



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 ( $\leq 40^\circ\text{C}$ )	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 Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series

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

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series

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

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series

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

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms 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)

Ith	W	68.6
AC-3	W	35

Tightening torque for terminals

min	Nm	35
max	Nm	35
min	Ibin	25.8
max	Ibin	25.8

Tightening torque for coil terminal

min	Nm	1
max	Nm	1
min	Ibin	0.74
max	Ibin	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 ±30°
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	cycles	700000
	mechanical load	cycles	5000000

Mirror contacts according to IEC/EN 60947-4-1

yes

EMC compatibility

yes

## 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 ≤20°C 50Hz

W	18
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## DC coil operating

DC rated control voltage

DC operating voltage		min	V	220
		max	V	240
	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

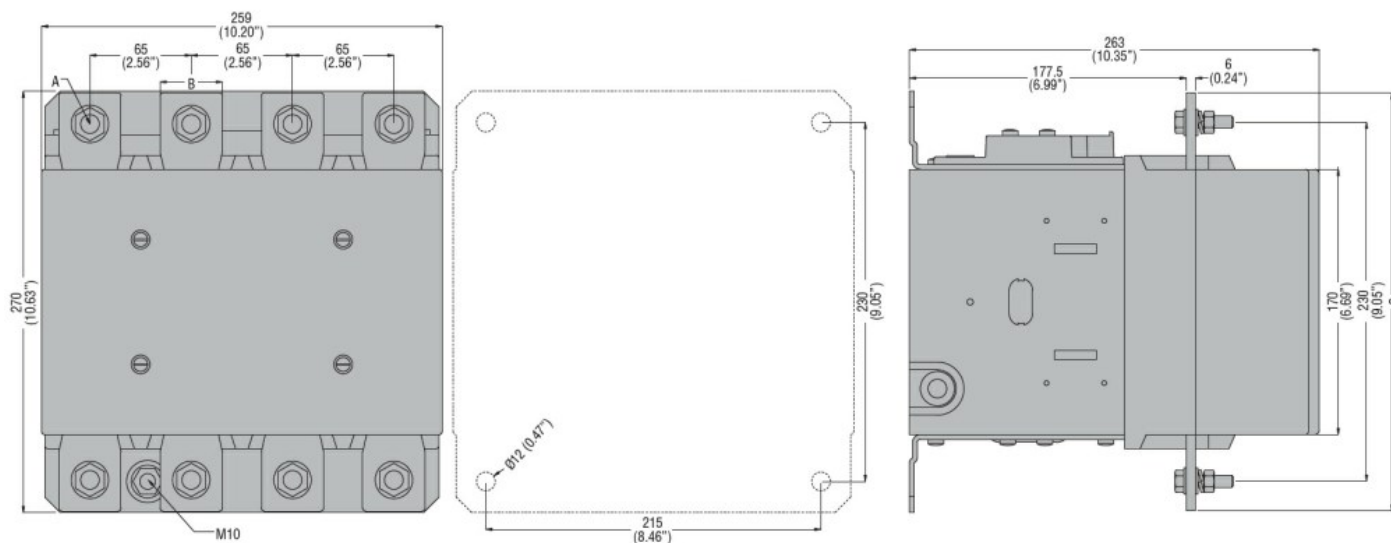
min	$^{\circ}\text{C}$	-60
max	$^{\circ}\text{C}$	80

Max altitude m 3000

### Resistance & Protection

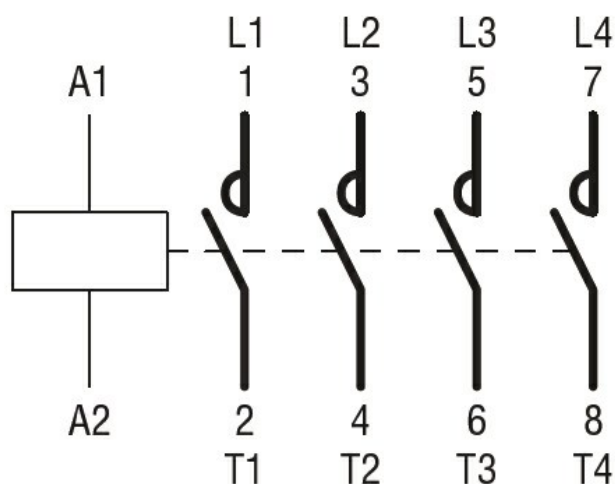
Pollution degree 3

### 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