





Product designation			Power contactor
Product type designation Contact characteristics			BF12
		pr	3
Number of poles Rated insulation voltage Ui IEC/EN		nr. V	690
Rated insulation voltage of IEC/EN Rated impulse withstand voltage Uimp		kV	6
Operational frequency		K V	0
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith	IIIdA	A	28
Operational current le			
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)	7.0 1 (1001)		
Training operational period (1=00 0)	230V	kW	3.2
	400V	kW	5.7
	415V	kW	6.2
	440V	kW	5.5
	500V	kW	5
	690V	kW	5
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	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
	75V	Α	18
	110V	Α	13
	220V	Α	
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
	≤24V	Α	22
	48V	Α	22
	75V	Α	20
	110V	Α	16





	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			
TEO MAX GUITOR TO IN DOC DOC MAI EN E TOMO WAN E PORCO IN CONCO	≤24V	Α	15
	48V	Α	13
	75V	A	12
	110V	A	8
	220V	A	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	22U V		
TEC max current le in DC3-DC3 with E/R > 13ms with 3 poles in selles	-241 /	۸	10
	≤24V 48V	A	18
		A	18
	75V	A	15
	110V	A	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			
	440V	Α	96
	500V	Α	96
	690V	Α	94
Resistance per pole (average value)		mΩ	2.5
Power dissipation per pole (average value)			
\	lth	W	2
	AC3	W	0.4
Tightening torque for terminals	7.00	••	U. .
gg tarque for terrimient	min	Nm	1.5
	max	Nm	1.8
	min	Ibin	1.1
		Ibin	1.5
Tightening torque for coil terminal	max	ווטו	1.0
rightening torque for contential	:-	Nima	0.0
	min	Nm Nm	0.8
	max	Nm	1
	min	lbft	0.8



		max	lbft	0.74
	simultaneously connectable		nr.	2
Conductor section				
	Flexible w/o lug conductor section		•	
		min	mm²	1
	FI 71 / 1 / 2	max	mm²	6
	Flexible c/w lug conductor section		2	4
		min	mm²	1
	Flavible with inculated and deliver conductor on	max	mm²	4
	Flexible with insulated spade lug conductor sec		mm²	4
		min	mm² mm²	1 4
Dower terminal protect	ction according to IEC/EN 60529	max	111111	IP20 when wired
Mechanical features	ction according to IEC/EN 60329			IP20 When whed
Operating position				
Operating position		normal		Vertical plan
		allowable		±30°
		allowable		Screw / DIN rail
Fixing				35mm
Weight			g	350
Auxiliary contact chara	acteristics		9	
Type of contact				1 NC
Thermal current Ith			Α	10
IEC/EN 60947-5-1 de	esignation			A600 - P600
Operating current AC				
- p		230V	Α	3
		400V	Α	1.9
		500V	Α	1.4
Operating current DC	12			
, 0		110V	Α	5.7
Operating current DC	13			
, ,		24V	Α	5.7
		48V	Α	2.9
		60V	Α	2.3
		110V	Α	1.25
		125V	Α	1.1
		220V	Α	0.55
		600V	Α	0.2
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	2000000
Safety related data				
Performance level B1	0d according to EN/ISO 13489-1			
		rated load	cycles	2000000
		mechanical load	cycles	20000000
	ing to IEC/EN 609474-4-1			yes
EMC compatibility				yes
Rated AC voltage at 6	60Hz		V	220
AC coil operating				
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	pick-up			

