



Product designation				Power contactor
Product type designation				B180
<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			275
Operational current I <sub>e</sub>	AC-1 (≤40°C)	A	275	
	AC-1 (≤55°C)	A	250	
	AC-1 (≤70°C)	A	200	
	AC-3 (≤440V ≤55°C)	A	185	
	AC-4 (400V)	A	65	
Rated operational power AC-3 (T≤55°C)	400V	kW	100	
Rated operational power AC-1 (T≤40°C)	230V	kW	95	
	400V	kW	160	
	500V	kW	213	
	690V	kW	298	
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 1 poles in series	75V	A	260	
	110V	A	120	
	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	260	
	110V	A	170	
	220V	A	150	
	330V	A	–	
	460V	A	–	
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 3 poles in series	75V	A	260	
	110V	A	170	
	220V	A	170	
	330V	A	150	
	460V	A	–	
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series	75V	A	260	
	110V	A	170	
	220V	A	170	

	330V	A	170
	460V	A	150
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	A	180
	110V	A	90
	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	180
	110V	A	140
	220V	A	100
	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	180
	110V	A	160
	220V	A	140
	330V	A	100
	460V	A	–
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	75V	A	180
	110V	A	160
	220V	A	160
	330V	A	160
	460V	A	100
Short-time allowable current for 10s (IEC/EN60947-1)		A	1500
Protection fuse			
	gG (IEC)	A	315
	aM (IEC)	A	200
Making capacity (RMS value)		A	1850
Breaking capacity at voltage			
	440V	A	1850
	500V	A	1600
	690V	A	1480
Resistance per pole (average value)		mΩ	0.3
Power dissipation per pole (average value)			
	I <sub>th</sub>	W	20.3
	AC-3	W	9.7
Tightening torque for terminals			
	min	Nm	18
	max	Nm	18
	min	I <sub>bin</sub>	13.3
	max	I <sub>bin</sub>	13.3
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	300 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			6040
Conductor section	AWG/kcmil conductor section	max	300 kcmil	
<b>Operations</b>				
Mechanical life			cycles	10000000
Electrical life			cycles	1000000
<b>Safety related data</b>				
Performance level B10d according to EN/ISO 13489-1	rated load mechanical load	cycles	cycles	1000000 10000000
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	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	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	220
max	V	240

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

**Operating times**

Average time for Us control

in AC

Closing NO

min	ms	60
max	ms	100

Opening NO

min	ms	25
max	ms	60

in DC

Closing NO

min	ms	60
max	ms	100

Opening NO

min	ms	25
max	ms	60

**UL technical data**

Full-load current (FLA) for three-phase AC motor

at 480V	A	180
at 600V	A	144

Yielded mechanical performance

for three-phase AC motor

200/208V	HP	60
220/230V	HP	75
575/600V	HP	150

General USE

Contactor

AC current A 275

Short-circuit protection fuse, 600V

Standard fault

Short circuit current	kA	10
Fuse rating	A	500
Fuse class		RK5

**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

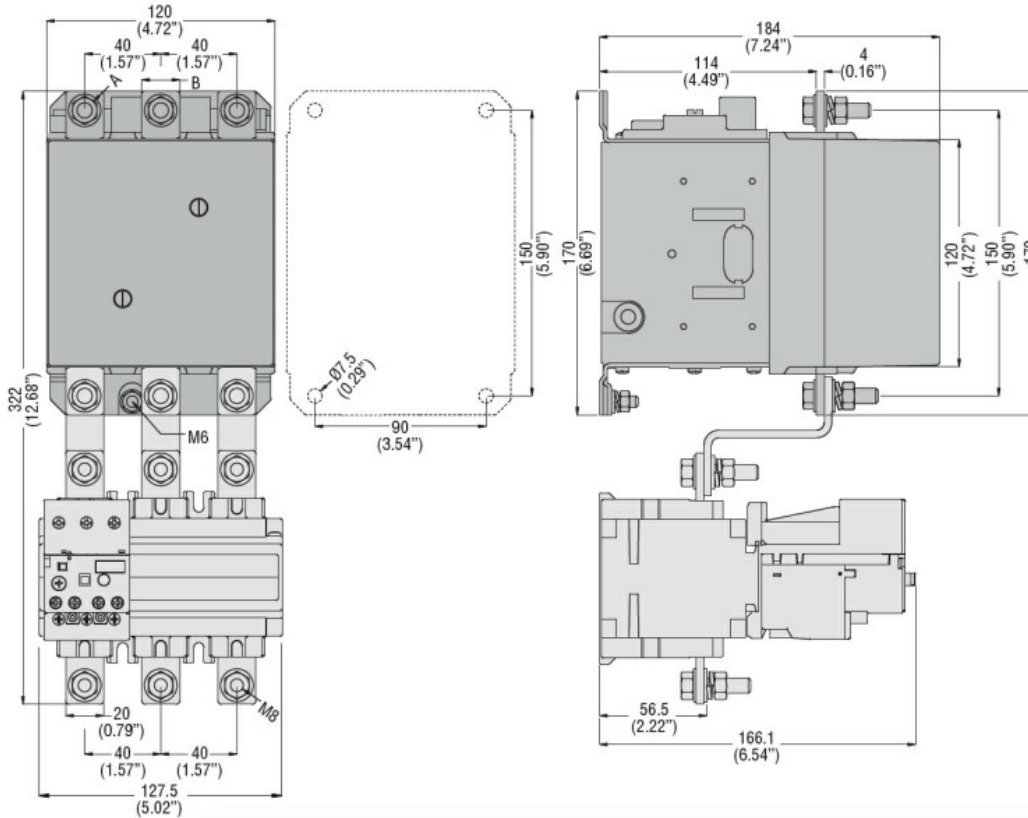
m 3000

Resistance & Protection

Pollution degree

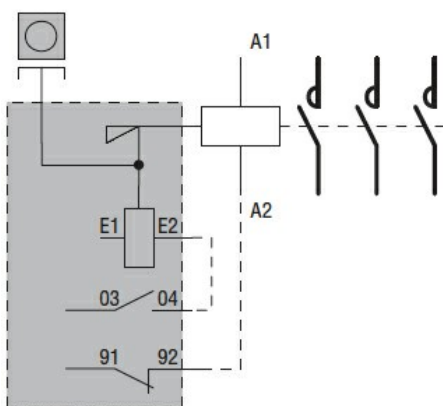
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Dimensions



CONTACTOR TYPE	A	B
B115	M6	15 (0.59")
B145	M8	20 (0.79")
B180	M8	20 (0.79")

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

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Certificates

CCC

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cULus

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EAC

**ETIM classification**

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching