



Product designation				Power contactor
Product type designation				B500
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}	A			700
Operational current I _e	AC-1 (≤40°C)	A	700	
	AC-1 (≤55°C)	A	550	
	AC-1 (≤70°C)	A	500	
	AC-3 (≤440V ≤55°C)	A	520	
	AC-4 (400V)	A	240	
Rated operational power AC-1 (T≤40°C)	230V	kW	252	
	400V	kW	438	
	500V	kW	575	
	690V	kW	755	
IEC max current I _e in DC1 with L/R ≤ 1ms with 1 poles in series	75V	A	650	
	110V	A	320	
	220V	A	--	
	330V	A	--	
	460V	A	--	
IEC max current I _e in DC1 with L/R ≤ 1ms with 2 poles in series	75V	A	650	
	110V	A	550	
	220V	A	450	
	330V	A	--	
	460V	A	--	
IEC max current I _e in DC1 with L/R ≤ 1ms with 3 poles in series	75V	A	650	
	110V	A	600	
	220V	A	600	
	330V	A	450	
	460V	A	--	
IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series	75V	A	650	
	110V	A	600	
	220V	A	600	
	330V	A	600	
	460V	A	450	

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series

75V	A	550
110V	A	320
220V	A	--
330V	A	--
460V	A	--

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series

75V	A	550
110V	A	550
220V	A	450
330V	A	--
460V	A	--

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series

75V	A	550
110V	A	550
220V	A	550
330V	A	450
460V	A	--

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series

75V	A	550
110V	A	550
220V	A	550
330V	A	450
460V	A	450

Short-time allowable current for 10s (IEC/EN60947-1)

A	4050
---	------

Protection fuse

gG (IEC)	A	800
aM (IEC)	A	500

Making capacity (RMS value)

A	5000
---	------

Breaking capacity at voltage

440V	A	5000
500V	A	4500
690V	A	4000

Resistance per pole (average value)

mΩ	0.14
----	------

Power dissipation per pole (average value)

I_{th}	W	68.6
AC-3	W	35

Tightening torque for terminals

min	Nm	35
max	Nm	35
min	lbin	25.8
max	lbin	25.8

Tightening torque for coil terminal

min	Nm	1
max	Nm	1
min	lbin	0.74
max	lbin	0.74

Max number of wires simultaneously connectable

Nr.	2
-----	---

Conductor section

AWG/Kcmil

max	2x 500 kcmil
-----	--------------

Power terminal protection according to IEC/EN 60529

IP00

Mechanical features

Operating position

	normal allowable	Vertical plan ±30°
Fixing		Screw
Weight	g	2091
Conductor section	AWG/kcmil conductor section	
	max	2x 500 kcmil

Operations

Mechanical life	cycles	5000000
Electrical life	cycles	700000

Safety related data

Performance level B10d according to EN/ISO 13489-1	rated load mechanical load	cycles	700000
		cycles	5000000
Mirror contats according to IEC/EN 609474-4-1			yes
EMC compatibility			yes

AC coil operating

Rated AC voltage at 50/60Hz, 60Hz	min	V	110
	max	V	125

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 60
	of 50/60Hz coil powered at 60Hz		
	pick-up	min	%Us 80
		max	%Us 110
	drop-out	min	%Us 20
		max	%Us 60
	of 60Hz coil powered at 60Hz		
	pick-up	min	%Us 80
		max	%Us 110
	drop-out	min	%Us 20
		max	%Us 60

AC average coil consumption at 20°C			
	of 50/60Hz coil powered at 50Hz	in-rush	VA 400
		holding	VA 18
	of 50/60Hz coil powered at 60Hz	in-rush	VA 400
		holding	VA 18
Dissipation at holding ≤20°C 50Hz		W	18

DC coil operating

DC rated control voltage			
--------------------------	--	--	--

		min	V	110
		max	V	125
DC operating voltage				
	pick-up	min	%Us	80
		max	%Us	110
	drop-out	min	%Us	20
		max	%Us	60

Average coil consumption $\leq 20^{\circ}\text{C}$		in-rush	W	400
		holding	W	18

Max cycles frequency

Mechanical operation		cycles/h	1200
----------------------	--	----------	------

Operating times

Average time for Us control				
	in AC			
		Closing NO		
		min	ms	110
		max	ms	180
		Opening NO		
		min	ms	60
		max	ms	100
	in DC			
		Closing NO		
		min	ms	110
		max	ms	180
		Opening NO		
		min	ms	60
		max	ms	100

UL technical data

General USE	Contactor			
		AC current	A	700
Short-circuit protection fuse, 600V	Standard fault	Short circuit current	kA	18
		Fuse rating	A	1200
		Fuse class		L

Ambient conditions

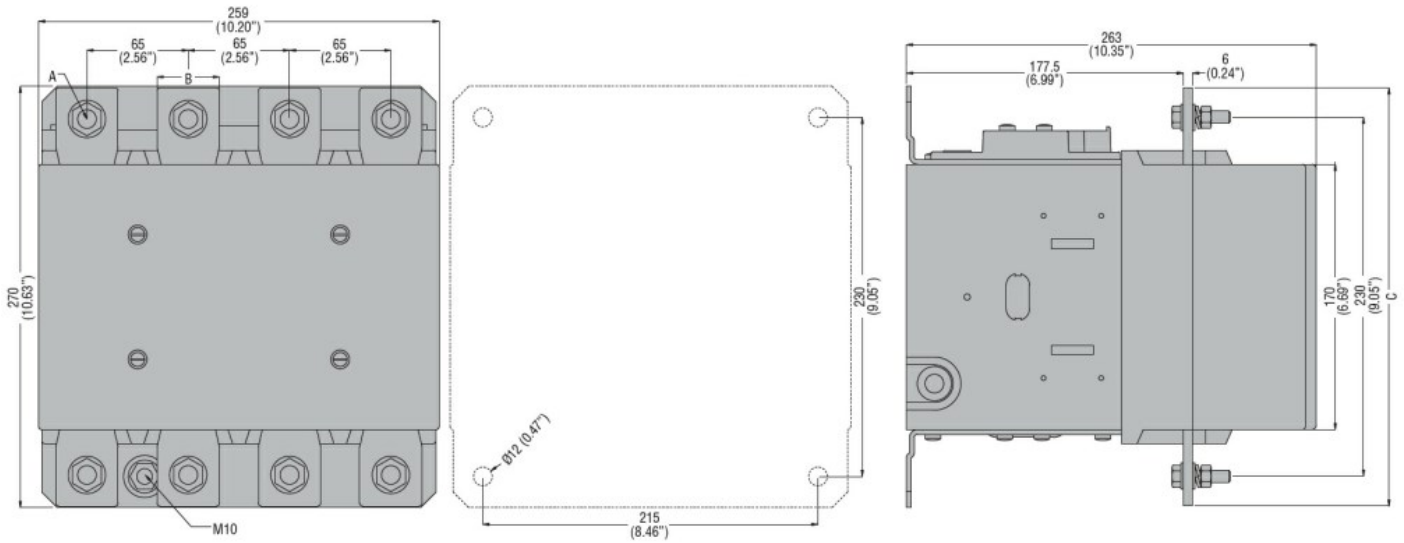
Temperature				
	Operating temperature			
		min	$^{\circ}\text{C}$	-50
		max	$^{\circ}\text{C}$	70
	Storage temperature			
		min	$^{\circ}\text{C}$	-60
		max	$^{\circ}\text{C}$	80

Max altitude		m	3000
--------------	--	---	------

Resistance & Protection

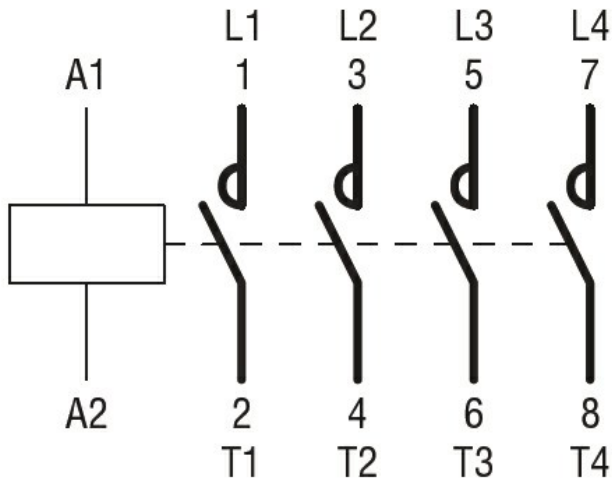
Pollution degree		3
------------------	--	---

Dimensions



CONTACTOR TYPE	A	B	C
B500	M10	35 (1.38")	265 (10.43")
B630	M12	40 (1.57")	270 (10.63")

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