

Product designation				Power contactor
Product type designation				BF80
<b>Contact characteristics</b>				
Number of poles	Nr.			3
Rated insulation voltage U <sub>i</sub> IEC/EN	V			1000
Rated impulse withstand voltage U <sub>imp</sub>	kV			8
Operational frequency	min	Hz	25	
	max	Hz	400	
IEC Conventional free air thermal current I <sub>th</sub>	A			115
Operational current I <sub>e</sub>	AC-1 (≤40°C)	A	115	
	AC-1 (≤55°C)	A	95	
	AC-1 (≤70°C)	A	80	
	AC-3 (≤440V ≤55°C)	A	80	
	AC-4 (400V)	A	38	
Rated operational power AC-3 (T≤55°C)	230V	kW	22	
	400V	kW	45	
	415V	kW	45	
	440V	kW	45	
	500V	kW	55	
	690V	kW	55	
	1000V	kW	37	
Rated operational power AC-1 (T≤40°C)	230V	kW	43	
	400V	kW	76	
	500V	kW	95	
	690V	kW	120	
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 1 poles in series	≤24V	A	70	
	48V	A	60	
	75V	A	60	
	110V	A	8	
	220V	A	–	
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 2 poles in series	≤24V	A	100	
	48V	A	100	
	75V	A	100	
	110V	A	80	
	220V	A	9	
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 3 poles in series	≤24V	A	100	
	48V	A	100	
	75V	A	100	
	110V	A	85	
	220V	A	95	
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series	≤24V	A	100	
	48V	A	100	
	75V	A	100	
	110V	A	100	
	220V	A	115	

IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series	≤24V	A	40
	48V	A	30
	75V	A	30
	110V	A	3
	220V	A	–
	IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	≤24V	A
48V		A	50
75V		A	50
110V		A	40
220V		A	5
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series		≤24V	A
	48V	A	70
	75V	A	70
	110V	A	60
	220V	A	64
	IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	≤24V	A
48V		A	90
75V		A	90
110V		A	75
220V		A	80
Short-time allowable current for 10s (IEC/EN60947-1)			A
Protection fuse	gG (IEC)	A	125
	aM (IEC)	A	80
Making capacity (RMS value)		A	800
Breaking capacity at voltage	440V	A	640
	500V	A	625
	690V	A	456
Resistance per pole (average value)		mΩ	0.6
Power dissipation per pole (average value)	I <sub>th</sub>	W	7.9
	AC3	W	3.8
Tightening torque for terminals	min	Nm	4
	max	Nm	5
	min	I <sub>bin</sub>	2.95
	max	I <sub>bin</sub>	3.69
Tightening torque for coil terminal	min	Nm	0.8
	max	Nm	1
	min	I <sub>bin</sub>	Prodotti finiti
	max	I <sub>bin</sub>	Prodotti finiti
Max number of wires simultaneously connectable		Nr.	2
Conductor section	Flexible w/o lug conductor section		
	min	mm <sup>2</sup>	1.5
	max	mm <sup>2</sup>	35
Flexible c/w lug conductor section			

	min	mm <sup>2</sup>	1.5
	max	mm <sup>2</sup>	35
Power terminal protection according to IEC/EN 60529			IP20 front
<b>Mechanical features</b>			
Operating position			
	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	1020
<b>Operations</b>			
Mechanical life		cycles	15000000
Electrical life		cycles	1300000
<b>Safety related data</b>			
Performance level B10d according to EN/ISO 13489-1			
	rated load mechanical load	cycles	1300000
		cycles	15000000
Mirror contacts according to IEC/EN 60947-4-1			Yes
EMC compatibility			Yes
Rated AC voltage at 60Hz		V	24
<b>AC coil operating</b>			
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	210
	holding	VA	15
of 50/60Hz coil powered at 60Hz			
	in-rush	VA	195
	holding	VA	13
of 60Hz coil powered at 60Hz			
	in-rush	VA	210
	holding	VA	15
Dissipation at holding ≤20°C 50Hz			W 5
<b>Max cycles frequency</b>			
Mechanical operation		cycles/h	3600
<b>Operating times</b>			
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	77
at 600V	A	77

Yielded mechanical performance

for three-phase AC motor

200/208V	HP	25
220/230V	HP	30
460/480V	HP	60
575/600V	HP	75

General USE

Contactor

AC current	A	115
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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