



Product designation				Power contactor
Product type designation				B500
<b>Contact characteristics</b>				
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 ( $\leq 40^\circ\text{C}$ )	A	700	
	AC-1 ( $\leq 55^\circ\text{C}$ )	A	550	
	AC-1 ( $\leq 70^\circ\text{C}$ )	A	500	
	AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )	A	520	
	AC-4 (400V)	A	240	
Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )	230V	kW	252	
	400V	kW	438	
	500V	kW	575	
	690V	kW	755	
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ 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 $L/R \leq 1\text{ms}$ 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 $L/R \leq 1\text{ms}$ 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 $L/R \leq 1\text{ms}$ 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
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Protection fuse

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

Making capacity (RMS value)

A	5000
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Breaking capacity at voltage

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

Resistance per pole (average value)

mΩ	0.14
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Power dissipation per pole (average value)

$I_{th}$	W	68.6
AC3	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
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Conductor section

AWG/Kcmil

max	2x 500 kcmil
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Power terminal protection according to IEC/EN 60529

IP00

**Mechanical features**

Operating position

	normal allowable	Vertical plan $\pm 30^\circ$
Fixing		Screw
Weight		g 2142
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
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EMC compatibility

	yes
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**AC coil operating**

Rated AC voltage at 50/60Hz, 60Hz

	min	V	220
	max	V	240

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  $\leq 20^\circ\text{C}$  50Hz

W	18
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**DC coil operating**

DC rated control voltage

		min	V	220
		max	V	240
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

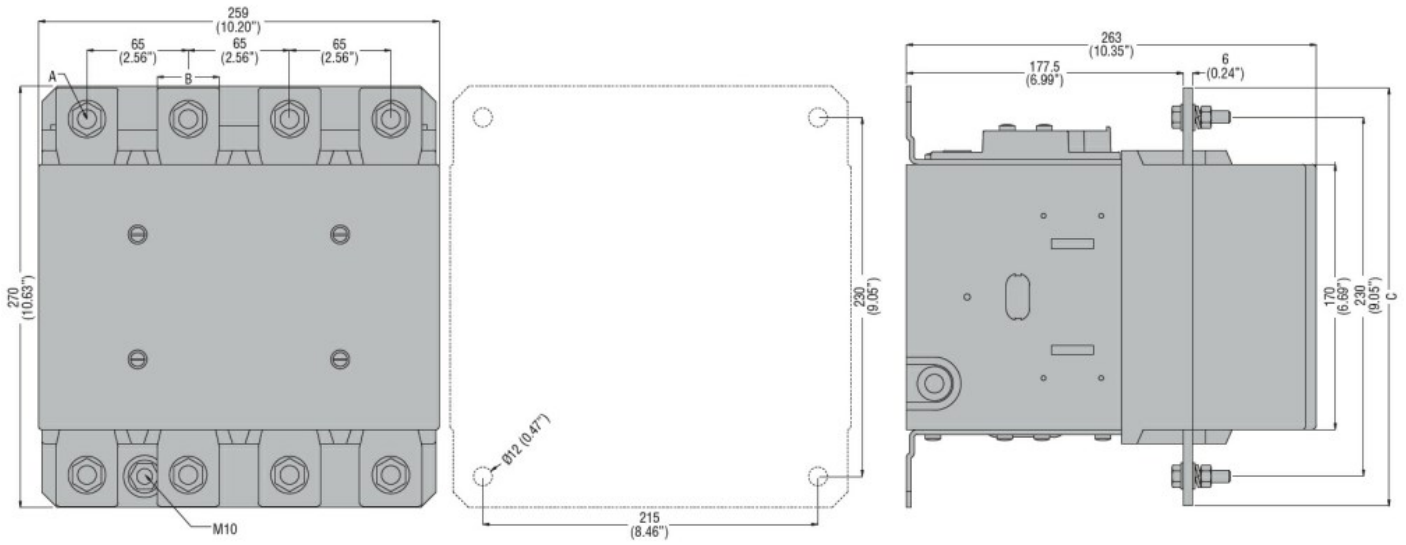
Operating times				
Average time for $U_s$ control				
	in AC			
		Closing NO		
		min	ms	110
		max	ms	180
		Opening NO		
		min	ms	60
		max	ms	100
	in DC			
		Closing NO		
		min	ms	110
		max	ms	180
		Opening NO		
		min	ms	60
		max	ms	100

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

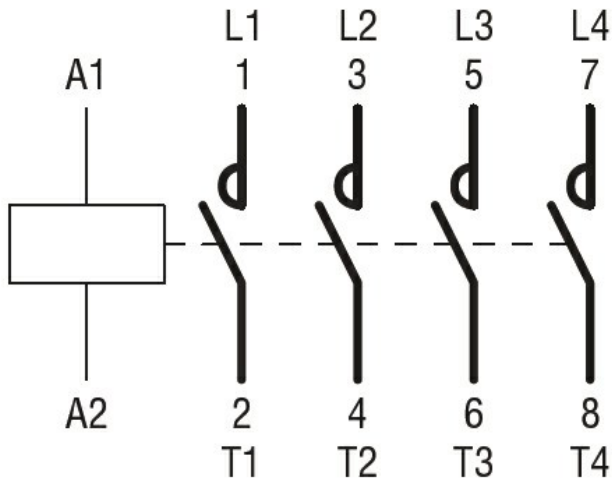
Resistance & Protection				
Pollution degree				3

Dimensions [mm (in)]				
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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