





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       A 25         Operational current Ie       AC-1 (≤40°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9         Rated operational power AC-3 (T≤55°C)       230V kW 2.2 400V kW 4.2 415V kW 4.5 440V kW 4.8 500V kW 4.5 440V kW 4.8 500V kW 5.5 690V kW 7.5         Rated operational power AC-1 (T≤40°C)         230V kW 9.5 400V kW 16 500V kW 21 600V kW 21 600V kW 21 600V kW 27	Product designation Product type designation			Power contactor BF09
Number of poles         Nr.         3           Rated insulation voltage Ui IEC/EN         V         690           Rated insulation voltage Uimp         kV         690           Deparational frequency         min         Hz         25           max         Hž         400         400           IEC Conventional free air thermal current Ith         A         25           Operational current Ie         AC-1 (≤40°C)         A         25           AC-1 (555°C)         A         20         AC-1 (570°C)         A         18           AC-3 (5400V 55°C)         A         20         AC-1 (570°C)         A         18           AC-3 (5400V 55°C)         A         20         AC-4 (4000V)         A         4.9           Rated operational power AC-3 (T≤55°C)         230V kW         2.2         400V kW         4.5         440V kW         4.8         500V kW         2.5         500V kW         5.5         690V kW         7.5         A         10         690V kW         7.5         A         10         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0         4.0	T, T			БГОЭ
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         25           Operational current Ie         AC-1 (≤40°C)         A         25           AC-1 (≤55°C)         A         20         AC-1 (≤70°C)         A         18           AC-3 (≤440V ≤55°C)         A         9         AC-4 (400V)         A         49           Rated operational power AC-3 (T≤55°C)         230V         kW         2.2         400V         kW         4.5           440V         kW         4.5         440V         kW         4.5         440V         kW         4.5         440V         kW         4.5         440V         kW         5.5         690V         kW         7.5         5         5         690V         kW         7.5         5         690V         kW         7.5         690V         kW         7.5         690V         kW         9.5         40V         kW         1.6         50V         kW         2.2         40V         20         40V         kW         1.2 <td< td=""><td></td><td></td><td>Nr</td><td>3</td></td<>			Nr	3
Rated impulse withstand voltage Uimp				
Operational frequency         min max by max         Hz hz by 400           IEC Conventional free air thermal current lth         A 25           Operational current le         AC-1 (≤40°C) A 25 AC-1 (≤55°C) A 20 AC-1 (≤55°C) A 20 AC-1 (≤55°C) A 9 AC-4 (4000V) A 4.9           Rated operational power AC-3 (T≤55°C)         230V kW 2.2 400V kW 4.2 415V kW 4.5 440V kW 4.8 500V kW 7.5           Rated operational power AC-1 (T≤40°C)         230V kW 7.5           Rated operational power AC-1 (T≤40°C)         230V kW 9.5 400V kW 16 500V kW 16 500V kW 16 500V kW 21 609V kW 27           IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series         ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A -           IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series         ≤24V A 18 48V A 18 48V A 18 75V A 17 110V A 6 220V A -           IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series         ≤24V A 18 48V A 18 48				
Min			ΚV	0
EC Conventional free air thermal current lth	Operational frequency	min	<b>⊔</b> →	25
EC Conventional free air thermal current lth				
Operational current le       AC-1 (≤40°C)       A       25         AC-1 (≤55°C)       A       20         AC-1 (≤70°C)       A       18         AC-3 (≤440V ≤55°C)       A       9         AC-4 (400V)       A       4.9         Rated operational power AC-3 (T≤55°C)         230V       kW       2.2         400V       kW       4.2         415V       kW       4.8         500V       kW       5.5         690V       kW       7.5         Rated operational power AC-1 (T≤40°C)         230V       kW       9.5         400V       kW       16         500V       kW       21         690V       kW       27         IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series         ≤24V       A       15         48V       A       12         110V       A       6         220V       A       -         IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series       ≤24V       A       18         48V       A       18       75V       A       12         10 <td>IEC Conventional free air thermal aurrent Ith</td> <td>IIIdX</td> <td></td> <td></td>	IEC Conventional free air thermal aurrent Ith	IIIdX		
AC-1 (≤40°C)			A	23
AC-1 (≤55°C)	Operational current le	AC 1 (<10°C)	۸	0.5
AC-1 (≤70°C) A 18 AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9  Rated operational power AC-3 (T≤55°C)  230V kW 2.2 400V kW 4.2 415V kW 4.5 440V kW 4.8 500V kW 5.5 690V kW 7.5  Rated operational power AC-1 (T≤40°C)  230V kW 9.5 690V kW 7.5  Rated operational power AC-1 (T≤40°C)  230V kW 9.5 400V kW 16 500V kW 21 690V kW 27  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 18 48V A 18 75V A 17 110V A 12 220V A 1  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series				
AC-3 (≤440V ≤55°C) A 9 AC-4 (400V) A 4.9  Rated operational power AC-3 (T≤55°C)  230V kW 2.2 400V kW 4.2 415V kW 4.5 440V kW 4.8 500V kW 5.5 690V kW 7.5  Rated operational power AC-1 (T≤40°C)  230V kW 9.5 690V kW 21 690V kW 27  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A −  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 18 48V A 18 48V A 18 75V A 17 110V A 12 220V A 1  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		,		
AC-4 (400V)		,		
Rated operational power AC-3 (T≤55°C)  230V kW 2.2 400V kW 4.2 415V kW 4.5 440V kW 4.8 500V kW 5.5 690V kW 7.5  Rated operational power AC-1 (T≤40°C)  230V kW 9.5 400V kW 16 500V kW 16 500V kW 21 690V kW 27  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 18 48V A 18 48V A 18 75V A 17 110V A 12 220V A 1 110V A 2 220V A 1 1 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		•		
230V   kW   2.2   400V   kW   4.2   415V   kW   4.5   440V   kW   4.8   500V   kW   5.5   690V   kW   7.5   7.5   8   7.5   7.5   8   8   7.5   8   8   8   8   8   8   8   8   8		AC-4 (400V)	A	4.9
400V   kW   4.2   415V   kW   4.5   440V   kW   4.5   440V   kW   4.8   500V   kW   5.5   690V   kW   7.5	Rated operational power AC-3 (T≤55°C)			
415V   kW   4.5   440V   kW   4.8   500V   kW   5.5   690V   kW   7.5				
A40V   kW   4.8   500V   kW   5.5   690V   kW   7.5				
Soov   kW   5.5   690V   kW   7.5				
Rated operational power AC-1 (T≤40°C)   230V   kW   9.5   400V   kW   16   500V   kW   21   690V   kW   27     27     27     27     27     27     28   27     28   28		440V	kW	
Rated operational power AC-1 (T≤40°C)  230V kW 9.5 400V kW 16 500V kW 21 690V kW 27  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 18 48V A 18 75V A 18 48V A 18 75V A 17 110V A 12 220V A 1  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 20 48V A 20 48V A 20 75V A 20		500V	kW	5.5
		690V	kW	7.5
400V   kW   16   500V   kW   21   690V   kW   27	Rated operational power AC-1 (T≤40°C)			
Soov   kW   21   690V   kW   27		230V	kW	9.5
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series   ≤24V		400V	kW	16
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 15 48V A 13 75V A 12 110V A 6 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 18 48V A 18 75V A 17 110V A 18 75V A 17 110V A 12 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 20		500V	kW	21
		690V	kW	27
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
T5V   A   12   110V   A   6   220V   A   -	·	≤24V	Α	15
T5V   A   12   110V   A   6   220V   A   -		48V		
110V   A   6   220V   A   -				
EC max current le in DC1 with L/R $\leq$ 1ms with 2 poles in series   $\leq$ 24V   A   18   48V   A   18   75V   A   17   110V   A   12   220V   A   1   110V   A   20   24V   A   20   20V   A   20V   A			Α	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 18 48V A 18 75V A 17 110V A 12 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 20				
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	<del>-</del> <del>-</del>		
		<24\/	Α	18
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 20 48V A 20 75V A 20				
≤24V A 20 48V A 20 75V A 20	IFC may current le in DC1 with I /R < 1ms with 3 notes in series	220 V		•
48V A 20 75V A 20		<0111	٨	20
75V A 20				
TIUV A 15				
		1100	А	19





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	220V	Α	10
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	10
	48V	Α	9
	75V	Α	8
	110V	Α	2
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	13
	48V	Α	11
	75V	A	10
	110V	A	7
	220V	A	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	2201		
TEO MAX CUITETILIE III DOG-DOG WILLI LIN > 101115 WILLI 3 POLES III SELIES	20AV	۸	15
	≤24V 48V	A	15 15
		A	15
	75V	A	13
	110V	A	11
	220V	A	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	12
	220V	Α	7
Short-time allowable current for 10s (IEC/EN60947-1)		Α	150
Protection fuse			
	gG (IEC)	Α	25
	aM (IEC)	Α	10
Making capacity (RMS value)		Α	90
Breaking capacity at voltage			
- · · · · · · · · · · · · · · · · · · ·	440V	Α	72
	500V	Α	72
	690V	Α	71
Resistance per pole (average value)	300.	mΩ	2.5
Power dissipation per pole (average value)		.1134	
1 ones dissipation per pero (average value)	Ith	W	1.6
	AC-3	W	0.2
Tightening torque for terminals	70-3	v v	0.2
rightening torque for terminals	min	Nim	1.5
	min	Nm Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
This is the state of the state	max	lbin	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	Ibin	0.8





		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	AMO ((4)			
	AWG/Kcmil			4.0
	Florible w/e lug conductor coetien	max		10
	Flexible w/o lug conductor section	min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section	IIIax	111111	0
	r lexible c/w lug conductor section	min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section	max		•
	r rexide mar mediated opade rag corradeter econom	min	mm²	1
		max	mm²	4
				IP20 when
Power terminal prote	ction according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail
				35mm
Weight			g	492
Conductor section				
	AWG/kcmil conductor section			
		max		10
Auxiliary contact char		max		
Thermal current Ith	racteristics	max	A	10
Thermal current Ith IEC/EN 60947-5-1 de	esignation	max	A	
Thermal current Ith IEC/EN 60947-5-1 de	esignation			10 A600 - P600
Thermal current Ith IEC/EN 60947-5-1 de	esignation	230V	A	10 A600 - P600
Thermal current Ith IEC/EN 60947-5-1 de	esignation	230V 400V	A A	10 A600 - P600 3 1.9
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	esignation 215	230V	A	10 A600 - P600
Thermal current lth IEC/EN 60947-5-1 de Operating current AC	esignation 215	230V 400V 500V	A A A	10 A600 - P600 3 1.9 1.4
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V	A A	10 A600 - P600 3 1.9
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V 500V	A A A	10 A600 - P600 3 1.9 1.4
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V 500V 110V	A A A	10 A600 - P600 3 1.9 1.4 5.7
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V 500V 110V 24V 48V	A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V 500V 110V 24V 48V 60V	A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V 500V 110V 24V 48V 60V 110V	A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V 500V 110V 24V 48V 60V 110V 125V	A A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC	esignation 215	230V 400V 500V 110V 24V 48V 60V 110V 125V	A A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC	esignation 215	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC Operating current DC	esignation 215	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Thermal current lth IEC/EN 60947-5-1 de Operating current AC Operating current DC Operating current DC Operating current DC  Operating current DC  Electrical life	esignation 215	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC  Electrical life  Safety related data	esignation 215 212 213	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	10 A600 - P600 3 1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
Thermal current lth IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC  Electrical life  Safety related data	esignation 215	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	10 A600 - P600  3 1.9 1.4  5.7  5.7 2.9 2.3 1.25 1.1 0.55 0.2  20000000 2000000
Thermal current lth IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC  Electrical life  Safety related data	esignation 315 312 313 10d according to EN/ISO 13489-1	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	10 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
Thermal current Ith IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operations  Mechanical life Electrical life Safety related data Performance level B	esignation 212 213 10d according to EN/ISO 13489-1	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	10 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
Thermal current lth IEC/EN 60947-5-1 de Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC  Electrical life Electrical life Safety related data Performance level B	esignation 315 312 313 10d according to EN/ISO 13489-1	230V 400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	10 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





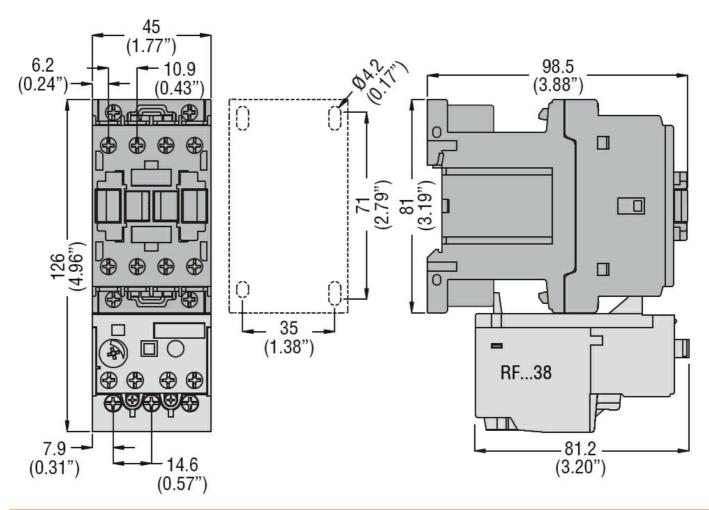
DC rated control voltage	ie			V	110
DC operating voltage	,,,			<u>*</u>	110
	pick-up				
			min	%Us	70
			max	%Us	125
	drop-out				
			min	%Us	10
			max	%Us	40
Average coil consumpt	tion ≤20°C				
			in-rush	W	5.4
			holding	W	5.4
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times	. ( )				
Average time for Us co					
	in AC	Clasing NO			
		Closing NO	min	ms	8
			max	ms	24
		Opening NO	Παλ	1113	<b>∠</b> -r
			min	ms	10
			max	ms	20
		Closing NC			
		-	min	ms	14
			max	ms	28
		Opening NC			
			min	ms	7
			max	ms	18
	in DC				
		Closing NO			- 4
			min	ms	54
		Opening NO	max	ms	66
		Opening NO	min	ms	14
			max	ms	17
		Closing NC	παλ	1113	• •
		0.00ig 140	min	ms	24
			max	ms	30
		Opening NC			
		. <del>-</del>	min	ms	47
			max	ms	57
UL technical data					
Full-load current (FLA)	for three-phase AC mo	otor			
			at 480V	Α	7.6
			at 600V	Α	0.375
Yielded mechanical pe					
	for single-phase AC r	notor	4404000		0.75
			110/120V	HP	0.75
	fan tlana i al a a A C		230V	HP	2
	for three-phase AC m	OTOľ	200/2021	UD	2
			200/208V 220/230V	HP HP	3
			220/230V 460/480V	HP HP	3 5
			575/600V	HP	7.5
			010/000V	1 11	



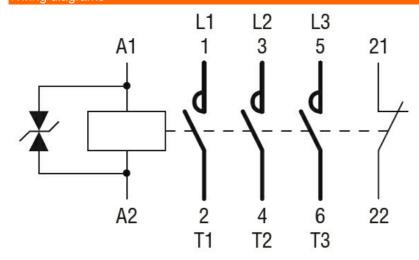


General USE				
	Contactor			
		AC current	Α	25
	Auxiliary contacts			
		AC voltage	V	600
		AC current	Α	10
		DC voltage	V	250
		DC current	Α	1
hort-circuit protection	on fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	60
	iliary contacts according to UL			A600 - P600
mbient conditions				
emperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
1ax altitude			m	3000
Resistance & Protec	tion			
mpact resistance				1111
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/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

#### Certificates



### BF0901D110

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 110VDC, 1NC AUXILIARY CONTACT

CCC			
cULus			
EAC			

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching