



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	360
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			
Rated AC voltage at 50/60Hz		V	42
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				
	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