



Product designation  
Product type designation

Power contactor  
BF40

**Contact characteristics**

Number of poles	Nr.	3
Rated insulation voltage U <sub>i</sub> IEC/EN	V	1000
Rated impulse withstand voltage U <sub>imp</sub>	kV	8
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current I <sub>th</sub>	A	70
Operational current I <sub>e</sub>	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 22
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 <sub>e</sub> 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 <sub>e</sub> 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
<hr/>			
IEC max current I <sub>e</sub> 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
<hr/>			
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series	≤24V	A	–
	48V	A	–
	75V	A	–
	110V	A	–
	220V	A	70
<hr/>			
IEC max current I <sub>e</sub> 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	–
<hr/>			
IEC max current I <sub>e</sub> 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
<hr/>			
IEC max current I <sub>e</sub> 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
<hr/>			
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	≤24V	A	–
	48V	A	–
	75V	A	–
	110V	A	–
	220V	A	40
<hr/>			
Short-time allowable current for 10s (IEC/EN60947-1)		A	400
<hr/>			
Protection fuse	gG (IEC)	A	100
	aM (IEC)	A	50
<hr/>			
Making capacity (RMS value)		A	400
<hr/>			
Breaking capacity at voltage	440V	A	320
	500V	A	265
	690V	A	256
<hr/>			
Resistance per pole (average value)		mΩ	0.8
<hr/>			
Power dissipation per pole (average value)	I <sub>th</sub>	W	3.9
	AC-3	W	1.3
<hr/>			
Tightening torque for terminals			

		min	Nm	4
		max	Nm	5
		min	Ibin	2.95
		max	Ibin	3.69
<b>Tightening torque for coil terminal</b>				
		min	Nm	0.8
		max	Nm	1
		min	Ibin	0.8
		max	Ibin	0.74
<b>Max number of wires simultaneously connectable</b>				Nr. 2
<b>Conductor section</b>				
	AWG/Kcmil			
		max		2
<b>Flexible w/o lug conductor section</b>				
		min	mm <sup>2</sup>	1.5
		max	mm <sup>2</sup>	35
<b>Flexible c/w lug conductor section</b>				
		min	mm <sup>2</sup>	1.5
		max	mm <sup>2</sup>	35
<b>Power terminal protection according to IEC/EN 60529</b>				IP20 front
<b>Mechanical features</b>				
<b>Operating position</b>				
		normal allowable		Vertical plan ±30°
<b>Fixing</b>				Screw / DIN rail 35mm
<b>Weight</b>				g 1020
<b>Conductor section</b>				
	AWG/kcmil conductor section			
		max		2
<b>Operations</b>				
<b>Mechanical life</b>			cycles	15000000
<b>Electrical life</b>			cycles	1500000
<b>Safety related data</b>				
<b>Performance level B10d according to EN/ISO 13489-1</b>				
		rated load	cycles	1500000
		mechanical load	cycles	15000000
<b>Mirror contacts according to IEC/EN 60947-4-1</b>				yes
<b>EMC compatibility</b>				yes
<b>AC coil operating</b>				
<b>Rated AC voltage at 50/60Hz</b>			V	230
<b>AC operating voltage</b>				
	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
---	---

Max cycles frequency

Mechanical operation

cycles/h	3600
----------	------

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

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
------------	---	----

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

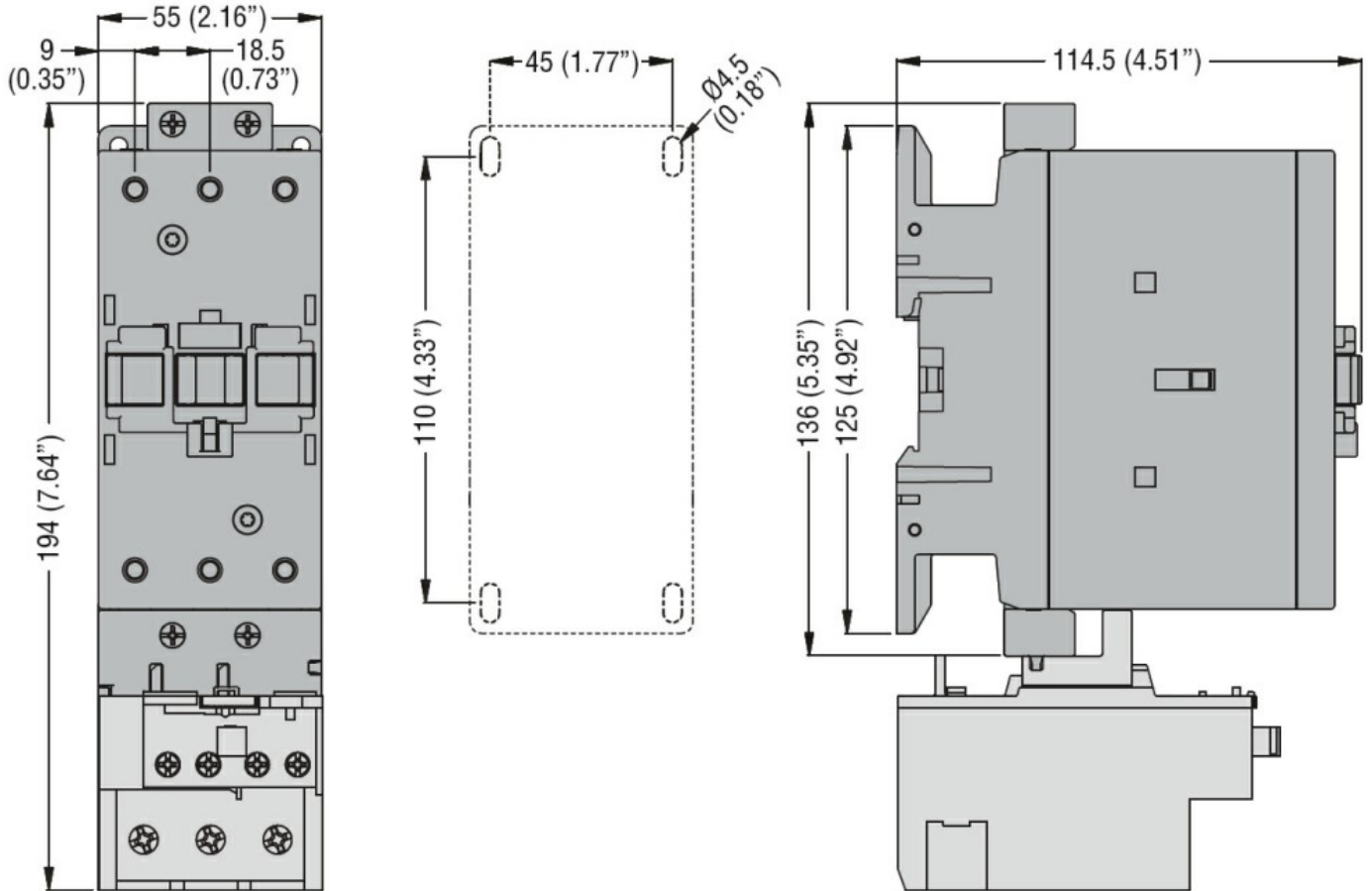
min	°C	-50
-----	----	-----

Storage temperature	max	°C	70
	min	°C	-60
Max altitude	max	°C	80
		m	3000

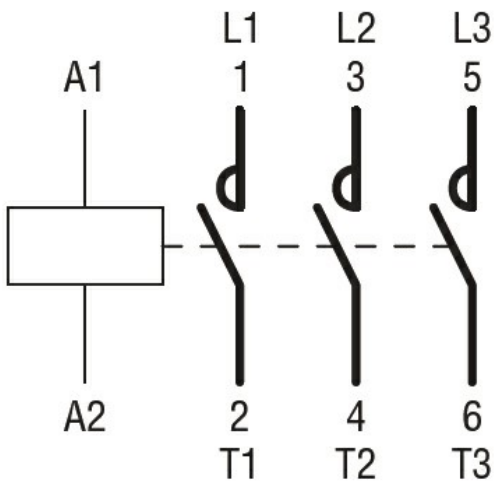
**Resistance & Protection**

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/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