



Power contactor
BG09

Product designation

Product type designation

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}	A	20
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A 20
	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A 9
	AC-4 (400V)	A 4
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V	kW 2.2
	400V	kW 4
	415V	kW 4.3
	440V	kW 4.5
	500V	kW 5
	690V	kW 5
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW 8
	400V	kW 14
	500V	kW 16
	690V	kW 22
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A 12
	48V	A 10
	75V	A 4
	110V	A 3
	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 15
	48V	A 14
	75V	A 9
	110V	A 8
	220V	A —
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A 16
	48V	A 16
	75V	A 10
	110V	A 10
	220V	A 2
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series		

	≤24V	A	16
	48V	A	16
	75V	A	10
	110V	A	10
	220V	A	2
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	7
	48V	A	6
	75V	A	2
	110V	A	1
	220V	A	–
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	8
	48V	A	8
	75V	A	5
	110V	A	4
	220V	A	–
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	10
	48V	A	10
	75V	A	6
	110V	A	5
	220V	A	0,8
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	10
	48V	A	10
	75V	A	6
	110V	A	5
	220V	A	0,8
Short-time allowable current for 10s (IEC/EN60947-1)		A	96
Protection fuse			
	gG (IEC)	A	20
	aM (IEC)	A	10
Making capacity (RMS value)		A	92
Breaking capacity at voltage			
	440V	A	72
	500V	A	72
	690V	A	72
Resistance per pole (average value)		mΩ	10
Power dissipation per pole (average value)			
	I _{th}	W	4
	AC3	W	0.81
Tightening torque for terminals			
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.59
	max	lbin	0.74
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	lbft	0.8
	max	lbft	0.74
Max number of wires simultaneously connectable		nr.	2

Conductor section				
Flexible w/o lug conductor section				
	min	mm²	0.75	
	max	mm²	2.5	
Flexible c/w lug conductor section				
	min	mm²	1.5	
	max	mm²	2.5	
Flexible with insulated spade lug conductor section				
	min	mm²	1.5	
	max	mm²	2.5	
Power terminal protection according to IEC/EN 60529			IP20 when wired	
Mechanical features				
Operating position				
	normal allowable		vertical plan ±30°	
Fixing			Screw / DIN rail 35mm	
Weight			g	182
Auxiliary contact characteristics				
Type of contact			1 NO	
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 DC12				
	110V	A	2.9	
Operating current DC13				
	24V	A	2.9	
	48V	A	1.4	
	60V	A	1.2	
	110V	A	0.6	
	125V	A	0.55	
	220V	A	0.3	
	600V	A	0.1	
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	500000
Safety related data				
Performance level B10d according to EN/ISO 13489-1				
	rated load	cycles	500000	
	mechanical load	cycles	20000000	
Mirror contats according to IEC/EN 609474-4-1			yes	
EMC compatibility			Yes	
AC coil operating				
Rated AC voltage at 50/60Hz			V	230
AC operating voltage				
of 50/60Hz coil powered at 50Hz				
pick-up				
	min	%Us	75	
	max	%Us	115	
drop-out				

		min	%Us	20
		max	%Us	55
of 50/60Hz coil powered at 60Hz				
pick-up		min	%Us	80
		max	%Us	115
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	30
		holding	VA	4
of 50/60Hz coil powered at 60Hz				
		in-rush	VA	25
		holding	VA	3
of 60Hz coil powered at 60Hz				
		in-rush	VA	30
		holding	VA	4
Dissipation at holding ≤20°C 50Hz			W	0.95
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us control				
in AC				
Closing NO				
		min	ms	12
		max	ms	21
Opening NO				
		min	ms	9
		max	ms	18
Closing NC				
		min	ms	17
		max	ms	26
Opening NC				
		min	ms	7
		max	ms	17
in DC				
Closing NO				
		min	ms	18
		max	ms	25
Opening NO				
		min	ms	2
		max	ms	3
Closing NC				
		min	ms	3
		max	ms	5
Opening NC				
		min	ms	11
		max	ms	17
UL technical data				
Full-load current (FLA) for three-phase AC motor				
		at 480V	A	7.6
		at 600V	A	6.1

Yielded mechanical performance

for single-phase AC motor

110/120V	HP	0.5
230V	HP	1.5

for three-phase AC motor

200/208V	HP	2
220/230V	HP	3
460/480V	HP	5
575/600V	HP	5

General USE

Contactor

AC current	A	20
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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	30

Contact rating of auxiliary contacts according to UL

A600 - Q600

Ambient conditions

Temperature

Operating temperature

min	°C	-40
max	°C	60

Storage temperature

min	°C	-55
max	°C	70

Max altitude

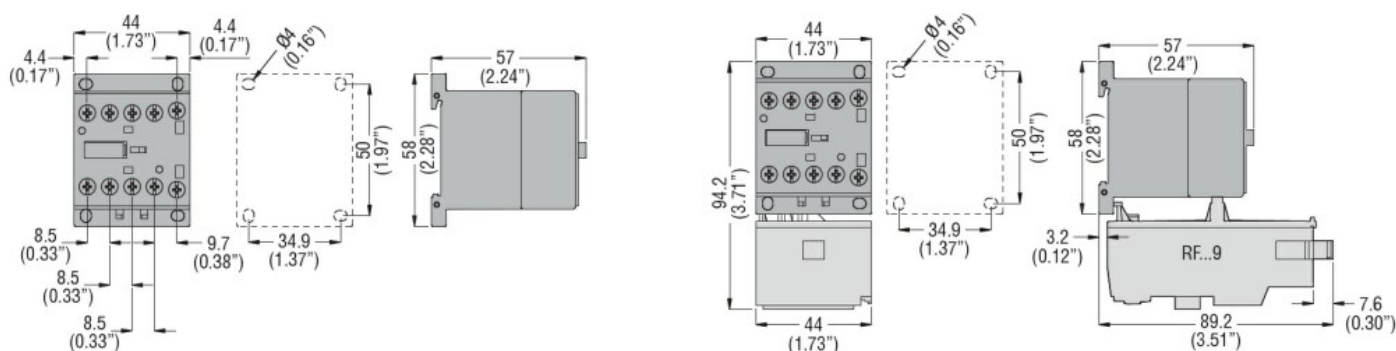
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Resistance & Protection

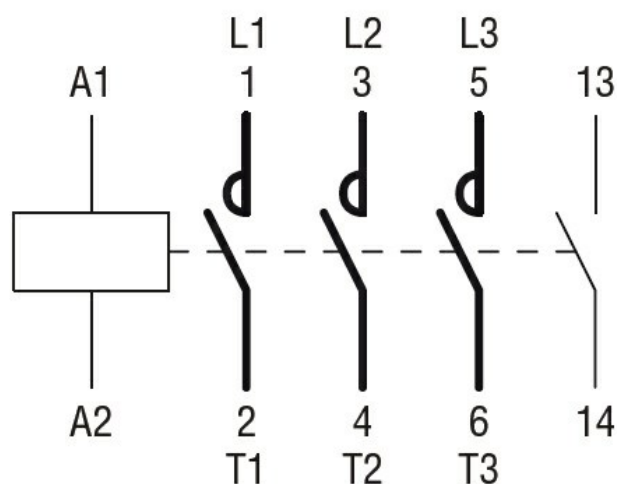
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN 60947-1

IEC/EN 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching