75V

110V

220V

≤24V

48V

75V

110V

Α

Α

Α

Α

Α

Α

20

13

1

22 22

20 16



Product designation



Power contactor

Product type designation **BF18** Contact characteristics 3 Nr. Number of poles Rated insulation voltage Ui IEC/EN ٧ 690 kV Rated impulse withstand voltage Uimp 6 Operational frequency min Η 25 max Hz 400 IEC Conventional free air thermal current Ith 32 Α Operational current le AC-1 (≤40°C) Α 32 AC-1 (≤55°C) Α 26 AC-1 (≤70°C) 23 Α AC-3 (≤440V ≤55°C) Α 18 AC-4 (400V) 8.5 Rated operational power AC-3 (T≤55°C) 230V kW 4 400V kW 7.5 415V kW 9 440V kW 9 500V kW 10 690V kW 10 Rated operational power AC-1 (T≤40°C) 230V kW 12 400V kW 21 500V kW 26 690V kW 36 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V Α 17 48V Α 15 75V Α 15 110V Α 6 220V Α IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V Α 20 48V Α 20

IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series



	220V	Α	11
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
'	≤24V	Α	22
	48V	Α	22
	75V	A	20
	110V	A	18
IFO and a summer to be DOO DOC with 1/D < 45 and with 4 and a fine and a	220V	Α	13
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series		_	
	≤24V	Α	12
	48V	Α	11
	75V	Α	11
	110V	Α	2
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	15
	48V	Α	13
	75V	Α	13
	110V	Α	8
	220V		2
150	220 V	Α	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series		_	
	≤24V	Α	18
	48V	Α	18
	75V	Α	16
	110V	Α	12
	220V	Α	6
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	18
	48V	Α	18
	75V	Α	16
	110V	A	13
	220V	A	8
Chart time allowable current for 10e (IEC/ENG0047.1)	220 V		200
Short-time allowable current for 10s (IEC/EN60947-1)		Α	200
Protection fuse	o ((= o)	_	
	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	Α	94
Resistance per pole (average value)		mΩ	2.5
Power dissipation per pole (average value)			
1 ones alcolpation per polo (average value)	Ith	W	2.6
	AC-3	W	0.8
Tinhtania a tanana fan tanain ala	AC-3	VV	0.0
Tightening torque for terminals			4 =
	min	Nm	1.5
	max	Nm	1.8
	min	Ibin	1.1
	max	Ibin	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	Ibin	0.8
			- · <del>-</del>



