

Product designation				Power contactor
Product type designation				BF38
Contact characteristics				
Number of poles	Nr.			4
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 ($\leq 40^\circ\text{C}$)	A	56	
	AC-1 ($\leq 40^\circ\text{C}$) with 16mm ² wire and fork end lug	A	60	
	AC-1 ($\leq 55^\circ\text{C}$)	A	45	
	AC-1 ($\leq 55^\circ\text{C}$) with 16mm ² wire and fork end lug	A	48	
	AC-1 ($\leq 70^\circ\text{C}$)	A	40	
	AC-1 ($\leq 70^\circ\text{C}$) with 16mm ² wire and fork end lug	A	42	
	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A	38	
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	AC-4 (400V)	A	15.5	
	230V	kW	21	
	400V	kW	36	
	500V	kW	45	
	690V	kW	62	
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A	35	
	48V	A	30	
	75V	A	23	
	110V	A	8	
	220V	A	-	
	IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	$\leq 24\text{V}$	A	36
48V		A	34	
75V		A	29	
110V		A	32	
220V		A	4	
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series		$\leq 24\text{V}$	A	36
	48V	A	34	
	75V	A	33	
	110V	A	34	
	220V	A	30	
	IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	$\leq 24\text{V}$	A	36
48V		A	34	
75V		A	33	
110V		A	34	
220V		A	38	
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series		$\leq 24\text{V}$	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°		Screw / DIN rail 35mm
Fixing				Screw / DIN rail 35mm
Weight	g			504
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	cycles	1400000 20000000
Mirror contacts according to IEC/EN 609474-4-1				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	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

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

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