min

%Us

80



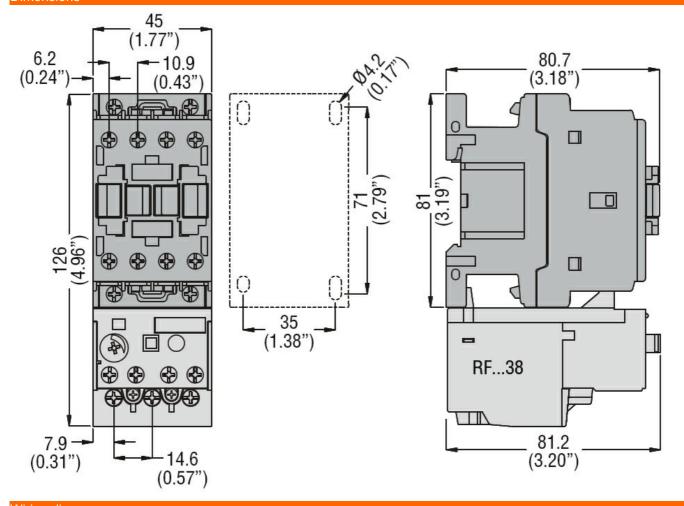


Max					
Minimax Min			max	%Us	110
Minimax Min		drop-out			
Max		•	min	%Us	20
AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz					
Of 50/60Hz coil powered at 50Hz In-rush holding VA 75 holding VA 9	AC average coil consu	umption at 20°C		,,,,,	
in-rush VA 75 holding VA 9	no avolago con conoc				
holding		of 30/00112 con powered at 30112	in-ruch	\/Δ	75
Of 50/60Hz coil powered at 60Hz					
In-rush		of E0/60Hz poil newared at 60Hz	Holding	٧٨	
holding		of 50/00f12 coil powered at 60f12	in ruch	١/٨	70
Of 60Hz coil powered at 60Hz					
In-rush VA 75 holding VA 9		(0011 11 1 1 0011	noiding	VA	0.5
Molding VA 9 VA 9 VA 9 VA 2 5 VA VA 2 5 VA VA VA VA VA VA VA		of 60Hz coil powered at 60Hz			
Dissipation at holding ≤20°C 50Hz W 2.5					
Machanical operation cycles/h 3600 Operating times Average time for Us control In AC Closing NO min ms 8 Opening NO min ms 10 max ms 14 max ms 15 15 15 15 <td></td> <td></td> <td>holding</td> <td></td> <td></td>			holding		
Mechanical operation		≤20°C 50Hz		W	2.5
Closing NO					
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 10 max ms 20 Closing NC min ms 14 max ms 28 Opening NC min ms 14 max ms 28 Opening NC min ms 14 max ms 18 UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 11 at 600V A 11 Yielded mechanical performance for single-phase AC motor 110/120V HP 1 230V HP 2 for three-phase AC motor 200/208V HP 5 460/480V HP 7.5 460/480V HP 7.5 575/600V HP 10 General USE Contactor AC current A 28 Auxiliary contacts AC voltage V 600 AC current A 10 DC voltage V 250 DC current A 10				cycles/h	3600
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 min ms 7 max ms 18 UL technical data Full-load current (FLA) for three-phase AC motor for single-phase AC motor for single-phase AC motor 110/120V HP 1 230V HP 2 for three-phase AC motor 1110/120V HP 1 230V HP 2 for three-phase AC motor 200/208V HP 5 220/230V HP 5 460/480V HP 7.5 575/600V HP 10 General USE Contactor AC current A 28 Auxiliary contacts AC voltage V 600 AC current A 10 DC voltage V 600 AC current A 10 DC voltage V 600 AC current A 10 DC voltage V 250 DC current A 10					
Closing NO	Average time for Us co	ontrol			
Min		in AC			
Min		Closing NO			
Opening NO		-	min	ms	8
Min max ms			max	ms	24
Min max ms		Opening NO			
Closing NC		. 3	min	ms	10
Closing NC					
Min ms		Closina NC			
Max		energing in	min	ms	14
Opening NC					
Min ms		Opening NC	max	1110	20
Max		oponing 110	min	ms	7
UL technical data					
Full-load current (FLA) for three-phase AC motor at 480V A 11 Yielded mechanical performance for single-phase AC motor 110/120V HP 1 230V HP 2 for three-phase AC motor 200/208V HP 5 220/230V HP 5 460/480V HP 7.5 575/600V HP 10 General USE Contactor AC current A 28 Auxiliary contacts AC voltage V 600 AC current A 10 DC voltage V 250 DC current A 1 DC voltage V 250 DC current A 1	III technical data		Пах	1110	10
At 480V A 11 at 600V A 11		for three-phase AC motor			
At 600V A 11	i un load culterit (i LA)	, for three phase Ae motor	at 490\/	۸	11
Yielded mechanical performance for single-phase AC motor 110/120V HP 1 230V HP 2 for three-phase AC motor 200/208V HP 5 220/230V HP 5 460/480V HP 7.5 575/600V HP 10 General USE AC current A 28 Auxiliary contacts AC voltage V 600 AC current A 10 DC voltage V 250 DC current A 1					
for single-phase AC motor 110/120V HP 1 230V HP 2 for three-phase AC motor 200/208V HP 5 220/230V HP 5 460/480V HP 7.5 575/600V HP 10 General USE Contactor AC current A 28 Auxiliary contacts AC voltage V 600 AC current A 10 DC voltage V 250 DC current A 1	Violded machanical re	orformanco	at 000 V	Α	11
110/120V	neided mechanical pe				
230V HP 2 For three-phase AC motor 200/208V HP 5 220/230V HP 5 460/480V HP 7.5 575/600V HP 10 10		ioi single-phase AC motor	440/4001	LID	4
For three-phase AC motor 200/208V HP 5 220/230V HP 5 460/480V HP 7.5 575/600V HP 10					
200/208V			230V	HP	
220/230V HP 5 460/480V HP 7.5 575/600V HP 10		tor three-phase AC motor			_
460/480V HP 7.5 575/600V HP 10					
S75/600V HP 10					
Contactor AC current A 28					
Contactor AC current A 28 Auxiliary contacts AC voltage V 600 AC current A 10 DC voltage V 250 DC current A 1			575/600V	HP	10
AC current A 28 Auxiliary contacts AC voltage V 600 AC current A 10 DC voltage V 250 DC current A 1	General USE				
Auxiliary contacts AC voltage V 600 AC current A 10 DC voltage V 250 DC current A 1		Contactor			
AC voltage V 600 AC current A 10 DC voltage V 250 DC current A 1			AC current	Α	28
AC voltage V 600 AC current A 10 DC voltage V 250 DC current A 1		Auxiliary contacts			
AC current A 10 DC voltage V 250 DC current A 1			AC voltage	V	600
DC voltage V 250 DC current A 1			_	Α	10
DC current A 1					
	Short-circuit protection	n fuse, 600V			





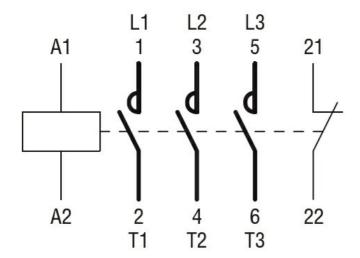
High fault			
•	Short circuit current	kA	100
	Fuse rating	Α	30
	Fuse class		J
Standard fault			_
	Short circuit current	kA	5
	Fuse rating	Α	70
Contact rating of auxiliary contacts according to UL			A600 - P600
Ambient conditions			
Temperature			
Operating temperature			
	min	°C	-50
	max	°C	70
Storage temperature			_
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions			



Wiring diagrams

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, AC COIL 60HZ, 220VAC, 1NC AUXILIARY CONTACT



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN 60947-1

IEC/EN 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching