# electric CONTACTOR TRIPOLAR, CORRIENTE DE OPERACIÓN IEC IE (AC3) = 230A, BOBINA AC/DC, 250...500VAC/DC **ENERGY AND AUTOMATION**



			ac.
Product designation Product type designation			Power contactor BF230
Contact characteristics			DI 230
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency		ΝV	0
Operational frequency	min	Hz	25
	min	⊓z Hz	400
IEC Conventional free air thermal current Ith	max	A A	350
Operational current le		A	330
Operational current le	AC 1 (<10°C)	۸	250
	AC-1 (≤40°C)	A	350
	AC-1 (≤55°C)	A	290
	AC-1 (≤70°C)	A	250
	AC-3 (≤440V ≤55°C)	A	230
	AC-4 (400V)	Α	110
Rated operational power AC-3 (T≤55°C)			
	230V	kW	55
	400V	kW	110
	415V	kW	110
	440V	kW	132
	500V	kW	132
	690V	kW	160
9	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	220 V		
120 max sarront to in 201 mar 2/1 = 1110 mar 2 poloo in solitos	≤24V	Α	350
	-24 V	, ,	500



BF23000E400

electric CONTACTOR TRIPOLAR, CORRIENTE DE OPERACIÓN IEC IE (AC3) = 230A, BOBINA AC/DC, 250...500VAC/DC **ENERGY AND AUTOMATION** 

	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	Α	350
	75V	A	250
	110V	A	135
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	220 V		
120 max current le in 200-2003 with 211 2 10m3 with 2 poles in series	≤24V	Α	350
	≥24 V 48 V	A	350
	75V	A	250
	110V		
		A	225
IFC many augment is in DC2 DC5 with L/D < 45 may with 2 males in agrica	220V	A	180
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	<24)/	۸	250
	≤24V	A	350
	48V	A	350
	75V	A	250
	110V	A	250
	220V	A	225
150	330V	Α	180
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	10.41.7		050
	≤24V	A	350
	48V	A	350
	75V	A	250
	110V	A	250
	220V	A	225
	330V	Α	210
	460V	Α	180
Short-time allowable current for 10s (IEC/EN60947-1)		Α	1840
Protection fuse	<b>-</b> :	_	
	gG (IEC)	Α	400
	aM (IEC)	A	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)		mΩ	0.18

# electric CONTACTOR TRIPOLAR, CORRIENTE DE OPERACIÓN IEC IE (AC3) = 230A, BOBINA AC/DC, 250...500VAC/DC

**ENERGY AND AUTOMATION** 

Power dissipation per	r pole (average value)			
		Ith	W	21
		AC-3	W	9.3
Tightening torque for	terminals			
0 0 1		min	Nm	18
		max	Nm	18
		min	Ibin	159
		max	Ibin	159
Tightening torque for	coil terminal	max	10	
rigitioning torque for	con terrina	min	Nm	0.8
			Nm	1
Dowar tarminal proto	ation according to IEC/EN 60500	max	INIII	
	ction according to IEC/EN 60529			IP00
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw
Weight			g	3000
Operations				
Mechanical life			cycles	10000000
Electrical life			cycles	1000000
Safety related data				
•	10d according to EN/ISO 13489-1			
	<b>3</b>	rated load	cycles	1000000
EMC compatibility			-,	yes
				y 00
AC coil operating				
AC coil operating	50/60Hz 60Hz			
	50/60Hz, 60Hz	min	V	250
	50/60Hz, 60Hz	min	V	250
Rated AC voltage at		min max	V V	250 500
Rated AC voltage at s	<u> </u>			
Rated AC voltage at s	of 50/60Hz coil powered at 50Hz			
Rated AC voltage at s	<u> </u>		V	500
Rated AC voltage at	of 50/60Hz coil powered at 50Hz		V %Us	500 80 Us min
Rated AC voltage at	of 50/60Hz coil powered at 50Hz pick-up	max	V	500
Rated AC voltage at s	of 50/60Hz coil powered at 50Hz	max min	V %Us %Us	80 Us min 110 Us max
Rated AC voltage at	of 50/60Hz coil powered at 50Hz pick-up	max min	V %Us	500 80 Us min
Rated AC voltage at s	of 50/60Hz coil powered at 50Hz pick-up	max min max	V %Us %Us	80 Us min 110 Us max
Rated AC voltage at	of 50/60Hz coil powered at 50Hz pick-up drop-out	max min max	V %Us %Us	80 Us min 110 Us max
Rated AC voltage at	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 s	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	500 80 Us min 110 Us max ≤70 Us min
Rated AC voltage at	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	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz	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 the AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out	max min max max	V  %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min
Rated AC voltage at the AC operating voltage	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 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 the AC operating voltage	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 the AC operating voltage	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 min max max max in-rush	%Us %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 the AC operating voltage	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 the AC operating voltage	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	%Us %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 160230 1.53.0
Rated AC voltage at the AC operating voltage	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 the AC operating voltage	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 110 Us max ≤70 Us min 110 Us max ≤70 Us min 160230 1.53.0
Rated AC voltage at the AC operating voltage	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 the AC operating voltage	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
AC coll operating Rated AC voltage at s  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 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 10 Us max ≤70 Us min 110 Us max ≤70 Us min 160230 1.53.0



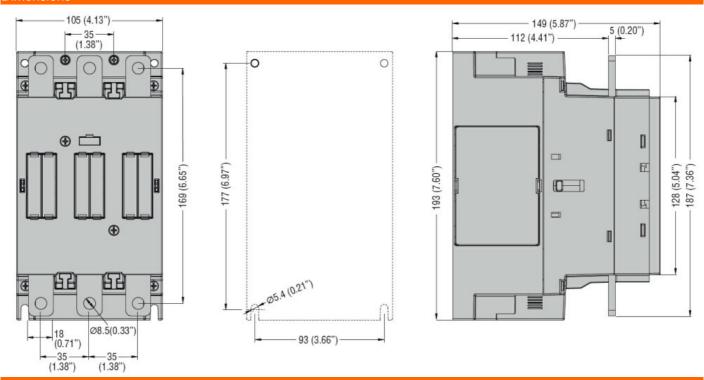
electric CONTACTOR TRIPOLAR, CORRIENTE DE OPERACIÓN IEC IE (AC3) = 230A, BOBINA AC/DC, 250...500VAC/DC

DC coil operating DC rated control voltage V 250 min ٧ 500 max DC operating voltage pick-up min %Us 85 Us min %Us 110 Us max max drop-out %Us ≤70 Us min max Average coil consumption ≤20°C in-rush W 160...230 holding W 1.5...3.0 Max cycles frequency Mechanical operation 1000 cycles/h Operating times Average time for Us control in AC Closing NO min ms 50 100 ms max Opening NO min ms 30 75 max ms UL technical data Yielded mechanical performance for three-phase AC motor 75 200/208V HP 220/230V HP 75 460/480V HP 150 575/600V HP 200 General USE Contactor AC current 350 Α Short-circuit protection fuse, 600V High fault Short circuit current kΑ 100 Fuse rating Α 400 Fuse class J Standard fault Short circuit current kΑ 10 Fuse rating 400 Α Fuse class RK5 Ambient conditions Temperature Operating temperature °C -40 min °C max 70 Storage temperature °C -50 min °C 80 max 3000 Max altitude Resistance & Protection Pollution degree 3

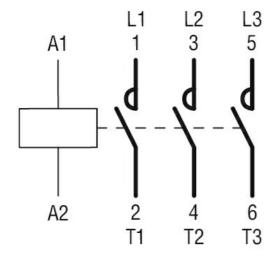
electric CONTACTOR TRIPOLAR, CORRIENTE DE OPERACIÓN IEC IE (AC3) = 230A, BOBINA AC/DC, 250...500VAC/DC

**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