



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 (≤40°C)	A	70	
	AC-1 (≤55°C)	A	60	
	AC-1 (≤70°C)	A	50	
	AC-3 (≤440V ≤55°C)	A	40	
	AC-4 (400V)	A	24	
Rated operational power AC-3 (T≤55°C)	230V	kW	11	
	400V	kW	18.5	
	415V	kW	22	
	440V	kW	22	
	500V	kW	22	
	690V	kW	30	
	1000V	kW	30	
Rated operational current AC-3 (T≤55°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≤40°C)	230V	kW	26	
	400V	kW	46	
	500V	kW	58	
	690V	kW	79	
IEC max current I _e in DC1 with L/R ≤ 1ms with 1 poles in series	≤24V	A	40	
	48V	A	35	
	75V	A	30	
	110V	A	8	
	220V	A	—	
IEC max current I _e in DC1 with L/R ≤ 1ms with 2 poles in series	≤24V	A	48	

	48V	A	48
	75V	A	45
	110V	A	42
	220V	A	5
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IEC max current I _e 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
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IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series	≤24V	A	–
	48V	A	–
	75V	A	–
	110V	A	–
	220V	A	70
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IEC max current I _e 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	–
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IEC max current I _e 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
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IEC max current I _e 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
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IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	≤24V	A	–
	48V	A	–
	75V	A	–
	110V	A	–
	220V	A	40
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Short-time allowable current for 10s (IEC/EN60947-1)		A	400
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Protection fuse			
	gG (IEC)	A	100
	aM (IEC)	A	50
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Making capacity (RMS value)		A	400
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Breaking capacity at voltage			
	440V	A	320
	500V	A	265
	690V	A	256
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Resistance per pole (average value)		mΩ	0.8
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Power dissipation per pole (average value)			
	I _{th}	W	3.9
	AC-3	W	1.3
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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 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 1020
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 60947-4-1			yes
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz		V	24
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	55
of 50/60Hz coil powered at 60Hz			
pick-up			
	min	%Us	85
	max	%Us	110

drop-out

min	%Us	40
max	%Us	55

AC average coil consumption at 20°C

of 50/60Hz coil powered at 50Hz

in-rush	VA	210
holding	VA	15

of 50/60Hz coil powered at 60Hz

in-rush	VA	195
holding	VA	13

of 60Hz coil powered at 60Hz

in-rush	VA	210
holding	VA	15

Dissipation at holding ≤20°C 50Hz

W	5
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Max cycles frequency

Mechanical operation

cycles/h	3600
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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
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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

Ambient conditions

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

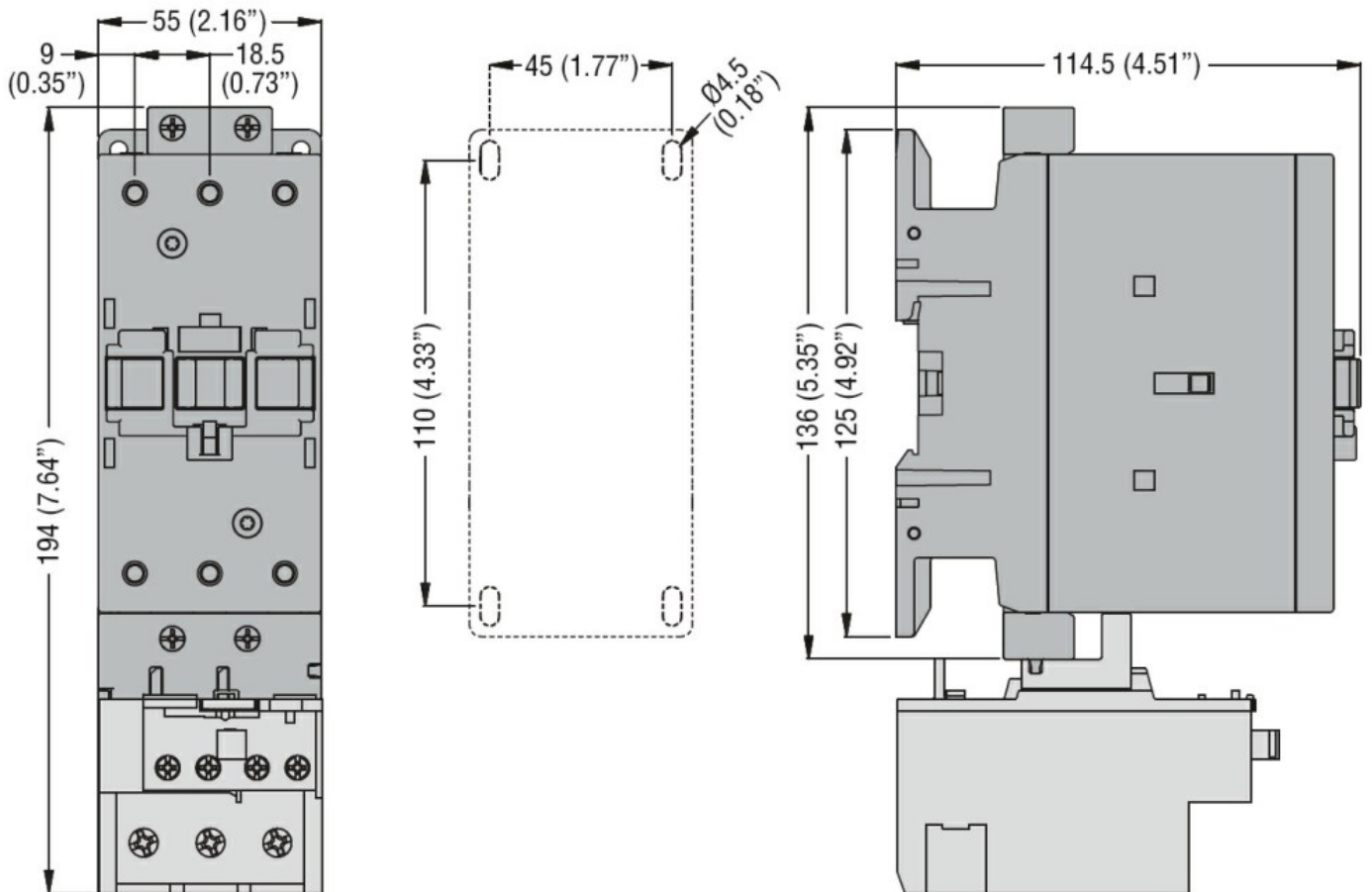
m	3000
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Resistance & Protection

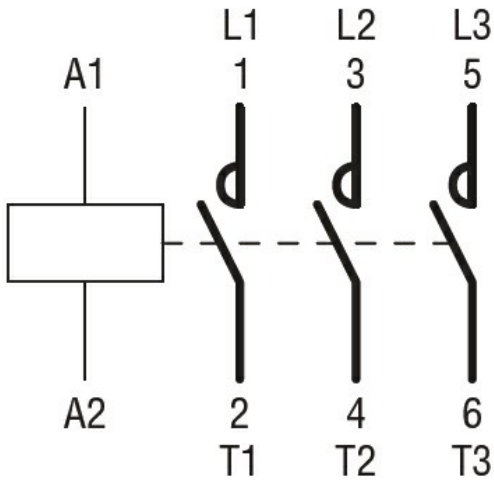
Pollution degree

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Dimensions



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