



Product designation				Power contactor
Product type designation				BF115
<b>Contact characteristics</b>				
Number of poles	Nr.			3
Rated insulation voltage $U_i$ IEC/EN	V			1000
Rated impulse withstand voltage $U_{imp}$	kV			8
Operational frequency	min	Hz	25	
	max	Hz	400	
IEC Conventional free air thermal current $I_{th}$	A			160
Operational current $I_e$	AC-1 ( $\leq 40^\circ\text{C}$ )	A	160	
	AC-1 ( $\leq 55^\circ\text{C}$ )	A	130	
	AC-1 ( $\leq 70^\circ\text{C}$ )	A	115	
	AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )	A	115	
	AC-4 (400V)	A	54	
Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )	230V	kW	37	
	400V	kW	55	
	415V	kW	55	
	440V	kW	55	
	500V	kW	75	
	690V	kW	110	
	1000V	kW	55	
Rated operational current AC-3 ( $T \leq 55^\circ\text{C}$ )	230V	A	115	
	400V	A	115	
	415V	A	115	
	440V	A	115	
	500V	A	106	
	690V	A	106	
	1000V	A	39	
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A	160	
	48V	A	160	
	75V	A	120	
	110V	A	10	
	220V	A	-	
	IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	$\leq 24\text{V}$	A	160
48V		A	160	
75V		A	160	
110V		A	130	
220V		A	14	
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series				

	≤24V	A	160
	48V	A	160
	75V	A	160
	110V	A	140
	220V	A	145
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IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series	≤24V	A	160
	48V	A	160
	75V	A	160
	110V	A	160
	220V	A	160
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series	≤24V	A	160
	48V	A	50
	75V	A	40
	110V	A	6
	220V	A	–
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	≤24V	A	160
	48V	A	72
	75V	A	65
	110V	A	65
	220V	A	7
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	≤24V	A	160
	48V	A	150
	75V	A	100
	110V	A	100
	220V	A	92
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	≤24V	A	160
	48V	A	120
	75V	A	120
	110V	A	125
	220V	A	115
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Short-time allowable current for 10s (IEC/EN60947-1)		A	920
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Protection fuse	gG (IEC)	A	200
	aM (IEC)	A	125
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Making capacity (RMS value)		A	1500
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Breaking capacity at voltage	440V	A	1200
	500V	A	850
	690V	A	905
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Resistance per pole (average value)		mΩ	0.45
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Power dissipation per pole (average value)	I <sub>th</sub>	W	11.5
	AC-3	W	6.0
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Tightening torque for terminals	min	Nm	6
	max	Nm	7
	min	I <sub>bin</sub>	4.4
	max	I <sub>bin</sub>	5.2

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1
min	lbin	0.59
max	lbin	0.74

Conductor section

AWG/Kcmil

max		2/0
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Flexible w/o lug conductor section

min	mm <sup>2</sup>	1.5
max	mm <sup>2</sup>	70

Flexible c/w lug conductor section

min	mm <sup>2</sup>	1.5
max	mm <sup>2</sup>	70

Power terminal protection according to IEC/EN 60529

IP20 front

**Mechanical features**

Operating position

normal allowable	Vertical plan ±30°
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Fixing

Screw / DIN rail  
35mm

Weight

g 2060

Conductor section

AWG/kcmil conductor section

max		2/0
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**Operations**

Mechanical life

cycles 15000000

Electrical life

cycles 1200000

**AC coil operating**

Rated AC voltage at 50/60Hz, 60Hz

min	V	20
max	V	48

AC operating voltage

of 50/60Hz coil powered at 50Hz  
pick-up

min	%Us	85 Us min
max	%Us	110

drop-out

max	%Us	≤70 Us min
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of 50/60Hz coil powered at 60Hz  
pick-up

min	%Us	85 Us min
max	%Us	110 Us max

drop-out

max	%Us	≤70 Us min
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AC average coil consumption at 20°C

of 50/60Hz coil powered at 50Hz

in-rush	VA	70...175
holding	VA	1.7...3.5

of 50/60Hz coil powered at 60Hz

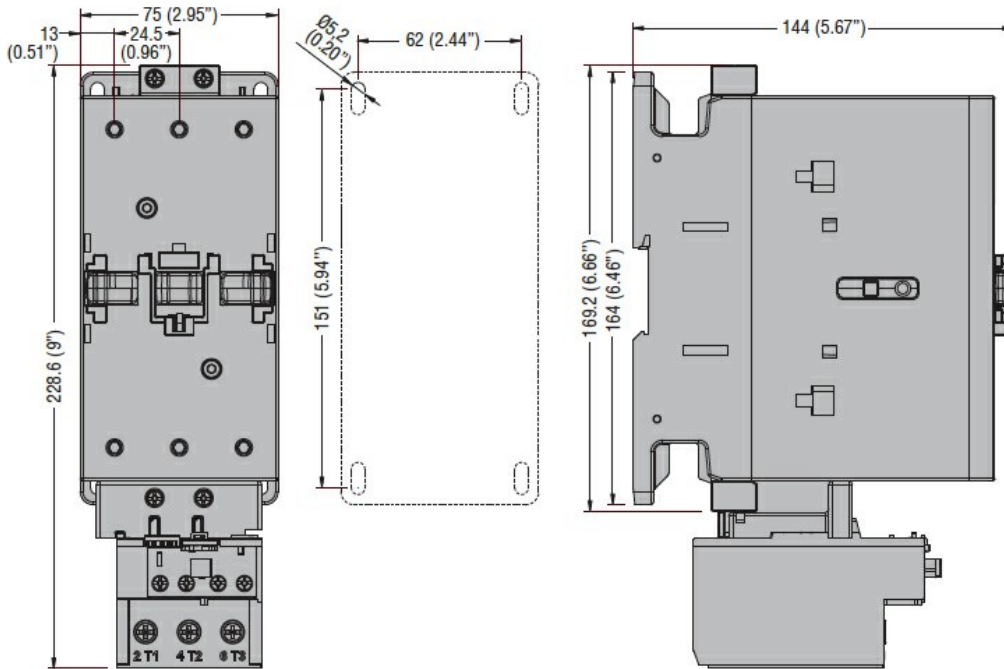
in-rush	VA	70...175
holding	VA	1.7...3.5

of 60Hz coil powered at 60Hz

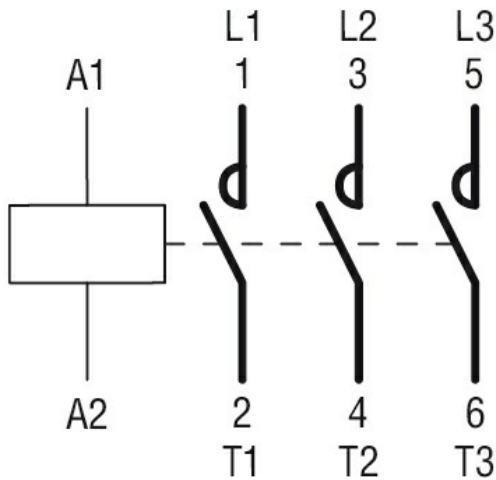
in-rush	VA	70...175
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	holding	VA	1.7...3.5
Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz		W	1.3...1,5
<b>DC coil operating</b>			
DC rated control voltage	min	V	20
	max	V	48
<b>DC operating voltage</b>			
pick-up	min	%Us	80 Us min
	max	%Us	110 Us max
drop-out	max	%Us	$\leq 70$ Us min
<b>Average coil consumption <math>\leq 20^{\circ}\text{C}</math></b>			
	in-rush	W	70...80
	holding	W	1.3...1.5
<b>Max cycles frequency</b>			
Mechanical operation		cycles/h	1500
<b>Operating times</b>			
Average time for Us control			
in AC			
Closing NO			
	min	ms	45
	max	ms	90
Opening NO			
	min	ms	24
	max	ms	60
<b>UL technical data</b>			
Yielded mechanical performance			
for three-phase AC motor			
	200/208V	HP	40
	220/230V	HP	40
	460/480V	HP	75
	575/600V	HP	100
<b>General USE</b>			
Contactor			
	AC current	A	165
<b>Short-circuit protection fuse, 600V</b>			
High fault			
	Short circuit current	kA	100
	Fuse rating	A	200
	Fuse class		J
Standard fault			
	Short circuit current	kA	10
	Fuse rating	A	250
	Fuse class		RK5
<b>Ambient conditions</b>			
Temperature			
Operating temperature			
	min	$^{\circ}\text{C}$	-50
	max	$^{\circ}\text{C}$	70
Storage temperature			
	min	$^{\circ}\text{C}$	-60
	max	$^{\circ}\text{C}$	+80
<b>Max altitude</b>			
		m	3000

### 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

CCC  
cULus

### ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching