety related data		max		15000000
Operations Mechanical life Electrical life Safety related data	AWG/kcmil conductor section Od according to EN/ISO 13489-1		cycles	15000000 1400000
Operations Mechanical life Electrical life Safety related data		rated load	cycles	15000000 1400000 1400000
Operations Mechanical life Electrical life Safety related data			cycles	15000000 1400000
Operations Mechanical life Electrical life Safety related data Performance level B1		rated load	cycles	15000000 1400000 1400000
Operations Mechanical life Electrical life Safety related data Performance level B1	0d according to EN/ISO 13489-1	rated load	cycles	15000000 1400000 1400000 15000000
Operations Mechanical life Electrical life Safety related data Performance level B1	0d according to EN/ISO 13489-1	rated load	cycles	15000000 1400000 1400000 15000000 yes
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility AC coil operating	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1	rated load	cycles	15000000 1400000 1400000 15000000 yes
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1	rated load mechanical load	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility AC coil operating	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1	rated load mechanical load min	cycles cycles cycles	15000000 1400000 1400000 150000000 yes yes
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1	rated load mechanical load	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility AC coil operating	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz, 60Hz	rated load mechanical load min	cycles cycles cycles	15000000 1400000 1400000 150000000 yes yes
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz, 60Hz of 50/60Hz coil powered at 50Hz	rated load mechanical load min	cycles cycles cycles	15000000 1400000 1400000 150000000 yes yes
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz, 60Hz	rated load mechanical load min max	cycles cycles cycles	15000000 1400000 1400000 150000000 yes yes 100 250
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz, 60Hz of 50/60Hz coil powered at 50Hz	rated load mechanical load min	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes 100 250
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz, 60Hz of 50/60Hz coil powered at 50Hz pick-up	rated load mechanical load min max	cycles cycles cycles	15000000 1400000 1400000 150000000 yes yes 100 250
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz, 60Hz of 50/60Hz coil powered at 50Hz	rated load mechanical load min max	cycles cycles cycles V V	15000000 1400000 1400000 150000000 yes yes 100 250
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz, 60Hz of 50/60Hz coil powered at 50Hz pick-up	rated load mechanical load min max	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes 100 250
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz, 60Hz of 50/60Hz coil powered at 50Hz pick-up	rated load mechanical load min max min max	cycles cycles cycles V V	15000000 1400000 1400000 150000000 yes yes 100 250
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz, 60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	rated load mechanical load min max min max	cycles cycles cycles V V	15000000 1400000 1400000 150000000 yes yes 100 250
Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz, 60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out	rated load mechanical load min max min max	cycles cycles cycles V V	15000000 1400000 1400000 150000000 yes yes 100 250

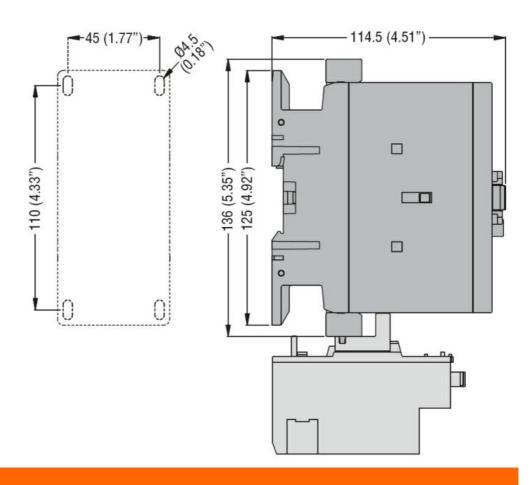


			max	%Us	110 Us max
		drop-out		0/11	.70.11
AC average sell care.	mention of 20°C		max	%Us	≤70 Us min
AC average coil consu	of 50/60Hz coil p	nowared at 50Hz			
	01 30/00112 COII p	owered at 30Hz	in-rush	VA	35120
			holding	VA	1.53.7
	of 50/60Hz coil p	powered at 60Hz	nolaling	• • • • • • • • • • • • • • • • • • • •	1.00.7
	01 00/001 12 0011 p	50W0104 4t 00112	in-rush	VA	35120
			holding	VA	1.53.7
Dissipation at holding	≤20°C 50Hz		9	W	12.5
DC coil operating					
DC rated control voltage	ge				
	5 -		min	V	100
			max	V	250
DC operating voltage					
. 5	pick-up				
			min	%Us	80 Us min
			max	%Us	110 Us max
	drop-out				
			max	%Us	≤70 Us min
Average coil consump	tion ≤20°C				
			in-rush	W	2368
			holding	W	1.21,9
Max cycles frequency					
Mechanical operation				cycles/h	1500
Operating times					
Avarage times for the se					
Average time for Us co					
Average time for Us co	ontrol in AC				
Average time for US Co		Closing NO			
Average time for US Co		Closing NO	min	ms	12
Average time for US co		-	min max	ms ms	12 28
Average time for US of		Closing NO Opening NO	max	ms	28
Average time for US of		-	max min	ms ms	28 8
Average time for US of	in AC	-	max	ms	28
Average time for US of		Opening NO	max min	ms ms	28 8
Average time for US &	in AC	-	max min max	ms ms ms	28 8 22
Average time for US &	in AC	Opening NO	max min max min	ms ms ms	28 8 22 40
Average time for US &	in AC	Opening NO Closing NO	max min max	ms ms ms	28 8 22
Average time for US &	in AC	Opening NO	max min max min max	ms ms ms	28 8 22 40 85
Average time for US of	in AC	Opening NO Closing NO	max min max min max min max	ms ms ms	28 8 22 40 85 20
	in AC	Opening NO Closing NO	max min max min max	ms ms ms	28 8 22 40 85
UL technical data	in AC	Opening NO Closing NO Opening NO	max min max min max min max	ms ms ms	28 8 22 40 85 20
	in AC	Opening NO Closing NO Opening NO	max min max min max min max	ms ms ms ms ms	28 8 22 40 85 20 55
UL technical data	in AC	Opening NO Closing NO Opening NO	max min max min max min max at 480V	ms ms ms ms ms ms	28 8 22 40 85 20 55
UL technical data Full-load current (FLA)	in AC in DC of for three-phase A	Opening NO Closing NO Opening NO	max min max min max min max	ms ms ms ms ms	28 8 22 40 85 20 55
UL technical data	in AC in DC of for three-phase A	Opening NO Closing NO Opening NO C motor	max min max min max min max at 480V	ms ms ms ms ms ms	28 8 22 40 85 20 55
UL technical data Full-load current (FLA)	in AC in DC of for three-phase A	Opening NO Closing NO Opening NO C motor	max min max min max min max at 480V	ms ms ms ms ms ms	28 8 22 40 85 20 55
UL technical data Full-load current (FLA)	in AC in DC of for three-phase A	Opening NO Closing NO Opening NO C motor	min max min max min max at 480V at 600V	ms ms ms ms ms A	28 8 22 40 85 20 55
UL technical data Full-load current (FLA)	in AC in DC of for three-phase A	Opening NO Closing NO Opening NO C motor	max min max min max min max at 480V at 600V	ms ms ms ms ms A A	28 8 22 40 85 20 55 65 62
UL technical data Full-load current (FLA)	in AC in DC of for three-phase A	Opening NO Closing NO Opening NO C motor	max min max min max min max at 480V at 600V 200/208V 220/230V	ms ms ms ms ms A A	28 8 22 40 85 20 55 65 62 20 25
UL technical data Full-load current (FLA)	in AC in DC of for three-phase A	Opening NO Closing NO Opening NO C motor	max min max min max min max at 480V at 600V 200/208V 220/230V 460/480V	ms ms ms ms ms ms HP HP	28 8 22 40 85 20 55 65 62 20 25 50
UL technical data Full-load current (FLA) Yielded mechanical pe	in AC in DC of for three-phase A	Opening NO Closing NO Opening NO C motor	max min max min max min max at 480V at 600V 200/208V 220/230V 460/480V	ms ms ms ms ms ms HP HP	28 8 22 40 85 20 55 65 62 20 25 50



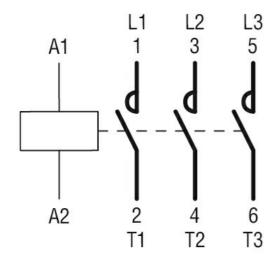
		AC current	Α	100
Short-circuit protect	ion fuse, 600V			
•	High fault			
	· ·	Short circuit current	kA	100
		Fuse rating	Α	200
		Fuse class		J
	Standard fault			
		Short circuit current	kA	10
		Fuse rating	Α	200
		Fuse class		RK5
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-40
		max	°C	70
	Storage temperature			
		min	°C	-50
		max	°C	80
Max altitude			m	3000
Resistance & Protect	ction			
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