

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	A 350		
Operational current Ie	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 power AC-3 ($T \leq 55^{\circ}\text{C}$)	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 ($T \leq 40^{\circ}\text{C}$)	230V	kW	132
	400V	kW	230
	500V	kW	253
	690V	kW	397
IEC max current Ie 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 Ie 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 Ie 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 $L/R \leq 1\text{ms}$ with 4 poles in series	$\leq 24\text{V}$	A	350
	48V	A	350
	75V	A	350
	110V	A	350

	220V	A	350
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A	350
	48V	A	350
	75V	A	250
	110V	A	135
	220V	A	—
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series	$\leq 24\text{V}$	A	350
	48V	A	350
	75V	A	250
	110V	A	225
	220V	A	180
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A	350
	48V	A	350
	75V	A	250
	110V	A	250
	220V	A	225
	330V	A	180
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series	$\leq 24\text{V}$	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	1955
Breaking capacity at voltage			
	440V	A	1955
	500V	A	1564
	690V	A	1377
Resistance per pole (average value)		m?	0.18
Power dissipation per pole (average value)			
	I _{th}	W	21
	AC3	W	9.3
Tightening torque for terminals			
	min	Nm	18
	max	Nm	18
	min	lbin	159
	max	lbin	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		Vertical plan

	allowable	$\pm 30^\circ$	
Fixing	Screw		
Weight	g	3000	
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
EMC compatibility	yes		
AC coil operating			
Rated AC voltage at 50/60Hz, 60Hz	min	V	250
	max	V	500
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 $\leq 20^\circ\text{C}$ 50Hz	W	1.5...3.0	
DC coil operating			
DC rated control voltage	min	V	250
	max	V	500
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 $\leq 20^\circ\text{C}$	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	35
	max	ms	75

UL technical data

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
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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

3

Pollution degree

ETIM classification

EC000066 -
Power contactor,
AC switching

ETIM 8.0