



Product designation

Power contactor

Product type designation

B180

**Contact characteristics**

Number of poles	Nr.	4
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-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 $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	75V A	260
	110V A	170
	220V A	170
	330V A	170
	460V A	150

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

75V	A	180
110V	A	90
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	180
110V	A	140
220V	A	100
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	180
110V	A	160
220V	A	140
330V	A	100
460V	A	—

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

$I_{th}$	W	20.3
AC-3	W	9.7

Tightening torque for terminals

min	Nm	18
max	Nm	18
min	Ibin	13.3
max	Ibin	13.3

Tightening torque for coil terminal

min	Nm	1
max	Nm	1
min	Ibin	0.74
max	Ibin	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

### Mechanical features

## Operating position

	normal allowable	Vertical plan ±30°
Fixing		Screw
Weight	g	6340

## 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	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	%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

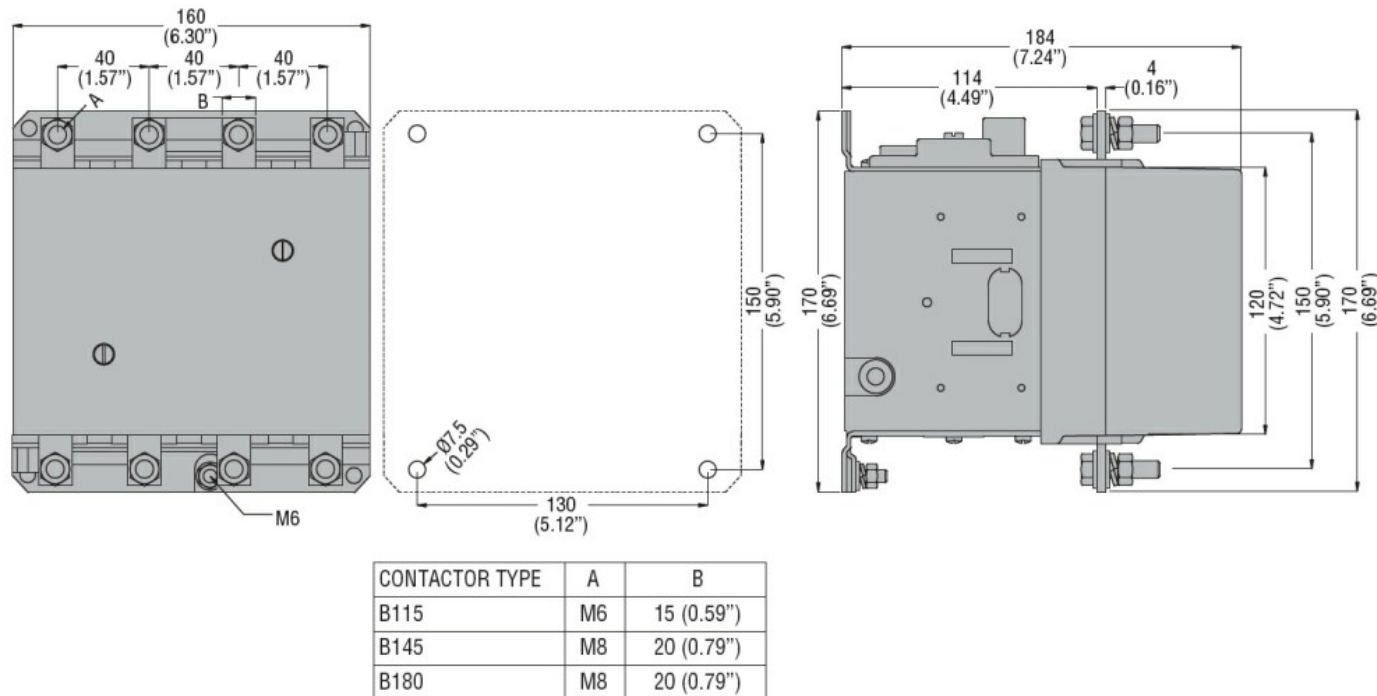
W	10
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## DC coil operating

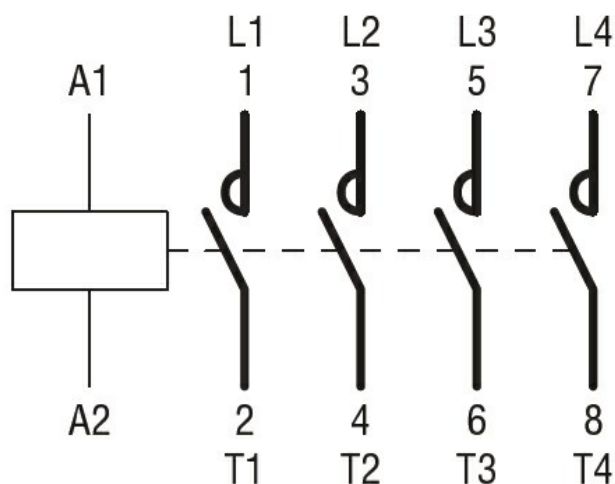
DC rated control voltage

		min	V	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	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	°C	-50
		max	°C	70
Storage temperature				
		min	°C	-60

	max	°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

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EAC

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching