



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
	AC-4 (400V)	A 4.9
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	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	$\leq 24\text{V}$	A 15
	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	$\leq 24\text{V}$	A 18
	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	$\leq 24\text{V}$	A 20
	48V	A 20
	75V	A 20

	110V	A	15
	220V	A	10
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
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	–
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
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
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
Short-time allowable current for 10s (IEC/EN60947-1)		A	150
Protection fuse			
	gG (IEC)	A	25
	aM (IEC)	A	10
Making capacity (RMS value)		A	90
Breaking capacity at voltage			
	440V	A	72
	500V	A	72
	690V	A	71
Resistance per pole (average value)		m Ω	2.5
Power dissipation per pole (average value)			
	I_{th}	W	1.6
	AC-3	W	0.2
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
	max	lbin	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1

		min	I _{bin}	0.8
		max	I _{bin}	0.74
Contact characteristics				
	Tightening torque for auxiliary contact terminals	S _{min}		0.8
	Tightening torque for auxiliary contact terminals	S _{max}		1
	Tightening torque for auxiliary contact terminals	I _{bin}		7.1
	Tightening torque for auxiliary contact terminals	I _{bin}		8.8
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 lenght				
	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	360
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	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
of 50/60Hz coil powered at 60Hz				
pick-up			min	%Us 85
			max	%Us 110
drop-out			min	%Us 20
			max	%Us 55
AC average coil consumption at 20°C				
of 50/60Hz coil powered at 50Hz				
			in-rush	VA 75
			holding	VA 9
of 50/60Hz coil powered at 60Hz				
			in-rush	VA 70
			holding	VA 6.5
of 60Hz coil powered at 60Hz				
			in-rush	VA 75
			holding	VA 9
Dissipation at holding ≤20°C 50Hz			W	2.5
DC coil operating				
DC operating voltage				
pick-up			min	%Us 0
			max	%Us 0
drop-out			min	%Us 0
			max	%Us 0
Average coil consumption ≤20°C				
			in-rush	W 5.4
			holding	W 2.4
Max cycles frequency				
Mechanical operation			cycles/h	3600
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
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	

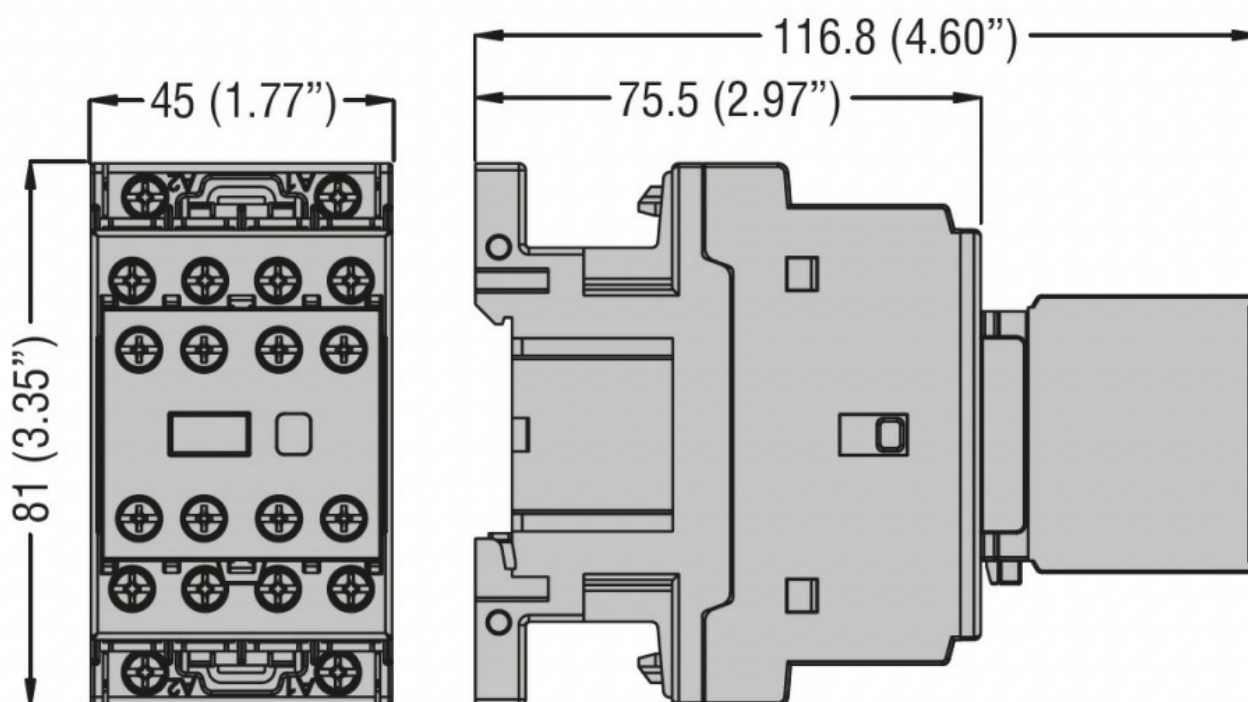
Contact rating of auxiliary contacts according to UL **A600 - Q600**

Ambient conditions

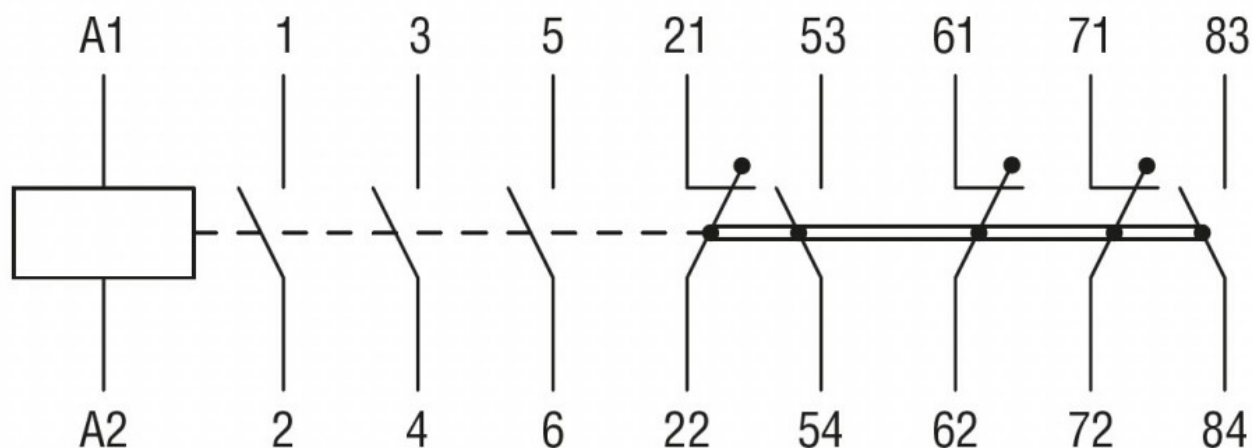
Temperature			
Operating temperature			
min	°C	-50	
max	°C	70	
Storage temperature			
min	°C	-60	

	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

THREE-POLE SAFETY CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL
50/60HZ, 24VAC, 2NO+3NC AUXILIARY CONTACT

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