



Product designation
Product type designation

Power contactor
BF230

Contact characteristics

Number of poles	Nr.	4
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	350
Operational current I_e		
	AC-1 ($\leq 40^\circ\text{C}$)	A 350
	AC-1 ($\leq 55^\circ\text{C}$)	A 290
	AC-1 ($\leq 70^\circ\text{C}$)	A 250
	AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$)	A 230
	AC-4 (400V)	A 110
Rated operational current AC-3 ($T \leq 55^\circ\text{C}$)		
	230V	A 230
	400V	A 230
	415V	A 230
	440V	A 230
	500V	A 184
	690V	A 165
	1000V	A 100
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)		
	230V	kW 132
	400V	kW 230
	500V	kW 253
	690V	kW 397
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series		
	$\leq 24\text{V}$	A 350
	48V	A 350
	75V	A 350
	110V	A 145
	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 350
	48V	A 350
	75V	A 350
	110V	A 270
	220V	A 225
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series		
	$\leq 24\text{V}$	A 350
	48V	A 350
	75V	A 350

	110V	A	270
	220V	A	270
	330V	A	225
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	350
	48V	A	350
	75V	A	350
	110V	A	350
	220V	A	350
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	350
	48V	A	350
	75V	A	250
	110V	A	135
	220V	A	–
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	350
	48V	A	350
	75V	A	250
	110V	A	225
	220V	A	180
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	350
	48V	A	350
	75V	A	250
	110V	A	250
	220V	A	225
	330V	A	180
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	350
	48V	A	350
	75V	A	250
	110V	A	250
	220V	A	225
	330V	A	210
	460V	A	180
Short-time allowable current for 10s (IEC/EN60947-1)		A	1840
Protection fuse			
	gG (IEC)	A	400
	aM (IEC)	A	250
Making capacity (RMS value)		A	2300
Breaking capacity at voltage			
	440V	A	1840
	500V	A	1472
	690V	A	1296
Resistance per pole (average value)		mΩ	0.18
Power dissipation per pole (average value)			
	Ith	W	21
	AC-3	W	9.3
Tightening torque for terminals			
	min	Nm	18
	max	Nm	18
	min	Ibin	159
	max	Ibin	159

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1

Power terminal protection according to IEC/EN 60529

IP00

Mechanical features

Operating position

normal allowable	Vertical plan ±30°
---------------------	-----------------------

Fixing

Screw

Weight

g	4000
---	------

Operations

Mechanical life

cycles	10000000
--------	----------

Electrical life

cycles	1000000
--------	---------

Safety related data

Performance level B10d according to EN/ISO 13489-1

rated load	cycles	1000000
mechanical load	cycles	10000000

EMC compatibility

yes

AC coil operating

Rated AC voltage at 50/60Hz, 60Hz

min	V	24
max	V	60

AC operating voltage

of 50/60Hz coil powered at 50Hz
pick-up

min	%Us	80 Us min
max	%Us	110 Us max

drop-out

max	%Us	≤70 Us min
-----	-----	------------

of 50/60Hz coil powered at 60Hz
pick-up

min	%Us	80 Us min
max	%Us	110 Us max

drop-out

max	%Us	≤70 Us min
-----	-----	------------

AC average coil consumption at 20°C

of 50/60Hz coil powered at 50Hz

in-rush	VA	160...230
holding	VA	1.5...3.0

of 50/60Hz coil powered at 60Hz

in-rush	VA	160...230
holding	VA	1.5...3.0

of 60Hz coil powered at 60Hz

in-rush	VA	160...230
holding	VA	1.5...3.0

Dissipation at holding ≤20°C 50Hz

W	1.5...3.0
---	-----------

DC coil operating

DC rated control voltage

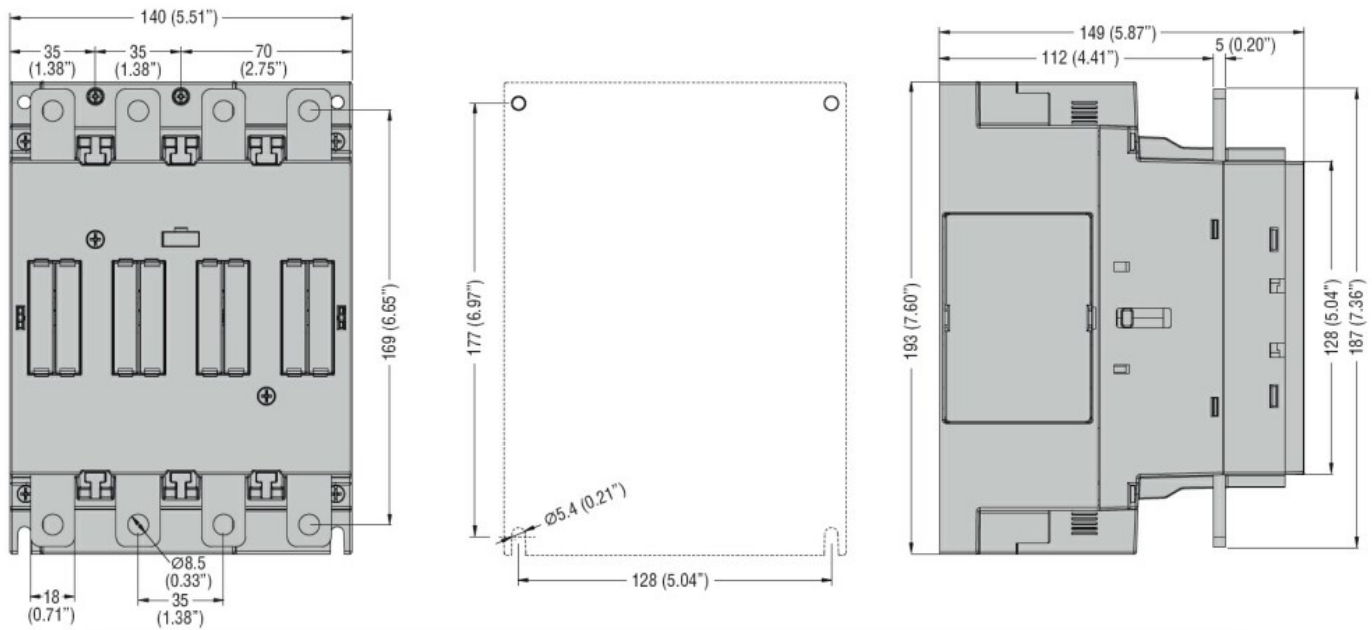
min	V	20
max	V	60

DC operating voltage

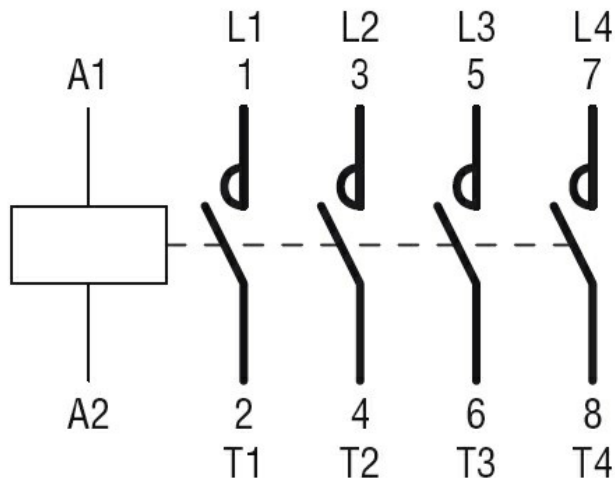
pick-up

min	%Us	85 Us min
-----	-----	-----------

		max	%Us	110 Us max
drop-out				
		max	%Us	≤70 Us min
Average coil consumption ≤20°C				
		in-rush	W	160...230
		holding	W	1.5...3.0
Max cycles frequency				
Mechanical operation			cycles/h	1000
Operating times				
Average time for Us control				
in AC				
		Closing NO		
		min	ms	50
		max	ms	100
		Opening NO		
		min	ms	30
		max	ms	75
UL technical data				
Rated operational voltage AC (UL)			V	600
Yielded mechanical performance				
for three-phase AC motor				
		200/208V	HP	75
		220/230V	HP	75
		460/480V	HP	150
		575/600V	HP	200
General USE				
Contactor				
		AC current	A	350
Short-circuit protection fuse, 600V				
High fault				
		Short circuit current	kA	100
		Fuse rating	A	400
		Fuse class		J
Standard fault				
		Short circuit current	kA	10
		Fuse rating	A	400
		Fuse class		RK5
Ambient conditions				
Temperature				
Operating temperature				
		min	°C	-40
		max	°C	70
Storage temperature				
		min	°C	-50
		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/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching