

Product designation				Power contactor
Product type designation				BF38
Contact characteristics				
Number of poles	Nr.			3
Rated insulation voltage U _i IEC/EN	V			690
Rated impulse withstand voltage U _{imp}	kV			6
Operational frequency	min	Hz	25	
	max	Hz	400	
IEC Conventional free air thermal current I _{th}	A			56
Operational current I _e	AC-1 (≤40°C)	A	56	
	AC-1 (≤40°C) with 16mm ² wire and fork end lug	A	60	
	AC-1 (≤55°C)	A	45	
	AC-1 (≤55°C) with 16mm ² wire and fork end lug	A	48	
	AC-1 (≤70°C)	A	40	
	AC-1 (≤70°C) with 16mm ² wire and fork end lug	A	42	
	AC-3 (≤440V ≤55°C)	A	38	
Rated operational power AC-3 (T≤55°C)	AC-4 (400V)	A	15.5	
	230V	kW	11	
	400V	kW	18.5	
	415V	kW	18.5	
	440V	kW	18.5	
	500V	kW	20	
Rated operational power AC-1 (T≤40°C)	690V	kW	22	
	230V	kW	21	
	400V	kW	36	
	500V	kW	45	
	690V	kW	62	
IEC max current I _e in DC1 with L/R ≤ 1ms with 1 poles in series	≤24V	A	35	
	48V	A	30	
	75V	A	23	
	110V	A	8	
	220V	A	–	
IEC max current I _e in DC1 with L/R ≤ 1ms with 2 poles in series	≤24V	A	36	
	48V	A	34	
	75V	A	29	
	110V	A	32	
	220V	A	4	
IEC max current I _e in DC1 with L/R ≤ 1ms with 3 poles in series	≤24V	A	36	
	48V	A	34	
	75V	A	33	
	110V	A	34	
	220V	A	30	
IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series	≤24V	A	36	
	48V	A	34	
	75V	A	33	

	110V	A	34
	220V	A	38
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	24
	48V	A	20
	75V	A	17
	110V	A	2,5
	220V	A	–
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	28
	48V	A	25
	75V	A	22
	110V	A	18
	220V	A	3
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	32
	48V	A	28
	75V	A	28
	110V	A	23
	220V	A	25
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	32
	48V	A	28
	75V	A	28
	110V	A	23
	220V	A	15
Short-time allowable current for 10s (IEC/EN60947-1)		A	320
Protection fuse			
	gG (IEC)	A	63
	aM (IEC)	A	40
Making capacity (RMS value)		A	380
Breaking capacity at voltage			
	440V	A	304
	500V	A	240
	690V	A	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
	I _{th}	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	I _{bin}	1.8
	max	I _{bin}	2.2
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
Conductor section			
Flexible w/o lug conductor section			
	min	mm ²	2.5

	max	mm ²	16
Flexible c/w lug conductor section	min	mm ²	1
	max	mm ²	10
Flexible with insulated spade lug conductor section	min	mm ²	1
	max	mm ²	10
Power terminal protection according to IEC/EN 60529			IP20 when wired
Mechanical features			
Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	430
Operations			
Mechanical life		cycles	20000000
Electrical life		cycles	1400000
Safety related data			
Performance level B10d according to EN/ISO 13489-1	rated load mechanical load	cycles	1400000
		cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1			Yes
EMC compatibility			Yes
AC coil operating			
Rated AC voltage at 50/60Hz		V	48
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	20
	max	%Us	55
AC average coil consumption at 20°C			
of 50/60Hz coil powered at 50Hz			
	in-rush	VA	75
	holding	VA	9
of 50/60Hz coil powered at 60Hz			
	in-rush	VA	70
	holding	VA	6.5
of 60Hz coil powered at 60Hz			
	in-rush	VA	75
	holding	VA	9
Dissipation at holding ≤20°C 50Hz		W	2.5
Max cycles frequency			
Mechanical operation		cycles/h	3600

Operating times

Average time for Us control
in AC

Closing NO	min	ms	8
	max	ms	24
Opening NO	min	ms	5
	max	ms	15
Closing NC	min	ms	9
	max	ms	20
Opening NC	min	ms	9
	max	ms	17

UL technical data

Full-load current (FLA) for three-phase AC motor

at 480V	A	40
at 600V	A	32

Yielded mechanical performance

for single-phase AC motor

110/120V	HP	3
230V	HP	7.5

for three-phase AC motor

200/208V	HP	10
220/230V	HP	15
460/480V	HP	30
575/600V	HP	30

General USE

Contactor

AC current	A	55
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Short-circuit protection fuse, 600V

High fault

Short circuit current	kA	100
Fuse rating	A	100
Fuse class		J

Standard fault

Short circuit current	kA	5
Fuse rating	A	150

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

EAC

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching