



**Contact characteristics**

Number of poles	Nr.	3
Rated insulation voltage $U_i$ IEC/EN	V	690
Rated impulse withstand voltage $U_{imp}$	kV	6
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current $I_{th} \leq 40^\circ C$	A	56
Operational current $I_e$	AC-1 ( $\leq 40^\circ C$ )	A 56
	AC-1 ( $\leq 40^\circ C$ ) with 16mm <sup>2</sup> wire and fork end lug	A 0
	AC-1 ( $\leq 55^\circ C$ )	A 45
	AC-1 ( $\leq 55^\circ C$ ) with 16mm <sup>2</sup> wire and fork end lug	A 0
	AC-1 ( $\leq 70^\circ C$ )	A 40
	AC-1 ( $\leq 70^\circ C$ ) with 16mm <sup>2</sup> wire and fork end lug	A 0
	AC-3 ( $\leq 440V \leq 55^\circ C$ )	A 32
Rated operational power AC-3 ( $T \leq 55^\circ C$ )	AC-4 (400V)	A 13.5
	230V	kW 8.8
	400V	kW 16
	415V	kW 17
	440V	kW 17
	500V	kW 20
	690V	kW 22
Rated operational power AC-1 ( $T \leq 40^\circ C$ )	230V	kW 21
	400V	kW 36
	500V	kW 45
	690V	kW 62
	IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 1 poles in series	$\leq 24V$
48V		A 26
75V		A 22
110V		A 8
220V		A -
IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 2 poles in series		$\leq 24V$
	48V	A 32
	75V	A 28
	110V	A 25
	220V	A 3
	IEC max current $I_e$ in DC1 with $L/R \leq 1ms$ with 3 poles in series	$\leq 24V$
48V		A 32
75V		A 32

	110V	A	27
	220V	A	23
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IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series			
	$\leq 24\text{V}$	A	–
	48V	A	–
	75V	A	–
	110V	A	–
	220V	A	–
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IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series			
	$\leq 24\text{V}$	A	20
	48V	A	17
	75V	A	15
	110V	A	2,5
	220V	A	–
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IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series			
	$\leq 24\text{V}$	A	25
	48V	A	22
	75V	A	20
	110V	A	15
	220V	A	3
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IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series			
	$\leq 24\text{V}$	A	30
	48V	A	28
	75V	A	28
	110V	A	20
	220V	A	23
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IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series			
	$\leq 24\text{V}$	A	–
	48V	A	–
	75V	A	–
	110V	A	–
	220V	A	–
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Short-time allowable current for 10s (IEC/EN60947-1)		A	320
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Protection fuse			
	gG (IEC)	A	63
	aM (IEC)	A	32
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Making capacity (RMS value)		A	320
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Breaking capacity at voltage			
	440V	A	256
	500V	A	240
	690V	A	192
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Resistance per pole (average value)		m $\Omega$	2
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Power dissipation per pole (average value)			
	$I_{th}$	W	6
	AC-3	W	2
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Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
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Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1

	min	lbin	0.8
	max	lbin	0.74
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil			
	max		6
Flexible w/o lug conductor section			
	min	mm <sup>2</sup>	2.5
	max	mm <sup>2</sup>	16
Flexible c/w lug conductor section			
	min	mm <sup>2</sup>	1
	max	mm <sup>2</sup>	10
Flexible with insulated spade lug conductor section			
	min	mm <sup>2</sup>	1
	max	mm <sup>2</sup>	10
Power terminal protection according to IEC/EN 60529			IP20 when properly wired
Cable stripping length			
	main circuit	mm	0
	command circuit	mm	0
	auxiliary circuit	mm	0
<b>Mechanical features</b>			
Operating position			
	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	432
<b>Auxiliary contact characteristics</b>			
Type of contact			0
Thermal current I <sub>th</sub>		A	0
IEC/EN 60947-5-1 designation			A600 - Q600
Operating current AC15			
	230V	A	3
	400V	A	1.9
	500V	A	1.4
Operating current DC13			
	110V	A	0.55
	125V	A	0.55
	220V	A	0.27
	600V	A	0.1
<b>Operations</b>			
Mechanical life		cycles	20000000
Electrical life		cycles	1600000
<b>Safety related data</b>			
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	1600000
	mechanical load	cycles	20000000
EMC compatibility			yes
<b>AC coil operating</b>			
Rated AC voltage at 50/60Hz		V	24
AC operating voltage			
	of 50/60Hz coil powered at 50Hz		

	pick-up		min	%Us	80	
			max	%Us	110	
	drop-out		min	%Us	20	
			max	%Us	55	
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of 50/60Hz coil powered at 60Hz						
	pick-up		min	%Us	85	
			max	%Us	110	
	drop-out		min	%Us	20	
			max	%Us	55	
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AC average coil consumption at 20°C						
of 50/60Hz coil powered at 50Hz						
		in-rush	VA		75	
		holding	VA		9	
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of 50/60Hz coil powered at 60Hz						
		in-rush	VA		70	
		holding	VA		6.5	
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of 60Hz coil powered at 60Hz						
		in-rush	VA		75	
		holding	VA		9	
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Dissipation at holding ≤20°C 50Hz						
				W	2.5	
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<b>DC coil operating</b>						
DC operating voltage						
	pick-up		min	%Us	0	
			max	%Us	0	
<hr/>						
	drop-out		min	%Us	0	
			max	%Us	0	
<hr/>						
Average coil consumption ≤20°C						
				in-rush	W	0
				holding	W	0
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<b>Max cycles frequency</b>						
Mechanical operation					cycles/h	3600
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<b>Operating times</b>						
Average time for Us control						
in AC						
	Closing NO		min	ms	8	
			max	ms	24	
	Opening NO		min	ms	5	
			max	ms	15	
	Closing NC		min	ms	9	
			max	ms	20	
	Opening NC		min	ms	9	
			max	ms	17	
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in DC						
	Closing NO					

	min	ms	0
	max	ms	0
Opening NO			
	min	ms	0
	max	ms	0
Closing NC			
	min	ms	0
	max	ms	0
Opening NC			
	min	ms	0
	max	ms	0

**UL technical data**

Rated operational voltage AC (UL) V 600

Full-load current (FLA) for three-phase AC motor

at 480V	A	27
at 600V	A	27

Yielded mechanical performance

for single-phase AC motor

110/120V	HP	3
230V	HP	7.5

for three-phase AC motor

200/208V	HP	10
220/240V	HP	10
460/480V	HP	20
575/600V	HP	25

General USE

Contactor

AC current	A	55
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Short-circuit protection fuse, 600V

High fault

Short circuit current	kA	100
Fuse rating	A	100
Fuse class		J

Standard fault

Short circuit current	kA	5
Fuse rating	A	125

Contact rating of auxiliary contacts according to UL

A600 - Q600

**Ambient conditions**

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

m 3000

**Resistance & Protection**

Impact resistance

0

Vibration resistance

0

Special thermic treatments

0

Pollution degree

3

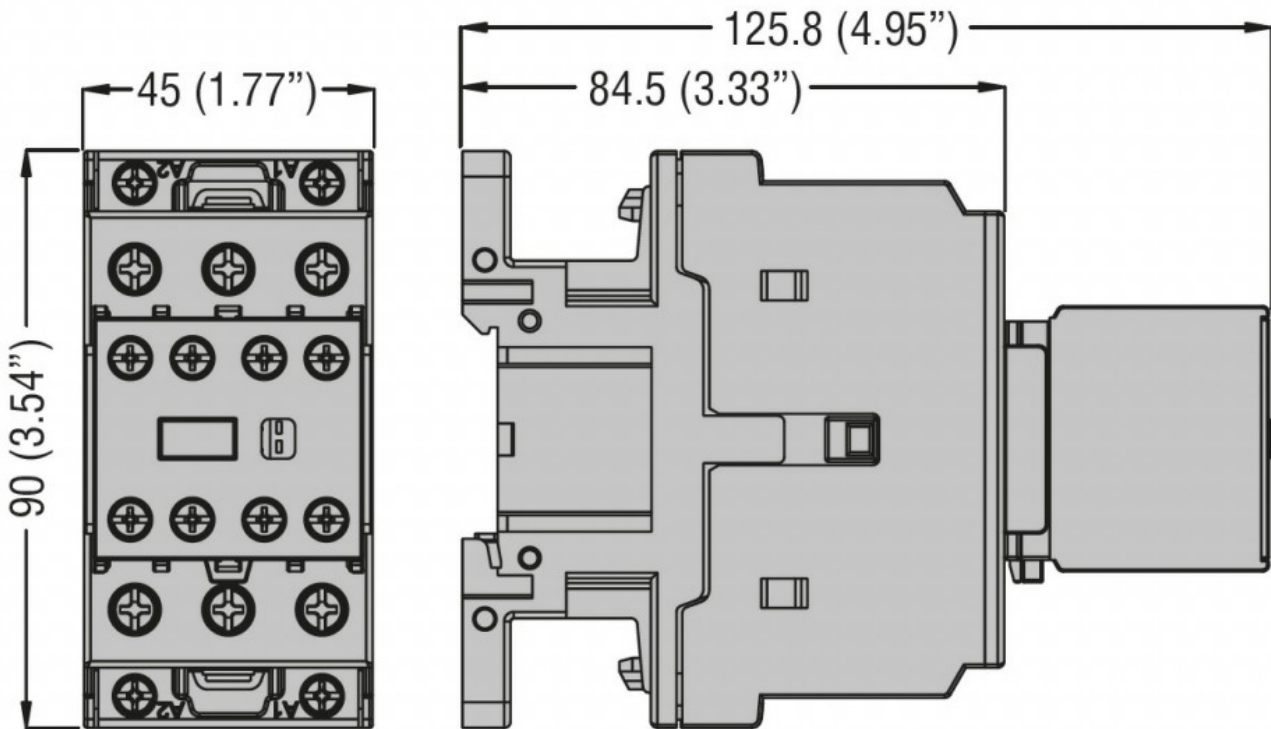
Resistance to flame (GWT)

0

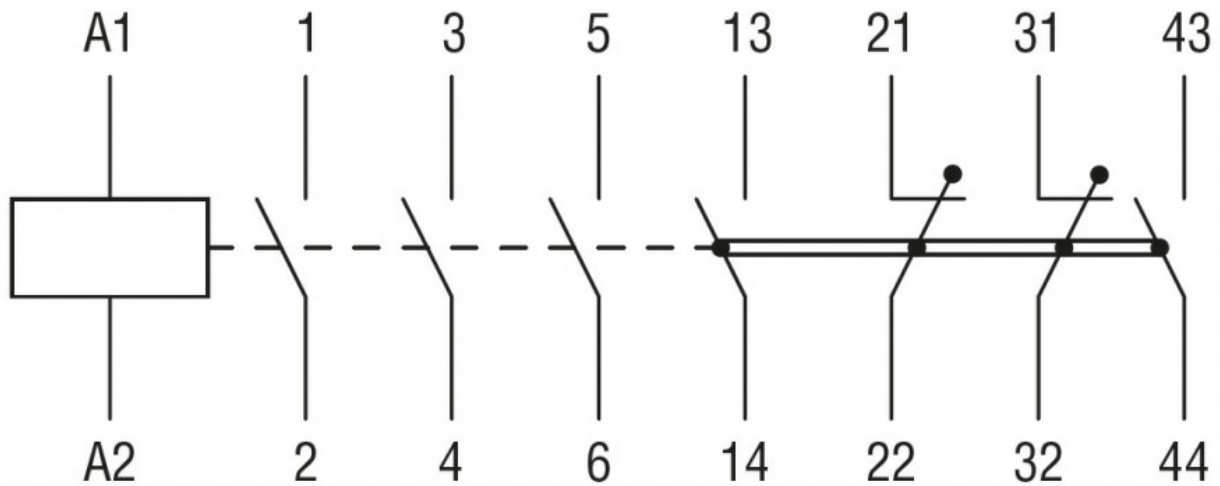
Flame retardant according to UL94

0

**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

IEC/EN/BS 60947-5-1

UL 60947-1

UL 60947-4-1

Certificates

cULus

UL listed for USA and Canada

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching