



Contact characteristics

Number of poles	Nr.	4
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 $I_{th} \leq 40^\circ\text{C}$	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 current AC-3 ($T \leq 55^\circ\text{C}$)	230V	A 150
	400V	A 150
	415V	A 150
	440V	A 150
	500V	A 128
	690V	A 113
	1000V	A 51
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

IEC max current Ie 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	
IEC max current Ie 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	–	
IEC max current Ie 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	
IEC max current Ie 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	
IEC max current Ie 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	
Short-time allowable current for 10s (IEC/EN60947-1)		A	1200
Protection fuse			
	gG (IEC)	A	250
	aM (IEC)	A	160
Making capacity (RMS value)		A	1500
Breaking capacity at voltage			
	440V	A	1200
	500V	A	1025
	690V	A	905
Resistance per pole (average value)		mΩ	0.45
Power dissipation per pole (average value)			
	Ith	W	12
	AC-3	W	10.1
Tightening torque for terminals			
	min	Nm	6
	max	Nm	7
	min	Ibin	35.4
	max	Ibin	44.3
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	Ibin	0.59
	max	Ibin	0.74

Max number of wires simultaneously connectable			Nr.	2
Conductor section				
AWG/Kcmil				
		max	2/0	
Flexible w/o lug conductor section				
		min	mm ²	1.5
		max	mm ²	70
Flexible c/w lug conductor section				
		min	mm ²	1.5
		max	mm ²	70
Power terminal protection according to IEC/EN 60529				IP20 front
Mechanical features				
Operating position				
		normal allowable	Vertical plan ±30°	
Fixing				Screw / DIN rail 35mm
Weight			g	2460
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	800000
Safety related data				
Performance level B10d according to EN/ISO 13489-1				
		rated load	cycles	800000
		mechanical load	cycles	15000000
EMC compatibility				yes
AC coil operating				
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	%Us	80 Us min
		max	%Us	110 Us max
drop-out		max	%Us	≤70 Us min
of 50/60Hz coil powered at 60Hz				
pick-up		min	%Us	80 Us min
		max	%Us	110 Us max
drop-out		max	%Us	≤70 Us 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
DC coil operating			
DC rated control voltage		min	V 60
		max	V 110
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
Max cycles frequency			
Mechanical operation		cycles/h	2000
Operating times			
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
UL technical data			
Rated operational voltage AC (UL)		V	600
Yielded mechanical performance			
for three-phase AC motor			
		200/208V	HP 50
		220/240V	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

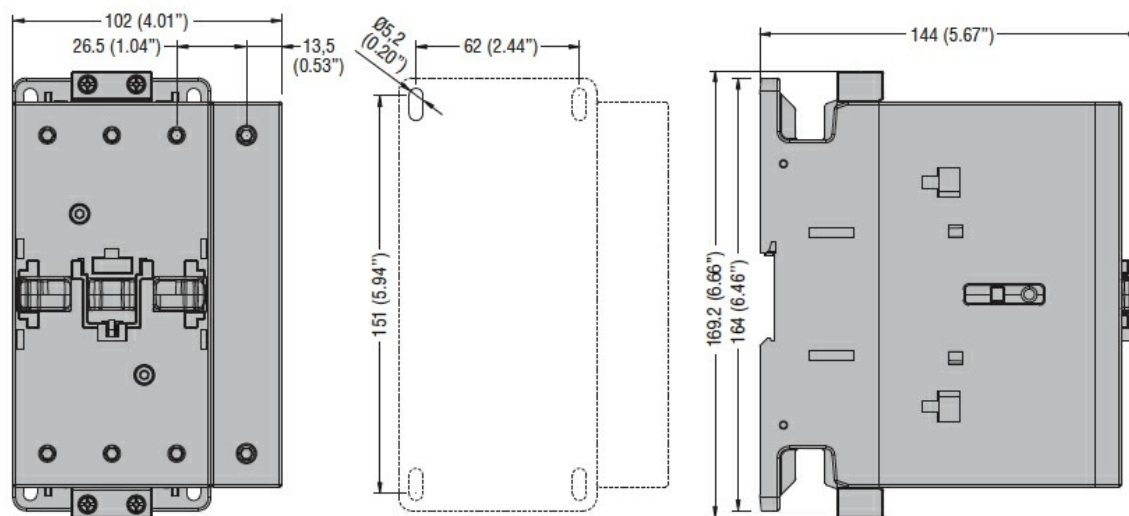
m	3000
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Resistance & Protection

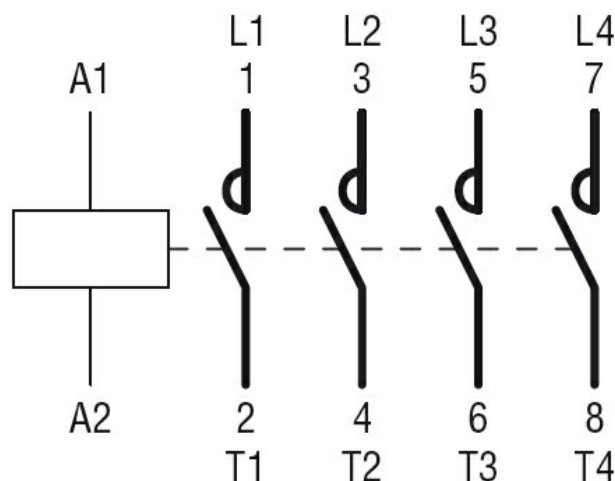
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN 60335-2-89

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

CSA C22.2 n. 60335-2-40:22 LZGH A2L
CSA C22.2 No. 60335-2-89:21 LZGH A2L
cULus
EAC
UL 60335-2-40 LZGH A2L
UL 60335-2-89 LZGH A2L

ETIM classification

ETIM 8.0	EC000066 - Power contactor, AC switching
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