



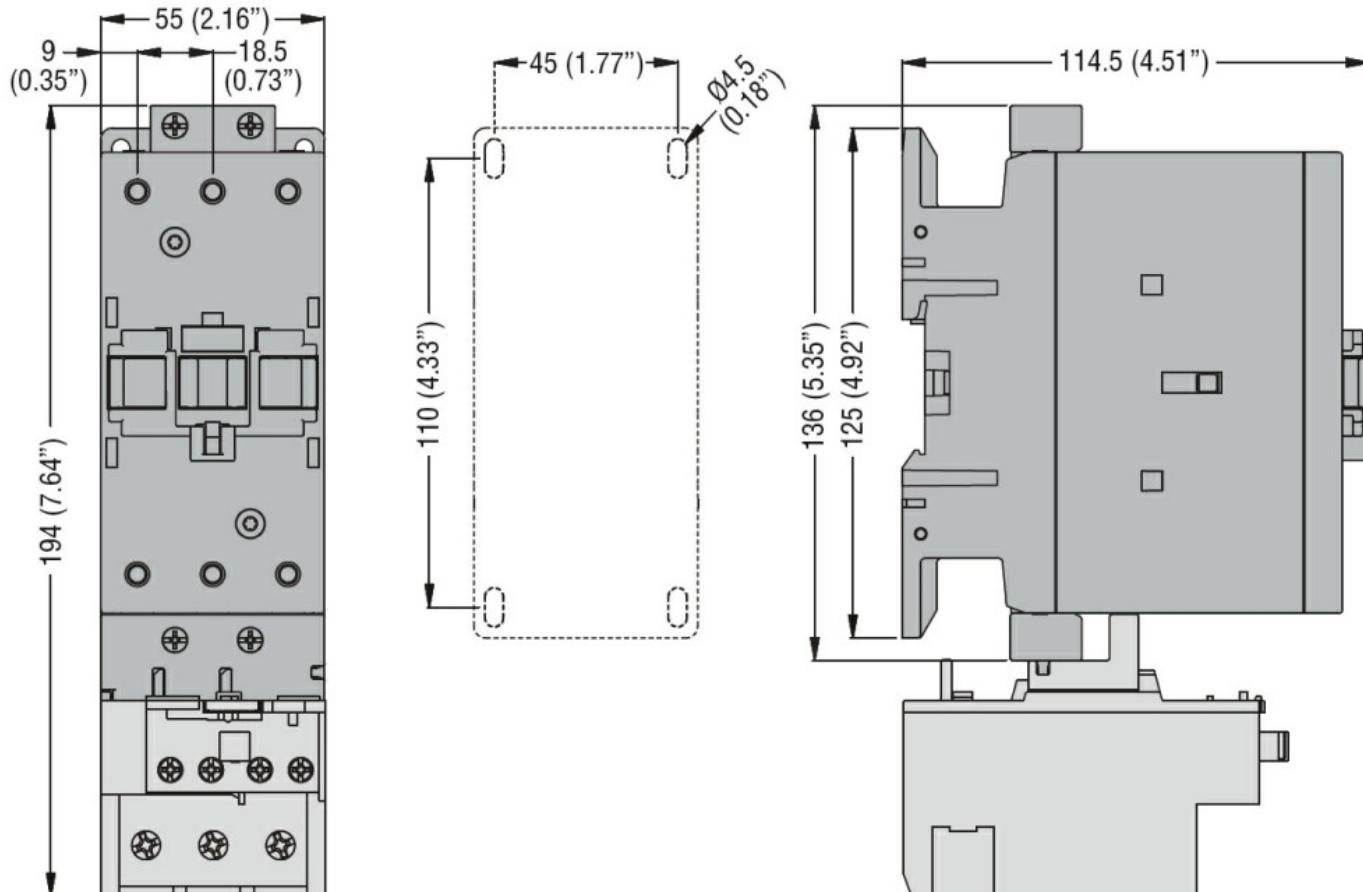
Product designation	Power contactor		
Product type designation	BF40		
Contact characteristics			
Number of poles	Nr.	3	
Rated insulation voltage U_i IEC/EN	V	1000	
Rated impulse withstand voltage U_{imp}	kV	8	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current I_{th}		A	70
Operational current I_e			
	AC-1 ($\leq 40^\circ C$)	A	70
	AC-1 ($\leq 55^\circ C$)	A	60
	AC-1 ($\leq 70^\circ C$)	A	50
	AC-3 ($\leq 440V \leq 55^\circ C$)	A	40
	AC-4 (400V)	A	24
Rated operational power AC-3 ($T \leq 55^\circ C$)			
	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 ($T \leq 40^\circ C$)			
	230V	kW	26
	400V	kW	46
	500V	kW	58
	690V	kW	79
IEC max current I_e in DC1 with $L/R \leq 1ms$ with 1 poles in series			
	$\leq 24V$	A	40
	48V	A	35
	75V	A	30
	110V	A	8
	220V	A	—
IEC max current I_e in DC1 with $L/R \leq 1ms$ with 2 poles in series			
	$\leq 24V$	A	48
	48V	A	48
	75V	A	45
	110V	A	42
	220V	A	5
IEC max current I_e in DC1 with $L/R \leq 1ms$ with 3 poles in series			
	$\leq 24V$	A	48
	48V	A	48
	75V	A	48

	110V	A	44
	220V	A	56
IEC max current le 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 le 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 le 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 le 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 le 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)			m? 0.8
Power dissipation per pole (average value)			
	I _{th}	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

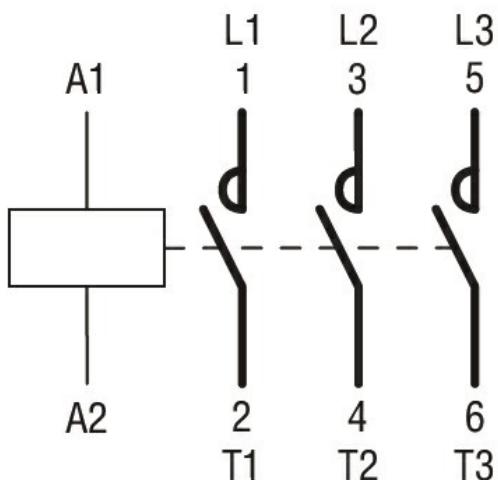
	min	Ibin	0.8		
	max	Ibin	0.74		
Max number of wires simultaneously connectable	Nr. 2				
Conductor section					
AWG/Kcmil	max		2		
Flexible w/o lug conductor section	min	mm ²	1.5		
	max	mm ²	35		
Flexible c/w lug conductor section	min	mm ²	1.5		
	max	mm ²	35		
Power terminal protection according to IEC/EN 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	cycles	1500000		
	mechanical load	cycles	15000000		
Mirror contacts according to IEC/EN 609474-4-1	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	VA	35...120		
	holding	VA	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 $\leq 20^{\circ}\text{C}$ 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 $\leq 20^{\circ}\text{C}$		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