



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 Ie in DC1 with L/R ≤ 1ms with 4 poles in series	≤24V	A	—
	48V	A	—
	75V	A	—
	110V	A	—
	220V	A	—
IEC max current Ie 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 Ie 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 Ie 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 Ie 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)	Ith	W	2.6
	AC-3	W	1.6
Tightening torque for terminals	min	Nm	1.5
	max	Nm	1.8
	min	Ibin	1.1
	max	Ibin	1.5
Tightening torque for coil terminal	min	Nm	0.8
	max	Nm	1
	min	Ibin	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	500
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
EMC compatibility			yes
AC coil operating			
AC operating voltage			
of 50/60Hz coil powered at 50Hz drop-out	max	%U _s	55
DC coil operating			

DC rated control voltage		V	48
DC operating voltage			
pick-up	min	%Us	80
	max	%Us	110
drop-out	min	%Us	10
	max	%Us	40
Average coil consumption ≤20°C			
	in-rush	W	2.4
	holding	W	2.4
Max cycles frequency			
Mechanical operation		cycles/h	3600
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			
Rated operational voltage AC (UL)		V	600
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

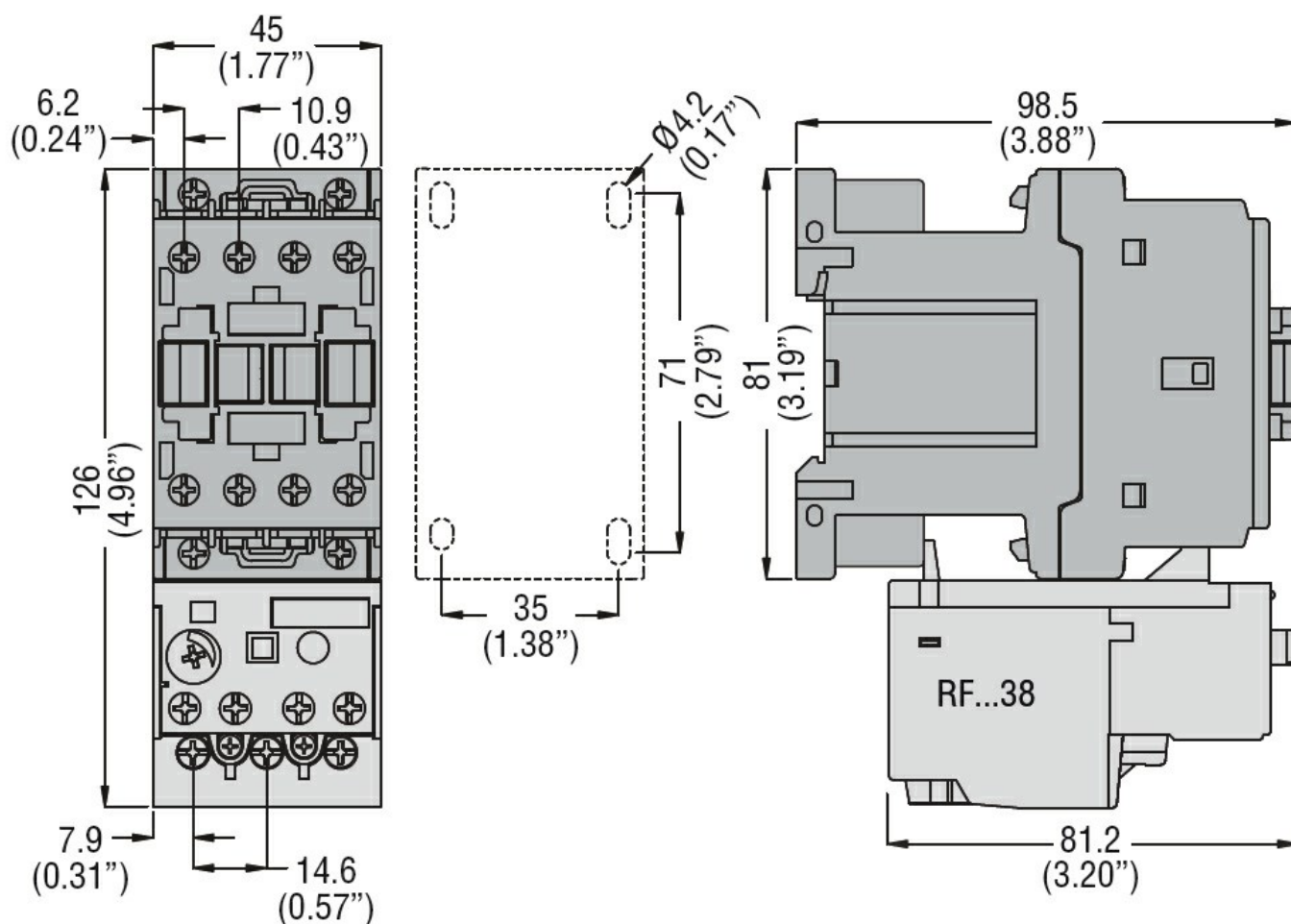
m 3000

Resistance & Protection

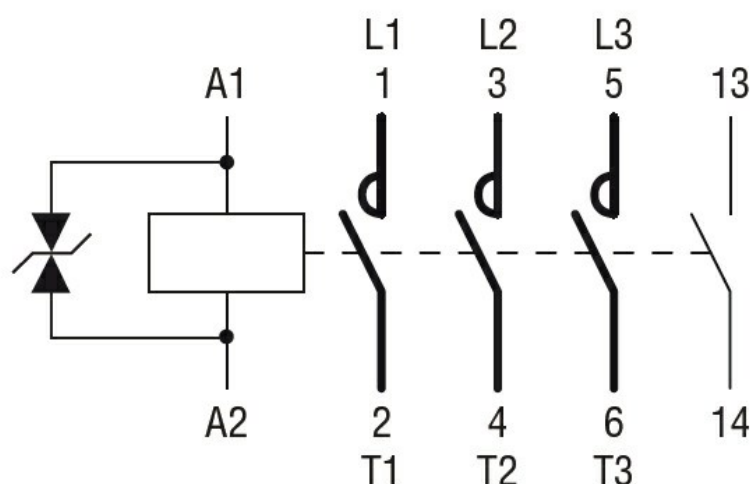
Pollution degree

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

EAC

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching