Lovato electric
ENERGY AND AUTOMATION

Product designation		Power contactor
Product type designation		BF195

Contact characteristics		
Number of poles	Nr.	4
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	230
AC-1 (≤70°C)	A	200
AC-3 (≤440V ≤55°C)	A	195
AC-4 (400V)	A	95
Rated operational current AC-3 (T≤55°C)		
230V	A	195
400V	A	195
415V	A	195
440V	A	195
500V	A	184
690V	A	165
1000V	A	85
Rated operational power AC-1 (T≤40°C)		
230V	kW	104
400V	kW	181
500V	kW	199
690V	kW	312
IEC max current Ie in DC1 with L/R ≤ 1ms with 1 poles in series		
≤24V	A	275
48V	A	275
75V	A	275
110V	A	120
220V	A	–
IEC max current Ie in DC1 with L/R ≤ 1ms with 2 poles in series		
≤24V	A	275
48V	A	275
75V	A	275
110V	A	170
220V	A	150
IEC max current Ie in DC1 with L/R ≤ 1ms with 3 poles in series		
≤24V	A	275
48V	A	275
75V	A	275

BF195T4E110
The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding

1 / 5

	110V	A	170
	220V	A	150
	330V	A	150
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	275
	48V	A	275
	75V	A	275
	110V	A	275
	220V	A	275
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	275
	48V	A	275
	75V	A	180
	110V	A	90
	220V	A	–
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	275
	48V	A	275
	75V	A	180
	110V	A	140
	220V	A	100
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	275
	48V	A	275
	75V	A	180
	110V	A	160
	220V	A	140
	330V	A	100
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	275
	48V	A	275
	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	1560
Protection fuse			
	gG (IEC)	A	315
	aM (IEC)	A	250
Making capacity (RMS value)		A	1658
Breaking capacity at voltage			
	440V	A	1658
	500V	A	1326
	690V	A	1377
Resistance per pole (average value)		mΩ	0.18
Power dissipation per pole (average value)			
	Ith	W	13
	AC-3	W	6.7
Tightening torque for terminals			
	min	Nm	18
	max	Nm	18
	min	Ibin	159
	max	Ibin	159

Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
Power terminal protection according to IEC/EN 60529			IP00

Mechanical features

Operating position			
	normal		Vertical plan
	allowable		±30°
Fixing			Screw
Weight		g	4000

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
EMC compatibility			yes

AC coil operating

Rated AC voltage at 50/60Hz, 60Hz			
	min	V	60
	max	V	110

AC operating voltage				
of 50/60Hz coil powered at 50Hz				
pick-up				
		min	%Us	80 Us min
		max	%Us	110 Us max
drop-out				
		max	%Us	≤70 Us min
of 50/60Hz coil powered at 60Hz				
pick-up				
		min	%Us	80 Us min
		max	%Us	110 Us max
drop-out				
		max	%Us	≤70 Us min

AC average coil consumption at 20°C				
of 50/60Hz coil powered at 50Hz				
		in-rush	VA	160…230
		holding	VA	1.5...3.0
of 50/60Hz coil powered at 60Hz				
		in-rush	VA	160…230
		holding	VA	1.5...3.0
of 60Hz coil powered at 60Hz				
		in-rush	VA	160…230
		holding	VA	1.5...3.0
Dissipation at holding ≤20°C 50Hz			W	1.5...3.0

DC coil operating

DC rated control voltage			
	min	V	60
	max	V	130

DC operating voltage				
pick-up				
		min	%Us	85 Us min
		max	%Us	110 Us max

drop-out				
	max	%Us	≤70 Us min	

Average coil consumption ≤20°C				
	in-rush	W	160…230	
	holding	W	1.5...3.0	

Max cycles frequency

Mechanical operation	cycles/h	1000

Operating times

Average time for Us control

    in AC

        Closing NO

	min	ms	50
	max	ms	100

        Opening NO

	min	ms	35
	max	ms	75

UL technical data

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

    High fault

	Short circuit current	kA	100
	Fuse rating	A	400
	Fuse class		J

    Standard fault

	Short circuit current	kA	10
	Fuse rating	A	400
	Fuse class		RK5

Ambient conditions

Temperature

    Operating temperature

	min	°C	-40
	max	°C	70

    Storage temperature

	min	°C	-50
	max	°C	80

Max altitude	m	3000

Resistance & Protection

Pollution degree	3

Dimensions

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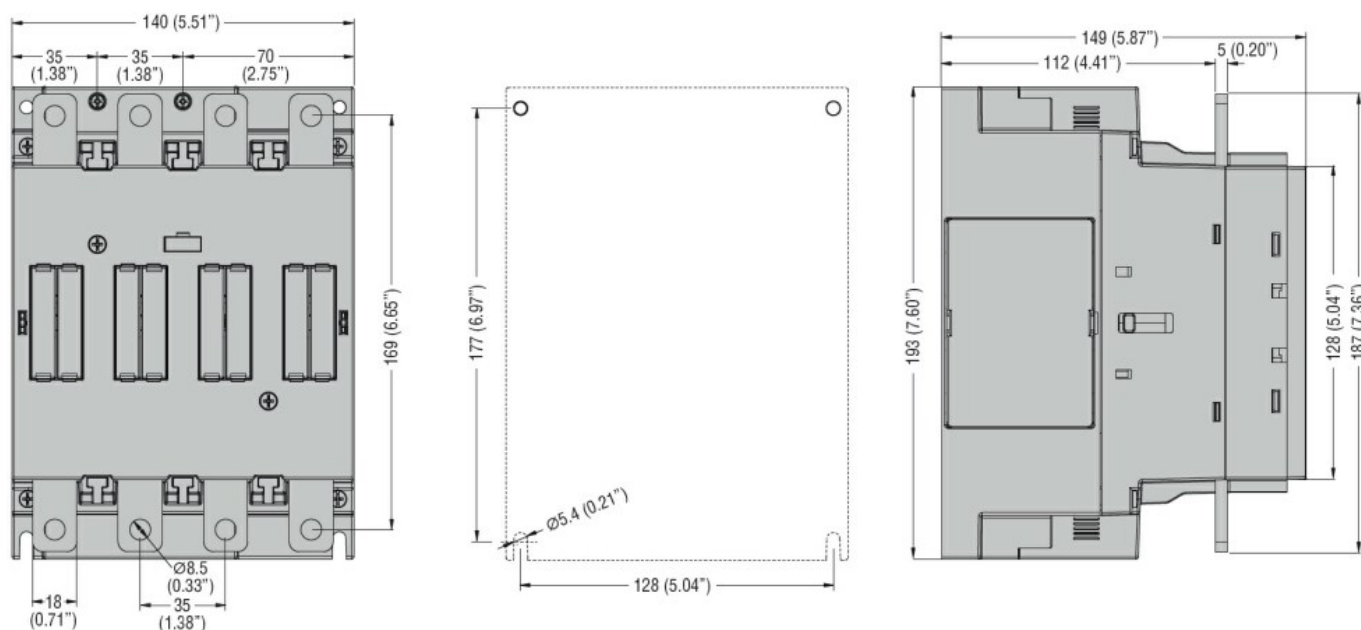
Wiring diagrams
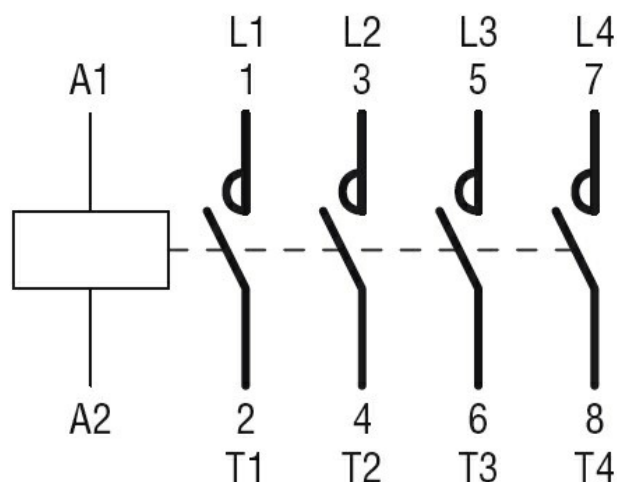
Certifications and compliance

Compliance

CSA C22.2 n° 60947-1
CSA C22.2 n° 60947-4-1
IEC/EN/BS 60947-1
IEC/EN/BS 60947-4-1
UL 60947-1
UL 60947-4-1

Certificates

cULus

ETIM classification

ETIM 8.0	EC000066 - Power contactor, AC switching