



Product designation

Power contactor

Product type designation

B180

**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	275
Operational current $I_e$	AC-1 ( $\leq 40^\circ\text{C}$ )	A 275
	AC-1 ( $\leq 55^\circ\text{C}$ )	A 250
	AC-1 ( $\leq 70^\circ\text{C}$ )	A 200
	AC-3 ( $\leq 440\text{V } \leq 55^\circ\text{C}$ )	A 185
	AC-4 (400V)	A 65
Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )	230V kW	57
	400V kW	100
	415V kW	108
	440V kW	115
	500V kW	123
	690V kW	144
	1000V kW	103
Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )	230V kW	95
	400V kW	160
	500V kW	213
	690V kW	298
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	75V A	260
	110V A	120
	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	260
	110V A	170
	220V A	150
	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	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	lbin	13.3
	max	lbin	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
Mechanical features			
Operating position			
	normal allowable		Vertical plan ±30°
Fixing			Screw
Weight		g	5380
Operations			
Mechanical life		cycles	10000000
Electrical life		cycles	1000000
Safety related data			
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	1000000
	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	110
	max	V	125
AC operating voltage			
of 50/60Hz coil powered at 50Hz			
pick-up	min	%U <sub>s</sub>	80
	max	%U <sub>s</sub>	110
drop-out	min	%U <sub>s</sub>	20
	max	%U <sub>s</sub>	60
of 50/60Hz coil powered at 60Hz			
pick-up	min	%U <sub>s</sub>	80
	max	%U <sub>s</sub>	110
drop-out	min	%U <sub>s</sub>	20
	max	%U <sub>s</sub>	60
of 60Hz coil powered at 60Hz			
pick-up	min	%U <sub>s</sub>	80
	max	%U <sub>s</sub>	110
drop-out	min	%U <sub>s</sub>	20
	max	%U <sub>s</sub>	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 holding	VA	300
			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 ≤20°C				
		in-rush holding	W	300
			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				
Rated operational voltage AC (UL)			V	600
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	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

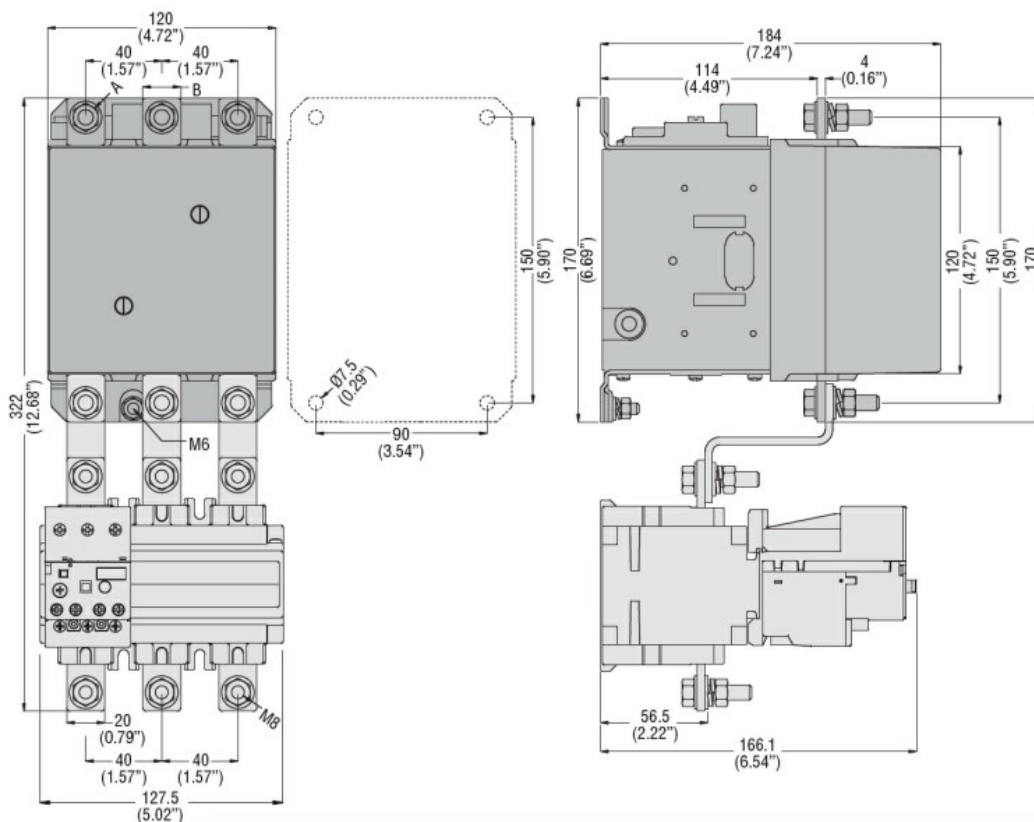
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## Resistance & Protection

Pollution degree

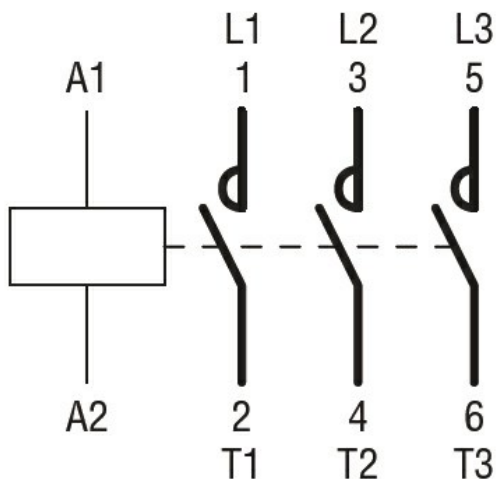
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## Dimensions



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

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching