



				Δ 111
Product designation				Auxiliary contactor
Product type designate			BF00	
Contact characteristic				
Number of poles		Nr.	4	
Rated insulation volta	ge Ui IEC/EN		V	690
Rated impulse withsta			kV	6
Operational frequency				
		min	Hz	25
		max	Hz	400
IEC Conventional free	e air thermal current Ith		Α	10
Protection fuse				
		gG (IEC)	Α	25
Tightening torque for	terminals			
		min	Nm	1.5
		max	Nm	1.8
		min	lbin	1.1
_		max	Ibin	1.5
Tightening torque for	coil terminal			
		min	Nm	0.8
		max	Nm	1
		min	lbin	0.8
		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	ANA/O///:1			
	AWG/Kcmil			10
	Flavible w/e lug conductor acction	max		10
	Flexible w/o lug conductor section	min	mm²	1
		min	mm²	1 6
	Flexible c/w lug conductor section	max	111111	0
	Flexible C/W lug colludctor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section	IIIax	111111	-
	1 10/10/10 With indulated opade lag conductor section	min	mm²	1
		max	mm²	4
				IP20 when
Power terminal protection according to IEC/EN 60529				properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail
				35mm
Weight			g	362



AWG/kcmil conductor section Auxiliary contact characteristics Thermal current Ith ECCEN 60947-5-1 designation Operating current AC15 Operating current AC15 Operating current DC12 Operating current DC12 Operating current DC13 Operations operations Operations operations Operations opera	Conductor section							
Aureliany contact characteristics		AWG/kcmil conductor section						
Thermal current Ith			max		10			
EC/EN 60947-5-1 designation		cteristics		•	1.0			
Operating current AC15 230V				A				
A								
Marchanical load Marchanical	Operating current AC1	5	2001/		•			
S00V								
Operating current DC13 110V A 5.7 Operating current DC13 24V A 5.7 48V A 2.9 600V A 2.3 1110V A 1.125 125V A 1.1 220V A 0.55 600V A 0.2 Operations Mechanical life Cycles 200000000 Safory related data Performance level B10d according to EN/ISO 13489-1 Temperature mechanical load Cycles 200000000 Mirror contats according to IEC/EN 609474-4-1 Temperature mechanical load Cycles 200000000 Mirror contats according to IEC/EN 609474-4-1 Temperature mechanical load Cycles 200000000 Mirror contats according to IEC/EN 609474-4-1 Temperature mechanical load Cycles 200000000 Mirror contats according to IEC/EN 609474-4-1 Temperature mechanical load Cycles 20000000 Ac operating Mirror contats according to IEC/EN 609474-4-1								
110V			500V	Α	1.4			
Capital part Capital	Operating current DC1	2						
Receive			110V	Α	5.7			
ABV A 2.9 600	Operating current DC1	3						
Comparation				Α				
110V				Α				
125V				Α				
Mechanical life			110V	Α	1.25			
Operations Mechanical life cycles 20000000 Safety related data Performance level B10d according to EN/ISO 13489-1 mechanical load cycles 20000000 Mirror contats according to IEC/EN 609474-4-1 mechanical load cycles 20000000 Mirror contats according to IEC/EN 609474-4-1 yes YES EMC compatibility yes Yes AC coll operating V 24 AC operating voltage Type Yes AC operating voltage min %Us 80 max %Us 110 drop-out min %Us 20 max %Us 55 of 50/60Hz coil powered at 60Hz min %Us 80 max %Us 55 AC average coil consumption at 20°C min %Us 20 max %Us 55 AC average coil consumption at 20°C in-rush VA 75 holding VA 9 </td <td></td> <td></td> <td>125V</td> <td>Α</td> <td>1.1</td>			125V	Α	1.1			
Operations Mechanical life cycles 20000000 Safety related data Performance level B10d according to EC/EN 609474-4-1 mechanical load cycles 20000000 Mirror contats according to IEC/EN 609474-4-1 yes YES EMC compatibility yes Y 24 AC coil operating yes Y 24 AC operating voltage min %Us 80 Max %Us 110 drop-out min %Us 20 max %Us 55 of 50/60Hz coil powered at 60Hz min %Us 80 max %Us 55 AC average coil consumption at 20°C max %Us 55 AC average coil consumption at 20°C in-rush VA 75 holding VA 9 of 50/60Hz coil powered at 60Hz in-rush VA 70 holding VA 6.5			220V	Α	0.55			
Mechanical life			600V	Α	0.2			
Safety related data Performance level B10d according to EN/ISO 13489-1 mechanical load cycles 20000000	Operations							
Performance level B10d according to EN/ISO 13489-1	Mechanical life			cycles	20000000			
Mirror contats according to IEC/EN 609474-4-1	Safety related data							
Mirror contats according to IEC/EN 609474-4-1	Performance level B10	Od according to EN/ISO 13489-1						
Mirror contats according to IEC/EN 609474-4-1 EMC compatibility Rated AC voltage at 50/60Hz Of 50/60Hz coil powered at 50Hz pick-up min %Us 80 max %Us 110 drop-out min %Us 20 max %Us 55 of 50/60Hz coil powered at 60Hz pick-up min %Us 80 max %Us 110 drop-out min %Us 80 max %Us 55 of 50/60Hz coil powered at 60Hz pick-up min %Us 80 max %Us 55 of 50/60Hz coil powered at 60Hz pick-up min %Us 80 max %Us 110 drop-out min %Us 20 max %Us 110 drop-out min %Us 20 max %Us 55 AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 75 holding VA 9 of 50/60Hz coil powered at 60Hz in-rush VA 75 holding VA 9 of 60Hz coil powered at 60Hz		-	mechanical load	cvcles	20000000			
EMC compatibility AC coil operating Rated AC voltage at 50/60Hz Of 50/60Hz coil powered at 50Hz pick-up min %Us 80 max %Us 110 drop-out min %Us 20 max %Us 55 of 50/60Hz coil powered at 60Hz pick-up min %Us 80 max %Us 55 of 50/60Hz coil powered at 60Hz pick-up min %Us 80 max %Us 55 AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz of 50/60Hz coil powered at 50Hz in-rush VA 75 holding VA 9 of 50/60Hz coil powered at 60Hz in-rush VA 75 holding VA 9 of 50/60Hz coil powered at 60Hz in-rush VA 70 holding VA 6.5	Mirror contats according	ng to IEC/EN 609474-4-1						
Rated AC voltage at 50/60Hz V 24		9						
Rated AC voltage at 50/60Hz V 24					<i>y</i>			
AC operating voltage of 50/60Hz coil powered at 50Hz pick-up min %Us 80 max %Us 110 drop-out min %Us 20 max %Us 55 of 50/60Hz coil powered at 60Hz pick-up min %Us 80 max %Us 55 of 50/60Hz coil powered at 60Hz pick-up min %Us 80 max %Us 110 drop-out min %Us 20 max %Us 55 AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 75 holding VA 9 of 50/60Hz coil powered at 60Hz in-rush VA 70 holding VA 6.5 of 60Hz coil powered at 60Hz	AC COIL OPERALING							
of 50/60Hz coil powered at 50Hz pick-up min %Us 80 max %Us 110 drop-out min %Us 20 max %Us 55 of 50/60Hz coil powered at 60Hz pick-up min %Us 80 max %Us 55 of 50/60Hz coil powered at 60Hz pick-up min %Us 80 max %Us 110 drop-out min %Us 80 max %Us 110 drop-out min %Us 20 max %Us 55 AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 75 holding VA 9 of 50/60Hz coil powered at 60Hz in-rush VA 70 holding VA 6.5		0/60Hz		V	24			
Pick-up	Rated AC voltage at 50	0/60Hz		V	24			
min %Us 80 max %Us 110	Rated AC voltage at 50			V	24			
Max Wus 110 Min Wus 20 Max Wus 55 Mus 55 Mus Mus 55 Mus Mus 55 Mus Mus 55 Mus	Rated AC voltage at 50	of 50/60Hz coil powered at 50Hz		V	24			
Min WUs 20 Max WUs 55	Rated AC voltage at 50	of 50/60Hz coil powered at 50Hz	min					
min	Rated AC voltage at 50	of 50/60Hz coil powered at 50Hz		%Us	80			
Max %Us 55	Rated AC voltage at 50	of 50/60Hz coil powered at 50Hz pick-up		%Us	80			
of 50/60Hz coil powered at 60Hz pick-up min %Us 80 max %Us 110 drop-out min %Us 20 max %Us 55 AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 75 holding VA 9 of 50/60Hz coil powered at 60Hz in-rush VA 70 holding VA 6.5 of 60Hz coil powered at 60Hz	Rated AC voltage at 50	of 50/60Hz coil powered at 50Hz pick-up	max	%Us %Us	80 110			
Pick-up	Rated AC voltage at 50	of 50/60Hz coil powered at 50Hz pick-up	max min	%Us %Us %Us	80 110 20			
Min %Us 80 max %Us 110	Rated AC voltage at 50	of 50/60Hz coil powered at 50Hz pick-up drop-out	max min	%Us %Us %Us	80 110 20			
Max %Us 110	Rated AC voltage at 50	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	max min	%Us %Us %Us	80 110 20			
Min WUs 20 max WUs 55	Rated AC voltage at 50	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	max min max	%Us %Us %Us %Us	80 110 20 55			
Min Mus 20 Max Mus 55	Rated AC voltage at 50	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	max min max min	%Us %Us %Us %Us	80 110 20 55			
AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 75 holding VA 9 of 50/60Hz coil powered at 60Hz in-rush VA 70 holding VA 6.5 of 60Hz coil powered at 60Hz	Rated AC voltage at 50	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up	max min max min	%Us %Us %Us %Us	80 110 20 55			
AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 75 holding VA 9 of 50/60Hz coil powered at 60Hz in-rush VA 70 holding VA 6.5 of 60Hz coil powered at 60Hz	Rated AC voltage at 50	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up	max min max min max	%Us %Us %Us %Us %Us	80 110 20 55 80 110			
of 50/60Hz coil powered at 50Hz in-rush VA 75 holding VA 9 of 50/60Hz coil powered at 60Hz in-rush VA 70 holding VA 6.5 of 60Hz coil powered at 60Hz	Rated AC voltage at 50	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up	max min max min min min max min	%Us %Us %Us %Us %Us	80 110 20 55 80 110			
in-rush VA 75 holding VA 9 of 50/60Hz coil powered at 60Hz in-rush VA 70 holding VA 6.5 of 60Hz coil powered at 60Hz	Rated AC voltage at 50 AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out	max min max min min min max min	%Us %Us %Us %Us %Us	80 110 20 55 80 110			
holding VA 9 of 50/60Hz coil powered at 60Hz in-rush VA 70 holding VA 6.5 of 60Hz coil powered at 60Hz	Rated AC voltage at 50 AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out	max min max min max min max	%Us %Us %Us %Us %Us	80 110 20 55 80 110			
of 50/60Hz coil powered at 60Hz in-rush VA 70 holding VA 6.5 of 60Hz coil powered at 60Hz	Rated AC voltage at 50 AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out	max min max min max min max	%Us %Us %Us %Us %Us %Us	80 110 20 55 80 110 20 55			
in-rush VA 70 holding VA 6.5 of 60Hz coil powered at 60Hz	Rated AC voltage at 50 AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out	max min max min max min max in-rush	%Us %Us %Us %Us %Us %Us	80 110 20 55 80 110 20 55			
holding VA 6.5 of 60Hz coil powered at 60Hz	Rated AC voltage at 50 AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out drop-out	max min max min max min max in-rush	%Us %Us %Us %Us %Us %Us	80 110 20 55 80 110 20 55			
of 60Hz coil powered at 60Hz	Rated AC voltage at 50 AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out drop-out	max min max min max min max in-rush holding	%Us %Us %Us %Us %Us %Us %Us %Us	80 110 20 55 80 110 20 55			
	Rated AC voltage at 50 AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out drop-out	max min max min max min max in-rush holding in-rush	%Us %Us %Us %Us %Us %Us %Us VA VA	80 110 20 55 80 110 20 55 75 9			
in-rush VA 75	Rated AC voltage at 50 AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out drop-out mption at 20°C of 50/60Hz coil powered at 50Hz of 50/60Hz coil powered at 60Hz	max min max min max min max in-rush holding in-rush	%Us %Us %Us %Us %Us %Us %Us VA VA	80 110 20 55 80 110 20 55 75 9			
	Rated AC voltage at 50 AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out drop-out mption at 20°C of 50/60Hz coil powered at 50Hz of 50/60Hz coil powered at 60Hz	max min max min max min max in-rush holding in-rush holding	%Us %Us %Us %Us %Us %Us %Us VA VA	80 110 20 55 80 110 20 55 75 9			

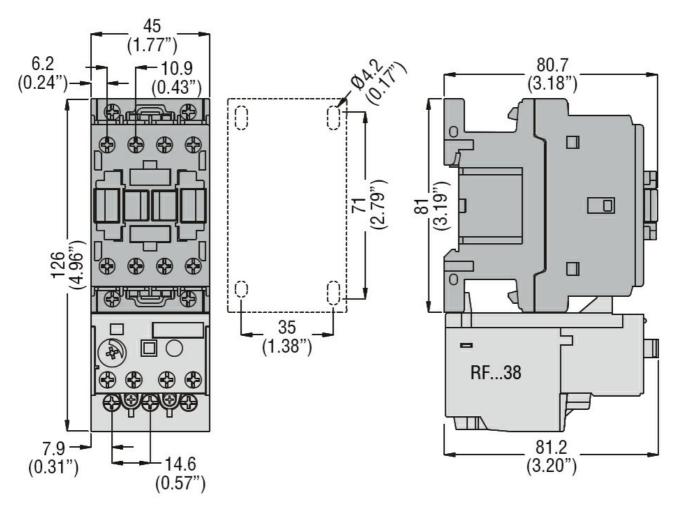


ENERGY AND AUTOMATION

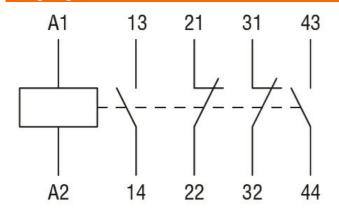
			holding	VA	9
Dissipation at holding ≤20	°C 50Hz			W	2.5
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us contr	ol				
in	AC .				
		Closing NO			
			min	ms	8
			max	ms	24
		Opening NO			
			min	ms	10
			max	ms	20
		Closing NC			
			min	ms	14
			max	ms	28
		Opening NC			_
			min	ms	7
			max	ms	18
UL technical data					
General USE	T				
A	uxiliary contacts		10	Δ.	4.0
Octobrille Configuration (III)		1.11	AC current	Α	10
Contact rating of auxiliary	contacts according to	UL			A600 - P600
Ambient conditions					
Temperature					
O	perating temperature			۰.	50
			min	°C	-50 -70
_			max	°C	70
S	torage temperature			۰.	00
			min	°C	-60
Max altitude			max	°C	80
				m	3000
Resistance & Protection					2
Pollution degree					3
Dimensions					







Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-5-1

IEC/EN 60947-1

IEC/EN 60947-5-1

UL 60947-1

UL 60947-5-1

Certificates

CCC

cULus

EAC





ETIM classification

ENERGY AND AUTOMATION

ETIM 8.0

EC000196 -Contactor relay