

Product designation Power contactor Product type designation BF12

Product type designation			DF IZ
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	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	1
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
F	≤24V	Α	22
	48V	Α	22
	75V	A	20
	110V	A	16
	1100	, ,	. •



	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	A	_
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 10ms with 2 poles in series	≤24V	Α	15
	48V	A	13
	75V	A	12
	110V	A	8
150	220V	Α	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. Sept. Service 3	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)	I±L	147	2
	Ith	W	2
	AC3	W	0.4
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
	min	lbin	0.8

		max	lbin	0.74
Max number of wires	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			
		max		10
	Flexible w/o lug conductor section			
		min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section			
		min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section			
		min	mm²	1
		max	mm²	4
	ction according to IEC/EN 60529			IP20 when wired
Mechanical features				
Operating position				Maderile
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Moight			~	356
Weight Conductor section			g	330
Conductor section	ANA/C/I/careil acardinates acation			
	AWG/kcmil conductor section			10
Auxiliary contact chara	actoriation	max		10
Thermal current Ith	acteristics		А	10
IEC/EN 60947-5-1 de	aignation		A	A600 - P600
Operating current AC	~			A000 - P000
Operating current AC	15	230V	Α	3
		400V	A	3 1.9
		500V	A	1.4
Operating current DC	12	300 V		1.4
Operating current DC	12	110V	Α	5.7
Operating current DC	12	1100	^	5.7
Operating current DC	13	24V	Α	5.7
		48V	A	2.9
		60V	A	2.9
		110V	A	2.3 1.25
		110V 125V	A	1.25
		220V	A	0.55
		600V	A	0.33
Operations				J. <u> </u>
Mechanical life			cycles	20000000
Electrical life			cycles	2000000
Safety related data			Oyolea	200000
•	0d according to EN/ISO 13489-1			
1 CHOMMANCE IEVELDI	od dooording to Environ 19409-1	rated load	cycles	2000000
		mechanical load	cycles	2000000
Mirror contate accordi	ng to IEC/EN 609474-4-1	medianidal idad	cycles	
	119 to 1EG/EN 0034/4-4-1			yes
EMC compatibility				yes
AC coil operating	:n/enu-		V	220
Rated AC voltage at 5	OU/OUT IZ		V	230

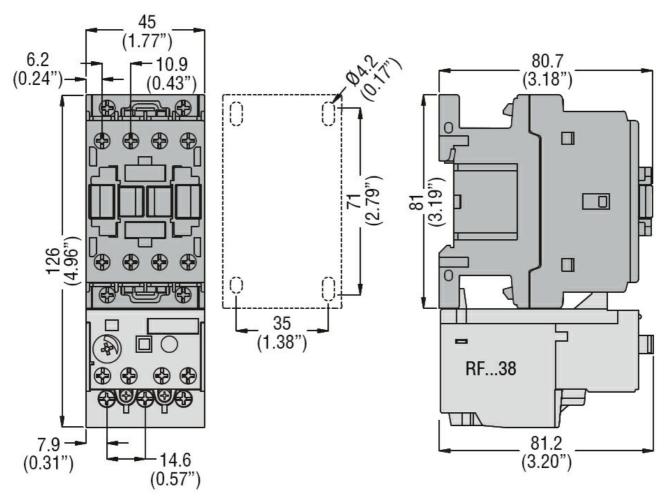
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up			
	·	min	%Us	85
		max	%Us	110
	drop-out			
	•	min	%Us	20
		max	%Us	55
AC average coil consu	umption at 20°C			
ar ar ar argument ar	of 50/60Hz coil powered at 50Hz			
	5. 56,66. 12 56.1 politicida de 501 12	in-rush	VA	75
		holding	VA	9
	of 50/60Hz coil powered at 60Hz	Holding	*/ \	
	3. 30/30/12 30/1 powered at 30/12	in-rush	VA	70
		holding	VA	6.5
	of 60Hz coil powered at 60Hz	Holding	VA	0.0
	or our iz con powered at our iz	in-rush	VA	75
		holding	VA	9
Dissipation at holding	<20°C 50H-	Holding	W	2.5
Dissipation at holding Max cycles frequency			۷V	2.3
iviax cycles frequency				
				2022
Mechanical operation			cycles/h	3600
Mechanical operation Operating times			cycles/h	3600
Mechanical operation Operating times	ontrol		cycles/h	3600
Mechanical operation Operating times	ontrol in AC		cycles/h	3600
Mechanical operation Operating times	ontrol			
Mechanical operation Operating times	ontrol in AC	min	ms	8
Mechanical operation Operating times	ontrol in AC Closing NO			
Mechanical operation Operating times	ontrol in AC	min max	ms ms	8 24
Mechanical operation Operating times	ontrol in AC Closing NO	min max min	ms ms	8 24 10
Mechanical operation Operating times	ontrol in AC Closing NO Opening NO	min max	ms ms	8 24
Mechanical operation Operating times	ontrol in AC Closing NO	min max min max	ms ms ms	8 24 10 20
Mechanical operation Operating times	ontrol in AC Closing NO Opening NO	min max min max min	ms ms ms ms	8 24 10 20
Mechanical operation Operating times	ontrol in AC Closing NO Opening NO Closing NC	min max min max	ms ms ms	8 24 10 20
Mechanical operation Operating times	ontrol in AC Closing NO Opening NO	min max min max min max	ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times	ontrol in AC Closing NO Opening NO Closing NC	min max min max min	ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times Average time for Us o	ontrol in AC Closing NO Opening NO Closing NC	min max min max min max	ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times Average time for Us of	ontrol in AC Closing NO Opening NO Closing NC Opening NC	min max min max min max min	ms ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times Average time for Us o	ontrol in AC Closing NO Opening NO Closing NC	min max min max min max min max	ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us o	ontrol in AC Closing NO Opening NO Closing NC Opening NC	min max min max min max min	ms ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times Average time for Us of	ontrol in AC Closing NO Opening NO Closing NC Opening NC	min max min max min max min max	ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of UL technical data Full-load current (FLA	ontrol in AC Closing NO Opening NO Closing NC Opening NC Opening NC	min max min max min max at 480V	ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of UL technical data Full-load current (FLA	ontrol in AC Closing NO Opening NO Closing NC Opening NC Opening NC	min max min max min max at 480V	ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of UL technical data Full-load current (FLA	ontrol in AC Closing NO Opening NO Closing NC Opening NC Opening NC opening NC	min max min max min max at 480V	ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of UL technical data Full-load current (FLA	ontrol in AC Closing NO Opening NO Closing NC Opening NC Opening NC opening NC	min max min max min max at 480V at 600V	ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of Us of Us technical data Full-load current (FLA)	ontrol in AC Closing NO Opening NO Closing NC Opening NC Opening NC of three-phase AC motor erformance for single-phase AC motor	min max min max min max at 480V at 600V	ms ms ms ms ms A	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us o	ontrol in AC Closing NO Opening NO Closing NC Opening NC Opening NC opening NC	min max min max min max at 480V at 600V	ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us of UL technical data Full-load current (FLA	ontrol in AC Closing NO Opening NO Closing NC Opening NC Opening NC of three-phase AC motor erformance for single-phase AC motor	min max min max min max at 480V at 600V	ms ms ms ms ms ms	8 24 10 20 14 28 7 18



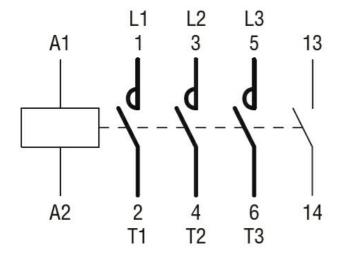


		460/480V	HP	7.5
		575/600V	HP	10
General USE				
	Contactor			
		AC current	Α	28
	Auxiliary contacts			
	•	AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protec	tion fuse, 600V			
•	High fault			
	9	Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	70
Contact rating of au	uxiliary contacts according to UL			A600 - P600
Ambient conditions				
Temperature				
	Operating temperature			
	o postaning south orange	min	°C	-50
		max	°C	70
	Storage temperature			
	Ctorage temperature	min	°C	-60
Max altitude		ax		
	ection			
				3
Max altitude Resistance & Prote Pollution degree Dimensions	ection	max	°C m	80 3000 3





Wiring diagrams



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

6/7



BF1210A230

Three-pole contactor, IEC operating current le (AC3) = 12A, AC coil 50/60Hz, 230VAC, 1NO auxiliary contact

cULus			
FAC			

ETIM classification

ETIM 8.0

BF1210A230

EC000066 -Power contactor, AC switching