



Product designation

Power contactor

Product type designation

BF40

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	70
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A 70
	AC-1 ($\leq 55^\circ\text{C}$)	A 60
	AC-1 ($\leq 70^\circ\text{C}$)	A 50
	AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$)	A 40
	AC-4 (400V)	A 24
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V kW	11
	400V kW	18.5
	415V kW	22
	440V kW	22
	500V kW	22
	690V kW	30
	1000V kW	18.5
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V kW	26
	400V kW	46
	500V kW	58
	690V kW	79
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$ A	40
	48V A	35
	75V A	30
	110V A	8
	220V A	–
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	$\leq 24\text{V}$ A	48
	48V A	48
	75V A	45
	110V A	42
	220V A	5
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$ A	48
	48V A	48
	75V A	48

	110V	A	44
	220V	A	56
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	—
	48V	A	—
	75V	A	—
	110V	A	—
	220V	A	70
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	27
	48V	A	23
	75V	A	19
	110V	A	3
	220V	A	—
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	32
	48V	A	30
	75V	A	27
	110V	A	22
	220V	A	5
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	40
	48V	A	40
	75V	A	38
	110V	A	27
	220V	A	32
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	—
	48V	A	—
	75V	A	—
	110V	A	—
	220V	A	40
Short-time allowable current for 10s (IEC/EN60947-1)		A	400
Protection fuse			
	gG (IEC)	A	100
	aM (IEC)	A	50
Making capacity (RMS value)		A	400
Breaking capacity at voltage			
	440V	A	320
	500V	A	265
	690V	A	256
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)			
	Ith	W	3.9
	AC3	W	1.3
Tightening torque for terminals			
	min	Nm	4
	max	Nm	5
	min	lbin	2.95
	max	lbin	3.69
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1

		min	lbin	0.8
		max	lbin	0.74
Max number of wires simultaneously connectable			Nr.	2
Conductor section	AWG/Kcmil			
		max		2
Flexible w/o lug conductor section		min	mm ²	1.5
		max	mm ²	35
Flexible c/w lug conductor section		min	mm ²	1.5
		max	mm ²	35
Power terminal protection according to IEC/EN 60529				IP20 front
Mechanical features				
Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	1060
Conductor section	AWG/kcmil conductor section			
		max		2
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1500000
Safety related data				
Performance level B10d according to EN/ISO 13489-1		rated load mechanical load	cycles cycles	1500000 15000000
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	20
		max	V	48
Rated AC voltage at 50/60Hz			V	24
AC operating voltage	of 50/60Hz coil powered at 50Hz 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 holding	VA VA	35...120 1.5...3.7
	of 50/60Hz coil powered at 60Hz	in-rush	VA	35...120

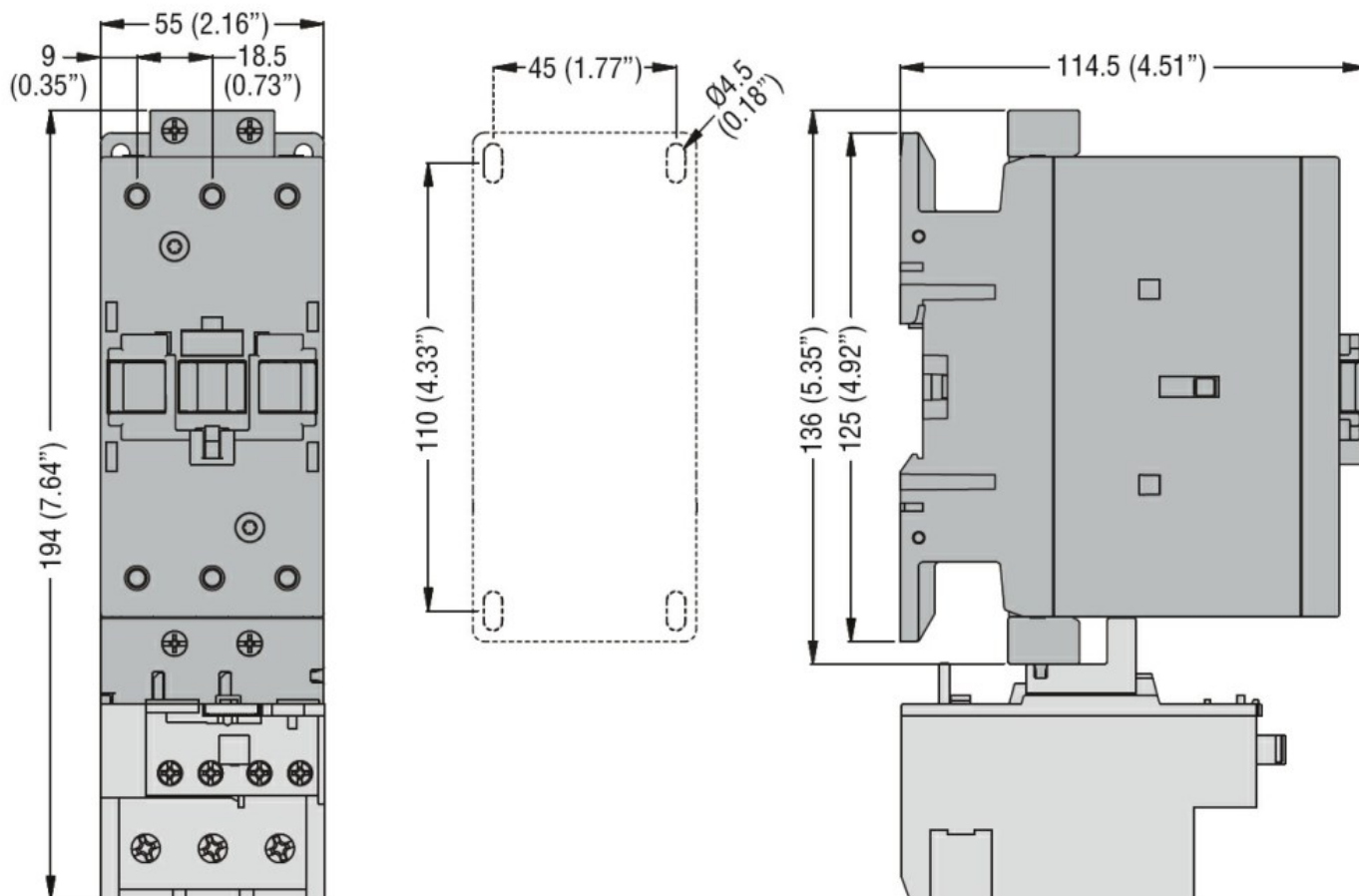
		holding	VA	1.5...3.7
Dissipation at holding ≤20°C 50Hz			W	1...2.5
DC coil operating				
DC rated control voltage		min	V	20
		max	V	48
DC rated control voltage			V	24
DC operating voltage				
pick-up		min	%Us	85 Us min
		max	%Us	110 Us max
drop-out		max	%Us	≤70 Us min
Average coil consumption ≤20°C				
		in-rush	W	23...68
		holding	W	1.2...1,9
Max cycles frequency				
Mechanical operation			cycles/h	1500
Operating times				
Average time for Us control				
in AC				
Closing NO		min	ms	12
		max	ms	28
Opening NO		min	ms	8
		max	ms	22
in DC				
Closing NO		min	ms	40
		max	ms	85
Opening NO		min	ms	20
		max	ms	55
UL technical data				
Full-load current (FLA) for three-phase AC motor				
		at 480V	A	40
		at 600V	A	32
Yielded mechanical performance				
for single-phase AC motor		110/120V	HP	3
		230V	HP	7.5
for three-phase AC motor		200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE				
Contactor		AC current	A	70
Auxiliary contacts		AC voltage	V	600
		AC current	A	10
		DC voltage	V	250

		DC current	A	1
Short-circuit protection fuse, 600V				
High fault		Short circuit current	kA	100
		Fuse rating	A	150
		Fuse class		J
Standard fault				
		Short circuit current	kA	5
		Fuse rating	A	150
		Fuse class		RK5
Contact rating of auxiliary contacts according to UL				SI - A600
Ambient conditions				
Temperature				
Operating temperature		min	°C	-40
		max	°C	70
Storage temperature				
		min	°C	-50
		max	°C	80
Max altitude			m	3000

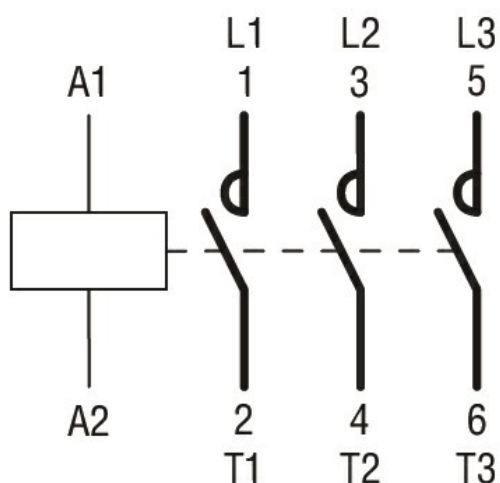
Resistance & Protection

Pollution degree 3

Dimensions



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

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching