



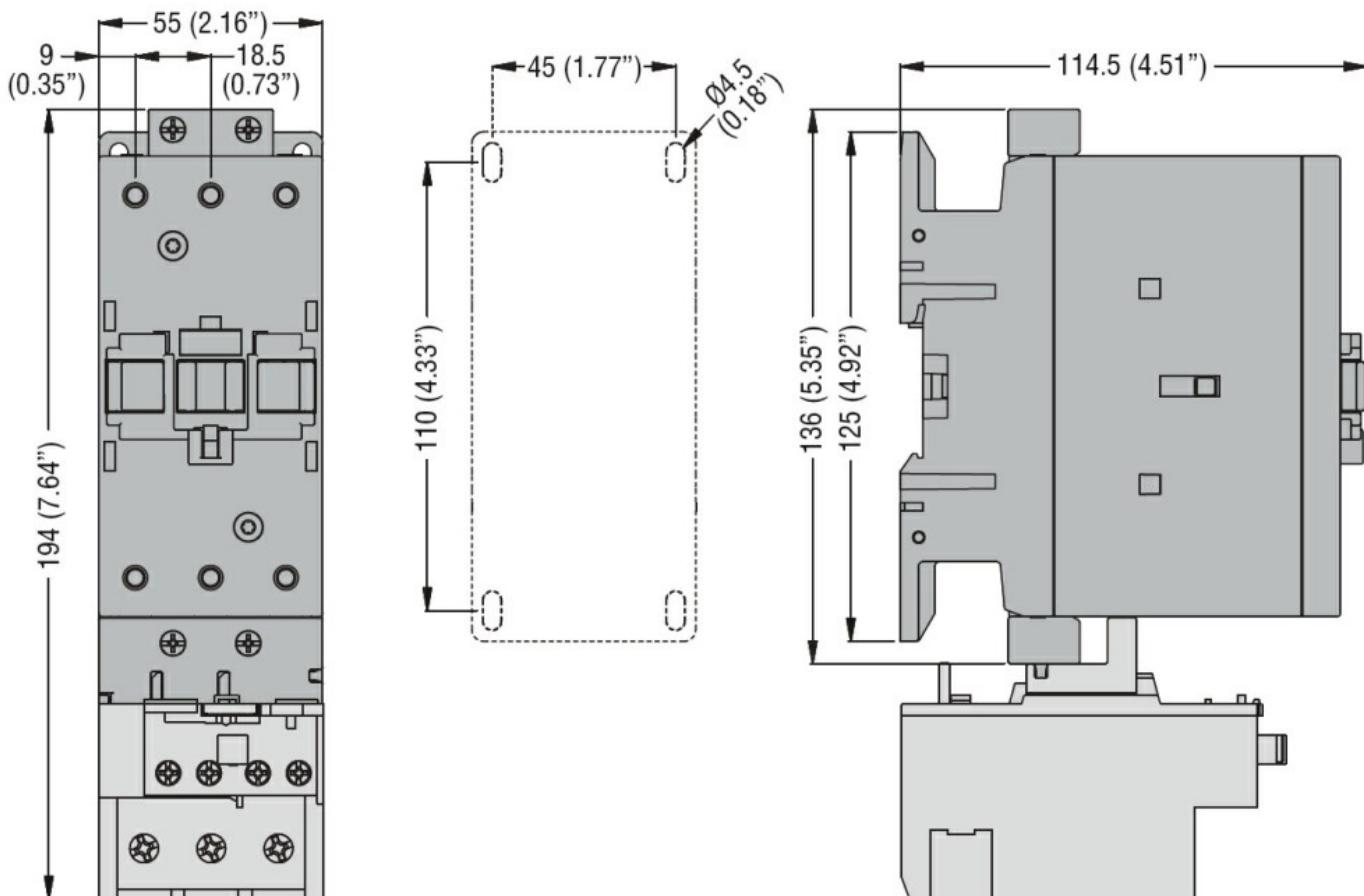
Product designation	Power contactor		
Product type designation	BF40		
<b>Contact characteristics</b>			
Number of poles	Nr.	3	
Rated insulation voltage $U_i$ IEC/EN	V	1000	
Rated impulse withstand voltage $U_{imp}$	kV	8	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current $I_{th}$	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 current AC-3 ( $T \leq 55^\circ\text{C}$ )	230V	A	40
	400V	A	40
	415V	A	40
	440V	A	40
	500V	A	33
	690V	A	32
	1000V	A	21
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 le in DC1 with L/R ≤ 1ms with 3 poles in series			
	≤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)		mΩ	0.8
Power dissipation per pole (average value)			
	I <sub>th</sub>	W	3.9
	AC-3	W	1.3
Tightening torque for terminals			

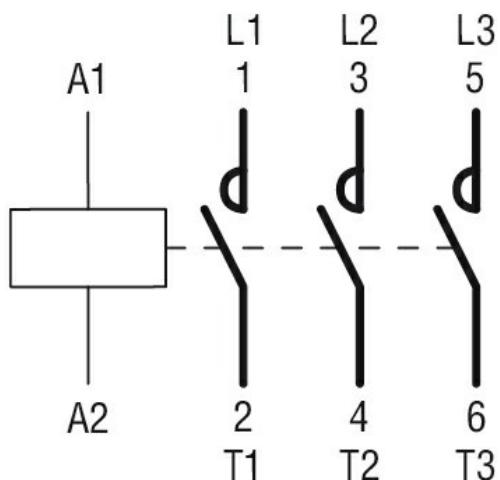
	min	Nm	4
	max	Nm	5
	min	Ibin	2.95
	max	Ibin	3.69
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	Ibin	0.8
	max	Ibin	0.74
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil	max		2
Flexible w/o lug conductor section	min	mm <sup>2</sup>	1.5
	max	mm <sup>2</sup>	35
Flexible c/w lug conductor section	min	mm <sup>2</sup>	1.5
	max	mm <sup>2</sup>	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
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	1500000 15000000
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz, 60Hz	min max	V V	100 250
AC operating voltage			
of 50/60Hz coil powered at 50Hz			
pick-up	min max	%Us %Us	80 Us min 110 Us max
drop-out	max	%Us	≤70 Us min
of 50/60Hz coil powered at 60Hz			
pick-up	min max	%Us %Us	80 Us min 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
<b>DC coil operating</b>			
DC rated control voltage	min	V	100
	max	V	250
DC operating voltage			
pick-up	min	%Us	80 Us min
	max	%Us	110 Us max
drop-out	max	%Us	$\leq 70$ Us min
Average coil consumption $\leq 20^{\circ}\text{C}$	in-rush	W	23...68
	holding	W	1.2...1,9
<b>Max cycles frequency</b>			
Mechanical operation		cycles/h	1500
<b>Operating times</b>			
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
<b>UL technical data</b>			
Rated operational voltage AC (UL)		V	600
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
<b>General USE</b>			
<b>Contactor</b>			

	AC current	A	70
Short-circuit protection fuse, 600V High fault	Short circuit current Fuse rating Fuse class	kA A J	100 150 RK5
Standard fault	Short circuit current Fuse rating Fuse class	kA A RK5	5 150
<b>Ambient conditions</b>			
Temperature	Operating temperature	min °C max °C	-40 70
Storage temperature		min °C max °C	-50 80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
<b>Dimensions</b>			



**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

[CCC](#)  
[cULus](#)

#### ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching