

Product designation				Power contactor
Product type designation				BF25
<b>Contact characteristics</b>				
Number of poles	Nr.			3
Rated insulation voltage Ui IEC/EN	V			690
Rated impulse withstand voltage Uimp	kV			6
Operational frequency	min	Hz	25	
	max	Hz	400	
IEC Conventional free air thermal current Ith	A			32
Operational current Ie	AC-1 (≤40°C)	A	32	
	AC-1 (≤55°C)	A	26	
	AC-1 (≤70°C)	A	23	
	AC-3 (≤440V ≤55°C)	A	25	
	AC-4 (400V)	A	10	
Rated operational power AC-3 (T≤55°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≤40°C)	230V	kW	12	
	400V	kW	21	
	500V	kW	26	
	690V	kW	36	
IEC max current Ie in DC1 with L/R ≤ 1ms with 1 poles in series	≤24V	A	20	
	48V	A	18	
	75V	A	18	
	110V	A	6	
	220V	A	–	
IEC max current Ie in DC1 with L/R ≤ 1ms with 2 poles in series	≤24V	A	23	
	48V	A	23	
	75V	A	23	
	110V	A	16	
	220V	A	1	
IEC max current Ie in DC1 with L/R ≤ 1ms with 3 poles in series	≤24V	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	–
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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
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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
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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	–
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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)			
	Ith	W	2.6
	AC3	W	1.6
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Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	Ibin	1.1
	max	Ibin	1.5
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Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	Ibin	Prodotti finiti
	max	Ibin	Prodotti finiti
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Max number of wires simultaneously connectable		Nr.	2
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Conductor section			
	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 wired
<b>Mechanical features</b>			
Operating position			
	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	502
<b>Auxiliary contact characteristics</b>			
Type of contact			1 NC
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
<b>Operations</b>			
Mechanical life		cycles	20000000
Electrical life		cycles	1200000
<b>Safety related data</b>			
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
<b>DC coil operating</b>			
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 ≤20°C			
	in-rush	W	2.4
	holding	W	2.4
<b>Max cycles frequency</b>			
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
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
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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
<b>Ambient conditions</b>				
Temperature				
Operating temperature		min	°C	-50
		max	°C	70
Storage temperature		min	°C	-60
		max	°C	80
Max altitude			m	3000
<b>Resistance &amp; Protection</b>				
Pollution degree				3
<b>Dimensions</b>				
<b>Wiring diagrams</b>				
<b>Certifications and compliance</b>				
Compliance				
		CSA C22.2 n° 60947-1		
		CSA C22.2 n° 60947-4-1		
		IEC/EN 60947-1		
		IEC/EN 60947-4-1		
		UL 60947-1		
		UL 60947-4-1		
Certificates				
		CCC		
		cULus		
		EAC		
<b>ETIM classification</b>				
ETIM 8.0				EC000066 - Power contactor, AC switching