

# FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 32A, DC COIL, 125VDC, 2NO AND 2NC



Product designation			Power contactor BF18
Product type designation Contact characteristics			DF 10
Number of poles		Nr.	4
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency		IX V	
Operational mediciney	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith	max	A	32
Operational current le			
	AC-1 (≤40°C)	Α	32
	AC-1 (≤55°C)	Α	26
	AC-1 (≤70°C)	Α	23
	AC-3 (≤440V ≤55°C)	Α	18
	AC-4 (400V)	Α	8.5
Rated operational power AC-1 (T≤40°C)	,		
	230V	kW	12
	400V	kW	21
	500V	kW	26
	690V	kW	36
Short-time allowable current for 10s (IEC/EN60947-1)		Α	200
Protection fuse			
	gG (IEC)	Α	32
	aM (IEC)	Α	20
Making capacity (RMS value)		Α	180
Breaking capacity at voltage			
	440V	Α	144
	500V	Α	120
	690V	A	94
Resistance per pole (average value)		mΩ	2.5
Power dissipation per pole (average value)			
	Ith	W	2.6
	AC-3	W	0.8
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
Tightoning torque for coil torming!	max	Ibin	1.5
Tightening torque for coil terminal		NI	0.0
	min	Nm	0.8
	max	Nm	1
	min	lbin Ibin	0.8
Max number of wires simultaneously connectable	max	Ibin Nr.	0.74
wax number of wifes simulaneously connectable		INI.	۷



# FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 32A, DC COIL, 125VDC, 2NO AND 2NC

AWG/Kcmil   Fiexible w/o lug conductor section   Fiexible w/o lug conductor section   Fiexible c/w lug conductor section   Fiexible c/w lug conductor section   Fiexible c/w lug conductor section   Fiexible with insulated spade lug conductor section   min mmin mmin mmin mmin mmin mmin mm					
Flexible w/o lug conductor section	Conductor section				
Flexible w/o lug conductor section   min mx mm²   1 mx mm²   6 mx mx mx²   7 mx mx²   7 mx mx²   7 mx mx²   7 mx²   7 mx mx²   7 mx²		AWG/Kcmil			
Flexible c/w lug conductor section			max		10
Flexible c/w lug conductor section		Flexible w/o lug conductor section			
Flexible c/w lug conductor section   min max mm²   1   1   1   1   1   1   1   1   1			min		
Min			max	mm <sup>2</sup>	6
Flexible with insulated spade lug conductor section   min max   mm²   1 max   mm²   1 mmx   mm²   mm²		Flexible c/w lug conductor section		2	
Flexible with insulated spade lug conductor section					
Min		Clavible with inculated anode has conductor continu	max	mm-	4
Power terminal protection according to IEC/EN 60529   Power terminal protection allowable   Power terminal protection   Power terminal protection		Flexible with insulated spade lug conductor section	min	mm²	1
Power terminal protection according to IEC/EN 60529   IP20 when properly wired   Mechanical features   IP20 when properly wired   Mechanical features   IP20 when properly wired   I					
Proper terminal protection according to IEC/EN 00529			max		
Mechanical features           Operating position         normal allowable         Vertical plan ±30°           Fixing         Screw / DIN rail 35mm           Weight         g         496           Conductor section           AWG/kcmil conductor section           max         10           Operations         max         10           Mechanical life         cycles         20000000           Electrical life         cycles         20000000           Safety related data         rated load mechanical load         cycles         1600000           Safety related data         cycles         1600000         20000000           Mirror contats according to IEC/EN 609474-4-1         rated load mechanical load         cycles         1600000         2000000         20000000 <th< td=""><td>Power terminal protect</td><td>ction according to IEC/EN 60529</td><td></td><td></td><td></td></th<>	Power terminal protect	ction according to IEC/EN 60529			
Normal allowable   Series	Mechanical features				γ - 1 - y
Normal allowable   Series	Operating position				
Fixing   Screw / DIN rail   S			normal		Vertical plan
Meight		all	owable		
AWG/kcmil conductor section         max       10         Operations         Mechanical life       cycles       20000000         Electrical life       cycles       1600000         Safety related data         Performance level B10d according to EN/ISO 13489-1       rated load cycles       1600000 cycles       20000000         Mirror contats according to IEC/EN 609474-4-1       YES         EMC compatibility       yes         DC rated control voltage       V 125         DC rated control voltage       V 125         DC operating voltage       min %Us 70       max       %Us 10         Mary %Us 10       max       %Us 10         Macroage coil consumption ≤20°C       in-rush %Us 10       40         Average coil consumption       cycles/h       3600         Operating times         Average time for Us control in AC         Closing NO         min max       %Us 10       54         Average time for Us control in AC	Fixing				
AWG/kcmil conductor section         max       10         Operations         Mechanical life       cycles       20000000         Electrical life       cycles       1600000         Safety related data         Performance level B10d according to EN/ISO 13489-1       rated load cycles       1600000 cycles       20000000         Mirror contats according to IEC/EN 609474-4-1       YES         EMC compatibility       yes         DC rated control voltage       V       125         DC operating voltage       y       125         Average coil consumption ≤20°C       in-rush	Weight			g	496
Operations           Mechanical life         cycles         20000000           Electrical life         cycles         1600000           Safety related data           rated load mechanical load orgoring to EN/ISO 13489-1         rated load mechanical load orgoring to 20000000         16000000           Mirror contats according to IEC/EN 609474-4-1         yes         200000000           Mirror contats according to IEC/EN 609474-4-1         yes         YES           EMC compatibility         yes         yes           DC rated control voltage         V         125           DC operating voltage         min         %Us         70           pick-up         min         %Us         70           drop-out         min         %Us         125           drop-out         min         %Us         10           Average coil consumption ≤20°C         in-rush         W         5.4           Max cycles frequency           Max cycles frequency           Mechanical operation         cycles/h         3600           Operating times           Average time for Us control in AC <td>Conductor section</td> <td></td> <td></td> <td></td> <td></td>	Conductor section				
Operations           Mechanical life         cycles         20000000           Electrical life         cycles         1600000           Safety related data         Performance level B10d according to EN/ISO 13489-1         rated load mechanical load cycles         1600000 20000000           Mirror contats according to IEC/EN 609474-4-1         YES           EMC compatibility         yes           DC coil operating         DC rated control voltage         V 125           DC operating voltage         yes           DC operating voltage         yes           In-rush max         %Us 70 yes           Max cycles coil consumption ≤20°C         in-rush min min min yes 40         5.4           Max cycles frequency         Mechanical operation         cycles/h 3600           Operating times           Average time for Us control in AC         Closing NO           min		AWG/kcmil conductor section			
Mechanical life			max		10
Electrical life cycles 1600000  Safety related data  Performance level B10d according to EN/ISO 13489-1  rated load cycles 200000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility yes  DC coil operating  DC rated control voltage  Pick-up  min %Us 70 max %Us 125  drop-out  min %Us 70 max %Us 10 max %Us 40  Average coil consumption ≤20°C  in-rush W 5.4 holding W 5.4 Max cycles frequency  Mechanical operation  Operating times  Average time for Us control  in AC  Closing NO  min ms 8	Operations				
Performance level B10d according to EN/ISO 13489-1   rated load mechanical load cycles 20000000   mechanical load cycles 20000000   mechanical load cycles 20000000   mechanical load cycles 20000000   yes 200000000   yes 200000000   yes 200000000   yes 200000000   yes 2000000000   yes 200000000   yes 2000000000   yes 2000000000   yes 2000000000   yes 2000000000000   yes 2000000000   yes 2000000000   yes 20000000000   yes 2000000000000000000000000000000000000				-	
Performance level B10d according to EN/ISO 13489-1  rated load mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility yes  DC coil operating  DC rated control voltage V 125  DC operating voltage  pick-up  pick-up  Arror contats according to IEC/EN 609474-4-1  Employed Pick-up  pick-up  Arror contats according to IEC/EN 609474-4-1  Employed Pick-up  pick-up  Arror contats according to IEC/EN 609474-4-1  Employed Pick-up  pick-up  min min wust 70  max wust 125  Arror contats according to IEC/EN 609474-4-1  Employed Pick-up  In min wust 10  Employed Pick-up  In min wust 10  Employed Pick-up  Max cycles frequency  Mechanical operation cycles/h 3600  Operating times  Average time for Us control  in AC  Closing NO  min ms 8				cycles	1600000
rated load   cycles   1600000   mechanical load   cycles   20000000   mechanical load   cycles   cycles	•				
Mirror contats according to IEC/EN 609474-4-1         YES           EMC compatibility         yes           DC coil operating         V 125           DC operating voltage         V 125           DC operating voltage         min wull substitution with substitution with substitution subst	Performance level B1				400000
Mirror contats according to IEC/EN 609474-4-1  EMC compatibility  DC coil operating  DC rated control voltage  DC operating voltage  pick-up  min %Us 70 max %Us 125  drop-out  min %Us 10 max %Us 10 max %Us 40  Average coil consumption ≤20°C  in-rush W 5.4 holding W 5.4 Max cycles frequency  Mechanical operation  Operating times  Average time for Us control in AC  Closing NO  min ms 8				•	
EMC compatibility yes    DC coil operating   V   125     DC operating voltage   V   125     DC operating voltage   min   %Us   70     max   %Us   125     drop-out   min   %Us   10     max   %Us   40     Average coil consumption ≤20°C   in-rush   W   5.4     holding   W   5.4     holding   W   5.4     Max cycles frequency     Mechanical operation   cycles/h   3600     Operating times     Average time for Us control     in AC     Closing NO   min   ms   8	Mirror contata accordi		ai ioad	cycles	
DC coil operating         DC operating voltage       V       125         DC operating voltage       min wax       %Us 70 max       70 max         drop-out       min wax       %Us 10 max       10 max         Average coil consumption ≤20°C       in-rush way 5.4 holding way 5.4         Max cycles frequency       wax cycles/h holding way 5.4         Mechanical operation       cycles/h 3600         Operating times         Average time for Us control in AC       Closing NO         min ms 8       8		11g to IEC/EN 609474-4-1			
DC rated control voltage         DC operating voltage       min %Us 70 max %Us 125         drop-out       min %Us 10 max %Us 40         Average coil consumption ≤20°C       in-rush W 5.4 holding W 5.4         Max cycles frequency       w 5.4         Mechanical operation       cycles/h 3600         Operating times         Average time for Us control in AC       closing NO         min ms 8					yes
DC operating voltage    pick-up		αρ		\/	125
pick-up		<del>ge</del>		V	123
min   %Us   70   max   %Us   125	Do operating voltage	nick-un			
max   %Us   125     drop-out   min   %Us   10     max   %Us   40     Average coil consumption ≤20°C   in-rush   W   5.4     holding   W   5.4     holding   W   5.4     holding   W   5.4     Max cycles frequency		From Ab	min	%Us	70
drop-out  min %Us 10 max %Us 40  Average coil consumption ≤20°C  in-rush W 5.4 holding W 5.4  Max cycles frequency  Mechanical operation cycles/h 3600  Operating times  Average time for Us control in AC  Closing NO  min ms 8					
min %Us 10 max %Us 40  Average coil consumption ≤20°C  in-rush W 5.4 holding W 5.4  Max cycles frequency  Mechanical operation cycles/h 3600  Operating times  Average time for Us control in AC  Closing NO  min ms 8		drop-out		<del>-</del>	
Average coil consumption ≤20°C in-rush holding W 5.4 holding W 5.4   Max cycles frequency w 5.4   Mechanical operation cycles/h 3600   Operating times   Average time for Us control in AC closing NO   Closing NO min ms 8		•	min	%Us	10
Average coil consumption ≤20°C  in-rush W 5.4 holding W 5.4  Max cycles frequency  Mechanical operation cycles/h 3600  Operating times  Average time for Us control in AC  Closing NO  min ms 8					
Max cycles frequency Mechanical operation cycles/h 3600  Operating times  Average time for Us control in AC  Closing NO  min ms 8	Average coil consump	otion ≤20°C			
Max cycles frequency  Mechanical operation cycles/h 3600  Operating times  Average time for Us control			in-rush	W	5.4
Mechanical operation cycles/h 3600  Operating times  Average time for Us control in AC Closing NO min ms 8			holding	W	5.4
Operating times Average time for Us control in AC Closing NO min ms 8	Max cycles frequency				
Average time for Us control in AC Closing NO min ms 8				cycles/h	3600
in AC Closing NO min ms 8					
Closing NO min ms 8	Average time for Us c				
min ms 8					
		Closing NO			•
max ms 24					
			max	ms	<b>∠</b> 4

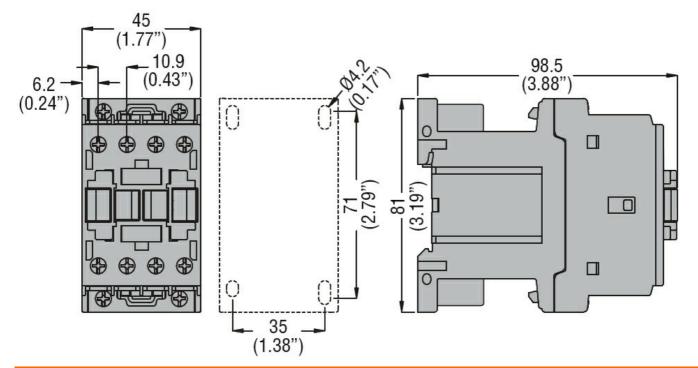


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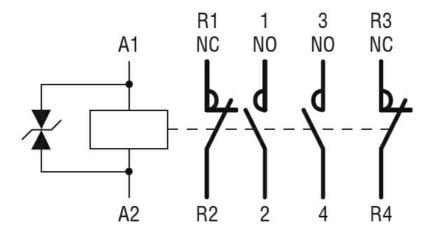
		Opening NO			
	'	Opening NO	min	ms	10
			max	ms	20
		Closing NC	max	1113	20
		Closing 140	min	ms	14
			max	ms	28
		Opening NC	max	1110	20
		opolinig i to	min	ms	7
			max	ms	18
	in DC				
		Closing NO			
		3	min	ms	54
			max	ms	66
		Opening NO			
			min	ms	14
			max	ms	17
		Closing NC			
		-	min	ms	24
			max	ms	30
		Opening NC			
			min	ms	47
			max	ms	57
UL technical data					
Full-load current (FLA)	for three-phase AC motor	r			
			at 480V	Α	14
			at 600V	Α	17
Yielded mechanical per	rformance				
	for single-phase AC mot	tor			
			110/120V	HP	1
	-		230V	HP	3
	for three-phase AC moto	or			
			200/208V	HP	5
			220/230V	HP	5
			460/480V	HP	10
			575/600V	HP	15
General USE	_				
	Contactor			_	
			AC current	Α	32
Ambient conditions					
Temperature					
	Operating temperature				
			min	°C	-50 -70
	Otamana (see see		max	°C	70
	Storage temperature		•	° <b>~</b>	00
			min	°C	-60 80
Maxaltituda			max	°C	80
Max altitude	n			m	3000
Resistance & Protectio	n				
Pollution degree					3
Dimensions					

**ENERGY AND AUTOMATION** 

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 32A, DC COIL, 125VDC, 2NO AND 2NC



### 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

CCC

cULus

EAC

ETIM classification

**ETIM 8.0** 

EC000066 -Power contactor, AC switching