



Product designation				Power contactor
Product type designation				B310
<b>Contact characteristics</b>				
Number of poles	Nr.			4
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			450
Operational current I <sub>e</sub>	AC-1 (≤40°C)	A	450	
	AC-1 (≤55°C)	A	370	
	AC-1 (≤70°C)	A	300	
	AC-3 (≤440V ≤55°C)	A	320	
	AC-4 (400V)	A	150	
Rated operational power AC-1 (T≤40°C)	230V	kW	158	
	400V	kW	270	
	500V	kW	350	
	690V	kW	488	
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 1 poles in series	75V	A	375	
	110V	A	195	
	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	375	
	110V	A	350	
	220V	A	300	
	330V	A	--	
	460V	A	--	
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 3 poles in series	75V	A	375	
	110V	A	350	
	220V	A	350	
	330V	A	300	
	460V	A	--	
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series	75V	A	375	
	110V	A	350	
	220V	A	350	
	330V	A	350	
	460V	A	300	

IEC max current I<sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series

75V	A	310
110V	A	170
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	310
110V	A	290
220V	A	230
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	310
110V	A	310
220V	A	290
330V	A	230
460V	A	--

IEC max current I<sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series

75V	A	310
110V	A	310
220V	A	310
330V	A	230
460V	A	230

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

A	2900
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Protection fuse

gG (IEC)	A	500
aM (IEC)	A	400

Making capacity (RMS value)

A	3150
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Breaking capacity at voltage

440V	A	3000
500V	A	2700
690V	A	2520

Resistance per pole (average value)

mΩ	0.2
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Power dissipation per pole (average value)

I <sub>th</sub>	W	40.5
AC-3	W	20

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
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Conductor section

AWG/Kcmil

max	2x 3/0
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Power terminal protection according to IEC/EN 60529

IP00
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### Mechanical features

Operating position

	normal allowable	Vertical plan ±30°
Fixing		Screw
Weight	g	1110
Conductor section	AWG/kcmil conductor section	
	max	2x 3/0

**Operations**

Mechanical life	cycles	10000000
Electrical life	cycles	700000

**Safety related data**

Performance level B10d according to EN/ISO 13489-1

	rated load mechanical load	cycles cycles	700000 10000000
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	300
holding	VA	10

of 50/60Hz coil powered at 60Hz

in-rush	VA	300
holding	VA	10

Dissipation at holding ≤20°C 50Hz

W	10
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**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	300
		holding	W	10

**Max cycles frequency**

Mechanical operation			cycles/h	2400
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**Operating times**

Average time for Us control				
	in AC			
		Closing NO		
			min	ms
			max	ms
		Opening NO		
			min	ms
			max	ms
	in DC			
		Closing NO		
			min	ms
			max	ms
		Opening NO		
			min	ms
			max	ms

**UL technical data**

Full-load current (FLA) for three-phase AC motor		at 480V	A	301
		at 600V	A	289

Yielded mechanical performance				
	for three-phase AC motor			
		200/208V	HP	100
		220/230V	HP	125
		460/480V	HP	250
		575/600V	HP	300

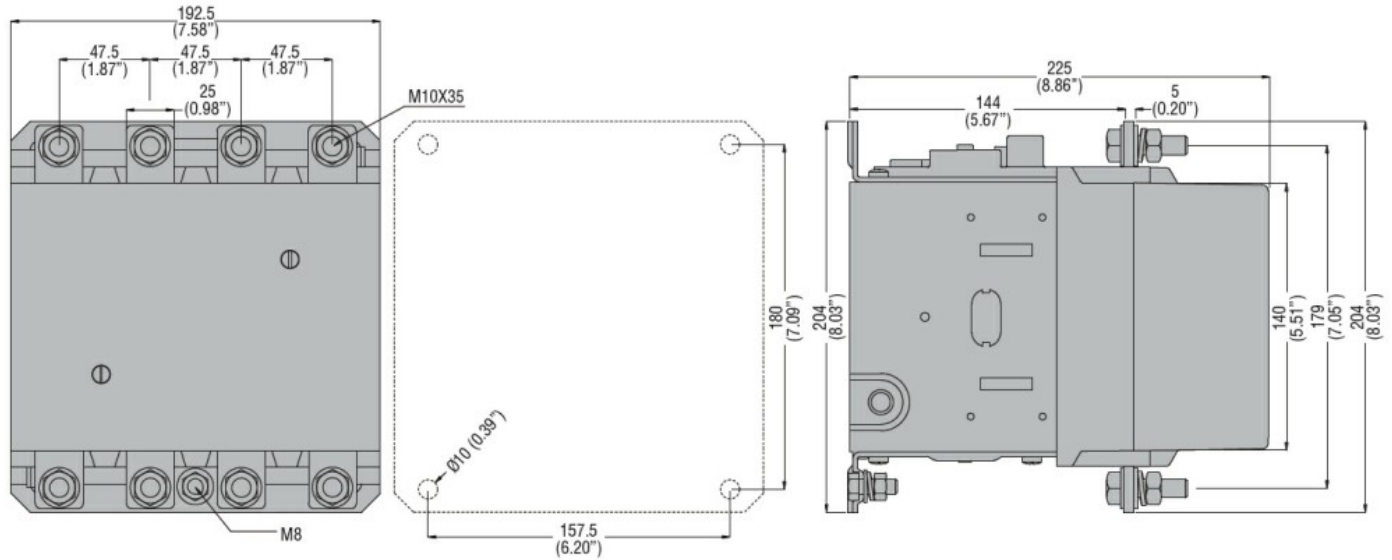
General USE				
	Contactor			
		AC current	A	450

Short-circuit protection fuse, 600V				
	Standard fault			
		Short circuit current	kA	18
		Fuse rating	A	800
		Fuse class		L

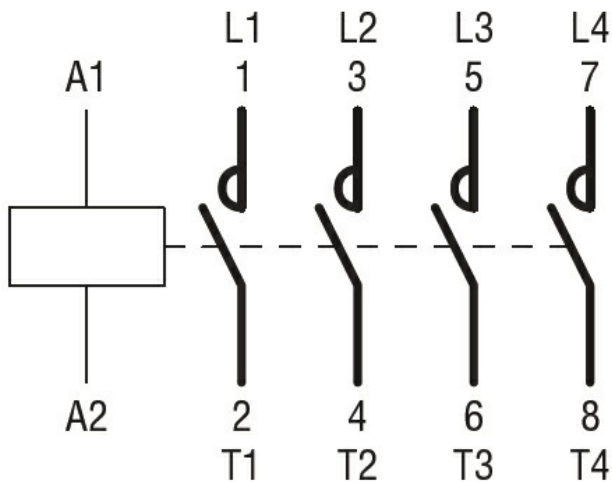
**Ambient conditions**

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

	min	°C	-60
	max	°C	80
Max altitude		m	3000
<b>Resistance &amp; Protection</b>			
Pollution degree			3
<b>Dimensions</b>			



**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