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AWG/Kcmil	Mary named as of assistance along the property of a compact of the	max	Ibin	0.74
AWG/Kcmil   Plexible w/o lug conductor section   Flexible w/o lug conductor section   Flexible w/o lug conductor section   max   mm²   6   6   6   6   6   6   6   6   6	Max number of wires simultaneously connectable		Nr.	2
Plexible w/o lug conductor section				
Flexible w/o lug conductor section	AWG/RCIIII	may		10
Min	Flexible w/o lug conductor secti			10
Flexible c/w lug conductor section	Tionible We lag contactor cook		mm²	1
Flexible c/w lug conductor section				-
Pickible with insulated spade lug conductor section	Flexible c/w lug conductor secti			
Flexible with insulated spade lug conductor section	3		mm²	1
Min m		max	mm²	4
Max	Flexible with insulated spade lu	g conductor section		
Page	·	min	mm²	1
### Property wired #### Property wired ##### Property wired ####################################		max	mm²	4
Property wiled   Prop	Power terminal protection according to IEC/EN 60529			IP20 when
Operating position         normal allowable         Vertical plan 430°           Fixing         Screw / DIN rai 35mm           Weight         g         358           Conductor section           AWG/kcmil conductor section           May AWG/kcmil conductor section         max         10           Auxiliary contact characteristics           Thermal current Ith         A         10           EEC/EN 60947-5-1 designation         A         10           Departing current AC15         230V         A         3           Coperating current DC12         230V         A         1.9           Operating current DC12         110V         A         5.7           Coperating current DC13         24V         A         5.7           Coperating current DC13         24V         A         5.7           Coperations         24V         A         5.7           Coperations         24V         A         5.7           Coperations         25000000         C         C         C         C         C         C         C         C         C         C         C </td <td></td> <td></td> <td></td> <td>properly wired</td>				properly wired
Normal allowable   Screw / DIN rai allowable   Screw / D				
Series   Series   Pilor ara   Pilo	Operating position			
Screw / DIN rai 35mm   Weight   g 358				
Same		allowable		
Weight	Fixing			
Conductor section  AWG/kcmil conductor section  max 10  Auxiliary contact characteristics  Thermal current lth A 10  IEC/EN 60947-5-1 designation A600 - P600  Operating current AC15  230V A 3 400V A 1.9 500V A 1.4  Operating current DC12  110V A 5.7  Operating current DC13  24V A 5.7  A8V A 2.9 60V A 2.3 110V A 1.25 125V A 1.1 125V A 1.1 220V A 0.55 600V A 0.2  Operations  Operations  Auxiliary contact characteristics  Cycles 20000000  Electrical life cycles 1600000  Safety related data  Performance level B10d according to EN/ISO 13489-1  Frated load cycles 1600000  Mirror contats according to IEC/EN 609474-4-1  Wes EMC compatibility  yes  EMC compatibility				
AWG/kcmil conductor section    Max			g	358
Max   10   10   10   10   10   10   10   1				
Auxiliary contact characteristics	AVVG/RCMII conductor section	mov		10
Thermal current Ith	Auxiliary contact characteristics	IIIax		10
EC/EN 60947-5-1 designation			Δ	10
Operating current AC15  230V A 1.9 400V A 1.9 500V A 1.4  Operating current DC12  110V A 5.7  Operating current DC13  24V A 5.7  48V A 2.9 60V A 2.3 110V A 1.25 125V A 1.1 220V A 0.55 600V A 0.55 600V A 0.2  Operations  Mechanical life cycles 20000000  Electrical life cycles 1600000  Safety related data  Performance level B10d according to EN/ISO 13489-1  rated load cycles 20000000  mechanical load cycles 20000000  mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1  yes  EMC compatibility yes				
230V	•			71000 1 000
A00V   A   1.9   500V   A   1.4   1.4   1.4   1.5				
S00V   A   1.4	Operating current AC13	230V	Α	3
Operating current DC12	Operating Current ACTS			
110V   A   5.7	Operating current ACTS	400V	Α	1.9
Departing current DC13		400V	Α	1.9
24V		400V 500V	A A	1.9 1.4
A 8V	Operating current DC12	400V 500V	A A	1.9 1.4
60V	Operating current DC12	400V 500V	A A	1.9 1.4 5.7
110V   A   1.25   125V   A   1.1   220V   A   0.55   600V   A   0.2	Operating current DC12	400V 500V 110V 24V	A A A	1.9 1.4 5.7 5.7
220V A 0.55	Operating current DC12	400V 500V 110V 24V 48V	A A A	1.9 1.4 5.7 5.7 2.9
Comparations	Operating current DC12	400V 500V 110V 24V 48V 60V	A A A A A	1.9 1.4 5.7 5.7 2.9 2.3
Mechanical life cycles 20000000 Electrical life cycles 1600000 Safety related data Performance level B10d according to EN/ISO 13489-1  rated load cycles 1600000 mechanical load cycles 20000000 mechanical load cycles 20000000 Mirror contats according to IEC/EN 609474-4-1  EMC compatibility yes	Operating current DC12	400V 500V 110V 24V 48V 60V 110V	A A A A A	1.9 1.4 5.7 5.7 2.9 2.3 1.25
Mechanical life cycles 20000000  Electrical life cycles 1600000  Safety related data  Performance level B10d according to EN/ISO 13489-1  rated load cycles 1600000  mechanical load cycles 20000000  mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility yes	Operating current DC12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55
Electrical life cycles 1600000  Safety related data  Performance level B10d according to EN/ISO 13489-1  rated load cycles 1600000  mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility yes	Operating current DC12 Operating current DC13	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55
Safety related data  Performance level B10d according to EN/ISO 13489-1  rated load cycles 1600000 mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility yes	Operating current DC12 Operating current DC13 Operations	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Performance level B10d according to EN/ISO 13489-1  rated load cycles 1600000 mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility yes	Operating current DC12 Operating current DC13 Operations Mechanical life	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A Cycles	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
rated load cycles 1600000 mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility  rated load cycles 20000000  yes	Operating current DC12 Operating current DC13 Operations Mechanical life Electrical life	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A Cycles	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1 yes  EMC compatibility yes	Operating current DC12 Operating current DC13  Operations Mechanical life Electrical life Safety related data	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A Cycles	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes	Operating current DC12 Operating current DC13 Operations Mechanical life Electrical life Safety related data	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000
EMC compatibility yes	Operating current DC12 Operating current DC13  Operations Mechanical life Electrical life Safety related data	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A Cycles cycles	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 1600000
	Operating current DC12 Operating current DC13  Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A Cycles cycles	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 1600000 1600000 200000000
	Operating current DC12 Operating current DC13  Operations Mechanical life Electrical life Safety related data Performance level B10d according to EN/ISO 13489-1  Mirror contats according to IEC/EN 609474-4-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A Cycles cycles	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 1600000 1600000 200000000 yes



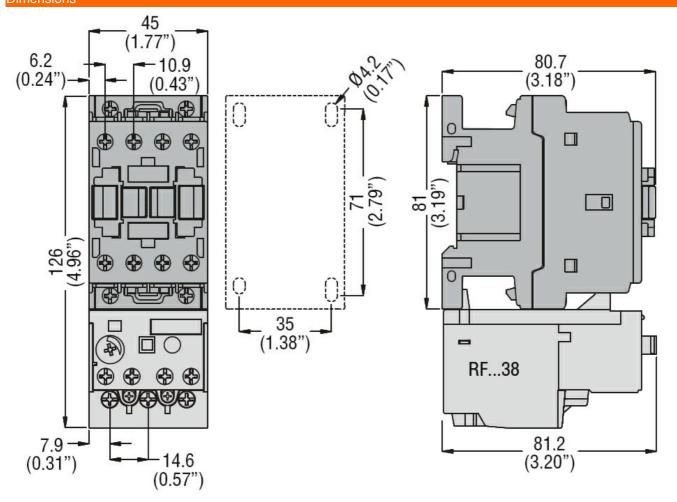
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Rated AC voltage at				V	230
AC operating voltag					
	of 60Hz coil powered				
		pick-up		0/11-	00
			min	%Us	80
		drop-out	max	%Us	110
		drop-out	min	%Us	20
			max	%Us	55
AC average coil cor	nsumption at 20°C		max	7003	00
to avolage con col	of 60Hz coil powered	at 60Hz			
	01 001 12 0011 por 1010 a	ut 001 12	in-rush	VA	75
			holding	VA	9
Dissipation at holdin	ıg ≤20°C 50Hz		<u> </u>	W	2.5
Max cycles frequenc					
Mechanical operatio	n			cycles/h	3600
Operating times					
Average time for Us	control				
	in AC				
		Closing NO			
			min	ms	8
			max	ms	24
		Opening NO			
			min	ms	10
			max	ms	20
		Closing NC			
			min	ms	14
		On anima NO	max	ms	28
		Opening NC	min	m.a	7
			min	ms ms	7 18
UL technical data			max	ms	10
	A) for three-phase AC mo	otor			
i dii lodd ddilolii (i 2	2 ty 101 times phase 7 to 11th		at 480V	Α	14
			at 600V	Α	17
Yielded mechanical	performance		4.0001		
	for single-phase AC r	motor			
	12. 2g.s p.1.800 / 10 1		110/120V	HP	1
			230V	HP	3
	for three-phase AC m	notor			
	,		200/208V	HP	5
			220/230V	HP	5
			460/480V	HP	10
			575/600V	HP	15
General USE					
	Contactor				
	-		AC current	Α	32
	Auxiliary contacts				
			AC voltage	V	600
			AC current	Α	10
			DC voltage	V	250
			DC current	Α	
Short-circuit protect					
	High fault				



ENERGY AND AUTON	MOITAN
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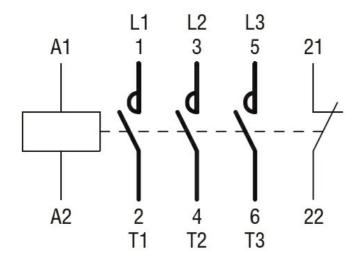
	Short circuit current	kA	100
	Fuse rating	Α	60
	Fuse class		J
Standard fault			
	Short circuit current	kA	5
	Fuse rating	Α	80
Contact rating of auxiliary contacts according to UL			A600 - P600
Ambient conditions			
Temperature			
Operating temperature			
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions			



Wiring diagrams



**ENERGY AND AUTOMATION** 



## Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60335-1

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