



Product designation	Power contactor		
Product type designation	B500		
<b>Contact characteristics</b>			
Number of poles	Nr.	3	
Rated insulation voltage U <sub>i</sub> IEC/EN	V	1000	
Rated impulse withstand voltage U <sub>imp</sub>	kV	8	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current I <sub>th</sub>	A	700	
Operational current I <sub>e</sub>	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-3 (T≤55°C)	400V	kW	290
Rated operational power AC-1 (T≤40°C)	230V	kW	252
	400V	kW	438
	500V	kW	575
	690V	kW	755
IEC max current I <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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 I <sub>e</sub> 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 I <sub>e</sub> 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 I <sub>e</sub> 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
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 <sub>th</sub>	W	68.6
	AC-3	W	35
Tightening torque for terminals			
	min	Nm	35
	max	Nm	35
	min	I <sub>bin</sub>	25.8
	max	I <sub>bin</sub>	25.8
Tightening torque for coil terminal			
	min	Nm	1
	max	Nm	1
	min	I <sub>bin</sub>	0.74
	max	I <sub>bin</sub>	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
<b>Mechanical features</b>				
Operating position	normal allowable	Vertical plan ±30°		
Fixing				Screw
Weight				g 1830
Conductor section	AWG/kcmil conductor section	max	2x 500 kcmil	
<b>Operations</b>				
Mechanical life				cycles 5000000
Electrical life				cycles 700000
<b>Safety related data</b>				
Performance level B10d according to EN/ISO 13489-1	rated load mechanical load	cycles	cycles	700000 5000000
Mirror contacts according to IEC/EN 60947-4-1				yes
EMC compatibility				yes
<b>AC coil operating</b>				
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

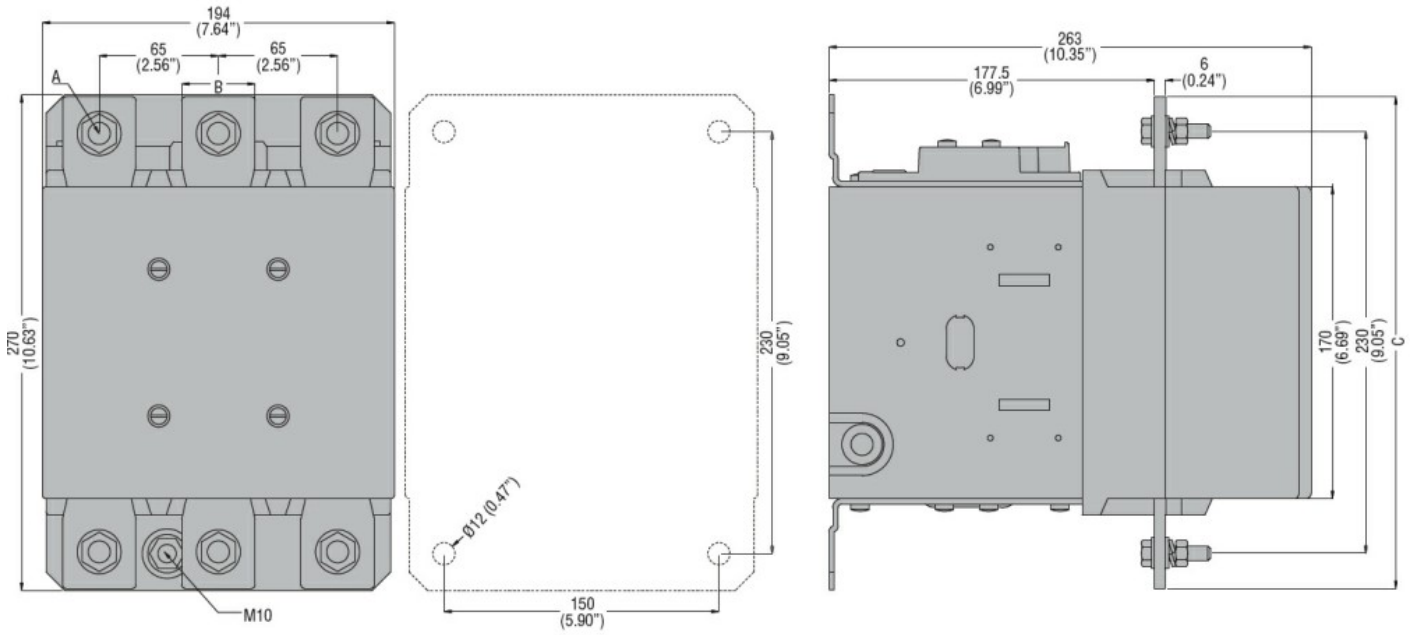
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**Resistance & Protection**

Pollution degree

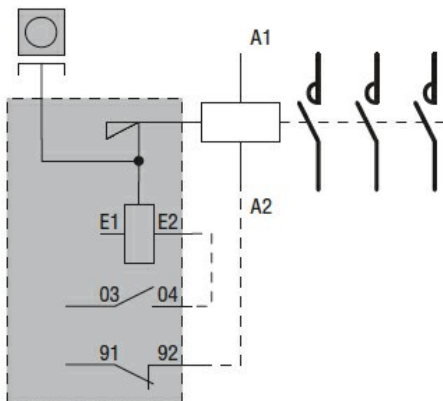
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**Dimensions**



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

cULus

### ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching