



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	358

Conductor section	AWG/kcmil conductor section	max	10
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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
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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

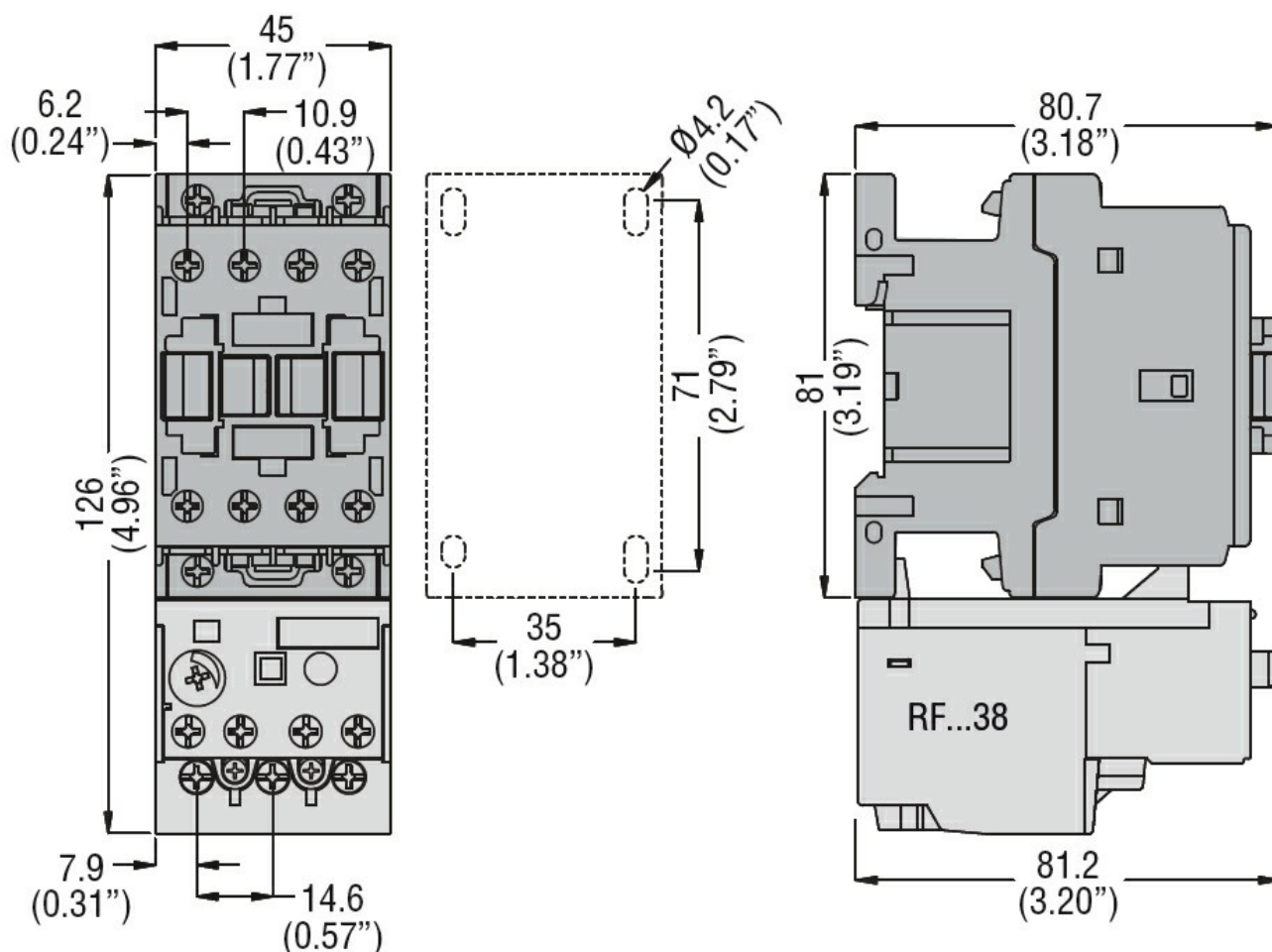
Safety related data

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

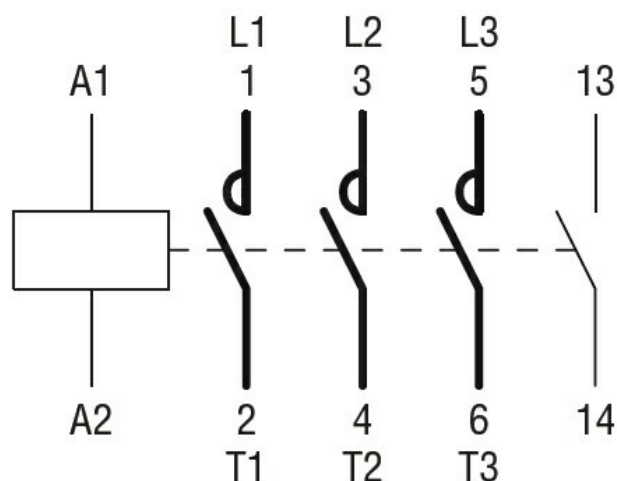
AC coil operating

Rated AC voltage at 50/60Hz	V		230
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	20
	max	%Us	55
AC average coil consumption at 20°C			
of 50/60Hz coil powered at 50Hz	in-rush	VA	75
	holding	VA	9
of 50/60Hz coil powered at 60Hz	in-rush	VA	70
	holding	VA	6.5
of 60Hz coil powered at 60Hz	in-rush	VA	75
	holding	VA	9
Dissipation at holding ≤20°C 50Hz	W		2.5
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
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			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