





Product type designation	Product designation			Power contactor
Contact characteristics Nr. 3 Number of poles Nr. 690 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 A 28 Operational current Ie AC-1 (≤40°C) A 28 AC-1 (≤55°C) A 23 AC-1 (≤55°C) A 20 AC-3 (≤440V ≤55°C) A 12 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 AC-1 (≤40°V kW 5.7 AC-1 (≤40°V k	<u> </u>			
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 LEC 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 23 AC-3 (≤440°V ≤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 5.5 500V kW 5 500V kW 5 690V kW 10 400V kW 10 400V kW 13 10 40V kW 12 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series \$24V A				
Rated insulation voltage Ui IEC/EN V 690 Rated impulse withstand voltage Uimp kV 6 Operational frequency min Hz 25 max Hz 400 Hz 400 IEC Conventional free air thermal current Ith A 28 28 Operational current Ie AC-1 (\$40°C) A 28 AC-1 (\$70°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 5.7 415v kW 6.2 440v kW 5.5 500V kW 5.6 500V kW 5.6 690v kW 5.6 690v kW 1.0 400v			Nr.	3
Rated impulse withstand voltage Uimp	·			
Operational frequency min max max max Hz bit Hz had with Hz had with L/R ≤ 1ms with 1 poles in series Hz bit Hz had with L/R ≤ 1ms with 1 poles in series EZ24V A a 13 a 12 bit Max had with L/R ≤ 1ms with 2 poles in series EZ24V A a 12 bit Max had with L/R ≤ 1ms with 3 poles in series EZ24V A a 12 bit Max had with L/R ≤ 1ms with 3 poles in series EZ24V A a 12 bit Max had with L/R ≤ 1ms with 3 poles in series EZ24V A a 12 bit Max had with L/R ≤ 1ms with 3 poles in series EZ24V A a 12 bit Max had with L/R ≤ 1ms with 3 poles in series EZ24V A a 12 bit Max had with L/R ≤ 1ms with 3 poles in series EZ24V A a 13 bit Max had with 1 bit Max had with 2 bit Max had with 3 bit Max had w			kV	
Min Hz 25 max Hz 400 EC Conventional free air thermal current lth				
EC Conventional free air thermal current lth		min	Hz	25
ECC Conventional free air thermal current Ith Operational current Ie A				
AC-1 (≤40°C)	IEC Conventional free air thermal current Ith		Α	28
AC-1 (≤40°C)	Operational current le			
AC-1 (≤55°C)	·	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 5.6 690V kW 5.6 690V kW 5.7 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			Α	23
AC-4 (400V) A 7.9		•	Α	20
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 5.5 500V kW 5.7 690V kW 5.7 690V kW 5.8 8100 A00V kW 10 400V kW 18 500V kW 23 690V 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 48V A 20 75V A 18 110V A 13 220V A 1		AC-3 (≤440V ≤55°C)	Α	12
230V kW 3.2 400V kW 5.7 415V kW 6.2 446V kW 5.5 500V kW 5.5 500V kW 5.5 500V kW 5 500V kW 18 500V kW 18 500V kW 32 5		AC-4 (400V)	Α	7.9
400V kW 5.7 415V kW 6.2 440V kW 5.5 500V kW 5.5 500V kW 5 5 5 5 5 5 5 5 5	Rated operational power AC-3 (T≤55°C)			
415V kW 6.2 440V kW 5.5 500V kW 5 500V kW 10 400V kW 18 500V kW 23 690V kW 32 500V kW		230V	kW	3.2
A440V kW 5.5 500V kW 5 690V kW 10 400V kW 18 690V kW 23 690V kW 32 690V 4		400V	kW	5.7
S00V kW 5 690V kW 5 5 690V kW 5 5 690V kW 5 5 690V kW 5 690V kW 5 690V kW 10 400V kW 18 500V kW 23 690V kW 32 690V kW 40V 40		415V	kW	6.2
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 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 48V A 22 75V A 20		440V	kW	5.5
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			kW	5
		690V	kW	5
A00V kW 18 500V kW 23 690V kW 32	Rated operational power AC-1 (T≤40°C)			
S00V kW 23 690V kW 32				
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series S24V A 17 48V A 15 75V A 13 110V A 6 220V A -				
Section Sec				
		690V	kW	32
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
T5V A 13 110V A 6 220V A -				
110V A 6 220V A -				
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				
Section Sec				6
		220V	Α	_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		_	
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 22 48V A 22 75V A 20				
≤24V A 22 48V A 22 75V A 20	IFO was a summart to in DOA with 1/D 444 and 1/1 Out 1/2	220V	А	1
48V A 22 75V A 20	IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	20.00		20
75V A 20				
11UV A 16				
		110V	А	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			
120 max carrent to in 200 200 mar 2/11 = 10 ma mar 2 poise in conse	≤24V	Α	15
	48V	A	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	ZZU V		
TEO MAX current le in 200-2003 with E/K > 13ms with 3 poles in series	≤24V	۸	18
		A	
	48V	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)			
1 1 1 1 1 1	lth	W	2
	AC-3	W	0.4
Tightening torque for terminals	, 10 0	• •	U. 1
rightening torque for terminale	min	Nm	1.5
	max	Nm	1.8
	min	Ibin	1.1
Tightoning targue for call terminal	max	lbin	1.5
Tightening torque for coil terminal		N I .	0.0
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8





		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	1110/14			
	AWG/Kcmil			4.0
	Clavible w/o live an diretor postion	max		10
	Flexible w/o lug conductor section	min	mama ²	1
		min	mm² mm²	1 6
	Flexible c/w lug conductor section	max	111111	0
	r lexible 6/w lug corluction section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section			•
	r loxible mar inediated opade lag confederer cooler	min	mm²	1
		max	mm²	4
D (('			IP20 when
Power terminal protect	tion according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail
				35mm
Weight			g	358
Conductor section				
	AWG/kcmil conductor section			
A 10	and the second s	max		10
Auxiliary contact chara Thermal current Ith	acteristics		Α	10
	aignation		<u> </u>	10 A600 B600
IEC/EN 60947-5-1 de	•		A	A600 - P600
IEC/EN 60947-5-1 de	•	2201/		A600 - P600
IEC/EN 60947-5-1 de	•	230V	A	A600 - P600 3
IEC/EN 60947-5-1 de	•	400V	A A	A600 - P600 3 1.9
IEC/EN 60947-5-1 de Operating current AC	15		A	A600 - P600 3
IEC/EN 60947-5-1 de Operating current AC	15	400V 500V	A A A	3 1.9 1.4
IEC/EN 60947-5-1 de Operating current AC Operating current DC	12	400V	A A	A600 - P600 3 1.9
IEC/EN 60947-5-1 de Operating current AC Operating current DC	12	400V 500V 110V	A A A	3 1.9 1.4 5.7
IEC/EN 60947-5-1 de Operating current AC Operating current DC	12	400V 500V 110V 24V	A A A	3 1.9 1.4 5.7
IEC/EN 60947-5-1 de Operating current AC Operating current DC	12	400V 500V 110V	A A A	3 1.9 1.4 5.7
IEC/EN 60947-5-1 de Operating current AC Operating current DC	12	400V 500V 110V 24V 48V	A A A A	3 1.9 1.4 5.7 5.7
IEC/EN 60947-5-1 de Operating current AC Operating current DC	12	400V 500V 110V 24V 48V 60V	A A A A A	3 1.9 1.4 5.7 5.7 2.9 2.3
IEC/EN 60947-5-1 de Operating current AC Operating current DC	12	400V 500V 110V 24V 48V 60V 110V	A A A A A	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25
IEC/EN 60947-5-1 de Operating current AC Operating current DC	12	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
IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC	12	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
Operating current DC Mechanical life	12	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 0.2
Operating current DC Electrical life	12	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
Operating current DC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data	12	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
Operating current DC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data	12	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000
Operating current DC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data	12 13 Od 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
Operating current DC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B1	12 13 Od 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
Operating current DC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi	12 13 Od 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 yes
Operating current DC Operating current DC Operating current DC Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B1	12 13 Od 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



	0/60Hz			V	110
AC operating voltage					
	of 50/60Hz coil powered a	t 50Hz			
	pio	ck-up			
			min	%Us	80
			max	%Us	110
	dro	op-out		0/11	00
			min	%Us	20
	-f-50/001	+ COLI-	max	%Us	55
	of 50/60Hz coil powered a				
	ρic	ck-up	min	%Us	85
			max	%Us	110
	dr	op-out	IIIdX	/003	110
	uit	op out	min	%Us	20
			max	%Us	55
AC average coil consu	 Imption at 20°C		THAT.		
2 2.1 2.1 2.3	of 50/60Hz coil powered a	t 50Hz			
		- 	in-rush	VA	75
			holding	VA	9
	of 50/60Hz coil powered a	t 60Hz	<u> </u>		
	'		in-rush	VA	70
			holding	VA	6.5
	of 60Hz coil powered at 60)Hz			
			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					
Average time for Us co					
	·				
	in AC	a a in a NO			
		osing NO	min	ma	0
		osing NO	min	ms	8
	Cl	-	min max	ms ms	8 24
	Cl	osing NO	max	ms	24
	Cl	-	max min	ms ms	10
	CI Op	pening NO	max	ms	24
	CI Op	-	max min	ms ms	10
	CI Op	pening NO	max min max min	ms ms ms	24102014
	CI Op CI	pening NO	max min max	ms ms ms	24 10 20
	CI Op CI	pening NO	max min max min	ms ms ms	24102014
	CI Op CI	pening NO	max min max min max	ms ms ms ms	24 10 20 14 28
JL technical data	CI Op CI	pening NO	max min max min max min	ms ms ms ms ms	24 10 20 14 28 7
	CI Op CI	pening NO	max min max min max min max	ms ms ms ms ms	24 10 20 14 28 7
	CI Op CI Op	pening NO	max min max min max min max at 480V	ms ms ms ms ms ms	24 10 20 14 28 7 18
Full-load current (FLA)	CI Op Op Op	pening NO	max min max min max min max	ms ms ms ms ms	24 10 20 14 28 7 18
Full-load current (FLA)	Op Op Offor three-phase AC motor	pening NO osing NC pening NC	max min max min max min max at 480V	ms ms ms ms ms ms	24 10 20 14 28 7 18
Full-load current (FLA)	CI Op Op Op	pening NO osing NC pening NC	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
Full-load current (FLA)	Op Op Offor three-phase AC motor	pening NO osing NC pening NC	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
UL technical data Full-load current (FLA) Yielded mechanical pe	Op Cl Op for three-phase AC motor erformance for single-phase AC motor	pening NO osing NC pening NC	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
Full-load current (FLA)	Op Op Offor three-phase AC motor	pening NO osing NC pening NC	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

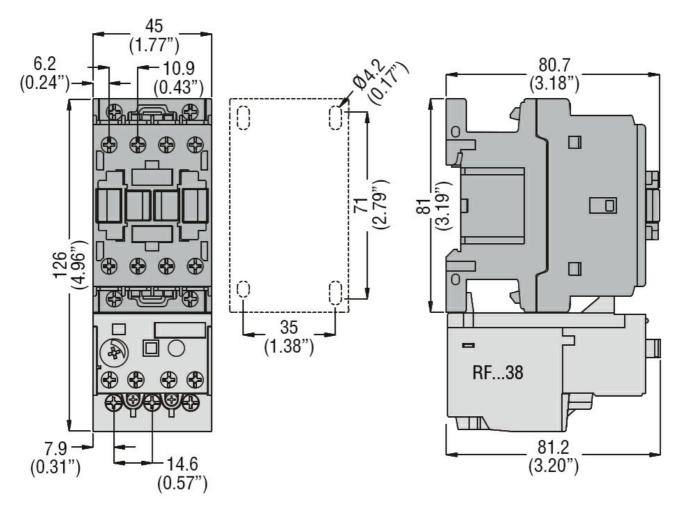




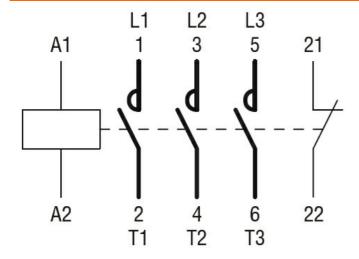
		220/230V	HP	5
		460/480V	HP	7.5
		575/600V	HP	10
General USE				
	Contactor			
		AC current	Α	28
	Auxiliary contacts			
	•	AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
Short-circuit protect	tion fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	70
Contact rating of au	ixiliary 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				

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, AC COIL 50/60HZ, 110VAC, 1NC AUXILIARY CONTACT



Wiring diagrams



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

BF1201A110



BF1201A110

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, AC COIL 50/60HZ, 110VAC, 1NC AUXILIARY CONTACT

CCC		
cULus		
EAC		

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching