



Product designation				Power contactor
Product type designation				B180
<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			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-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
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Protection fuse

gG (IEC)	A	315
aM (IEC)	A	200

Making capacity (RMS value)

A	1850
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Breaking capacity at voltage

440V	A	1850
500V	A	1600
690V	A	1480

Resistance per pole (average value)

mΩ	0.3
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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
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Conductor section

AWG/Kcmil

max	300 kcmil
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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	6320
Conductor section	AWG/kcmil conductor section	
	max	300 kcmil

**Operations**

Mechanical life	cycles	10000000
Electrical life	cycles	1000000

**Safety related data**

Performance level B10d according to EN/ISO 13489-1	rated load mechanical load	cycles	1000000
		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	440
	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

**DC coil operating**

DC rated control voltage			
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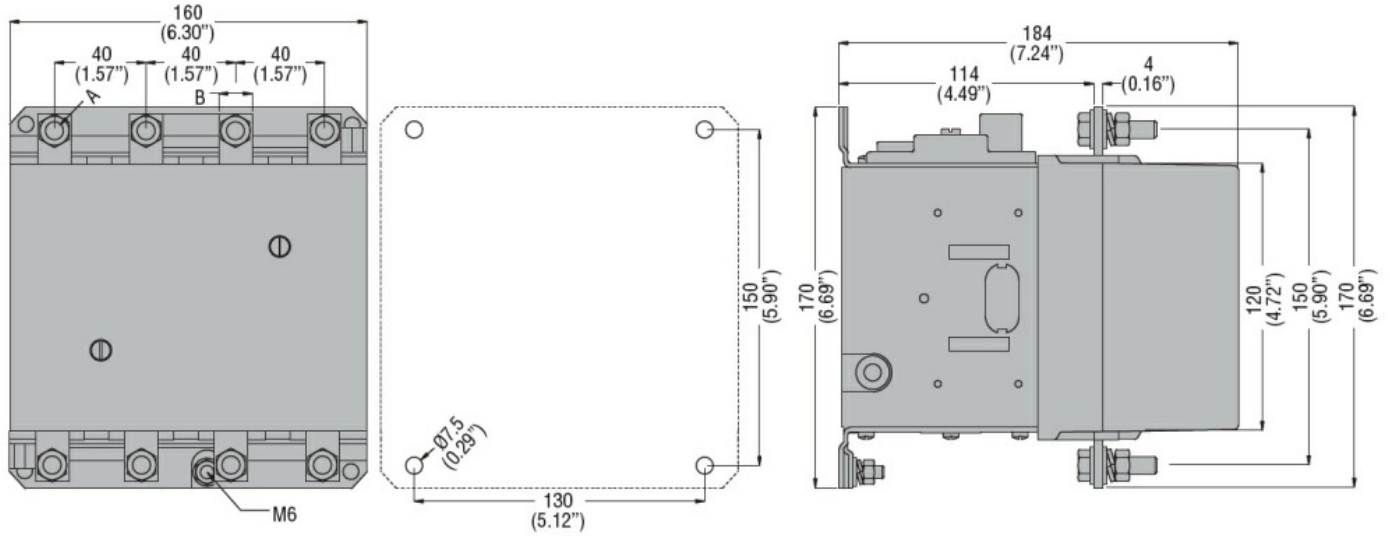
		min	V	440
		max	V	415
DC operating voltage				
	pick-up	min	%Us	80
		max	%Us	110
	drop-out	min	%Us	20
		max	%Us	60
Average coil consumption $\leq 20^{\circ}\text{C}$				
		in-rush	W	300
		holding	W	10
<b>Max cycles frequency</b>				
Mechanical operation				cycles/h 2400
<b>Operating times</b>				
Average time for Us control				
	in AC			
		Closing NO		
		min	ms	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
<b>UL technical data</b>				
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
<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	°C	80
Max altitude		m	3000

**Resistance & Protection**

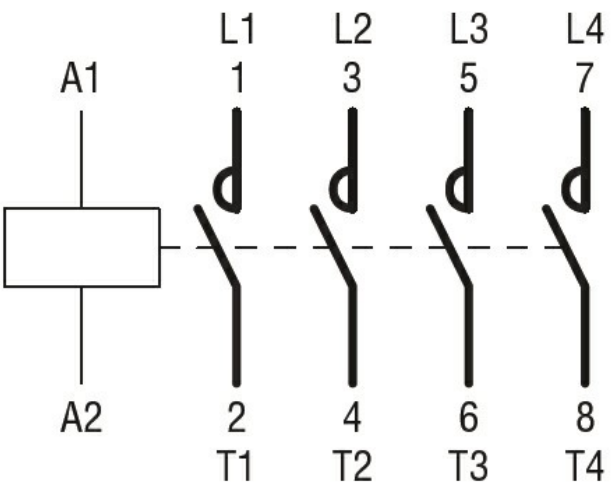
Pollution degree	3
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**Dimensions**



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

Certificates	CCC
	cULus

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EAC

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching