



			•
Product designation			Power contacto
Product type designation			BF18
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		А	32
Operational current le			
	AC-1 (≤40°C)	А	32
	AC-1 (≤55°C)	А	26
	AC-1 (≤70°C)	А	23
	AC-3 (≤440V ≤55°C)	А	18
	AC-4 (400V)	А	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 $L/R \le 1$ ms with 1 poles in series			
	≤24V	А	17
	48V	А	15
	75V	А	15
	110V	А	6
	220V	А	-
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			
	≤24V	А	20
	48V	А	20
	75V	А	20
	110V	А	13
	220V	А	1
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series			
	≤24V	А	22
	48V	А	22
	75V	А	20
	110V	А	16



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 12VDC, 1NC AUXILIARY CONTACT

	220V	А	11	
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series				
	≤24V	А	22	
	48V	А	22	
	75V	А	20	
	110V	А	18	
	220V	А	13	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series				
	≤24V	А	12	
	48V	А	11	
	75V	А	11	
	110V	А	2	
	220V	А	_	
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 2 poles in series				
	≤24V	А	15	
	48V	A	13	
	75V	A	13	
	110V	A	8	
	220V	A	2	
IEC max current le in DC3-DC5 with L/R \leq 15ms with 3 poles in series	2201	71	2	
	≤24V	А	18	
	48V	A	18	
	75V	A	16	
	110V	A	12	
	220V	A	6	
IEC max current le in DC3-DC5 with L/R \leq 15ms with 4 poles in series	220 V	~	0	
The max current le in DC3-DC3 with L/K = 15ms with 4 poles in series	≤24V	А	18	
	≤24∨ 48V	A	18	
	48V 75V	A	16	
	110V			
	220V	A A	13 8	
Short time allowable surrant for 10s (IEC/ENG0047.1)	220 V	A	200	
Short-time allowable current for 10s (IEC/EN60947-1)		A	200	
Protection fuse		^	20	
	gG (IEC)	A	32	
	aM (IEC)	A	20	
Making capacity (RMS value)		Α	180	
Breaking capacity at voltage	, . .	-		
	440V	A	144	
	500V	A	120	
	690V	A	94	
Resistance per pole (average value)		mΩ	2.5	
Power dissipation per pole (average value)				
	lth	W	2.6	
	AC3	W	0.8	
Tightening torque for terminals				
	min	Nm	1.5	
	max	Nm	1.8	
	min	Ibin	1.1	
	max	lbin	1.5	
Tightening torque for coil terminal				
	min	Nm	0.8	
	max	Nm	1	
	min	Ibin	0.8	



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 12VDC, 1NC AUXILIARY CONTACT

BF1801D012

lbin 0.74 max Max number of wires simultaneously connectable Nr. 2 Conductor section AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² 1 mm² 6 max Flexible c/w lug conductor section 1 min mm² max mm² 4 Flexible with insulated spade lug conductor section mm² 1 min mm² 4 max IP20 when Power terminal protection according to IEC/EN 60529 properly wired Mechanical features Operating position Vertical plan normal ±30° allowable Screw / DIN rail Fixing 35mm Weight 494 g Conductor section AWG/kcmil conductor section 10 max Auxiliary contact characteristics Thermal current Ith А 10 IEC/EN 60947-5-1 designation A600 - P600 Operating current AC15 230V А 3 400V 1.9 А 500V А 1.4 Operating current DC12 110V А 5.7 **Operating current DC13** 24V А 5.7 48V А 2.9 60V A 2.3 110V А 1.25 125V А 1.1 220V А 0.55 600V 0.2 А Operations Mechanical life 20000000 cycles Electrical life 1600000 cycles Safety related data Performance level B10d according to EN/ISO 13489-1 1600000 rated load cycles mechanical load 20000000 cycles Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes DC coil operating



BF1801D012 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 12VDC,

1NC AUXILIARY CONTACT

DC rated control voltage	je			V	12
DC operating voltage					
	pick-up			0/11-	70
			min	%Us	70
	drop out		max	%Us	125
	drop-out		min	%Us	10
			max	%Us	40
Average coil consump	tion <20°C		IIIdA	/003	40
Average con consump			in-rush	W	5.4
			holding	Ŵ	5.4
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times				ý	
Average time for Us co	ontrol				
0	in AC				
		Closing NO			
			min	ms	8
			max	ms	24
		Opening NO			
			min	ms	10
			max	ms	20
		Closing NC			
			min	ms	14
			max	ms	28
		Opening NC			7
			min	ms	7 18
	in DC		max	ms	10
		Closing NO			
			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 mo	DIOF	-1 40014	^	4.4
			at 480V at 600V	A A	14 17
Yielded mechanical pe	rformanco		at 000 v	A	17
neided mechanical pe	for single-phase AC r	motor			
	ior single-phase AC I		110/120V	HP	1
			230V	HP	3
	for three-phase AC m	notor	2001		<u> </u>
			200/208V	HP	5
			220/230V	HP	5
			460/480V	HP	10
			575/600V	HP	15

BF1801D012

The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding



°C

°C

min

max

-50

70

General USE				
	Contactor			
		AC current	А	32
	Auxiliary contacts			
		AC voltage	V	600
		AC current	А	10
		DC voltage	V	250
		DC current	А	1
Short-circuit protect	ction fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	А	60
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	А	80
Contact rating of a	uxiliary contacts according to UL			A600 - P600
Ambient conditions	S			

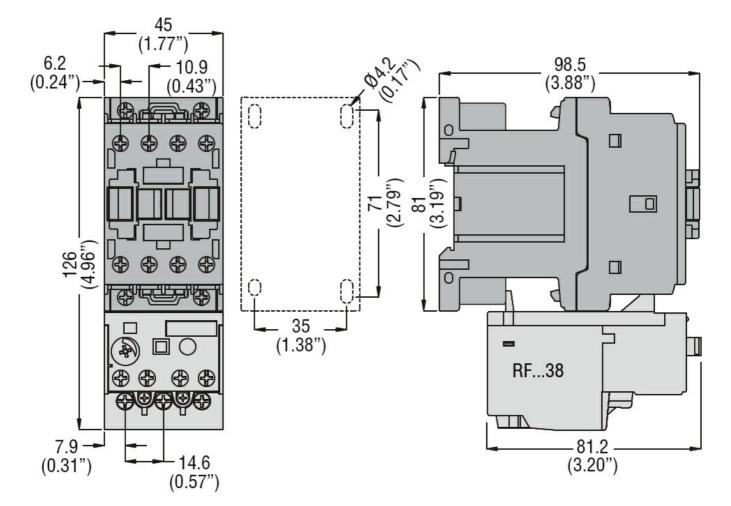
Temperature

Operating temperature

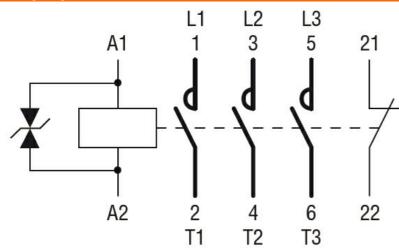
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions [mm (in)]			



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 12VDC, **1NC AUXILIARY CONTACT**



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	-

Certificates



BF1801D012 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 12VDC, 1NC AUXILIARY CONTACT

	CCC
	cULus
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sification	

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ETIM class

EC000066 -Power contactor, AC switching





Product designation			Power contacto
Product type designation			BF18
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		А	32
Operational current le			
	AC-1 (≤40°C)	А	32
	AC-1 (≤55°C)	А	26
	AC-1 (≤70°C)	А	23
	AC-3 (≤440V ≤55°C)	А	18
	AC-4 (400V)	А	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	А	17
	48V	А	15
	75V	А	15
	110V	А	6
	220V	А	-
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			
	≤24V	А	20
	48V	А	20
	75V	А	20
	110V	А	13
	220V	А	1
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series			
	≤24V	А	22
	48V	А	22
	75V	А	20
	110V	А	16



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 24VDC, 1NC AUXILIARY CONTACT

	220V	А	11	
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series				
	≤24V	А	22	
	48V	А	22	
	75V	A	20	
	110V	A	18	
	220V	A	13	
IEC max current le in DC3-DC5 with L/R \leq 15ms with 1 poles in series				
	≤24V	Α	12	
	48V	Α	11	
	75V	А	11	
	110V	А	2	
	220V	А	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	2201			
	<241	٨	45	
	≤24V	A	15	
	48V	А	13	
	75V	А	13	
	110V	А	8	
	220V	А	2	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series				
	≤24V	А	18	
	48V	A	18	
	75V	А	16	
	110V	А	12	
	220V	Α	6	
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 4 poles in series				
	≤24V	А	18	
	48V	А	18	
	75V	A	16	
	110V			
		A	13	
	220V	A	8	
Short-time allowable current for 10s (IEC/EN60947-1)		А	200	
Protection fuse				
	gG (IEC)	А	32	
	aM (IEC)	А	20	
Making capacity (RMS value)	. ,	А	180	
Breaking capacity at voltage				
Droaking capabily at voltage	44014	٨	111	
	440V	A	144	
	500V	A	120	
	690V	A	94	
Resistance per pole (average value)		mΩ	2.5	
Power dissipation per pole (average value)				
	lth	W	2.6	
	AC3	W	0.8	
Tightening torque for terminals	////		0.0	
	min	Nim	1 5	
	min	Nm	1.5	
	max	Nm	1.8	
	min	lbin	1.1	
	max	lbin	1.5	
Tightening torque for coil terminal				
	min	Nm	0.8	
	max	Nm	1	
	min	Ibin	0.8	
	[[]]]		0.0	

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THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 24VDC, 1NC AUXILIARY CONTACT

BF1801D024

lbin 0.74 max Max number of wires simultaneously connectable Nr. 2 Conductor section AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² 1 mm² 6 max Flexible c/w lug conductor section 1 min mm² max mm² 4 Flexible with insulated spade lug conductor section mm² 1 min mm² 4 max IP20 when Power terminal protection according to IEC/EN 60529 properly wired Mechanical features Operating position Vertical plan normal ±30° allowable Screw / DIN rail Fixing 35mm Weight 495 g Conductor section AWG/kcmil conductor section 10 max Auxiliary contact characteristics Thermal current Ith А 10 IEC/EN 60947-5-1 designation A600 - P600 Operating current AC15 230V А 3 400V 1.9 А 500V А 1.4 Operating current DC12 110V А 5.7 **Operating current DC13** 24V А 5.7 48V А 2.9 60V A 2.3 110V А 1.25 125V А 1.1 220V А 0.55 600V 0.2 А Operations Mechanical life 20000000 cycles Electrical life 1600000 cycles Safety related data Performance level B10d according to EN/ISO 13489-1 1600000 rated load cycles mechanical load 20000000 cycles Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes DC coil operating



BF1801D024 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 24VDC,

INC AUXILIARY CONTACT

DC rated control voltag	10			V	24
DC operating voltage	Je			V	24
De operating voltage	pick-up				
	plot up		min	%Us	70
			max	%Us	125
	drop-out			,	
			min	%Us	10
			max	%Us	40
Average coil consump	tion ≤20°C				
			in-rush	W	5.4
			holding	W	5.4
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times	antrol				
Average time for Us co	in AC				
		Closing NO			
			min	ms	8
			max	ms	24
		Opening NO	max		-
			min	ms	10
			max	ms	20
		Closing NC			
			min	ms	14
			max	ms	28
		Opening NC			_
			min	ms	7
	in DC		max	ms	18
	III DC	Closing NO			
			min	ms	54
			max	ms	66
		Opening NO			
		1 0	min	ms	14
			max	ms	17
		Closing NC			
			min	ms	24
		o	max	ms	30
		Opening NC	•		47
			min	ms	47 57
UL technical data			max	ms	57
Full-load current (FLA)	for three-phase AC mo	otor			
			at 480V	А	14
			at 600V	A	17
Yielded mechanical pe	rformance				
	for single-phase AC r	notor			
			110/120V	HP	1
			230V	HP	3
	for three-phase AC m	notor			
			200/208V	HP	5
			220/230V	HP	5
			460/480V	HP HP	10 15
			575/600V	п٢	15

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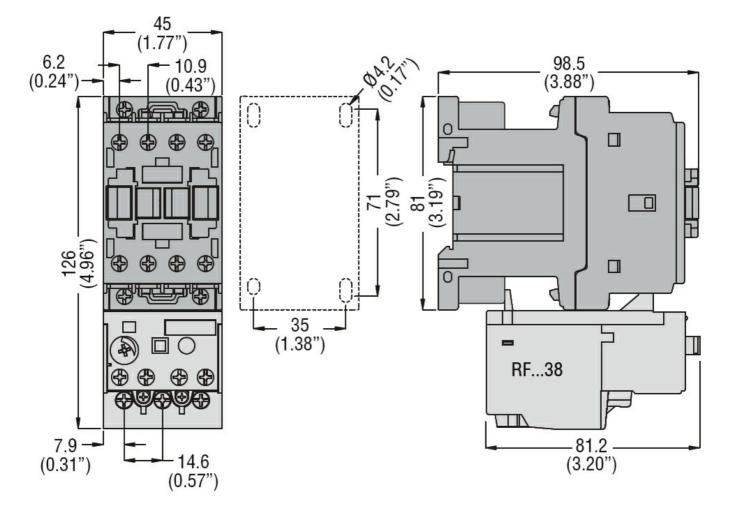
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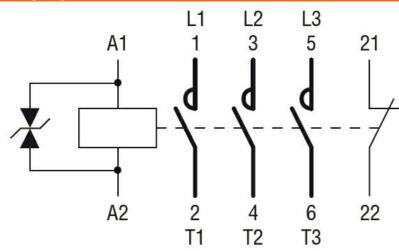
General USE				
	Contactor			
		AC current	А	32
	Auxiliary contacts			
		AC voltage	V	600
		AC current	А	10
		DC voltage	V	250
		DC current	А	1
Short-circuit proted	ction fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	А	60
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	А	80
	uxiliary contacts according to UL			A600 - P600
Ambient conditions	5			
Femperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Vax altitude			m	3000
Resistance & Prot	ection			
Pollution degree				3
Dimensions [mm (i	in)]			



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 24VDC, 1NC AUXILIARY CONTACT



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	



BF1801D024 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 24VDC, 1NC AUXILIARY CONTACT

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EC000066 -Power contactor, AC switching





			•
Product designation			Power contacto
Product type designation			BF18
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		А	32
Operational current le			
	AC-1 (≤40°C)	А	32
	AC-1 (≤55°C)	А	26
	AC-1 (≤70°C)	А	23
	AC-3 (≤440V ≤55°C)	А	18
	AC-4 (400V)	А	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 $L/R \le 1$ ms with 1 poles in series			
	≤24V	А	17
	48V	А	15
	75V	А	15
	110V	А	6
	220V	А	-
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			
	≤24V	А	20
	48V	А	20
	75V	А	20
	110V	А	13
	220V	Α	1
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series			
	≤24V	А	22
	48V	А	22
	75V	А	20
	110V	А	16



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 48VDC, 1NC AUXILIARY CONTACT

	220V	А	11	
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series				
	≤24V	Α	22	
	48V	А	22	
	75V	А	20	
	110V	А	18	
	220V	А	13	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series				
	≤24V	А	12	
	48V	А	11	
	75V	А	11	
	110V	А	2	
	220V	А	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series				
	≤24V	А	15	
	48V	A	13	
	40V 75V	A	13	
	110V	A	8	
	220V	A	2	
IEC max current le in DC3-DC5 with L/R \leq 15ms with 3 poles in series	2201	А	۷	
The current le in DC3-DC5 with $L/R \le 15$ ms with 5 poles in series	<241	^	4.0	
	≤24V	A	18	
	48V	A	18	
	75V	A	16	
	110V	A	12	
	220V	A	6	
IEC max current le in DC3-DC5 with L/R \leq 15ms with 4 poles in series		-		
	≤24V	A	18	
	48V	A	18	
	75V	A	16	
	110V	A	13	
	220V	A	8	
Short-time allowable current for 10s (IEC/EN60947-1)		Α	200	
Protection fuse				
	gG (IEC)	А	32	
	aM (IEC)	Α	20	
Making capacity (RMS value)		А	180	
Breaking capacity at voltage				
	440V	А	144	
	500V	А	120	
	690V	А	94	
Resistance per pole (average value)		mΩ	2.5	
Power dissipation per pole (average value)			-	
	lth	W	2.6	
	AC3	Ŵ	0.8	
Tightening torque for terminals	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	••	0.0	
	min	Nm	1.5	
	max	Nm	1.8	
	min	Ibin	1.0 1.1	
Tightoning targue for call terminal	max	lbin	1.5	
Tightening torque for coil terminal		N 1 -	0.0	
	min	Nm	0.8	
	max	Nm	1	
	min	lbin	0.8	



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 48VDC, 1NC AUXILIARY CONTACT

BF1801D048

lbin 0.74 max Max number of wires simultaneously connectable Nr. 2 Conductor section AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² 1 mm² 6 max Flexible c/w lug conductor section 1 min mm² max mm² 4 Flexible with insulated spade lug conductor section mm² 1 min mm² 4 max IP20 when Power terminal protection according to IEC/EN 60529 properly wired Mechanical features Operating position Vertical plan normal ±30° allowable Screw / DIN rail Fixing 35mm Weight 493 g Conductor section AWG/kcmil conductor section 10 max Auxiliary contact characteristics Thermal current Ith А 10 IEC/EN 60947-5-1 designation A600 - P600 Operating current AC15 230V А 3 400V 1.9 А 500V А 1.4 Operating current DC12 110V А 5.7 **Operating current DC13** 24V А 5.7 48V А 2.9 60V A 2.3 110V А 1.25 125V А 1.1 220V А 0.55 600V 0.2 А Operations Mechanical life 20000000 cycles Electrical life 1600000 cycles Safety related data Performance level B10d according to EN/ISO 13489-1 1600000 rated load cycles mechanical load 20000000 cycles Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes DC coil operating



BF1801D048 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 48VDC,

INC AUXILIARY CONTACT

DC rated control voltage	10			V	48
DC operating voltage	Je			v	40
DC operating voltage	nick un				
	pick-up		min	%Us	70
			max	%Us	125
	drop-out		IIIdX	/005	120
	ulop-out		min	%Us	10
			max	%Us	40
Average coil consump	tion <20°C		max	/003	+0
			in-rush	W	5.4
			holding	Ŵ	5.4
Max cycles frequency			noiding	vv	5.4
Mechanical operation				cycles/h	3600
Operating times				0,0100/11	0000
Average time for Us co	ontrol				
Average time for 03 ce	in AC				
		Closing NO			
		Closing NO	min	ms	8
			max	ms	24
		Opening NO	Παλ	113	L T
		Opening NO	min	ms	10
			max	ms	20
		Closing NC	тах	mo	20
		Closing No	min	ms	14
			max	ms	28
		Opening NC	Пал	mo	20
		oponing ito	min	ms	7
			max	ms	18
	in DC			-	
		Closing NO			
		e e e e e e e e e e e e e e e e e e e	min	ms	54
			max	ms	66
		Opening NO			
			min	ms	14
			max	ms	17
		Closing NC			
		0	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 mo	otor			
			at 480V	А	14
			at 600V	А	17
Yielded mechanical pe	rformance				
	for single-phase AC r	notor			
			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

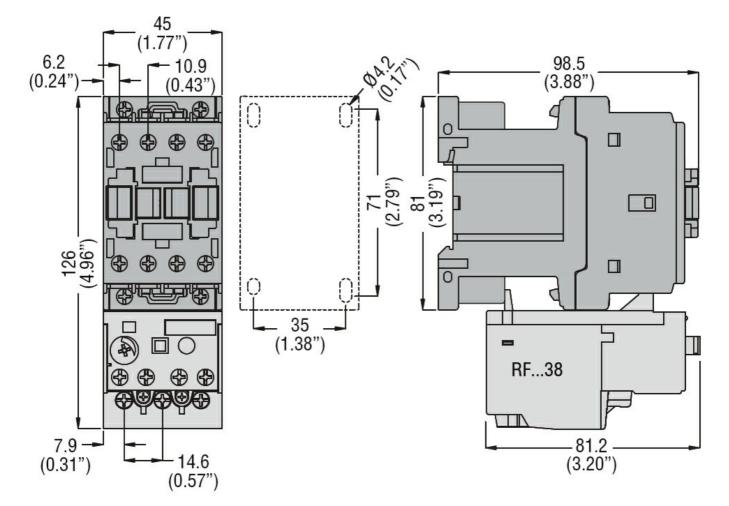


1NC AUXILIARY CONTACT

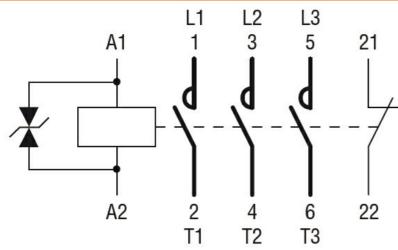
General USE			
Contactor			
	AC current	А	32
Auxiliary contacts			
	AC voltage	V	600
	AC current	А	10
	DC voltage	V	250
	DC current	Α	1
Short-circuit protection fuse, 600V			
High fault			
	Short circuit current	kA	100
	Fuse rating	Α	60
	Fuse class		J
Standard fault			
	Short circuit current	kA	5
	Fuse 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 [mm (in)]			



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 48VDC, 1NC AUXILIARY CONTACT



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
Cortificatos	

Certificates



BF1801D048 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 48VDC, 1NC AUXILIARY CONTACT

	CCC
	cULus EAC
	EAC
sification	

ETIM 8.0

ETIM class

EC000066 -Power contactor, AC switching





			•
Product designation			Power contacto
Product type designation			BF18
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		А	32
Operational current le			
	AC-1 (≤40°C)	А	32
	AC-1 (≤55°C)	А	26
	AC-1 (≤70°C)	А	23
	AC-3 (≤440V ≤55°C)	А	18
	AC-4 (400V)	А	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 $L/R \le 1$ ms with 1 poles in series			
	≤24V	А	17
	48V	А	15
	75V	А	15
	110V	А	6
	220V	А	-
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			
	≤24V	А	20
	48V	А	20
	75V	А	20
	110V	А	13
	220V	А	1
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series			
	≤24V	А	22
	48V	А	22
	75V	А	20
	110V	А	16



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 60VDC, 1NC AUXILIARY CONTACT

	220V	А	11	
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series				
	≤24V	А	22	
	48V	А	22	
	75V	A	20	
	110V	A	18	
	220V	A	13	
IEC max current le in DC3-DC5 with L/R \leq 15ms with 1 poles in series	2201	7.	10	
	≤24V	А	12	
	48V	A	12	
	48V 75V	A	11	
	110V	A		
			2	
	220V	A	-	
IEC max current le in DC3-DC5 with L/R \leq 15ms with 2 poles in series		-		
	≤24V	A	15	
	48V	A	13	
	75V	А	13	
	110V	А	8	
	220V	Α	2	
IEC max current le in DC3-DC5 with L/R \leq 15ms with 3 poles in series				
	≤24V	А	18	
	48V	А	18	
	75V	А	16	
	110V	А	12	
	220V	А	6	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series				
•	≤24V	А	18	
	48V	A	18	
	75V	A	16	
	110V	A	13	
	220V	A	8	
Short-time allowable current for 10s (IEC/EN60947-1)	220 V	A	200	
Protection fuse		Λ	200	
FIOLECIIOITIUSE		۸	22	
	gG (IEC)	A	32	
	aM (IEC)	<u>A</u>	20	
Making capacity (RMS value)		А	180	
Breaking capacity at voltage				
	440V	А	144	
	500V	А	120	
	690V	Α	94	
Resistance per pole (average value)		mΩ	2.5	
Power dissipation per pole (average value)				
	lth	W	2.6	
	AC3	W	0.8	
Tightening torque for terminals				
	min	Nm	1.5	
	max	Nm	1.8	
	min	Ibin	1.1	
	max	Ibin	1.5	
Tightening torque for coil terminal	тал			
	min	Nm	0.8	
		Nm		
	max		1	
	min	lbin	0.8	



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 60VDC, 1NC AUXILIARY CONTACT

BF1801D060

lbin 0.74 max Max number of wires simultaneously connectable Nr. 2 Conductor section AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² 1 mm² 6 max Flexible c/w lug conductor section 1 min mm² max mm² 4 Flexible with insulated spade lug conductor section mm² 1 min mm² 4 max IP20 when Power terminal protection according to IEC/EN 60529 properly wired Mechanical features Operating position Vertical plan normal ±30° allowable Screw / DIN rail Fixing 35mm Weight 496 g Conductor section AWG/kcmil conductor section 10 max Auxiliary contact characteristics Thermal current Ith А 10 IEC/EN 60947-5-1 designation A600 - P600 Operating current AC15 230V А 3 400V 1.9 А 500V А 1.4 Operating current DC12 110V А 5.7 **Operating current DC13** 24V А 5.7 48V А 2.9 60V A 2.3 110V А 1.25 125V А 1.1 220V А 0.55 600V 0.2 А Operations Mechanical life 20000000 cycles Electrical life 1600000 cycles Safety related data Performance level B10d according to EN/ISO 13489-1 1600000 rated load cycles mechanical load 20000000 cycles Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes DC coil operating



BF1801D060 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 60VDC,

1NC AUXILIARY CONTACT

DC rated control voltage	10			V	60
DC rated control voltage	je			V	60
DC operating voltage					
	pick-up			0/11-	70
			min	%Us	70
			max	%Us	125
	drop-out			0/11-	4.0
			min	%Us	10
<u> </u>	1		max	%Us	40
Average coil consump	$100 \leq 20^{\circ} C$		1 I	147	- 4
			in-rush	W	5.4
			holding	W	5.4
Max cycles frequency				a vala a /h	2000
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us co					
	in AC				
		Closing NO			•
			min	ms	8
			max	ms	24
		Opening NO			4.0
			min	ms	10
			max	ms	20
		Closing NC			
			min	ms	14
			max	ms	28
		Opening NC			_
			min	ms	7
			max	ms	18
	in DC				
		Closing NO			F 4
			min	ms	54
			max	ms	66
		Opening NO			
			min	ms	14
			max	ms	17
		Closing NC		100.0	24
			min	ms	24
		Opening NO	max	ms	30
		Opening NC	min	me	47
				ms ms	47 57
UL technical data			max	ms	51
Full-load current (FLA)	for three-phase AC m	otor			
i ulliloau cultetti (FLA)	ior unce-phase AC III		at 480V	А	14
			at 600V	A	14
Yielded mechanical pe	rformance		ai 000 V	~	17
neided mechanical pe		motor			
	for single-phase AC r	notor	110/120V	HP	1
			230V	HP	1 3
	for three-phase AC m	otor	2307	ΠF	5
	ior unee-phase AC II		200/208V	HP	5
			200/208V 220/230V	HP HP	5 5
			460/480V	HP	5 10
			460/480V 575/600V	HP	15
			575/0007	ΠĽ	10

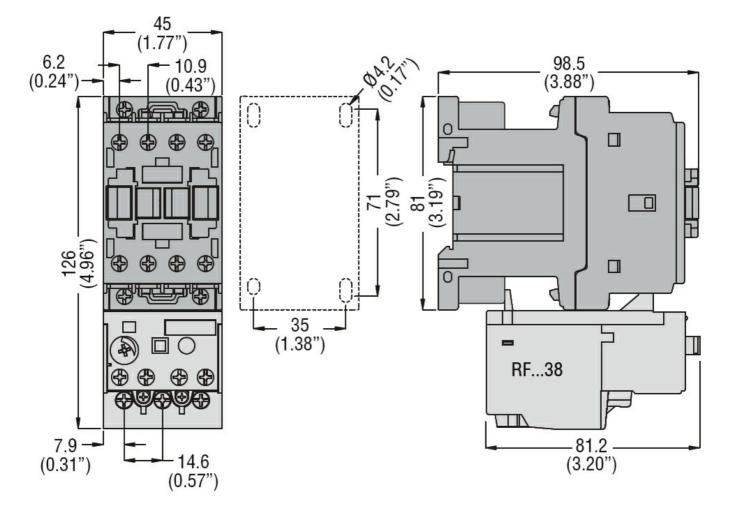


ENERGY AND AUTOMATION

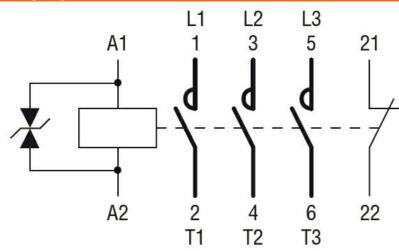
General USE				
	Contactor			
		AC current	А	32
	Auxiliary contacts			
		AC voltage	V	600
		AC current	А	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protection	on fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	А	60
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	80
	iliary 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 & Protec	tion			
Pollution degree				3
Dimensions [mm (in)]			



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 60VDC, **1NC AUXILIARY CONTACT**



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
Cortificatos	

Certificates



BF1801D060 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 60VDC, 1NC AUXILIARY CONTACT

<u>CCC</u>
cULus
EAC

ETIM 8.0

ETIM class

EC000066 -Power contactor, AC switching





Product designation			Power contacto
Product type designation			BF18
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	32
Operational current le			
	AC-1 (≤40°C)	А	32
	AC-1 (≤55°C)	А	26
	AC-1 (≤70°C)	A	23
	AC-3 (≤440V ≤55°C)	A	18
	AC-4 (400V)	A	8.5
Rated operational power AC-3 (T≤55°C)			
	230V	kW	4
	400V	kW	7.5
	415V	kW	9
	440V	kW	9
	500V 690V	kW kW	10 10
Rated operational power AC-1 (T≤40°C)	690 v	KVV	10
Rated operational power AC-1 ($1 \leq 40$ C)	230V	kW	12
	230V 400V	kW	21
	400V 500V	kW	26
	690V	kW	36
IEC max current le in DC1 with L/R \leq 1ms with 1 poles in series	0001		00
	≤24V	А	17
	48V	A	15
	75V	A	15
	110V	A	6
	220V	А	_
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			
	≤24V	А	20
	48V	А	20
	75V	А	20
	110V	А	13
	220V	А	1
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series			
	≤24V	А	22
	48V	А	22
	75V	Α	20
	110V	А	16



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 110VDC, **1NC AUXILIARY CONTACT**

ENERGY AND AUTOMATION			
	220V	А	11
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	А	22
	48V	А	22
	75V	А	20
	110V	А	18
	220V	А	13
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 1 poles in series			
	≤24V	Α	12
	48V	А	11
	75V	А	11
	110V	А	2
	220V	А	-

IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	А	15
	48V	Α	13
	75V	Α	13
	110V	Α	8
	220V	А	2
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 3 poles in series			
	≤24V	А	18
	48V	А	18
	75V	А	16
	110V	А	12
	220V	А	6
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 4 poles in series			
	≤24V	А	18
	48V	А	18
	75V	А	16
	110V	А	13
	220V	А	8
Short-time allowable current for 10s (IEC/EN60947-1)		А	200
Protection fuse			
	gG (IEC)	А	32
	aM (IEC)	А	20
Making capacity (RMS value)	. ,	А	180

Breaking capacity at voltage 440V A 144 500V А 120 690V А 94 Resistance per pole (average value) 2.5 mΩ Power dissipation per pole (average value) lth W 2.6 AC3 W 0.8 Tightening torque for terminals 1.5 min Nm Nm 1.8 max min Ibin 1.1 1.5 max lbin Tightening torque for coil terminal 0.8 min Nm max Nm 1

BF1801D110

min

lbin

0.8



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 110VDC, 1NC AUXILIARY CONTACT

Max number of wires	simultanagualy connectable	max	Ibin Nr.	0.74
Conductor section	simultaneously connectable		INF.	2
Conductor Section	AWG/Kcmil			
		max		10
	Flexible w/o lug conductor section	Шах		10
		min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section			
	Ū.	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section			
		min	mm²	1
		max	mm²	4
Power terminal proto	ction according to IEC/EN 60529			IP20 when
-	ction according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rai
				35mm
Weight			g	494
Conductor section				
	AWG/kcmil conductor section			
A 111		max		10
Auxiliary contact char	acteristics		۸	10
Thermal current Ith			A	10 A600 - P600
IEC/EN 60947-5-1 de				A600 - P600
Operating current AC	15	230V	۸	2
		230V 400V	A A	3 1.9
		400V 500V	A	1.9
			A	1.4
Operating current DC	12	0001		
Operating current DC	12		۸	57
		110V	A	5.7
Operating current DC Operating current DC		110V		
		110V 24V	А	5.7
		110V 24V 48V	A A	5.7 2.9
		110V 24V 48V 60V	A A A	5.7 2.9 2.3
		110V 24V 48V 60V 110V	A A A A	5.7 2.9 2.3 1.25
		110V 24V 48V 60V 110V 125V	A A A A	5.7 2.9 2.3 1.25 1.1
		110V 24V 48V 60V 110V 125V 220V	A A A A A	5.7 2.9 2.3 1.25 1.1 0.55
Operating current DC		110V 24V 48V 60V 110V 125V	A A A A	5.7 2.9 2.3 1.25 1.1
Operating current DC		110V 24V 48V 60V 110V 125V 220V	A A A A A A	5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DC Operations Mechanical life		110V 24V 48V 60V 110V 125V 220V	A A A A A A cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000
Operating current DC Operations Mechanical life Electrical life		110V 24V 48V 60V 110V 125V 220V	A A A A A A	5.7 2.9 2.3 1.25 1.1 0.55 0.2
Operating current DC Operations Mechanical life Electrical life Safety related data	213	110V 24V 48V 60V 110V 125V 220V	A A A A A A cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000
Operating current DC Operations Mechanical life Electrical life Safety related data		110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A cycles cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 1600000
Operating current DC Operations Mechanical life Electrical life Safety related data	10d according to EN/ISO 13489-1	110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A Cycles cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 1600000 1600000
Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B1	213 10d according to EN/ISO 13489-1 med	110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A cycles cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 1600000 1600000 1600000
Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B1	10d according to EN/ISO 13489-1	110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A Cycles cycles	5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 1600000 1600000



BF1801D110 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 110VDC,

1NC AUXILIARY CONTACT

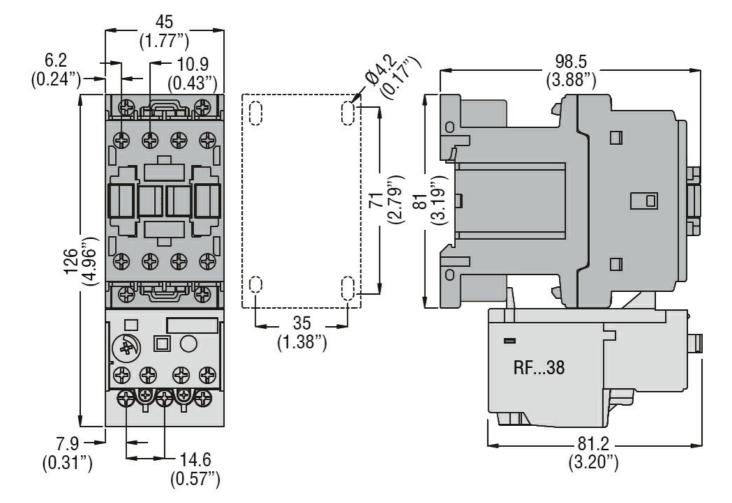
DC rated control voltage	ge			V	110
DC operating voltage					
	pick-up				
			min	%Us	70
			max	%Us	125
	drop-out		min	0/ L lo	10
			min max	%Us %Us	40
Average coil consump	tion <20°C		Πάλ	/003	40
, wordge een eeneamp			in-rush	W	5.4
			holding	W	5.4
Max cycles frequency			Ť		
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us co					
	in AC				
		Closing NO			2
			min	ms	8
		Opening NO	max	ms	24
		Opening NO	min	ms	10
			max	ms	20
		Closing NC	Пах	mo	20
			min	ms	14
			max	ms	28
		Opening NC			
			min	ms	7
			max	ms	18
	in DC				
		Closing NO			- /
			min	ms	54
		Opening NO	max	ms	66
			min	ms	14
			max	ms	17
		Closing NC	max		
		0	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		^	4.4
			at 480V at 600V	A A	14 17
Yielded mechanical pe	rformance		ai 000V	А	17
noidea meenanical pe	for single-phase A	AC motor			
			110/120V	HP	1
			230V	HP	3
	for three-phase A	C motor			
			200/208V	HP	5
			220/230V	HP	5
			460/480V	HP	10
			575/600V	HP	15



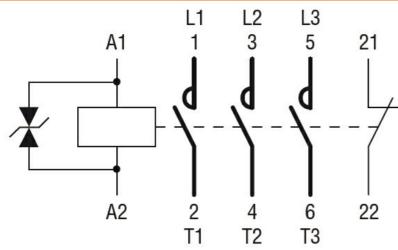
General USE				
	Contactor			
		AC current	А	32
	Auxiliary contacts			
		AC voltage	V	600
		AC current	А	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protectior	n fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	А	60
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	80
	ary contacts according to UL			A600 - P600
Ambient conditions				
Femperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Vax altitude			m	3000
Resistance & Protecti	on			
Pollution degree				3
Dimensions [mm (in)]				



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 110VDC, 1NC AUXILIARY CONTACT



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
Cartificatos	

Certificates



BF1801D110 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 110VDC, 1NC AUXILIARY CONTACT

	CCC
	cULus
	EAC
ETIM classification	

ETIM 8.0

EC000066 -Power contactor, AC switching





			•
Product designation			Power contacto
Product type designation			BF18
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		А	32
Operational current le			
	AC-1 (≤40°C)	А	32
	AC-1 (≤55°C)	А	26
	AC-1 (≤70°C)	А	23
	AC-3 (≤440V ≤55°C)	А	18
	AC-4 (400V)	А	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 $L/R \le 1$ ms with 1 poles in series			
	≤24V	А	17
	48V	А	15
	75V	А	15
	110V	А	6
	220V	А	-
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			
	≤24V	А	20
	48V	А	20
	75V	А	20
	110V	А	13
	220V	Α	1
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series			
	≤24V	А	22
	48V	А	22
	75V	А	20
	110V	А	16



BF1801D125 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 125VDC, 1NC AUXILIARY CONTACT

$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	ENERGY AND AUTOMATION	1	INC AUXILIARY CONTACT		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		220V	А	11	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series				
$\begin{array}{cccccccc} 75 & A & 20 \\ 110 & A & 18 \\ 220 & A & 13 \end{array} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 1 poles in series} \\ & \leq 24 & A & 12 \\ 48 & A & 11 \\ 75 & A & 11 \\ 110 & A & 2 \\ 220 & A & - \end{array} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ \hline IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in $		≤24V	А	22	
$\begin{array}{c cccc} 110 & A & 18 \\ 220 & A & 13 \end{array}$ IEC max current le in DC3-DC5 with L/R < 15ms with 1 poles in series $\begin{array}{c ccccccccccccccccccccccccccccccccccc$		48V	А	22	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		75V	А	20	
IEC max current le in DC3-DC5 with L/R \leq 15ms with 1 poles in series $\leq 24V$ A1248VA1175VA11110VA2220VA-		110V	А	18	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		220V	А	13	
$ \begin{array}{cccc} 48 \ensuremath{V} & \ensuremath{A} & 11 \\ 75 \ensuremath{V} & \ensuremath{A} & 11 \\ 110 \ensuremath{V} & \ensuremath{A} & 2 \\ 220 \ensuremath{V} & \ensuremath{A} & 2 \\ 220 \ensuremath{V} & \ensuremath{A} & 2 \\ 220 \ensuremath{V} & \ensuremath{A} & - \end{array} $ IEC max current le in DC3-DC5 with L/R \leq 15ms with 2 poles in series $ \begin{array}{c} \leq 24 \ensuremath{V} & \ensuremath{A} & 15 \\ 48 \ensuremath{V} & \ensuremath{A} & 13 \end{array} $	IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series				
$\begin{array}{cccc} 75 \ & \mbox{A} & 11 \\ 110 \ & \mbox{A} & 2 \\ 220 \ & \mbox{A} & - \end{array}$ IEC max current le in DC3-DC5 with L/R < 15ms with 2 poles in series $\begin{array}{cccc} \leq 24 \ & \mbox{A} & 15 \\ 48 \ & \mbox{A} & 13 \end{array}$		≤24V	А	12	
$ \begin{array}{c cccc} 110 V & A & 2 \\ 220 V & A & - \end{array} \\ \hline \mbox{IEC max current le in DC3-DC5 with L/R \le 15ms with 2 poles in series} \\ & \leq 24 V & A & 15 \\ & 48 V & A & 13 \end{array} $		48V	Α	11	
220V A - IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series ≤24V A 15 48V A 13		75V	А	11	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series ≤24V A 15 48V A 13		110V	А	2	
≤24V A 15 48V A 13		220V	А	-	
48V A 13	IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series				
		≤24V	А	15	
		48V	А	13	
75V A 13		75V	А	13	

110V

220V

≤24V

А

А

А

8

2

18

IEC max current le in DC3-DC5 with L/R \leq 15ms with 3 poles in series

			-
	48V	А	18
	75V	А	16
	110V	А	12
	220V	А	6
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	А	18
	48V	А	18
	75V	А	16
	110V	А	13
	220V	Α	8
Short-time allowable current for 10s (IEC/EN60947-1)		А	200
Protection fuse			
	gG (IEC)	А	32
	aM (IEC)	А	20
Making capacity (RMS value)	. ,	Α	180

Breaking capacity at voltage 440V A 144 500V А 120 690V А 94 Resistance per pole (average value) mΩ 2.5 Power dissipation per pole (average value) lth W 2.6 AC3 W 0.8 Tightening torque for terminals 1.5 min Nm Nm 1.8 max min Ibin 1.1 1.5 max lbin Tightening torque for coil terminal 0.8 min Nm max Nm 1 min lbin 0.8



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 125VDC, 1NC AUXILIARY CONTACT

BF1801D125

lbin 0.74 max Max number of wires simultaneously connectable Nr. 2 Conductor section AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² 1 mm² 6 max Flexible c/w lug conductor section 1 min mm² max mm² 4 Flexible with insulated spade lug conductor section mm² 1 min mm² 4 max IP20 when Power terminal protection according to IEC/EN 60529 properly wired Mechanical features Operating position Vertical plan normal ±30° allowable Screw / DIN rail Fixing 35mm Weight 498 g Conductor section AWG/kcmil conductor section 10 max Auxiliary contact characteristics Thermal current Ith А 10 IEC/EN 60947-5-1 designation A600 - P600 Operating current AC15 230V А 3 400V 1.9 А 500V А 1.4 Operating current DC12 110V А 5.7 **Operating current DC13** 24V А 5.7 48V А 2.9 60V A 2.3 110V А 1.25 125V А 1.1 220V А 0.55 600V 0.2 А Operations Mechanical life 20000000 cycles Electrical life 1600000 cycles Safety related data Performance level B10d according to EN/ISO 13489-1 1600000 rated load cycles mechanical load 20000000 cycles Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes DC coil operating

BF1801D125



BF1801D125 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 125VDC,

1NC AUXILIARY CONTACT

DC rated control voltage	je			V	125
DC operating voltage					
	pick-up				
			min	%Us	70
			max	%Us	125
	drop-out			0/110	10
			min	%Us %Us	10 40
Average coil consump	tion <20°C		max	/005	40
			in-rush	W	5.4
			holding	W	5.4
Max cycles frequency			J		
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us co					
	in AC				
		Closing NO			0
			min	ms	8
		Opening NO	max	ms	24
			min	ms	10
			max	ms	20
		Closing NC		-	-
		Ū	min	ms	14
			max	ms	28
		Opening NC			
			min	ms	7
			max	ms	18
	in DC				
		Closing NO	min	ms	54
			max	ms	66
		Opening NO	max	me	
		1 0	min	ms	14
			max	ms	17
		Closing NC			
			min	ms	24
			max	ms	30
		Opening NC			47
			min	ms ms	47 57
UL technical data			max	ms	51
	for three-phase AC moto	or			
			at 480V	А	14
			at 600V	А	17
Yielded mechanical pe	rformance				
	for single-phase AC mo	otor			
			110/120V	HP	1
			230V	HP	3
	for three-phase AC mo	tor			_
			200/208V	HP	5
			220/230V	HP up	5
			460/480V 575/600V	HP HP	10 15
			J75/000V	I IF	10

BF1801D125

The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding



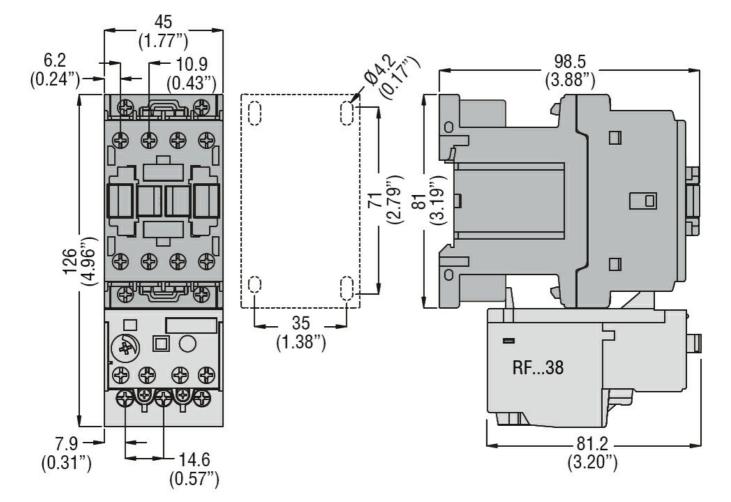
ENERGY AND AUTOMATION

General USE				
	Contactor			
		AC current	А	32
	Auxiliary contacts			
		AC voltage	V	600
		AC current	А	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protection	n fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	60
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	80
_	iary 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	on			
Pollution degree				3
Dimensions [mm (in)]				

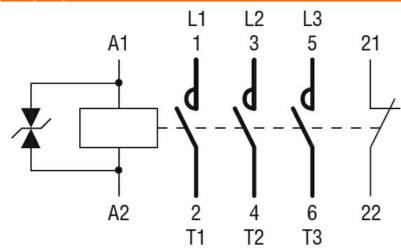
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THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 125VDC, 1NC AUXILIARY CONTACT



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
Cortificatos	

Certificates



BF1801D125 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 125VDC, 1NC AUXILIARY CONTACT

	CCC
	cULus
	EAC
classification	

ETIM 8.0

ETIM

EC000066 -Power contactor, AC switching





			•
Product designation			Power contacto
Product type designation			BF18
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		A	32
Operational current le			
	AC-1 (≤40°C)	A	32
	AC-1 (≤55°C)	A	26
	AC-1 (≤70°C)	A	23
	AC-3 (≤440V ≤55°C)	A	18
	AC-4 (400V)	A	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)	0001/	1.147	10
	230V	kW	12
	400V	kW	21
	500V	kW	26
IFC may aureant to in DC1 with L/D < 1 may with 1 nation in partice	690V	kW	36
IEC max current le in DC1 with $L/R \le 1$ ms with 1 poles in series	<241/	^	47
	≤24V	A	17
	48V 75V	A	15 15
	110V	A A	6
	220V	A	0
IEC max current le in DC1 with L/R \leq 1ms with 2 poles in series	220 V	~	
$1 - 0$ max currencie in DOT with $L(X \rightarrow 1)$ is with 2 poies in selies	≤24V	А	20
	≤24∨ 48V	A	20
	48V 75V	A	20
	110V	A	13
	220V	A	1
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series	2201	7	1
	≤24V	А	22
	48V	A	22
	48V 75V	A	20
	110V	A	16
	1100	$\overline{\Lambda}$	



BF1801D220 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 220VDC,

ENERGY AND AUTOMATION	1NC AUXILIARY CONTACT			
	220V	А	11	
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series				
	≤24V	А	22	
	48V	А	22	
	75V	Α	20	
	110V	Α	18	
	220V	А	13	
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 1 poles in series				
	≤24V	А	12	
	48V	А	11	
	75V	А	11	
	110V	А	2	
	220V	А	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series				
-	<241/	۸	15	

	≤24V	Α	15
	48V	А	13
	75V	Α	13
	110V	А	8
	220V	А	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	А	18
	48V	А	18
	75V	А	16
	110V	А	12
	220V	А	6
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	А	18
	48V	А	18
	75V	А	16
	110V	А	13
	220V	А	8
Short-time allowable current for 10s (IEC/EN60947-1)		А	200
Protection fuse			
	gG (IEC)	А	32
	aM (IEC)	А	20
Making capacity (RMS value)		А	180
Breaking capacity at voltage			
	440V	А	144
	500V	А	120

	Ith	W	2.6
	AC3	W	0.8
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
	max	lbin	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1

Resistance per pole (average value)

Power dissipation per pole (average value)

690V

min

А

mΩ

lbin

94

2.5

0.8



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 220VDC, 1NC AUXILIARY CONTACT

BF1801D220

lbin 0.74 max Max number of wires simultaneously connectable Nr. 2 Conductor section AWG/Kcmil max 10 Flexible w/o lug conductor section min mm² 1 mm² 6 max Flexible c/w lug conductor section 1 min mm² max mm² 4 Flexible with insulated spade lug conductor section mm² 1 min mm² 4 max IP20 when Power terminal protection according to IEC/EN 60529 properly wired Mechanical features Operating position Vertical plan normal ±30° allowable Screw / DIN rail Fixing 35mm Weight 500 g Conductor section AWG/kcmil conductor section 10 max Auxiliary contact characteristics Thermal current Ith А 10 IEC/EN 60947-5-1 designation A600 - P600 Operating current AC15 230V А 3 400V 1.9 А 500V А 1.4 Operating current DC12 110V А 5.7 **Operating current DC13** 24V А 5.7 48V А 2.9 60V A 2.3 110V А 1.25 125V А 1.1 220V А 0.55 600V 0.2 А Operations Mechanical life 20000000 cycles Electrical life 1600000 cycles Safety related data Performance level B10d according to EN/ISO 13489-1 1600000 rated load cycles mechanical load 20000000 cycles Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes DC coil operating

BF1801D220



BF1801D220 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 220VDC,

INC AUXILIARY CONTACT

DO note di se introl control					000
DC rated control voltage	je			V	220
DC operating voltage	nial				
	pick-up		min	%Us	70
			max	%Us	125
	drop-out		Παλ	/003	125
	ulop-out		min	%Us	10
			max	%Us	40
Average coil consumpt	tion ≤20°C			,	
o 1			in-rush	W	5.4
			holding	W	5.4
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us co	ontrol				
	in AC				
		Closing NO			
			min	ms	8
			max	ms	24
		Opening NO			4.0
			min	ms	10
			max	ms	20
		Closing NC	min	ms	14
			max	ms	28
		Opening NC	Пал	1115	20
		oponing No	min	ms	7
			max	ms	18
	in DC				
		Closing NO			
		-	min	ms	54
			max	ms	66
		Opening NO			
			min	ms	14
			max	ms	17
		Closing NC			.
			min	ms	24
		Opening NC	max	ms	30
			min	ms	47
			max	ms	57
UL technical data					
	for three-phase AC mo	otor			
- (-)	,		at 480V	А	14
			at 600V	А	17
Yielded mechanical pe	rformance				
	for single-phase AC n	notor			
			110/120V	HP	1
			230V	HP	3
	for three-phase AC m	otor			
			200/208V	HP	5
			220/230V	HP	5
			460/480V	HP	10
			575/600V	HP	15

BF1801D220



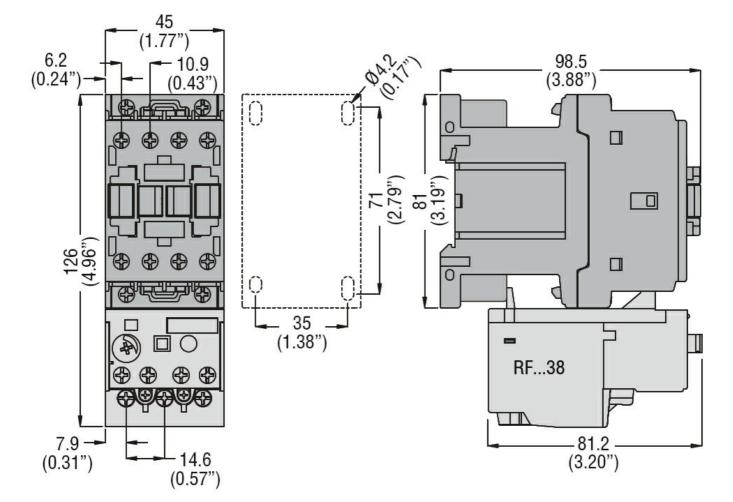
LIVERGT AND AUTOMATI

General USE				
	Contactor			
		AC current	А	32
	Auxiliary contacts			
		AC voltage	V	600
		AC current	А	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protectior	n fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	А	60
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	80
_	ary 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
Vax altitude			m	3000
Resistance & Protection	on			
Pollution degree				3
Dimensions [mm (in)]				

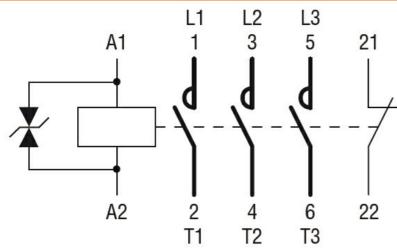
BF1801D220



THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 220VDC, 1NC AUXILIARY CONTACT



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
Cortificatos	

Certificates



BF1801D220 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 18A, DC COIL, 220VDC, 1NC AUXILIARY CONTACT

C	CC
cl	ULus
E,	AC
ETIM classification	

ETIM 8.0

EC000066 -Power contactor, AC switching