Lovato electric
ENERGY AND AUTOMATION

11B18000110

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 185A, AC/DC COIL, 110...125VAC/DC

Product designation			Power contactor
Product type designation			B180
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		A	275
Operational current Ie			
	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)			
	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≤40°C)			
	230V	kW	95
	400V	kW	160
	500V	kW	213
	690V	kW	298
IEC max current Ie 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 Ie 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 Ie 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 Ie 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 Ie 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 Ie 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 Ie 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 Ie 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)		m?	0.3
Power dissipation per pole (average value)			
	Ith	W	20.3
	AC3	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	lbin	0.74
		max	lbin	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		Vertical plan
		allowable		±30°
Fixing				Screw
Weight			g	5380
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 contats according to IEC/EN 609474-4-1				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
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
		460/480V	HP	150
		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

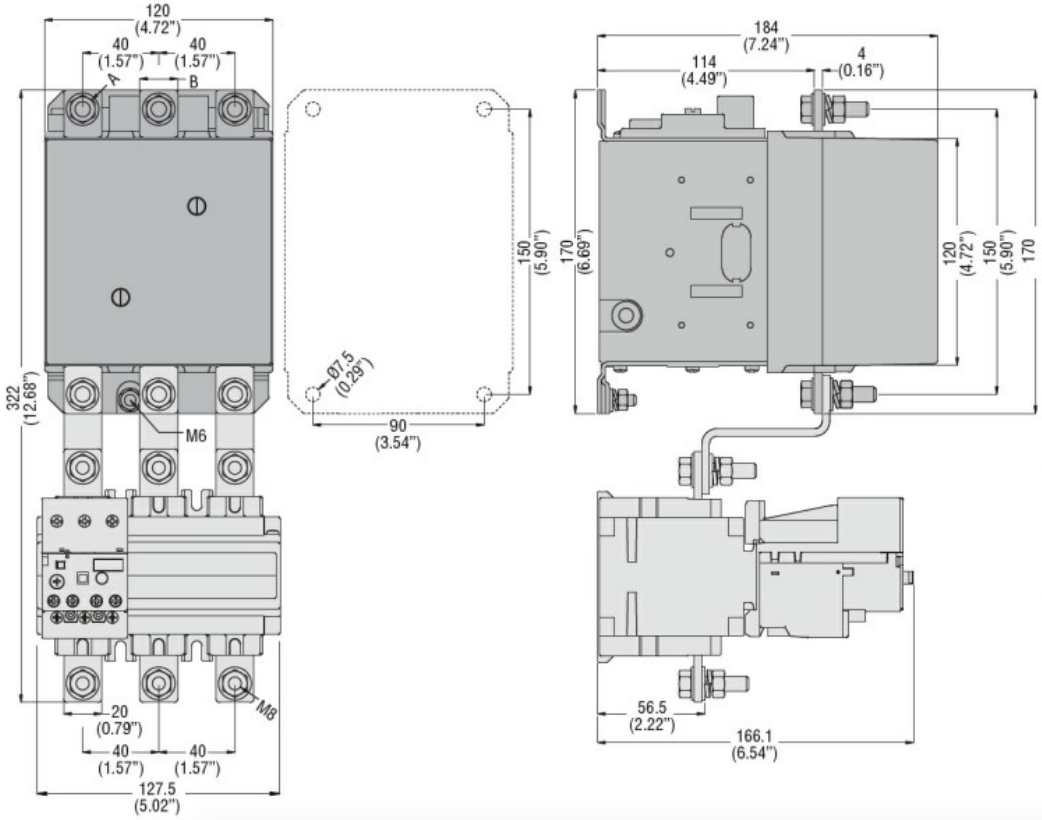
Ambient conditions

Temperature			
	Operating temperature		
	min	°C	-50
	max	°C	70
	Storage temperature		
	min	°C	-60
	max	°C	80
Max altitude		m	3000

Resistance & Protection

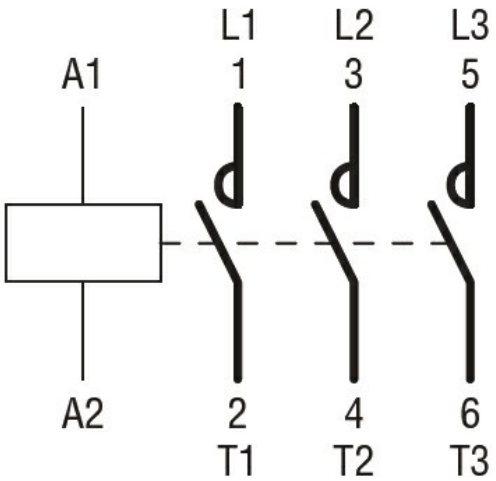
Pollution degree	3

Dimensions



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