



Product designation				Power contactor
Product type designation				BF25
<b>Contact characteristics</b>				
Number of poles	Nr.			3
Rated insulation voltage $U_i$ IEC/EN	V			690
Rated impulse withstand voltage $U_{imp}$	kV			6
Operational frequency	min	Hz	25	
	max	Hz	400	
IEC Conventional free air thermal current $I_{th}$	A			32
Operational current $I_e$	AC-1 ( $\leq 40^\circ\text{C}$ )	A	32	
	AC-1 ( $\leq 55^\circ\text{C}$ )	A	26	
	AC-1 ( $\leq 70^\circ\text{C}$ )	A	23	
	AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )	A	25	
	AC-4 (400V)	A	10	
Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )	230V	kW	7	
	400V	kW	12.5	
	415V	kW	13.4	
	440V	kW	13.4	
	500V	kW	15	
	690V	kW	11	
Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )	230V	kW	12	
	400V	kW	21	
	500V	kW	26	
	690V	kW	36	
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A	20	
	48V	A	18	
	75V	A	18	
	110V	A	6	
	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	23	
	48V	A	23	
	75V	A	23	
	110V	A	16	
	220V	A	1	
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A	23	
	48V	A	23	
	75V	A	23	
	110V	A	18	

	220V	A	12
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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	–
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series	≤24V	A	15
	48V	A	13
	75V	A	13
	110V	A	2
	220V	A	–
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	≤24V	A	18
	48V	A	18
	75V	A	16
	110V	A	10
	220V	A	2
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	≤24V	A	22
	48V	A	22
	75V	A	18
	110V	A	15
	220V	A	8
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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	–
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Short-time allowable current for 10s (IEC/EN60947-1)		A	200
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Protection fuse	gG (IEC)	A	50
	aM (IEC)	A	25
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Making capacity (RMS value)		A	250
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Breaking capacity at voltage	440V	A	200
	500V	A	184
	690V	A	102
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Resistance per pole (average value)		mΩ	2.5
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Power dissipation per pole (average value)	I <sub>th</sub>	W	2.6
	AC-3	W	1.6
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Tightening torque for terminals	min	Nm	1.5
	max	Nm	1.8
	min	I <sub>bin</sub>	1.1
	max	I <sub>bin</sub>	1.5
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Tightening torque for coil terminal	min	Nm	0.8
	max	Nm	1
	min	I <sub>bin</sub>	0.8

		max	I <sub>bin</sub>	0.74
Max number of wires simultaneously connectable			Nr.	2
Conductor section	AWG/Kcmil	max		10
Flexible w/o lug conductor section		min	mm <sup>2</sup>	1
		max	mm <sup>2</sup>	6
Flexible c/w lug conductor section		min	mm <sup>2</sup>	1
		max	mm <sup>2</sup>	4
Flexible with insulated spade lug conductor section		min	mm <sup>2</sup>	1
		max	mm <sup>2</sup>	4
Power terminal protection according to IEC/EN 60529				IP20 when properly wired

**Mechanical features**

Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	502
Conductor section	AWG/kcmil conductor section	max		10

**Auxiliary contact characteristics**

Thermal current I <sub>th</sub>		A		10
IEC/EN 60947-5-1 designation				A600 - P600
Operating current AC15		230V	A	3
		400V	A	1.9
		500V	A	1.4
Operating current DC12		110V	A	5.7
Operating current DC13		24V	A	5.7
		48V	A	2.9
		60V	A	2.3
		110V	A	1.25
		125V	A	1.1
		220V	A	0.55
		600V	A	0.2

**Operations**

Mechanical life		cycles		20000000
Electrical life		cycles		1200000

**Safety related data**

Performance level B10d according to EN/ISO 13489-1		rated load	cycles	1200000
		mechanical load	cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1				yes
EMC compatibility				yes

**DC coil operating**

DC rated control voltage		V	24
DC operating voltage			
pick-up	min	%Us	80
	max	%Us	110
drop-out	min	%Us	10
	max	%Us	40

Average coil consumption $\leq 20^{\circ}\text{C}$			
	in-rush	W	2.4
	holding	W	2.4

**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	8
	max	ms	24
Opening NO	min	ms	10
	max	ms	20
Closing NC	min	ms	14
	max	ms	28
Opening NC	min	ms	7
	max	ms	18
in DC			
Closing NO	min	ms	75
	max	ms	91
Opening NO	min	ms	15
	max	ms	19

**UL technical data**

Full-load current (FLA) for three-phase AC motor			
	at 480V	A	21
	at 600V	A	17

Yielded mechanical performance			
for single-phase AC motor			
	110/120V	HP	2
	230V	HP	3
for three-phase AC motor			
	200/208V	HP	7.5
	220/230V	HP	7.5
	460/480V	HP	15
	575/600V	HP	15

General USE			
Contactor			
	AC current	A	32
Auxiliary contacts			
	AC voltage	V	600
	AC current	A	10

	DC voltage	V	250
	DC current	A	1
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Short-circuit protection fuse, 600V High fault	Short circuit current	kA	100
	Fuse rating	A	60
	Fuse class		J
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Standard fault	Short circuit current	kA	5
	Fuse rating	A	100
Contact rating of auxiliary contacts according to UL			A600 - P600

**Ambient conditions**

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

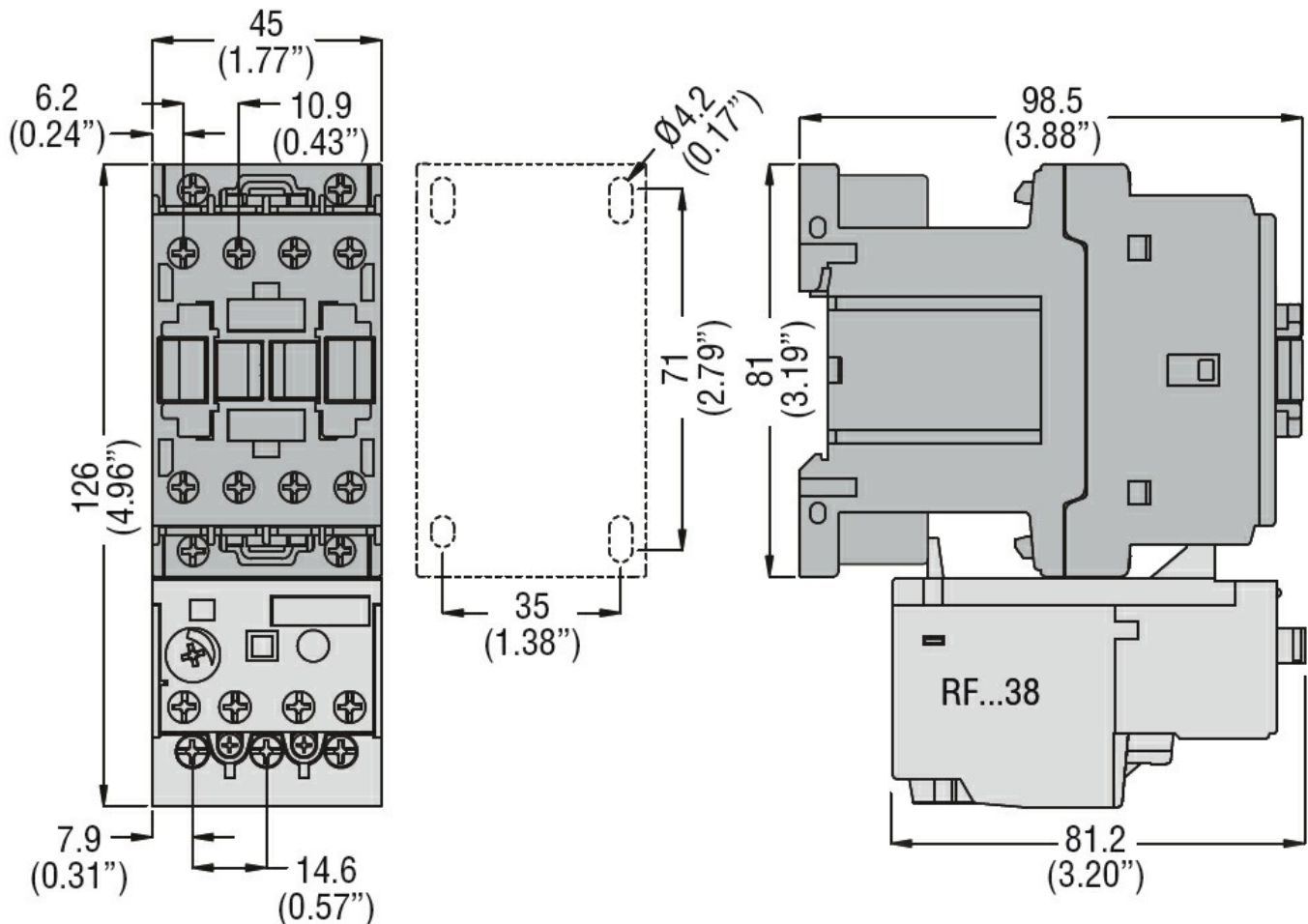
m	3000
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**Resistance & Protection**

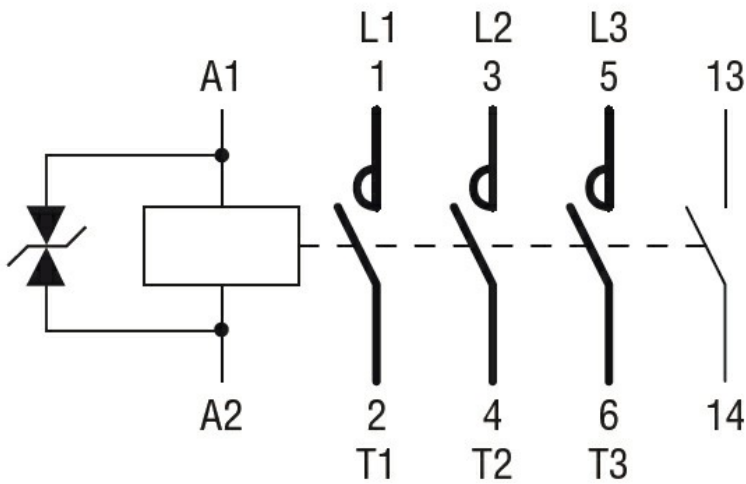
Pollution degree

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

EAC

**ETIM classification**

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching