



Product designation	Power contactor		
Product type designation	BF25		
Contact characteristics			
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
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	–
IEC max current I _e 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	–
IEC max current I _e 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
IEC max current I _e 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
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	–
Short-time allowable current for 10s (IEC/EN60947-1)		A	200
Protection fuse			
	gG (IEC)	A	50
	aM (IEC)	A	25
Making capacity (RMS value)		A	250
Breaking capacity at voltage			
	440V	A	200
	500V	A	184
	690V	A	102
Resistance per pole (average value)		mΩ	2.5
Power dissipation per pole (average value)			
	I _{th}	W	2.6
	AC-3	W	1.6
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	I _{bin}	1.1
	max	I _{bin}	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	I _{bin}	0.8

	max	I _{bin}	0.74
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil	max		10
Flexible w/o lug conductor section	min	mm ²	1
	max	mm ²	6
Flexible c/w lug conductor section	min	mm ²	1
	max	mm ²	4
Flexible with insulated spade lug conductor section	min	mm ²	1
	max	mm ²	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 _{th}		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
	Closing NC	min	ms 24
		max	ms 30
	Opening NC	min	ms 67
		max	ms 81

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

Short-circuit protection fuse, 600V

High fault	Short circuit current	kA	100
	Fuse rating	A	60
	Fuse class		J
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

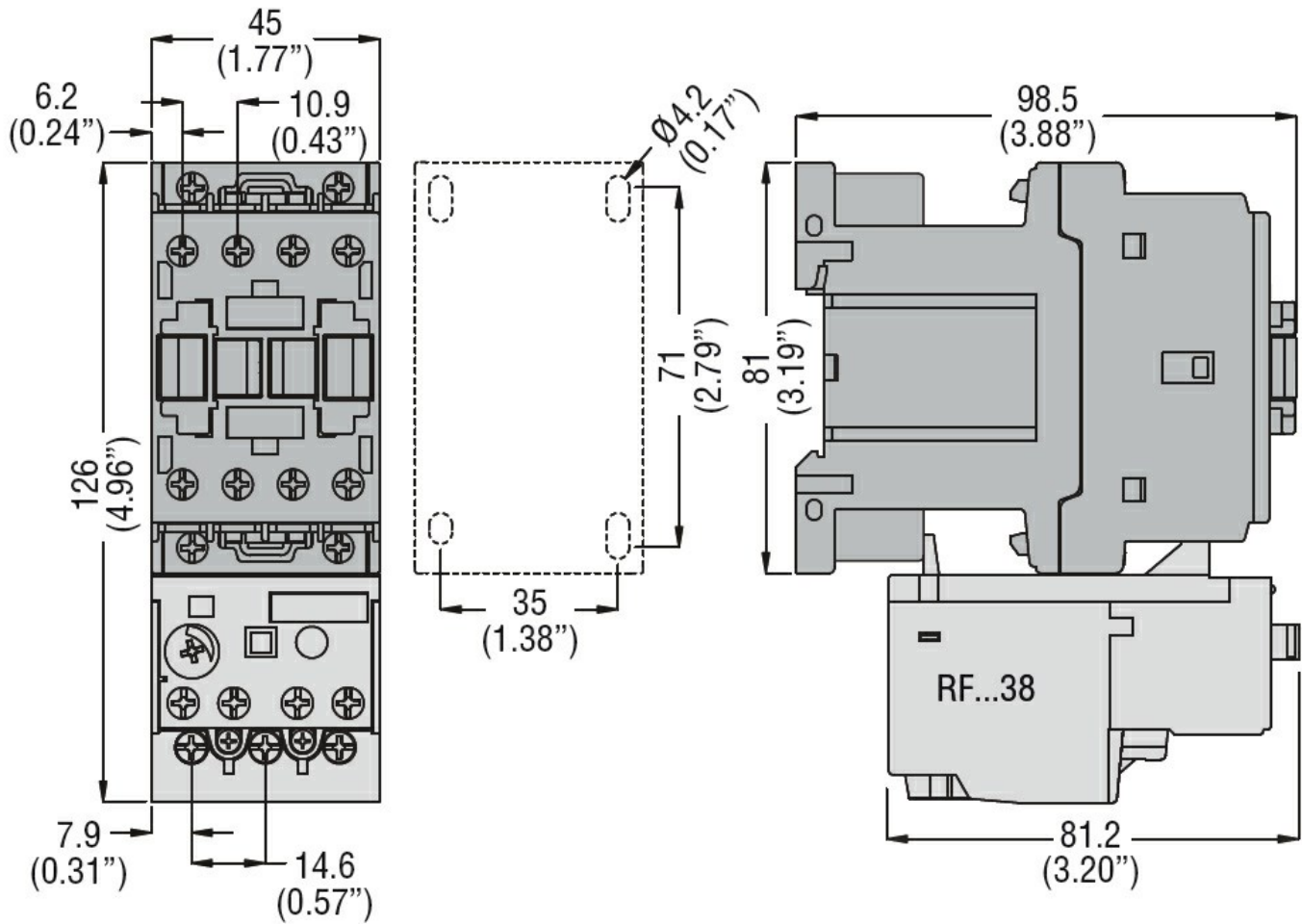
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Resistance & Protection

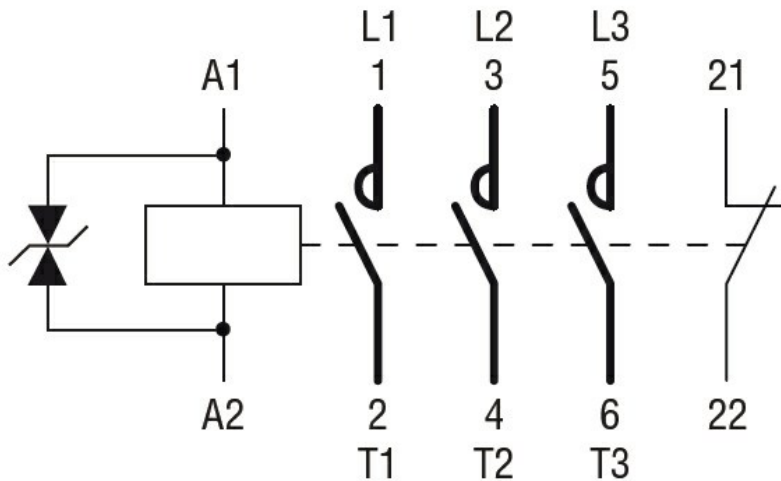
Pollution degree

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