



Product designation  
Product type designation

Power contactor  
BF150

**Contact characteristics**

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	165
Operational current $I_e$	AC-1 ( $\leq 40^\circ\text{C}$ )	A 165
	AC-1 ( $\leq 55^\circ\text{C}$ )	A 135
	AC-1 ( $\leq 70^\circ\text{C}$ )	A 118
	AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )	A 150
	AC-4 (400V)	A 70
Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )	230V	kW 45
	400V	kW 75
	415V	kW 75
	440V	kW 75
	500V	kW 90
	690V	kW 110
	1000V	kW 55
Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )	230V	kW 62
	400V	kW 110
	500V	kW 136
	690V	kW 187
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A 165
	48V	A 165
	75V	A 150
	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 165
	48V	A 165
	75V	A 165
	110V	A 150
	220V	A 14
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A 165
	48V	A 165
	75V	A 165

	110V	A	160
	220V	A	150
<hr/>			
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	165
	48V	A	165
	75V	A	165
	110V	A	165
	220V	A	165
<hr/>			
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	165
	48V	A	60
	75V	A	44
	110V	A	6
	220V	A	–
<hr/>			
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	165
	48V	A	82
	75V	A	70
	110V	A	80
	220V	A	7
<hr/>			
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	165
	48V	A	195
	75V	A	110
	110V	A	120
	220V	A	120
<hr/>			
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	165
	48V	A	130
	75V	A	130
	110V	A	150
	220V	A	150
<hr/>			
Short-time allowable current for 10s (IEC/EN60947-1)		A	1200
<hr/>			
Protection fuse			
	gG (IEC)	A	250
	aM (IEC)	A	160
<hr/>			
Making capacity (RMS value)		A	1500
<hr/>			
Breaking capacity at voltage			
	440V	A	1200
	500V	A	1025
	690V	A	905
<hr/>			
Resistance per pole (average value)		mΩ	0.45
<hr/>			
Power dissipation per pole (average value)			
	I <sub>th</sub>	W	12
	AC3	W	10.1
<hr/>			
Tightening torque for terminals			
	min	Nm	6
	max	Nm	7
	min	I <sub>bin</sub>	35.4
	max	I <sub>bin</sub>	44.3
<hr/>			
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1

		min	I <sub>bin</sub>	0.59
		max	I <sub>bin</sub>	0.74
Conductor section	AWG/Kcmil			
		max		2/0
	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
<b>Mechanical features</b>				
Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	2060
Conductor section	AWG/kcmil conductor section			
		max		2/0
<b>Operations</b>				
Mechanical life			cycles	15000000
Electrical life			cycles	800000
<b>Safety related data</b>				
Performance level B10d according to EN/ISO 13489-1		rated load	cycles	800000
Mirror contacts according to IEC/EN 60947-4-1				yes
EMC compatibility				yes
<b>AC coil operating</b>				
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	%U <sub>s</sub>	85 U <sub>s</sub> min
		max	%U <sub>s</sub>	110 U <sub>s</sub> max
	drop-out	max	%U <sub>s</sub>	≤70 U <sub>s</sub> min
	of 50/60Hz coil powered at 60Hz pick-up	min	%U <sub>s</sub>	85 U <sub>s</sub> min
		max	%U <sub>s</sub>	110 U <sub>s</sub> max
	drop-out	max	%U <sub>s</sub>	≤70 U <sub>s</sub> min
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
	holding	VA	1.7...3.5
Dissipation at holding ≤20°C 50Hz		W	1.3...1.5
<b>DC coil operating</b>			
DC rated control voltage			
	min	V	20
	max	V	48
DC operating voltage			
	pick-up		
	min	%Us	80 Us min
	max	%Us	110 Us max
	drop-out		
	max	%Us	≤70 Us min
Average coil consumption ≤20°C			
	in-rush	W	70...80
	holding	W	1.3...1.5
<b>Max cycles frequency</b>			
Mechanical operation		cycles/h	2000
<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
	in DC		
	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	50
	220/230V	HP	50
	460/480V	HP	100
	575/600V	HP	125
General USE			
	Contactor		
	AC current	A	165
Short-circuit protection fuse, 600V			
	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

**Ambient conditions**

Temperature

Operating temperature

min °C -40  
max °C 70

Storage temperature

min °C -50  
max °C 80

Max altitude

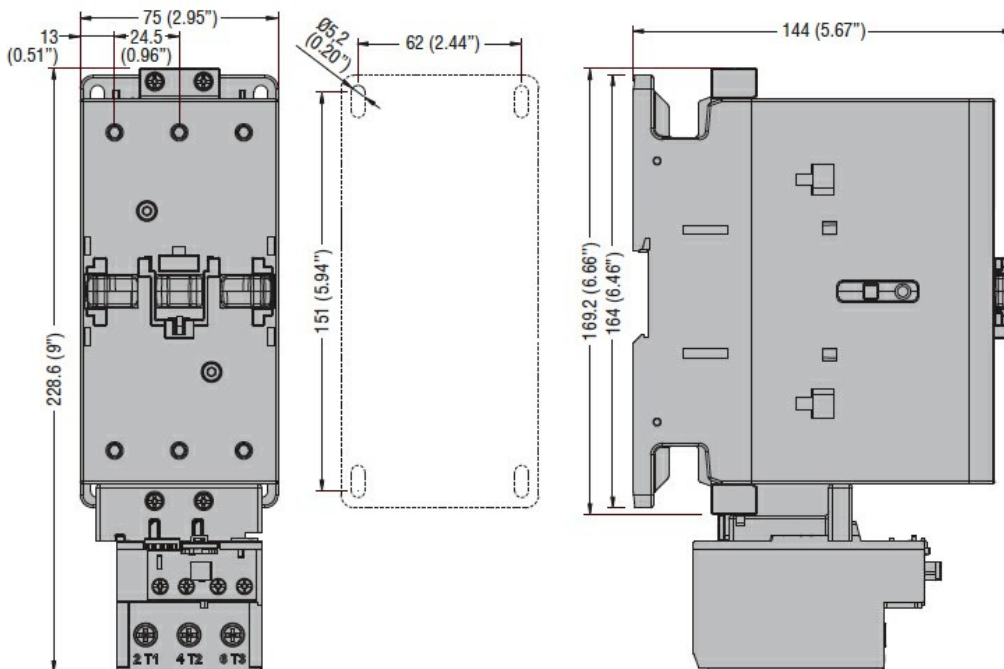
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**Resistance & Protection**

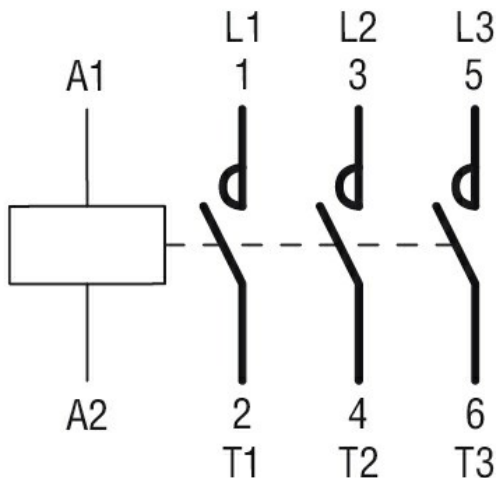
Pollution degree

3

**Dimensions [mm (in)]**



**Wiring diagrams**



**Certifications and compliance**

Compliance

CSA C22.2 n° 60947-1  
CSA C22.2 n° 60947-4-1

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IEC/EN/BS 60947-1

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IEC/EN/BS 60947-4-1

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UL 60947-1

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UL 60947-4-1

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Certificates

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ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching



Product designation  
Product type designation

Power contactor  
BF150

**Contact characteristics**

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	165
Operational current $I_e$	AC-1 ( $\leq 40^\circ\text{C}$ )	A 165
	AC-1 ( $\leq 55^\circ\text{C}$ )	A 135
	AC-1 ( $\leq 70^\circ\text{C}$ )	A 118
	AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )	A 150
	AC-4 (400V)	A 70
Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )	230V	kW 45
	400V	kW 75
	415V	kW 75
	440V	kW 75
	500V	kW 90
	690V	kW 110
	1000V	kW 55
Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )	230V	kW 62
	400V	kW 110
	500V	kW 136
	690V	kW 187
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A 165
	48V	A 165
	75V	A 150
	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 165
	48V	A 165
	75V	A 165
	110V	A 150
	220V	A 14
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A 165
	48V	A 165
	75V	A 165

	110V	A	160
	220V	A	150
<hr/>			
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	165
	48V	A	165
	75V	A	165
	110V	A	165
	220V	A	165
<hr/>			
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	165
	48V	A	60
	75V	A	44
	110V	A	6
	220V	A	–
<hr/>			
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	165
	48V	A	82
	75V	A	70
	110V	A	80
	220V	A	7
<hr/>			
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	165
	48V	A	195
	75V	A	110
	110V	A	120
	220V	A	120
<hr/>			
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	165
	48V	A	130
	75V	A	130
	110V	A	150
	220V	A	150
<hr/>			
Short-time allowable current for 10s (IEC/EN60947-1)		A	1200
<hr/>			
Protection fuse			
	gG (IEC)	A	250
	aM (IEC)	A	160
<hr/>			
Making capacity (RMS value)		A	1500
<hr/>			
Breaking capacity at voltage			
	440V	A	1200
	500V	A	1025
	690V	A	905
<hr/>			
Resistance per pole (average value)		mΩ	0.45
<hr/>			
Power dissipation per pole (average value)			
	I <sub>th</sub>	W	12
	AC3	W	10.1
<hr/>			
Tightening torque for terminals			
	min	Nm	6
	max	Nm	7
	min	I <sub>bin</sub>	35.4
	max	I <sub>bin</sub>	44.3
<hr/>			
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1



		min	I <sub>bin</sub>	0.59
		max	I <sub>bin</sub>	0.74
Conductor section	AWG/Kcmil			
		max		2/0
	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
<b>Mechanical features</b>				
Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	2060
Conductor section	AWG/kcmil conductor section			
		max		2/0
<b>Operations</b>				
Mechanical life			cycles	15000000
Electrical life			cycles	800000
<b>Safety related data</b>				
Performance level B10d according to EN/ISO 13489-1		rated load	cycles	800000
Mirror contacts according to IEC/EN 60947-4-1				yes
EMC compatibility				yes
<b>AC coil operating</b>				
Rated AC voltage at 50/60Hz, 60Hz		min	V	60
		max	V	110
AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up	min	%U <sub>s</sub>	80 U <sub>s</sub> min
		max	%U <sub>s</sub>	110 U <sub>s</sub> max
	drop-out	max	%U <sub>s</sub>	≤70 U <sub>s</sub> min
	of 50/60Hz coil powered at 60Hz pick-up	min	%U <sub>s</sub>	80 U <sub>s</sub> min
		max	%U <sub>s</sub>	110 U <sub>s</sub> max
	drop-out	max	%U <sub>s</sub>	≤70 U <sub>s</sub> min
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
	holding	VA	1.7...3.5
Dissipation at holding ≤20°C 50Hz		W	1.3...1.5
<b>DC coil operating</b>			
DC rated control voltage			
	min	V	60
	max	V	110
DC operating voltage			
pick-up			
	min	%Us	80 Us min
	max	%Us	110 Us max
drop-out			
	max	%Us	≤70 Us min
Average coil consumption ≤20°C			
	in-rush	W	70...80
	holding	W	1.3...1.5
<b>Max cycles frequency</b>			
Mechanical operation		cycles/h	2000
<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
in DC			
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	50
	220/230V	HP	50
	460/480V	HP	100
	575/600V	HP	125
General USE			
Contactor			
	AC current	A	165
Short-circuit protection fuse, 600V			
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

**Ambient conditions**

Temperature

Operating temperature

min °C -40  
max °C 70

Storage temperature

min °C -50  
max °C 80

Max altitude

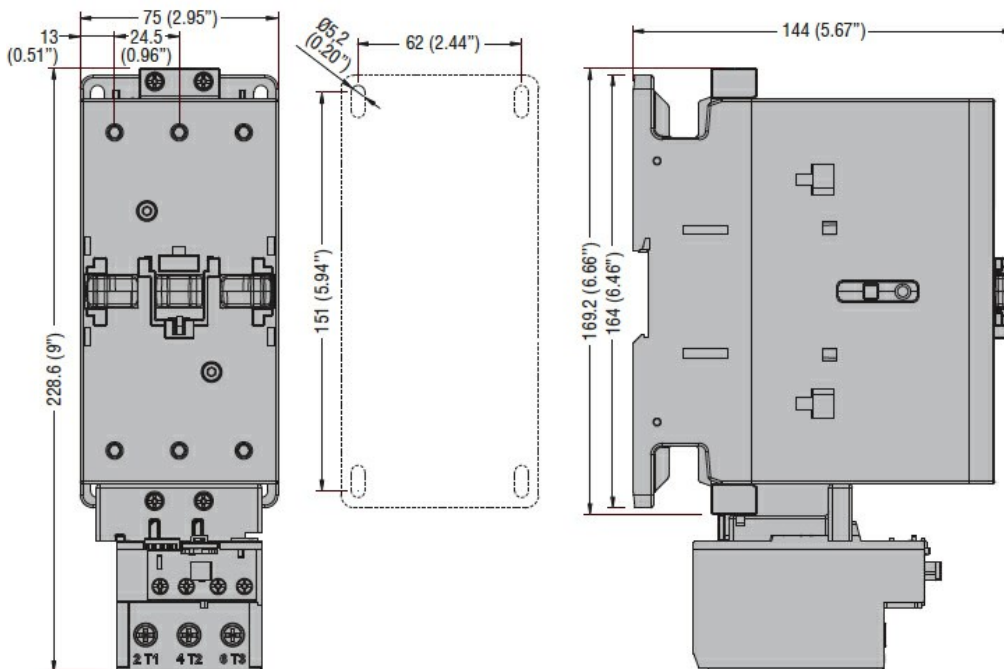
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**Resistance & Protection**

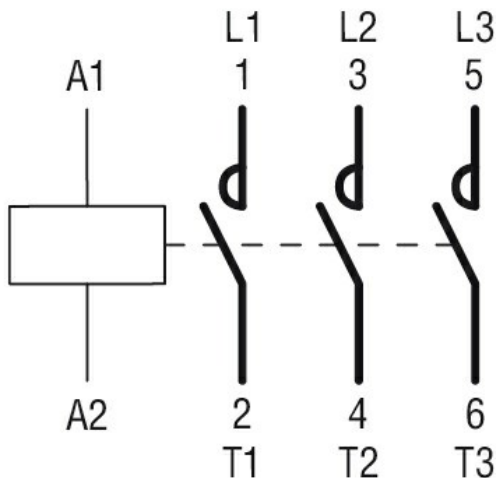
Pollution degree

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**Dimensions [mm (in)]**



**Wiring diagrams**



**Certifications and compliance**

Compliance

CSA C22.2 n° 60947-1  
CSA C22.2 n° 60947-4-1

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IEC/EN/BS 60947-1

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IEC/EN/BS 60947-4-1

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UL 60947-1

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UL 60947-4-1

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Certificates

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CCC

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ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching



Product designation  
Product type designation

Power contactor  
BF150

**Contact characteristics**

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	165
Operational current $I_e$	AC-1 ( $\leq 40^\circ\text{C}$ )	A 165
	AC-1 ( $\leq 55^\circ\text{C}$ )	A 135
	AC-1 ( $\leq 70^\circ\text{C}$ )	A 118
	AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )	A 150
	AC-4 (400V)	A 70
Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )	230V	kW 45
	400V	kW 75
	415V	kW 75
	440V	kW 75
	500V	kW 90
	690V	kW 110
	1000V	kW 55
Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )	230V	kW 62
	400V	kW 110
	500V	kW 136
	690V	kW 187
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A 165
	48V	A 165
	75V	A 150
	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 165
	48V	A 165
	75V	A 165
	110V	A 150
	220V	A 14
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A 165
	48V	A 165
	75V	A 165

	110V	A	160
	220V	A	150
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IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	165
	48V	A	165
	75V	A	165
	110V	A	165
	220V	A	165
<hr/>			
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	165
	48V	A	60
	75V	A	44
	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	165
	48V	A	82
	75V	A	70
	110V	A	80
	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	165
	48V	A	195
	75V	A	110
	110V	A	120
	220V	A	120
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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	165
	48V	A	130
	75V	A	130
	110V	A	150
	220V	A	150
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Short-time allowable current for 10s (IEC/EN60947-1)		A	1200
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Protection fuse			
	gG (IEC)	A	250
	aM (IEC)	A	160
<hr/>			
Making capacity (RMS value)		A	1500
<hr/>			
Breaking capacity at voltage			
	440V	A	1200
	500V	A	1025
	690V	A	905
<hr/>			
Resistance per pole (average value)		mΩ	0.45
<hr/>			
Power dissipation per pole (average value)			
	I <sub>th</sub>	W	12
	AC3	W	10.1
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Tightening torque for terminals			
	min	Nm	6
	max	Nm	7
	min	I <sub>bin</sub>	35.4
	max	I <sub>bin</sub>	44.3
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Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1

		min	I <sub>bin</sub>	0.59
		max	I <sub>bin</sub>	0.74
Conductor section	AWG/Kcmil	max		2/0
	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
<b>Mechanical features</b>				
Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	2060
Conductor section	AWG/kcmil conductor section	max		2/0
<b>Operations</b>				
Mechanical life			cycles	15000000
Electrical life			cycles	800000
<b>Safety related data</b>				
Performance level B10d according to EN/ISO 13489-1		rated load	cycles	800000
Mirror contacts according to IEC/EN 60947-4-1				yes
EMC compatibility				yes
<b>AC coil operating</b>				
Rated AC voltage at 50/60Hz, 60Hz		min	V	100
		max	V	250
AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up	min	%U <sub>s</sub>	80 U <sub>s</sub> min
		max	%U <sub>s</sub>	110 U <sub>s</sub> max
	drop-out	max	%U <sub>s</sub>	≤70 U <sub>s</sub> min
	of 50/60Hz coil powered at 60Hz pick-up	min	%U <sub>s</sub>	80 U <sub>s</sub> min
		max	%U <sub>s</sub>	110 U <sub>s</sub> max
	drop-out	max	%U <sub>s</sub>	≤70 U <sub>s</sub> min
AC average coil consumption at 20°C	of 50/60Hz coil powered at 50Hz	in-rush holding	VA	70...175
			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
	holding	VA	1.7...3.5
Dissipation at holding ≤20°C 50Hz		W	1.3...1.5
<b>DC coil operating</b>			
DC rated control voltage			
	min	V	100
	max	V	250
DC operating voltage			
pick-up			
	min	%Us	80 Us min
	max	%Us	110 Us max
drop-out			
	max	%Us	≤70 Us min
Average coil consumption ≤20°C			
	in-rush	W	70...80
	holding	W	1.3...1.5
<b>Max cycles frequency</b>			
Mechanical operation		cycles/h	2000
<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
in DC			
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	50
	220/230V	HP	50
	460/480V	HP	100
	575/600V	HP	125
General USE			
Contactor			
	AC current	A	165
Short-circuit protection fuse, 600V			
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

**Ambient conditions**

Temperature

Operating temperature

min °C -40  
max °C 70

Storage temperature

min °C -50  
max °C 80

Max altitude

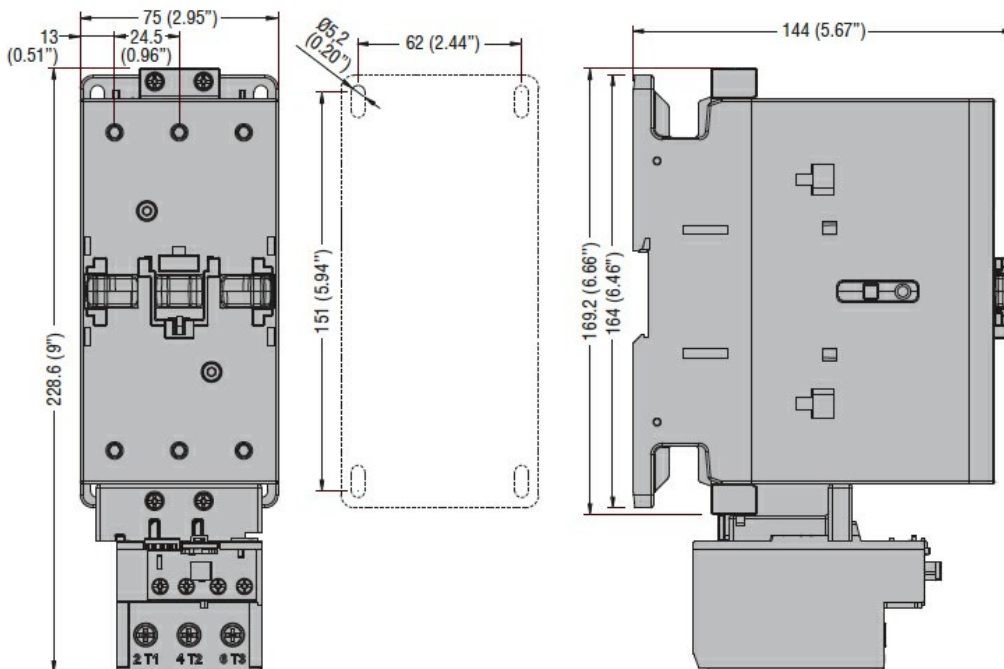
m 3000

**Resistance & Protection**

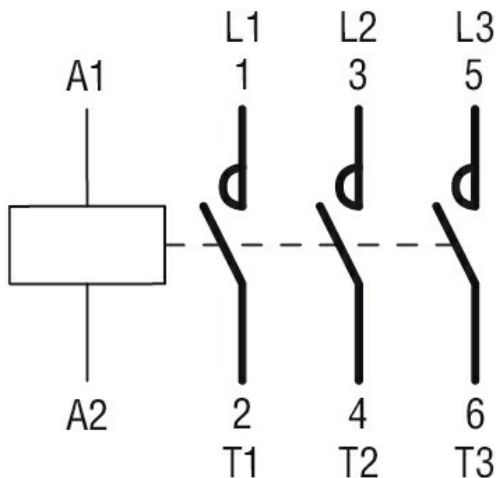
Pollution degree

3

**Dimensions [mm (in)]**



**Wiring diagrams**



**Certifications and compliance**

Compliance

CSA C22.2 n° 60947-1  
CSA C22.2 n° 60947-4-1

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IEC/EN/BS 60947-1

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IEC/EN/BS 60947-4-1

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UL 60947-1

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UL 60947-4-1

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Certificates

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CCC

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cULus

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ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching