



Product designation Product type designation			Power contactor BF12
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	28
Operational current le			
	AC-1 (≤40°C)	Α	28
	AC-1 (≤55°C)	Α	23
	AC-1 (≤70°C)	Α	20
	AC-3 (≤440V ≤55°C)	Α	12
	AC-4 (400V)	Α	7.9
Rated operational power AC-3 (T≤55°C)			_
	230V	kW	3.2
	400V	kW	5.7
	415V	kW	6.2
	440V	kW	6.2
	500V	kW	7.5
	690V	kW	10
Rated operational power AC-1 (T≤40°C)			
	230V	kW	10
	400V	kW	18
	500V	kW	23
	690V	kW	32
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	Α	17
	48V	Α	15
	75V	Α	13
	110V	A	6
150	220V	Α	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	40.4V./	•	0.0
	≤24V	A	20
	48V	A	20
	75V 110V	A	18
		A	13 1
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	220V	A	1
TEC max current le in DCT with L/R > This with 3 poles in series	~2A\/	۸	22
	≤24V 48V	A ^	22
	48 V 75 V	A A	22 20
	110V	A	16
	1100	^	10



	220V	Α	11
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	20
	48V	Α	20
	75V	Α	20
	110V	Α	16
	220V	Α	12
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
·	≤24V	Α	12
	48V	Α	11
	75V	Α	10
	110V	Α	2
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	220 V		
The max current le in boo-boo with bit 2 forms with 2 poles in series	≤24V	Α	15
	48V	A	13
	46 V 75 V		13
		A	
	110V	A	8
150	220V	A	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	.= :		4.0
	≤24V	Α	18
	48V	Α	18
	75V	Α	15
	110V	Α	12
	220V	Α	6
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	15
	48V	Α	15
	75V	Α	15
	110V	Α	16
	220V	Α	7
Short-time allowable current for 10s (IEC/EN60947-1)		Α	150
Protection fuse			
	gG (IEC)	Α	32
	aM (IEC)	Α	12
Making capacity (RMS value)	·	Α	120
Breaking capacity at voltage			
J. Safe and J. Saf	440V	Α	96
	500V	A	96
	690V	A	94
Resistance per note (average value)	090 v	mΩ	2.5
Resistance per pole (average value)		11177	۷.ن
Power dissipation per pole (average value)	141	147	2
	Ith	W	2
Till to die to en a forte estado	AC-3	W	0.4
Tightening torque for terminals			4 =
	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



		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	1140/14			
	AWG/Kcmil			40
	Florible w/o live conductor coefficie	max		10
	Flexible w/o lug conductor section	min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section	IIIdx	111111	0
	Tickliste of windy contradictor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section			
		min	mm²	1
		max	mm²	4
Device terminal prote	ation according to IEC/EN COESO			IP20 when
Power terminal prote	ction according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail
				35mm
Weight			g	496
Conductor section	ANAIC (Incomit a conducation and sting			
	AWG/kcmil conductor section			10
		max		10
Auxiliary contact cha	ractarietice			
Auxiliary contact char	racteristics		Α	10
Thermal current Ith			Α	10 A600 - P600
Thermal current Ith IEC/EN 60947-5-1 d	esignation		A	10 A600 - P600
Thermal current Ith	esignation	230V		A600 - P600
Thermal current Ith IEC/EN 60947-5-1 d	esignation	230V 400V	A A A	
Thermal current Ith IEC/EN 60947-5-1 d	esignation		A	A600 - P600 3
Thermal current Ith IEC/EN 60947-5-1 d	esignation 215	400V	A A	A600 - P600 3 1.9
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC	esignation 215	400V	A A	A600 - P600 3 1.9
Thermal current lth IEC/EN 60947-5-1 d Operating current AC Operating current DC	esignation C15	400V 500V	A A A	3 1.9 1.4
Thermal current lth IEC/EN 60947-5-1 d Operating current AC Operating current DC	esignation C15	400V 500V	A A A	3 1.9 1.4
Thermal current lth IEC/EN 60947-5-1 d Operating current AC Operating current DC	esignation C15	400V 500V 110V 24V 48V	A A A	A600 - P600  3 1.9 1.4  5.7  5.7 2.9
Thermal current lth IEC/EN 60947-5-1 d Operating current AC Operating current DC	esignation C15	400V 500V 110V 24V 48V 60V	A A A A A	3 1.9 1.4 5.7 5.7 2.9 2.3
Thermal current lth IEC/EN 60947-5-1 d Operating current AC Operating current DC	esignation C15	400V 500V 110V 24V 48V 60V 110V	A A A A A	A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	esignation C15	400V 500V 110V 24V 48V 60V 110V 125V	A A A A A A	A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1
Thermal current Ith IEC/EN 60947-5-1 d Operating current AC Operating current DC	esignation C15	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A	A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1 0.55
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC	esignation C15	400V 500V 110V 24V 48V 60V 110V 125V	A A A A A A	A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC	esignation C15	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1 0.55 0.2
Thermal current Ith IEC/EN 60947-5-1 d Operating current AC Operating current DC Operating current DC Operating current DC Operations Mechanical life	esignation C15	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1 0.55 0.2
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC Operations  Mechanical life Electrical life	esignation C15	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1 0.55 0.2
Thermal current Ith IEC/EN 60947-5-1 decorating current ACCOPERATION COPERATION CURRENT COPERATION	esignation C15 C12 C13	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1 0.55 0.2
Thermal current Ith IEC/EN 60947-5-1 decorating current ACCOPERATION CURRENT ACCOPERATION COPERATION CURRENT ACCOPERATION CURRENT ACCOP	esignation C15	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1 0.55 0.2  20000000 20000000
Thermal current Ith IEC/EN 60947-5-1 decorating current ACCOPERATION CURRENT ACCOPERATION COPERATION CURRENT ACCOPERATION CURRENT ACCOP	esignation C15 C12 C13 C10	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1 0.55 0.2  20000000 20000000
Thermal current Ith IEC/EN 60947-5-1 decorating current AC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B	esignation C15 C12 C13 C10 according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1 0.55 0.2  20000000 20000000 20000000
Thermal current Ith IEC/EN 60947-5-1 decorating current AC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B	esignation C15 C12 C13 C10	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1 0.55 0.2  20000000 20000000

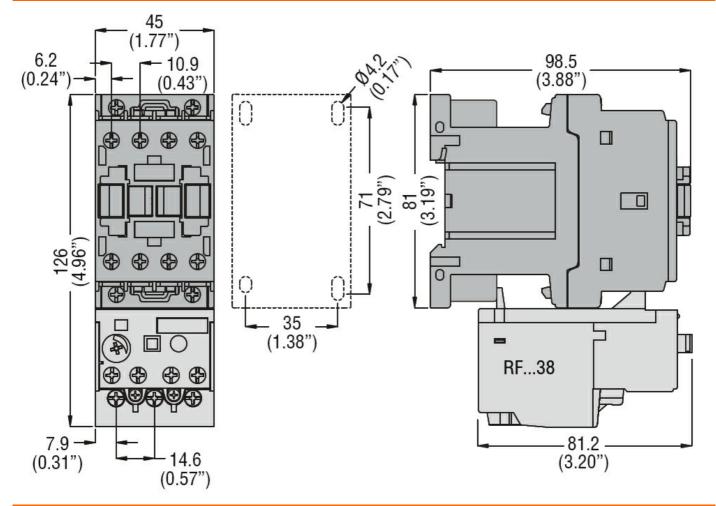


DC rated control voltage	је			V	60
DC operating voltage					
	pick-up				
			min	%Us	70
	drop out		max	%Us	125
	drop-out		min	%Us	10
			max	%Us	40
Average coil consump	tion ≤20°C		max	7000	
			in-rush	W	5.4
			holding	W	5.4
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us co					
	in AC	Clasing NO			
		Closing NO	min	ms	8
			max	ms	24
		Opening NO	IIIdA	1113	
		- p <b>3</b> - • <b>-</b>	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			
		Closing IVO	min	ms	54
			max	ms	66
		Opening NO			
			min	ms	14
			max	ms	17
UL technical data					
Full-load current (FLA)	tor three-phase	AC motor		Α.	44
			at 480V at 600V	A A	11 11
Yielded mechanical pe	erformance		at 000V	^	11
riolada medianidai pe	for single-phase	e AC motor			
	.or origio pridot		110/120V	HP	1
			230V	HP	2
	for three-phase	AC motor			_
	-		200/208V	HP	5
			220/230V	HP	5
			460/480V	HP	7.5
00=			575/600V	HP	10
General USE	044				
	Contactor		A.C. a	۸	20
	Auxiliary contact	te	AC current	A	28
	Auxiliary Coritat	olo .	AC voltage	V	600
			AC current	Ā	10
					<del>-</del>

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## THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, DC COIL, 60VDC, 1NO AUXILIARY CONTACT

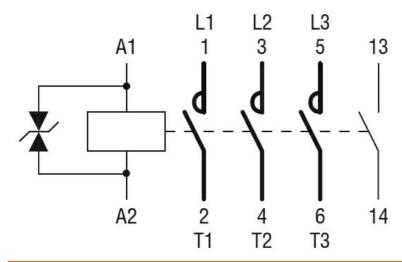
		DC voltage	V	250
		DC current	Α	1
Short-circuit protect	tion fuse, 600V			
	High fault			
	•	Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	70
Contact rating of auxiliary contacts according to UL				A600 - P600
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Prote	ction			
Pollution degree				3
Dimensions				



### Wiring diagrams

**ENERGY AND AUTOMATION** 

### THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, DC COIL, 60VDC, 1NO AUXILIARY CONTACT



### 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