



Product designation	Power contactor		
Product type designation	B310		
<b>Contact characteristics</b>			
Number of poles	Nr.	4	
Rated insulation voltage Ui IEC/EN	V	1000	
Rated impulse withstand voltage Uimp	kV	8	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		A	450
Operational current Ie			
	AC-1 ( $\leq 40^{\circ}\text{C}$ )	A	450
	AC-1 ( $\leq 55^{\circ}\text{C}$ )	A	370
	AC-1 ( $\leq 70^{\circ}\text{C}$ )	A	300
	AC-3 ( $\leq 440\text{V} \leq 55^{\circ}\text{C}$ )	A	320
	AC-4 (400V)	A	150
Rated operational power AC-1 ( $T \leq 40^{\circ}\text{C}$ )			
	230V	kW	158
	400V	kW	270
	500V	kW	350
	690V	kW	488
IEC max current Ie in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series			
	75V	A	375
	110V	A	195
	220V	A	--
	330V	A	--
	460V	A	--
IEC max current Ie in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series			
	75V	A	375
	110V	A	350
	220V	A	300
	330V	A	--
	460V	A	--
IEC max current Ie in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series			
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	300
	460V	A	--
IEC max current Ie in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series			
	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	300

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

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

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

Protection fuse

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

Making capacity (RMS value) A 3150

Breaking capacity at voltage

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

Resistance per pole (average value)  $\text{m}\Omega$  0.2

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

Conductor section

AWG/Kcmil	max	2x 3/0
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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	1110
Operations		
Mechanical life	cycles	10000000
Electrical life	cycles	700000
Safety related data		

Performance level B10d according to EN/ISO 13489-1

rated load	cycles	700000
mechanical load	cycles	10000000

Mirror contacts 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

## DC coil operating

DC rated control voltage

min	V	110
max	V	125

## DC operating voltage

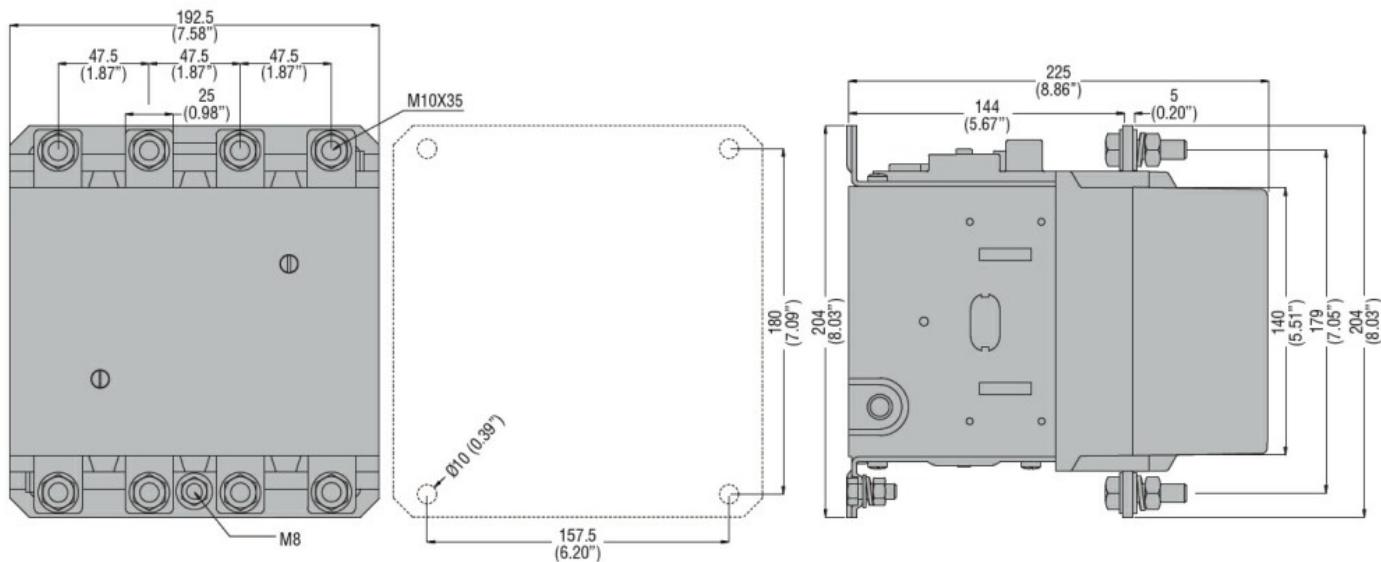
pick-up	min	%Us	80
	max	%Us	110
drop-out	min	%Us	20
	max	%Us	60
Average coil consumption $\leq 20^{\circ}\text{C}$			
	in-rush	W	300
	holding	W	10
<b>Max cycles frequency</b>			
Mechanical operation		cycles/h	2400
<b>Operating times</b>			
Average time for Us control			
in AC			
Closing NO	min	ms	80
	max	ms	120
Opening NO	min	ms	30
	max	ms	75
in DC			
Closing NO	min	ms	80
	max	ms	120
Opening NO	min	ms	30
	max	ms	75
<b>UL technical data</b>			
Rated operational voltage AC (UL)		V	600
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
<b>General USE</b>			
Contactor			
	AC current	A	450
Short-circuit protection fuse, 600V			
Standard fault			
	Short circuit current	kA	18
	Fuse rating	A	800
	Fuse class	L	
<b>Ambient conditions</b>			
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

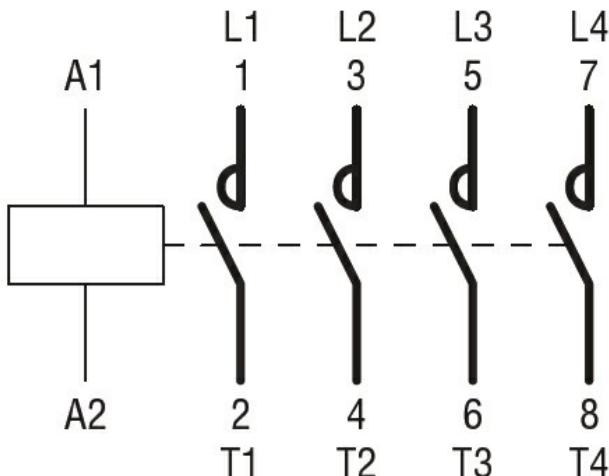
Resistance & Protection

Pollution degree 3

Dimensions



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