

Product designation				Power contactor
Product type designation				B310
Contact characteristics				
Number of poles	Nr.			3
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			450
Operational current I_e	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	110	
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V	kW	100	
	400V	kW	170	
	415V	kW	188	
	440V	kW	200	
	500V	kW	213	
	690V	kW	256	
	1000V	kW	180	
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 I_e 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 I_e 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 I_e 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 I_e 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 ≤ 15ms 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 ≤ 15ms 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 ≤ 15ms 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 ≤ 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 _{th}	W	40.5
AC3	W	20

Tightening torque for terminals

min	Nm	35
max	Nm	35
min	I _{bin}	25.8
max	I _{bin}	25.8

Tightening torque for coil terminal

min	Nm	1
max	Nm	1

Max number of wires simultaneously connectable

Nr.	2
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Power terminal protection according to IEC/EN 60529

IP00

Mechanical features

Operating position

normal	Vertical plan
allowable	±30°

Fixing

Screw

Weight

g	9530
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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 60947-4-1			Yes
EMC compatibility			Yes

AC coil operating

Rated AC voltage at 50/60Hz, 60Hz

	min	V	380
	max	V	415

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	380
max	V	415

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 U_s 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

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

Max altitude

m	3000
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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