

Product designation				Power contactor
Product type designation				BF40
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	70	
Operational current I_e		AC-1 ($\leq 40^\circ\text{C}$)	A	70
		AC-1 ($\leq 55^\circ\text{C}$)	A	60
		AC-1 ($\leq 70^\circ\text{C}$)	A	50
		AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A	40
		AC-4 (400V)	A	24
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)		230V	kW	11
		400V	kW	18.5
		415V	kW	22
		440V	kW	22
		500V	kW	22
		690V	kW	30
		1000V	kW	18.5
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)		230V	kW	26
		400V	kW	46
		500V	kW	58
		690V	kW	79
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series		$\leq 24\text{V}$	A	40
		48V	A	35
		75V	A	30
		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	48
		48V	A	48
		75V	A	45
		110V	A	42
		220V	A	5
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series		$\leq 24\text{V}$	A	48
		48V	A	48
		75V	A	48
		110V	A	44
		220V	A	56
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series		$\leq 24\text{V}$	A	–
		48V	A	–
		75V	A	–
		110V	A	–
		220V	A	70

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series

≤24V	A	27
48V	A	23
75V	A	19
110V	A	3
220V	A	–

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series

≤24V	A	32
48V	A	30
75V	A	27
110V	A	22
220V	A	5

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series

≤24V	A	40
48V	A	40
75V	A	38
110V	A	27
220V	A	32

IEC max current I_e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series

≤24V	A	–
48V	A	–
75V	A	–
110V	A	–
220V	A	40

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

A	400
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Protection fuse

gG (IEC)	A	100
aM (IEC)	A	50

Making capacity (RMS value)

A	400
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Breaking capacity at voltage

440V	A	320
500V	A	265
690V	A	256

Resistance per pole (average value)

mΩ	0.8
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Power dissipation per pole (average value)

I _{th}	W	3.9
AC3	W	1.3

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	1500000
Safety related data			
Performance level B10d according to EN/ISO 13489-1			
	rated load mechanical load	cycles	1500000
		cycles	15000000
Mirror contacts according to IEC/EN 60947-4-1			Yes
EMC compatibility			Yes
Rated AC voltage at 60Hz		V	575
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	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	70
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Short-circuit protection fuse, 600V

High fault

Short circuit current	kA	100
Fuse rating	A	150
Fuse class		J

Standard fault

Short circuit current	kA	5
Fuse rating	A	150
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