

Product designation				Power contactor
Product type designation				BF65
Contact characteristics				
Number of poles	Nr.	3		
Rated insulation voltage Ui IEC/EN	V	1000		
Rated impulse withstand voltage Uimp	kV	8		
Operational frequency	min	Hz	25	
	max	Hz	400	
IEC Conventional free air thermal current Ith	A	100		
Operational current Ie	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 power AC-1 (T≤40°C)	230V	kW	38	
	400V	kW	65	
	500V	kW	82	
	690V	kW	114	
IEC max current Ie 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 Ie 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 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 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	–

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

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

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

Short-time allowable current for 10s (IEC/EN60947-1)

A	640
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Protection fuse

gG (IEC)	A	125
aM (IEC)	A	80

Making capacity (RMS value)

A	650
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Breaking capacity at voltage

440V	A	520
500V	A	425
690V	A	376

Resistance per pole (average value)

mΩ	0.8
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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	I _{bin}	2.95
max	I _{bin}	3.69

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1
min	I _{bin}	Prodotti finiti
max	I _{bin}	Prodotti finiti

Max number of wires simultaneously connectable

Nr.	2
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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 mechanical load	cycles	1400000
		cycles	15000000
Mirror contacts according to IEC/EN 60947-4-1			Yes
EMC compatibility			Yes
Rated AC voltage at 60Hz		V	460
AC coil operating			
AC operating voltage			
	of 60Hz coil powered at 60Hz pick-up	min	%Us 80
		max	%Us 110
	drop-out	min	%Us 20
		max	%Us 55
AC average coil consumption at 20°C			
	of 50/60Hz coil powered at 50Hz	in-rush holding	VA 210 VA 15
	of 50/60Hz coil powered at 60Hz	in-rush holding	VA 195 VA 13
	of 60Hz coil powered at 60Hz	in-rush holding	VA 210 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

Opening NO	max	ms	85
	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
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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
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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