



Product type designation			•	
Contact cheracteristics Number of poles Nr. 3 Rated insulation voltage Uil EC/EN V 690 Rated insulation voltage Uimp kV 6 Operational frequency min Hz 25 max Hz 400 400 IEC Conventional frequency min Hz 25 max Hz 400 400 IEC Conventional frequency min Hz 25 IEC Conventional frequency min Hz 25 IEC Conventional frequency max Hz 400 IEC conventional frequency max Hz 400 AC-1 (s60°C) A 28 AC-1 (s60°C) A 28 AC-1 (s50°C) A 20 AC-3 (s440V s55°C) A 12 Rated operational power AC-3 (Ts55°C) 230V kW 5.5 500V kW 5.5 Rated operational power AC-1 (Ts40°C) 230V kW 5 500V kW 5 Rated operational power AC-1 (Ts40°C)	Product designation			Power contactor
Number of poles Nr. 3 Rated insulation voltage Ui IEC/EN V 690 Rated insulation voltage Withstand voltage Uimp kV 6 Operational frequency min Hz 25 max Hz 400 BCC conventional free air thermal current Ith A 28 Operational current Ie AC-1 (≤40°C) A 28 AC-1 (≤55°C) A 23 AC-1 (≤70°C) A 20 AC-3 (≤440° ≤55°C) A 20 AC-3 (≤400° ≤55°C) A 12 AC-4 (4000°) A 7.9 Rated operational power AC-3 (T≤55°C) 230V kW 3.2 AC-4 (4000°) KW 5.7 A115°V KW 6.2 AC-4 (400°) KW 5.5 AC-4 (400°) KW 5.0 <td></td> <td></td> <td></td> <td>BF12</td>				BF12
Rated insulation voltage Ui IEC/EN V 690 Rated impulse withstand voltage Uimp kV 6 Operational frequency min Hz 25 IEC Conventional free air thermal current Ith A 28 Operational current Ie AC-1 (≤40°C) A 28 AC-1 (≤55°C) A 23 AC-1 (≤70°C) A 20 AC-3 (≤440V ≤55°C) A 20 AC-3 (≤440V ≤55°C) A 12 AC-4 (400V) A 7.9 A 7.9 Rated operational power AC-3 (T≤55°C) 230V kW 3.2 400V kW 5.7 415V kW 5.5 500V kW 5.5 500V kW 5.5 690V kW 3.2 400V kW 1.0 Rated operational power AC-1 (T≤40°C) 230V kW 1.0 400V kW 5.0 Rated operational power AC-1 (T≤40°C) 230V kW 1.0 400V kW 3.2 IEC m	Contact characteristics			
Rated impulse withstand voltage Uimp			Nr.	3
Department Franch Franc	Rated insulation voltage Ui IEC/EN		V	690
Min	Rated impulse withstand voltage Uimp		kV	6
EC Conventional free air thermal current Ith	Operational frequency			_
EC Conventional free air thermal current Ith		min	Hz	25
Operational current le AC-1 (≤45°C) A 28 AC-1 (≤55°C) A 23 AC-1 (≤70°C) A 20 AC-3 (≤440V ≤55°C) A 12 AC-4 (400V) A 7.9 Rated operational power AC-3 (T≤55°C) 230V kW 5.7 415V kW 5.7 415V kW 5.5 500V kW 5.5 500V kW 5.5 690V kW 5.5 500V kW 5.5 8 440V kW 18 500V kW 23 690V kW 32 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series \$\leq 24V \times A 15 75V A 13 \$\leq 24V \times A 20 48V A 20 \$\leq 24V \times A 18 110V A 18 \$\leq 24V \times A 20 48V A 20 \$\leq 24V \times A 18 110V A 18 \$\leq 24V \times A 20 75V A 18 \$\leq 24V \times A 22 75V A 20 \$\leq 24V \times A 22 \$\leq 24V \times A 22 \$\leq 24V \times A 22 \$\leq 24V \times A 20 \$\leq 24V \times A 20 \$\		max	Hz	400
AC-1 (≤40°C)	IEC Conventional free air thermal current Ith		Α	28
AC-1 (S55°C) A 23 AC-1 (S70°C) A 20 AC-3 (S440V S55°C) A 12 AC-4 (4000V) A 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 5.8 690V kW 5.8 690V kW 5.8 690V kW 3.2 800V 80 800V	Operational current le			
AC-1 (≤70°C) A 20 AC-3 (≤440V ≤55°C) A 12 AC-4 (400V) A 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 690V kW 5 800V 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 524V A 17 48V A 15 75V A 13 110V A 6 220V A 7 48V A 20 75V A 18 110V A 6 220V A 7 110V A 6 220V A 7 110V A 6 220V A 7 110V A 6 220V A 1 110V A 6 220V A 1 110V A 13 120V A 22 48V A 22 75V A 20		AC-1 (≤40°C)	Α	28
AC-3 (≤440V ≤55°C) A 12 AC-4 (400V) A 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 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 A 17 48V A 15 75V A 13 110V A 6 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 20 48V A 20 75V A 18 110V A 13 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 20 48V A 20 75V A 18 110V A 13 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		AC-1 (≤55°C)	Α	23
AC-4 (400V)		AC-1 (≤70°C)	Α	20
Rated operational power AC-3 (T≤55°C) 230V kW 3.2 400V kW 5.7 415V kW 6.2 4440V kW 5.5 500V kW 5 690V kW 5 690V kW 5 Rated operational power AC-1 (T≤40°C) 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 \$\frac{\text{\$\frac{2}{4}\$V A 15}}{\text{\$75\$V A 13}}\$ \$\frac{1}{110V A 6} 6\$ \$\frac{2}{220V A -}\$ IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series \$\frac{\text{\$\frac{2}{4}\$V A 20}}{\text{\$\frac{4}{8}\$V A 13}}\$ \$\frac{1}{10V A 6} 6\$ \$\frac{2}{220V A -}\$ IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series \$\frac{\text{\$\frac{2}{4}\$V A 20}}{\text{\$\frac{4}{8}\$V A 13}}\$ \$\frac{2}{220V A 1}\$ \$\frac{1}{8}\$V A 13 \$\frac{2}{220V A 1}\$ \$\frac{1}{8}\$V A 20 \$\frac{2}{4}\$V A 22		AC-3 (≤440V ≤55°C)	Α	12
230V kW 3.2 400V kW 5.7 415V kW 6.2 440V kW 5.5 500V kW 5 500V kW 10 400V kW 18 500V kW 23 690V kW 32 500V k		AC-4 (400V)	Α	7.9
400V kW 5.7 415V kW 6.2 440V kW 5.5 500V kW 5 500V kW 18 500V kW 23 690V kW 32 500V kW	Rated operational power AC-3 (T≤55°C)	,		
		230V	kW	3.2
A40V kW 5.5 500V kW 5 690V kW 10 400V kW 18 500V kW 23 690V kW 32 690V kW		400V	kW	5.7
Soov kW 5 690V kW 5		415V	kW	6.2
Soov kW 5 690V kW 5		440V	kW	
Rated operational power AC-1 (T≤40°C) 230V kW 10 400V kW 18 500V kW 23 690V kW 32 220V A 15 75V A 13 110V A 6 220V A - 220V A 1 220V A 22 48V A 2		500V	kW	
		690V	kW	
	Rated operational power AC-1 (T≤40°C)			
A00V kW 18 500V kW 23 690V kW 32	, ,	230V	kW	10
SooV kW 23 690V kW 32		400V	kW	
SEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series SE24V A 17 48V A 15 75V A 13 110V A 6 220V A -		500V	kW	23
		690V	kW	32
	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
Total content Total conte	·	≤24V	Α	17
110V A 6 220V A -		48V	Α	15
EC max current le in DC1 with L/R \leq 1ms with 2 poles in series \leq 24V A 20 48V A 20 75V A 18 110V A 13 220V A 1		75V	Α	13
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 20 48V A 20 75V A 18 110V A 13 220V A 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 22 48V A 22 75V A 20		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	
IEC max current le in DC1 with L/R \leq 1ms with 3 poles in series			Α	
≤24V A 22 48V A 22 75V A 20	IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			_
48V A 22 75V A 20	·	≤24V	Α	22
75V A 20				



	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	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. 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				Marchael I
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Moight			~	358
Weight Conductor section			g	300
Conductor section	ANAC // careil acan diverton acastic in			
	AWG/kcmil conductor section			40
Auvilian, contact char	actoriation	max		10
Auxiliary contact chara Thermal current Ith	acteristics		А	10
IEC/EN 60947-5-1 de	aignation		A	A600 - P600
Operating current AC	-			A000 - F000
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	15	24V	Α	5.7
		48V	A	2.9
		60V	A	2.3
		110V	A	2.3 1.25
		110V 125V	A	1.25
		220V	A	0.55
		600V	A	0.2
Operations				J. <u>Z</u>
Mechanical life			cycles	20000000
Electrical life			cycles	2000000
Safety related data			Oyolea	200000
•	0d according to EN/ISO 13489-1			
i chomance level DI	od docording to E14/100 10400-1	rated load	cycles	2000000
		mechanical load	cycles	2000000
Mirror contate accordi	ing to IEC/EN 609474-4-1	medianidal idad	cycles	
	IIIY 10 1EC/EIN 0034/4-4-1			yes
EMC compatibility				yes
AC coil operating	:0/60Hz		V	110
Rated AC voltage at 5	00/00F12		V	110

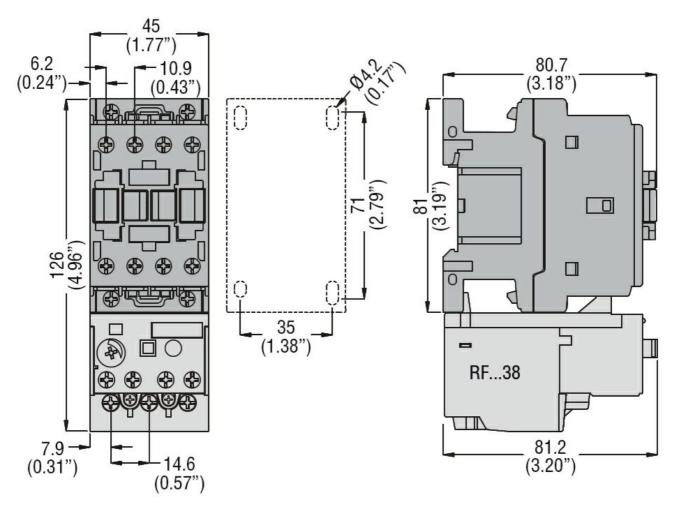
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
	·	min	%Us	80
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
	of 50/60Hz coil powered at 60Hz	IIIax	7003	
	•			
	pick-up		0/11	
		min	%Us	85
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
AC average coil consu	ımption at 20°C			
_	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	75
		holding	VA	9
	of EU/GULT and noward at GULT	Holding	VA	3
	of 50/60Hz coil powered at 60Hz	in-rush	VA	70
		holding	VA	6.5
	of 60Hz coil powered at 60Hz			
		in-rush	VA	75
		holding	VA	9
Dissipation at holding:	≤20°C 50Hz		W	2.5
Max cycles frequency				
Mechanical operation			cycles/h	3600
•				
Operating times				
Operating times Average time for Us co	ontrol			
Operating times Average time for Us co				
	in AC			
		mio		0
	in AC	min	ms	8
	in AC Closing NO	min max	ms ms	8 24
	in AC	max	ms	24
	in AC Closing NO	max min		10
	in AC Closing NO Opening NO	max	ms	24
	in AC Closing NO	max min	ms ms	10
	in AC Closing NO Opening NO	max min	ms ms	10
	in AC Closing NO Opening NO	max min max	ms ms ms	241020
	in AC Closing NO Opening NO Closing NC	max min max min	ms ms ms	24102014
	in AC Closing NO Opening NO	max min max min max	ms ms ms ms	2410201428
	in AC Closing NO Opening NO Closing NC	max min max min max min	ms ms ms ms ms	24102014287
Average time for Us co	in AC Closing NO Opening NO Closing NC	max min max min max	ms ms ms ms	2410201428
Average time for Us co	in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min	ms ms ms ms ms	24102014287
Average time for Us co	in AC Closing NO Opening NO Closing NC	max min max min max min max	ms ms ms ms ms	24 10 20 14 28 7 18
Average time for Us co	in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min max at 480V	ms ms ms ms ms	24 10 20 14 28 7 18
UL technical data Full-load current (FLA)	in AC Closing NO Opening NO Closing NC Opening NC Opening NC	max min max min max min max	ms ms ms ms ms	24 10 20 14 28 7 18
UL technical data Full-load current (FLA)	in AC Closing NO Opening NO Closing NC Opening NC Opening NC of for three-phase AC motor	max min max min max min max at 480V	ms ms ms ms ms	24 10 20 14 28 7 18
UL technical data Full-load current (FLA)	in AC Closing NO Opening NO Closing NC Opening NC Opening NC	max min max min max min max at 480V	ms ms ms ms ms	24 10 20 14 28 7 18
UL technical data Full-load current (FLA)	in AC Closing NO Opening NO Closing NC Opening NC Opening NC of for three-phase AC motor	max min max min max min max at 480V	ms ms ms ms ms	24 10 20 14 28 7 18
UL technical data Full-load current (FLA)	in AC Closing NO Opening NO Closing NC Opening NC Opening NC of for three-phase AC motor	max min max min max min max at 480V at 600V	ms ms ms ms ms A A	24 10 20 14 28 7 18 11 11
UL technical data Full-load current (FLA)	in AC Closing NO Opening NO Closing NC Opening NC Opening NC of for three-phase AC motor erformance for single-phase AC motor	max min max min max min max at 480V at 600V	ms ms ms ms ms ms	24 10 20 14 28 7 18
UL technical data Full-load current (FLA)	in AC Closing NO Opening NO Closing NC Opening NC Opening NC of for three-phase AC motor	max min max min max min max at 480V at 600V 110/120V 230V	ms ms ms ms ms ms	24 10 20 14 28 7 18 11 11 1
Average time for Us co	in AC Closing NO Opening NO Closing NC Opening NC Opening NC of for three-phase AC motor erformance for single-phase AC motor	max min max min max min max at 480V at 600V 110/120V 230V 200/208V	ms ms ms ms ms ms A A HP HP	24 10 20 14 28 7 18 11 11 2
UL technical data Full-load current (FLA)	in AC Closing NO Opening NO Closing NC Opening NC Opening NC of for three-phase AC motor erformance for single-phase AC motor	max min max min max min max at 480V at 600V 110/120V 230V	ms ms ms ms ms ms	24 10 20 14 28 7 18 11 11 1



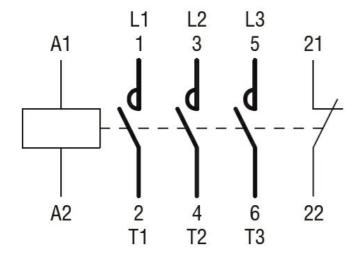


		460/480V	HP	7.5
		575/600V	HP	10
General USE				
	Contactor			
		AC current	Α	28
	Auxiliary contacts			
	·	AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protect	ction fuse, 600V			
·	High fault			
	Ç	Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	70
Contact rating of a	uxiliary 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	ection			
Pollution degree				3
Dimensions				





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



BF1201A110

Three-pole contactor, IEC operating current le (AC3) = 12A, AC coil 50/60Hz, 110VAC, 1NC auxiliary contact

CCC			
cULus			
EAC			

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching