

Product designation		Power contactor	
Product type designation		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 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 I_e 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			

	≤24V	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 ≤ 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 I _e 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	1955
Breaking capacity at voltage			
	440V	A	1955
	500V	A	1564
	690V	A	1377
Resistance per pole (average value)		mΩ	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 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
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	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
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Resistance & Protection

Pollution degree

3

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching