



			96
Product designation			Power contactor
Product type designation			BF230
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith	max	A	350
Operational current le		- / \	
Operational current le	AC-1 (≤40°C)	Α	350
	AC-1 (≤40 C) AC-1 (≤55°C)		290
	AC-1 (≤33 C) AC-1 (≤70°C)	A	250
	AC-1 (≤70 C) AC-3 (≤440V ≤55°C)	A	
	AC-3 (≤440V ≤55 C) AC-4 (400V)	A	230
D-1-1	AC-4 (400V)	Α	110
Rated operational power AC-3 (T≤55°C)	0001/		
	230V	kW	55
	400V	kW	110
	415V	kW	110
	440V	kW	132
	500V	kW	132
	690V	kW	160
	1000V	kW	110
Rated operational current AC-3 (T≤55°C)			
	230V	Α	230
	400V	Α	230
	415V	Α	230
	440V	Α	230
	500V	Α	184
	690V	Α	165
	1000V	Α	100
Rated operational power AC-1 (T≤40°C)			
	230V	kW	132
	400V	kW	230
	500V	kW	253
	690V	kW	397
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	Α	350
	48V	Α	350
	75V	Α	350
	110V	Α	145
	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	<u>-</u>		
, , , , , , , , , , , , , , , , , , , ,	≤24V	Α	350



	48V	Α	350
	75V	Α	350
	110V	Α	270
	220V	Α	225
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
	≤24V	Α	350
	48V	Α	350
	75V	Α	350
	110V	Α	270
	220V	Α	270
	330V	Α	225
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
·	≤24V	Α	350
	48V	Α	350
	75V	Α	350
	110V	Α	350
	220V	Α	350
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	350
	48V	A	350
	75V	A	250
	110V	Α	135
	220V	A	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	220 V		
120 max current le in 200-200 with E/N = 10m3 with 2 poles in series	≤24V	Α	350
	48V	A	350
	75V	A	250
	110V	A	225
	220V	A	180
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	220 V		100
TEC Max current le in DC3-DC3 with E/N = 13/115 with 3 poles in series	≤24V	Α	350
	48V	A	350
	75V	A	250
	110V		250
		A	
	220V	A	225
IFO and a summer to be DOO DOC with 1/D < 45 and with 4 and a beginning	330V	Α	180
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	<b>-04)</b> (		050
	≤24V	A	350
	48V	A	350
	75V	A	250
	110V	A	250
	220V	A	225
	330V	A	210
Object Control   10   10   10   10   10   10   10   1	460V	A	180
Short-time allowable current for 10s (IEC/EN60947-1)		Α	1840
Protection fuse	<b>-</b> ·	_	
	gG (IEC)	Α	400
	aM (IEC)	Α	250
Making capacity (RMS value)		Α	2300
Breaking capacity at voltage			
	440V	Α	1840
	500V	Α	1472
	690V	Α	1296
Resistance per pole (average value)		$m\Omega$	0.18



**ENERGY AND AUTOMATION** 

Power dissipation per	r 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			
riginioning torquo for		min	Nm	0.8
		max	Nm	1
Power terminal protec	ction according to IEC/EN 60529	Παλ	13111	IP00
Mechanical features	ction according to IEC/EN 00329			11-00
Operating position				Markalaha.
		normal		Vertical plan
<del>_</del>		allowable		±30°
Fixing				Screw
Weight			g	3000
Operations				
Mechanical life			cycles	10000000
Electrical life			cycles	1000000
Safety related data				
Performance level B1	10d according to EN/ISO 13489-1			
		rated load	cycles	1000000
EMC compatibility				yes
AC coil operating				
	50/60Hz, 60Hz			
	50/60Hz, 60Hz	min	V	24
	50/60Hz, 60Hz			
Rated AC voltage at 5		min max	V V	24 60
Rated AC voltage at 5				
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz			
Rated AC voltage at 8		max	V	60
Rated AC voltage at 8	of 50/60Hz coil powered at 50Hz	max	V %Us	80 Us min
Rated AC voltage at 8	of 50/60Hz coil powered at 50Hz pick-up	max	V	60
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz	max min max	V %Us %Us	80 Us min 110 Us max
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up drop-out	max	V %Us	80 Us min
Rated AC voltage at 8	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz	max min max	V %Us %Us	80 Us min 110 Us max
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up drop-out	max min max max	V %Us %Us %Us	80 Us min 110 Us max ≤70 Us min
Rated AC voltage at 8	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz	max min max	V %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up	max min max max	V %Us %Us %Us	80 Us min 110 Us max ≤70 Us min
Rated AC voltage at t	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz	max min max max	V %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min 110 Us max
Rated AC voltage at 8	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up	max min max max	V %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min
Rated AC voltage at t	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out	min max min max	%Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min 110 Us max
Rated AC voltage at t	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out	min max min max	%Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min 110 Us max
Rated AC voltage at t	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out	min max max min max min max	%Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min 110 Us max ≤70 Us min
Rated AC voltage at 6	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out	min max min max max max in-rush	%Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min
Rated AC voltage at t	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out  drop-out	min max max min max min max	%Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min 110 Us max ≤70 Us min
Rated AC voltage at t	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out	min max max min max min max in-rush holding	%Us %Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min 110 Us max ≤70 Us min 160230 1.53.0
Rated AC voltage at t	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out  drop-out	min max max min max max in-rush holding in-rush	%Us %Us %Us %Us %Us %Us VA	80 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 160230 1.53.0
Rated AC voltage at t	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out  drop-out  sumption at 20°C of 50/60Hz coil powered at 50Hz  of 50/60Hz coil powered at 60Hz	min max max min max min max in-rush holding	%Us %Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min 110 Us max ≤70 Us min 160230 1.53.0
Rated AC voltage at t	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out  drop-out	min max max min max min max in-rush holding in-rush holding	%Us %Us %Us %Us %Us %Us VA VA	80 Us min 110 Us max ≤70 Us min  80 Us min 110 Us max ≤70 Us min  160230 1.53.0  160230 1.53.0
Rated AC voltage at \$  AC operating voltage  AC average coil cons	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out  drop-out  sumption at 20°C of 50/60Hz coil powered at 50Hz  of 50/60Hz coil powered at 60Hz	min max max min max max in-rush holding in-rush	%Us %Us %Us %Us %Us %Us VA	80 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 160230 1.53.0

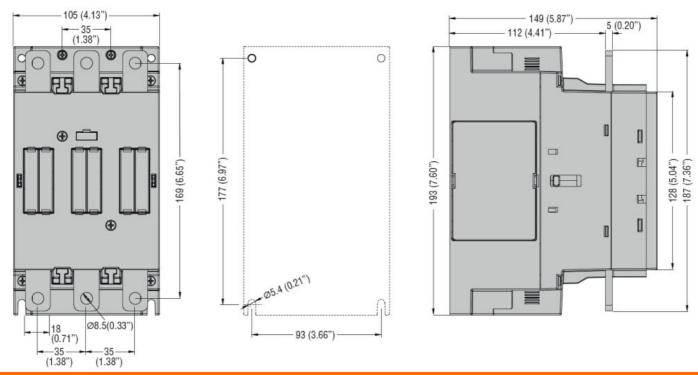
**ENERGY AND AUTOMATION** 

DC soil an arcting					
DC coil operating					
DC rated control voltage	je				
			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 consump	tion ≤20°C				
			in-rush	W	160230
			holding	W	1.53.0
Max cycles frequency					
Mechanical operation				cycles/h	1000
Operating times				•	
Average time for Us co	ontrol				
	in AC				
		Closing NO			
		2.00mg 110	min	ms	50
			max	ms	100
		Opening NO	Παλ	1113	100
		Opening NO	min	mo	30
				ms	75
III to obside I date			max	ms	75
UL technical data					
Yielded mechanical pe					
	for three-phase AC mo	otor			
			200/208V	HP	75
			220/230V	HP	75
			460/480V	HP	150
			575/600V	HP	200
General USE					
	Contactor				
			AC current	Α	350
Short-circuit protection	fuse, 600V				
	High fault				
	· ·		Short circuit current	kA	100
			Fuse rating	Α	400
			Fuse class		J
	Standard fault				
			Short circuit current	kA	10
			Fuse rating	A	400
			Fuse class	, ,	RK5
Ambient conditions			1 400 01400		
Temperature					
romporature	Operating temperature				
	Operating temperature	<del>,</del>	min	°C	-40
			min	°C	
	Otomore to contract		max	, C	70
	Storage temperature			2.5	
			min	°C	-50
			max	°C	80
Max altitude				m	3000
Resistance & Protection	on				
Pollution degree					3

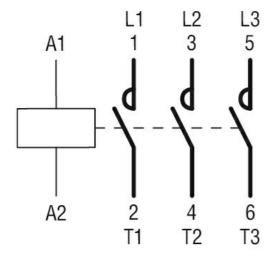
CONTACTOR 3 POLI, IEC CURENT OPERARE IE (AC3) = 230A, AC/DC BOBINA, 24...60VAC - 20...60VDC

ENERGY AND AUTOMATION

## **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