



Product designation			Power contactor
Product type designation Contact characteristics			BF230
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency		K V	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith	max	A	350
Operational current le			
oporational carron le	AC-1 (≤40°C)	Α	350
	AC-1 (≤55°C)	Α	290
	AC-1 (≤70°C)	Α	250
	AC-3 (≤440V ≤55°C)	Α	230
	AC-4 (400V)	Α	110
Rated operational power AC-3 (T≤55°C)	- (/		
1 1 (/	230V	kW	55
	400V	kW	110
	415V	kW	110
	440V	kW	132
	500V	kW	132
	690V	kW	160
	1000V	kW	110
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			
	≤24V	Α	350
	48V	Α	350
	75V	Α	350
	110V	Α	270
150 ALL BOX 101 A	220V	Α	225
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	.=		050
	≤24V	Α	350
	48V	A	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	A	350
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series	220 V		330
TEC max current le in DC3-DC3 with L/K = 13ms with 1 poles in series	<241/	۸	250
	≤24V 48V	A	350
		A	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			
	≤24V	Α	350
	48V	Α	350
	75V	Α	250
	110V	Α	225
	220V	Α	180
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	350
	48V	Α	350
	75V	Α	250
	110V	Α	250
	220V	Α	225
	330V	Α	180
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			_
·	≤24V	Α	350
	48V	Α	350
	75V	Α	250
	110V	Α	250
	220V	Α	225
	330V	Α	210
	460V	Α	180
Short-time allowable current for 10s (IEC/EN60947-1)	→00 V		1840
Protection fuse			1070
1 TOTOGROTT TUGO	gG (IEC)	Α	400
			250
Making capacity (PMS value)	aM (IEC)	A A	2300
Making capacity (RMS value)		A	2300
Breaking capacity at voltage	4.4017	۸	1010
	440V	A	1840
	500V	A	1472
	690V	Α	1296
Resistance per pole (average value)		mΩ	0.18
Power dissipation per pole (average value)			
	Ith	W	21
	AC3	W	9.3
Tightening torque for terminals	_		4.0
	min	Nm	18
	max	Nm	18
	min	lbin	159
	max	lbin	159



BF23000E230

Weight g 3000 Degrations Mechanical life cycles 10000000					
Provide terminal protection according to IEC/EN 60529 1000000 1000000 10000000 10000000 100000000	Tightening torque for co	oil terminal	_		
Pool					
Departing position Section Sec			max	Nm	
Departing position		ion according to IEC/EN 60529			IP00
Main					
Screw Scr	Operating position				
Screw Screw Screw Screw Screw Selections Screw					•
Neight Special Content			allowable		
Departions	Fixing				Screw
Mechanical life cycles 10000000 Electrical life cycles 10000000 Electrical life cycles 10000000 Electrical life cycles 1000000000000000000000000000000000000	Weight			g	3000
Caretrical life	Operations				
Performance level B10d according to EN/ISO 13489-1 rated load cycles 1000000	Mechanical life			cycles	10000000
Performance level B10d according to EN/ISO 13489-1 rated load cycles 1000000	Electrical life			cycles	1000000
Performance level B10d according to EN/ISO 13489-1 rated load cycles 1000000 yes	Safety related data				
EMC compatibility VC coil operating Rated AC voltage at 50/60Hz, 60Hz Rated AC voltage at 50/60Hz, 60Hz Rated AC voltage at 50/60Hz, 60Hz Rated AC voltage at 50/60Hz coil powered at 50Hz pick-up min max	•	d according to EN/ISO 13489-1			
EMC compatibility yes Cooli operating Rated AC voltage at 50/60Hz, 60Hz Pick-up Rated AC voltage at 50/60Hz coil powered at 50Hz Pick-up Rated AC voltage at 50/60Hz coil powered at 60Hz Pick-up Rated AC voltage at 50/60Hz coil powered at 60Hz Rated AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz Rated AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz Rated AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz Rated AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz Rated AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz Rated AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz Rated AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz Rated AC voltage at 50/4		, a according to 1, w. C o 10 100 1	rated load	cycles	1000000
No coil operating Rated AC voltage at 50/60Hz, 60Hz min V 100 max V 250	FMC compatibility		Tatod Ioaa	0,0.00	
Rated AC voltage at 50/60Hz, 60Hz min					, 55
MC operating voltage of 50/60Hz coil powered at 50Hz pick-up min max %Us 80 Us min max %Us 110 Us max drop-out min max %Us \$70 Us min max \$70 Us min \$70 Us max \$70 Us max \$70 Us min \$70 Us max \$70 Us max \$70 Us min \$70 Us max \$70 Us		0/60Hz 60Hz			
AC operating voltage of 50/60Hz coil powered at 50Hz pick-up drop-out min	Nated Ao voltage at 30	0/00/12, 00/12	ma!	17	100
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 MAC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz accepted at 50Hz of 50/60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 of 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 of 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 of 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 of 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 or 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 or 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 or 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 or 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 or 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 or 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 or 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 or 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0					
of 50/60Hz coil powered at 50Hz pick-up min max	A O		max	V	250
Pick-up Min MUS 80 Us min max MUS 110 Us max MuS	AC operating voltage	(FO/OOLL			
Min Mus 80 Us min max Mus 110 Us max Mus Mus 110 Us max Mus Mus 110 Us max Mus					
Max Mus 110 Us max		pick-up		0/11	
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 Mus Mus 110 Us max Mus					
Max Wus ≤70 Us min of 50/60Hz coil powered at 60Hz pick-up min wus 80 Us min max wus 110 Us max wus wus 110 Us max wus			max	%Us	110 Us max
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 160230 holding VA 1.53.0 of 50/60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 of 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 of 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 Occordioperating OC rated control voltage pick-up min V 100 max V 250 OC operating voltage		drop-out			
Pick-up min max %Us 80 Us min max %Us 110 Us max MC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 160230 holding VA 1.53.0 holding VA 1		-	max	%Us	≤70 Us min
Min Mus		·			
Max Mus 110 Us max Max Mus		pick-up			
Max			min		
Max			max	%Us	110 Us max
AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 160230 holding VA 1.53.0 of 50/60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 of 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 of 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 Dissipation at holding ≤20°C 50Hz W 1.53.0 DC coil operating DC rated control voltage min V 100 max V 250 DC operating voltage pick-up min %Us 85 Us min		drop-out			
of 50/60Hz coil powered at 50Hz in-rush VA 160230 holding VA 1.53.0 of 50/60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 of 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 of 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 Dissipation at holding ≤20°C 50Hz VX 1.53.0 OC coil operating OC rated control voltage min V 100 max V 250 OC operating voltage pick-up min %Us 85 Us min			max	%Us	≤70 Us min
in-rush VA 160230 holding VA 1.53.0	AC average coil consu	mption at 20°C			
holding		of 50/60Hz coil powered at 50Hz			
of 50/60Hz coil powered at 60Hz in-rush holding VA 1.53.0 of 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 Dissipation at holding ≤20°C 50Hz Coil operating DC rated control voltage min V 100 max V 250 DC operating voltage pick-up min %Us 85 Us min			in-rush	VA	160230
in-rush			holding	VA	1.53.0
in-rush		of 50/60Hz coil powered at 60Hz			
holding VA 1.53.0 of 60Hz coil powered at 60Hz in-rush vA 160230 holding VA 1.53.0 Dissipation at holding ≤20°C 50Hz W 1.53.0 DC coil operating DC rated control voltage min v 100 max v 250 DC operating voltage pick-up min %Us 85 Us min		•	in-rush	VA	160230
of 60Hz coil powered at 60Hz in-rush VA 160230 holding VA 1.53.0 Dissipation at holding ≤20°C 50Hz W 1.53.0 DC coil operating DC rated control voltage min V 100 max V 250 DC operating voltage pick-up min %Us 85 Us min					
in-rush VA 160230 holding VA 1.53.0 Dissipation at holding ≤20°C 50Hz W 1.53.0 DC coil operating DC rated control voltage min V 100 max V 250 DC operating voltage pick-up min %Us 85 Us min		of 60Hz coil powered at 60Hz			
holding VA 1.53.0 Dissipation at holding ≤20°C 50Hz W 1.53.0 DC coil operating DC rated control voltage min V 100 max V 250 DC operating voltage pick-up min %Us 85 Us min		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	in-rush	VA	160230
Dissipation at holding ≤20°C 50Hz Cool operating Cool operating Cool operating M 1.53.0					
DC coil operating DC rated control voltage min V 100 max V 250 DC operating voltage pick-up min %Us 85 Us min	Dissination at holding s	<20°C 50Hz	Holding		
DC rated control voltage min V 100 max V 250 DC operating voltage pick-up min %Us 85 Us min				V V	1.00.0
min V 100 max V 250 OC operating voltage pick-up min %Us 85 Us min		10			
DC operating voltage pick-up max V 250 min %Us 85 Us min	o rated control voltag	y c	ma!	17	100
DC operating voltage pick-up min %Us 85 Us min					
pick-up min %Us 85 Us min	DO		max	V	200
min %Us 85 Us min	DC operating voltage				
		pick-up			
max %Us 110 Us max			min		
			max	%Us	110 Us max

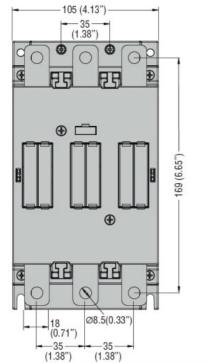


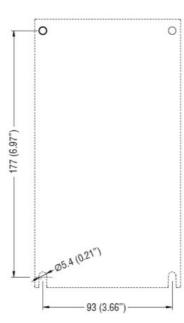


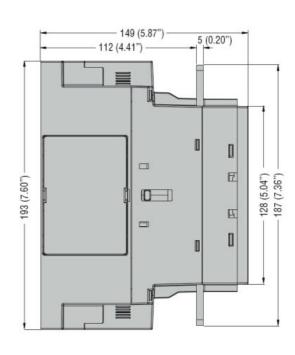
	drop-out			
		max	%Us	≤70 Us min
Average coil consump	tion ≤20°C			
		in-rush	W	160230
May avalos fraguesav		holding	W	1.53.0
Max cycles frequency Mechanical operation			cycles/h	1000
Operating times			cycles/fi	1000
Average time for Us of	ontrol			
rivorago ilino loi co o	in AC			
	Closing NO			
	· ·	min	ms	50
		max	ms	100
	Opening NO			
		min	ms	30
		max	ms	75
UL technical data	·			
Yielded mechanical pe				
	for three-phase AC motor	200/2001	LID	75
		200/208V 220/230V	HP HP	75 75
		460/480V	HP	75 150
		575/600V	HP	200
General USE		010/0001		200
30110101 332	Contactor			
		AC current	Α	350
Short-circuit protection	n 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	Α	400 DK5
Ambient conditions		Fuse class		RK5
Ambient conditions Temperature				
remperature	Operating temperature			
	Operating temperature	min	°C	-40
		max	°C	70
	Storage temperature		-	-
		min	°C	-50
		max	°C	80
Max altitude			m	3000
Resistance & Protection	on			
Pollution degree				3
Dimensions				

ENERGY AND AUTOMATION

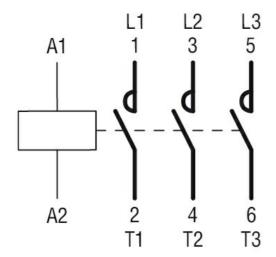
THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 230A, AC/DC COIL, 100...250VAC/DC







Wiring diagrams



Certifications and compliance

Certificates

cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching