



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 $I_{th} \leq 40^\circ\text{C}$	A	25
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A 25
	AC-1 ($\leq 40^\circ\text{C}$) with 16mm ² wire and fork end lug	A 0
	AC-1 ($\leq 55^\circ\text{C}$)	A 20
	AC-1 ($\leq 55^\circ\text{C}$) with 16mm ² wire and fork end lug	A 0
	AC-1 ($\leq 70^\circ\text{C}$)	A 18
	AC-1 ($\leq 70^\circ\text{C}$) with 16mm ² wire and fork end lug	A 0
	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A 9
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	AC-4 (400V)	A 4.9
	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 ($T \leq 40^\circ\text{C}$)	230V	kW 9.5
	400V	kW 16
	500V	kW 21
	690V	kW 27
	IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$
48V		A 13
75V		A 12
110V		A 6
220V		A -
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series		$\leq 24\text{V}$
	48V	A 18
	75V	A 17
	110V	A 12
	220V	A 1
	IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$
48V		A 20
75V		A 20

	110V	A	15
	220V	A	10
<hr/>			
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series			
	$\leq 24\text{V}$	A	20
	48V	A	20
	75V	A	20
	110V	A	16
	220V	A	12
<hr/>			
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	10
	48V	A	9
	75V	A	8
	110V	A	2
	220V	A	–
<hr/>			
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	13
	48V	A	11
	75V	A	10
	110V	A	7
	220V	A	2
<hr/>			
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	15
	48V	A	15
	75V	A	13
	110V	A	11
	220V	A	6
<hr/>			
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	15
	48V	A	15
	75V	A	15
	110V	A	12
	220V	A	7
<hr/>			
Short-time allowable current for 10s (IEC/EN60947-1)		A	150
<hr/>			
Protection fuse			
	gG (IEC)	A	25
	aM (IEC)	A	10
<hr/>			
Making capacity (RMS value)		A	90
<hr/>			
Breaking capacity at voltage			
	440V	A	72
	500V	A	72
	690V	A	71
<hr/>			
Resistance per pole (average value)		m Ω	2.5
<hr/>			
Power dissipation per pole (average value)			
	I _{th}	W	1.6
	AC-3	W	0.2
<hr/>			
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
	max	lbin	1.5
<hr/>			
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1

	min	I _{bin}	0.8
	max	I _{bin}	0.74
Max number of wires simultaneously connectable		Nr.	2
Conductor section	AWG/Kcmil		
	max		10
Flexible w/o lug conductor section	min	mm ²	1
	max	mm ²	6
Flexible c/w lug conductor section	min	mm ²	1
	max	mm ²	4
Flexible with insulated spade lug conductor section	min	mm ²	1
	max	mm ²	4
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
Mechanical features			
Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	358
Auxiliary contact characteristics			
Thermal current I _{th}		A	10
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
Operations			
Mechanical life		cycles	20000000
Electrical life		cycles	2000000
Safety related data			
Performance level B10d according to EN/ISO 13489-1	rated load	cycles	2000000
	mechanical load	cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1 annex F			Yes
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz		V	110
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
<hr/>					
of 50/60Hz coil powered at 60Hz					
	pick-up		min	%Us	85
			max	%Us	110
	drop-out		min	%Us	20
			max	%Us	55
<hr/>					
AC average coil consumption at 20°C					
of 50/60Hz coil powered at 50Hz					
		in-rush	VA		75
		holding	VA		9
<hr/>					
of 50/60Hz coil powered at 60Hz					
		in-rush	VA		70
		holding	VA		6.5
<hr/>					
of 60Hz coil powered at 60Hz					
		in-rush	VA		75
		holding	VA		9
<hr/>					
Dissipation at holding ≤20°C 50Hz					
				W	2.5
DC coil operating					
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
				holding	W
					0
					0
<hr/>					
Max cycles frequency					
Mechanical operation					cycles/h
					3600
<hr/>					
Operating times					
Average time for Us control					
in AC					
	Closing NO		min	ms	8
			max	ms	24
	Opening NO		min	ms	10
			max	ms	20
	Closing NC		min	ms	14
			max	ms	28
	Opening NC		min	ms	7
			max	ms	18
<hr/>					
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	7.6
at 600V	A	9

Yielded mechanical performance

for single-phase AC motor

110/120V	HP	0.75
230V	HP	2

for three-phase AC motor

200/208V	HP	3
220/240V	HP	3
460/480V	HP	5
575/600V	HP	7.5

General USE

Contactor

AC current A 25

Auxiliary contacts

AC voltage	V	600
AC current	A	10
DC voltage	V	250
DC current	A	1

Short-circuit protection fuse, 600V

High fault

Short circuit current	kA	100
Fuse rating	A	30
Fuse class		J

Standard fault

Short circuit current	kA	5
Fuse rating	A	60

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

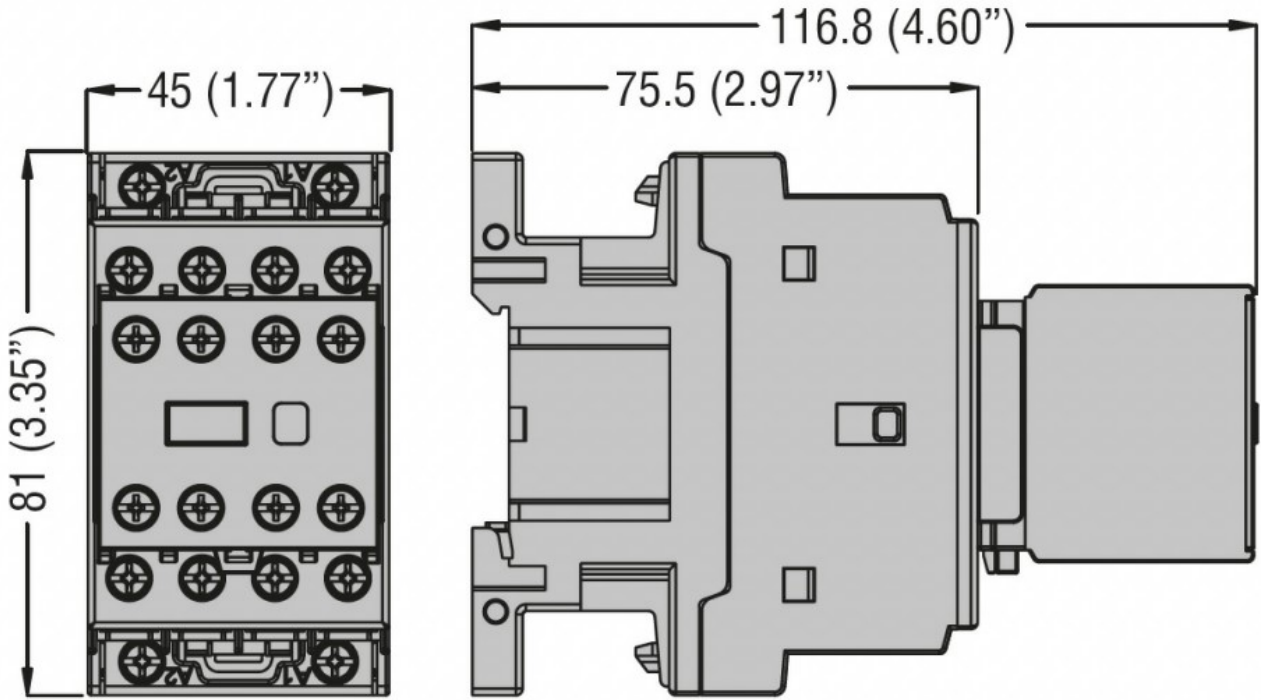
0

Vibration resistance

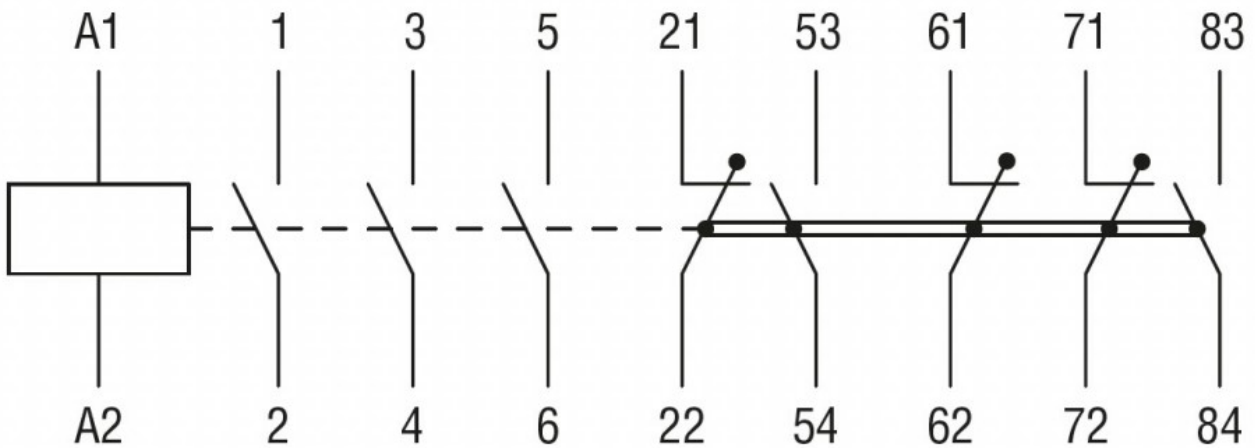
0

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