

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 160A, AC/DC COIL, 250... 500VAC/DC **ENERGY AND AUTOMATION**



Product designation Product type designation			Power contactor BF160
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	250
Operational current le			
	AC-1 (≤40°C)	Α	250
	AC-1 (≤55°C)	Α	210
	AC-1 (≤70°C)	Α	180
	AC-3 (≤440V ≤55°C)	Α	160
	AC-4 (400V)	A	75
Rated operational power AC-3 (T≤55°C)	2001		
	230V	kW	45
	400V	kW	75
	415V	kW	90
	440V	kW	90
	500V	kW	110
	690V	kW	132
Detect or cretional nervey AC 4 (T<40°C)	1000V	kW	75
Rated operational power AC-1 (T≤40°C)	2201/	LAAZ	0.5
	230V	kW	95
	400V 500V	kW kW	165
	690V	kW	181 284
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series	090 v	KVV	204
TEC max current le in DCT with L/N = mis with 1 poles in series	≤24V	۸	250
	≤24∨ 48∨	A A	250
	75V	A	250
	110V	A	110
	220V	A	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	220 V		
TEO THAN OUT OF THE BOT WILL ETT = THIS WILL 2 police in solice	≤24V	Α	250
	48V	Α	250
	75V	Α	250
	110V	Α	150
	220V	Α	130
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
	≤24V	Α	250
	48V	Α	250
	75V	Α	250
	. • •		



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	110V	Α	160	
	220V	Α	150	
	330V	Α	130	
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series				
	≤24V	Α	250	
	48V	Α	250	
	75V	Α	250	
	110V	Α	250	
	220V	Α	250	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series				
	≤24V	Α	250	
	48V	Α	250	
	75V	Α	160	
	110V	Α	80	
	220V	A	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	220 V			
120 max current le in 000-000 with the 2 forms with 2 poles in series	≤24V	Α	250	
	≤24 V 48 V	A	250	
	48 V 75 V	A	250 160	
	110V	A	120	
150	220V	Α	90	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	.0.43.4		0-0	
	≤24V	Α	250	
	48V	Α	250	
	75V	Α	160	
	110V	Α	140	
	220V	Α	120	
	330V	Α	90	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series				
	≤24V	Α	250	
	48V	Α	250	
	75V	Α	160	
		_	4.40	
	110V	Α	140	
	110V 220V	A A	140 140	
	220V 330V	A A	140 140	
Short-time allowable current for 10s (IEC/EN60947-1)	220V	A A A	140 140 90	
Short-time allowable current for 10s (IEC/EN60947-1) Protection fuse	220V 330V	A A	140 140	
,	220V 330V 460V	A A A	140 140 90 1280	
· · · · · · · · · · · · · · · · · · ·	220V 330V 460V gG (IEC)	A A A	140 140 90 1280	
Protection fuse	220V 330V 460V	A A A A	140 140 90 1280 315 200	
Protection fuse Making capacity (RMS value)	220V 330V 460V gG (IEC)	A A A	140 140 90 1280	
Protection fuse	220V 330V 460V gG (IEC) aM (IEC)	A A A A A	140 140 90 1280 315 200 1360	
Protection fuse Making capacity (RMS value)	220V 330V 460V gG (IEC) aM (IEC)	A A A A A	140 140 90 1280 315 200 1360	
Protection fuse Making capacity (RMS value)	220V 330V 460V gG (IEC) aM (IEC)	A A A A A A	140 140 90 1280 315 200 1360 1360 1326	
Protection fuse Making capacity (RMS value) Breaking capacity at voltage	220V 330V 460V gG (IEC) aM (IEC)	A A A A A A A	140 140 90 1280 315 200 1360 1360 1326 1139	
Protection fuse Making capacity (RMS value) Breaking capacity at voltage Resistance per pole (average value)	220V 330V 460V gG (IEC) aM (IEC)	A A A A A A	140 140 90 1280 315 200 1360 1360 1326	
Protection fuse Making capacity (RMS value) Breaking capacity at voltage	220V 330V 460V gG (IEC) aM (IEC) 440V 500V 690V	A A A A A A MΩ	140 140 90 1280 315 200 1360 1360 1326 1139 0.18	
Protection fuse Making capacity (RMS value) Breaking capacity at voltage Resistance per pole (average value)	220V 330V 460V gG (IEC) aM (IEC) 440V 500V 690V	A A A A A MΩ	140 140 90 1280 315 200 1360 1360 1326 1139 0.18	
Protection fuse Making capacity (RMS value) Breaking capacity at voltage Resistance per pole (average value) Power dissipation per pole (average value)	220V 330V 460V gG (IEC) aM (IEC) 440V 500V 690V	A A A A A A MΩ	140 140 90 1280 315 200 1360 1360 1326 1139 0.18	
Protection fuse Making capacity (RMS value) Breaking capacity at voltage Resistance per pole (average value)	220V 330V 460V gG (IEC) aM (IEC) 440V 500V 690V	A A A A A A MΩ W	140 140 90 1280 315 200 1360 1360 1326 1139 0.18	
Protection fuse Making capacity (RMS value) Breaking capacity at voltage Resistance per pole (average value) Power dissipation per pole (average value)	220V 330V 460V gG (IEC) aM (IEC) 440V 500V 690V Ith AC3	A A A A A A MΩ W W Nm	140 140 90 1280 315 200 1360 1360 1326 1139 0.18	
Making capacity (RMS value) Breaking capacity at voltage Resistance per pole (average value) Power dissipation per pole (average value)	220V 330V 460V gG (IEC) aM (IEC) 440V 500V 690V Ith AC3	A A A A A A A MΩ W W	140 140 90 1280 315 200 1360 1360 1326 1139 0.18	
Making capacity (RMS value) Breaking capacity at voltage Resistance per pole (average value) Power dissipation per pole (average value)	220V 330V 460V gG (IEC) aM (IEC) 440V 500V 690V Ith AC3	A A A A A A MΩ W W Nm	140 140 90 1280 315 200 1360 1360 1326 1139 0.18	



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Tightening torque for co	oil torminal			
rigitiering torque for co	on terminal	min	Nm	0.8
			Nm	1
Dower terminal protect	ion appording to IEC/EN 60530	max	INIII	IP00
Mechanical features	ion according to IEC/EN 60529			IP00
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw
Weight			g	3000
Operations				
Mechanical life			cycles	10000000
Electrical life			cycles	1000000
Safety related data			, , , , ,	
•	od according to EN/ISO 13489-1			
. onomianos 10101 B 10	74 4000 mily to 214/100 10 100 1	rated load	cycles	1000000
EMC compatibility		Tatod load	0,0100	yes
AC coil operating				yes
Rated AC voltage at 50	0/60Hz 60Hz			
Nated AC Voltage at 30	0/00112, 00112	min	V	250
		min	V	500
AC an aroting valtage		max	V	500
AC operating voltage	of 50/001 - acil reviewed at 501 -			
	of 50/60Hz coil powered at 50Hz			
	pick-up		0/11-	00 11
		min	%Us	80 Us min
	Lance of	max	%Us	110 Us max
	drop-out		0/11-	470 LL
	(50/0011 11 1 1 1 0011	max	%Us	≤70 Us min
	of 50/60Hz coil powered at 60Hz			
	pick-up		0/11	
		min	%Us	80 Us min
		max	%Us	110 Us max
	drop-out			
		max	%Us	≤70 Us min
AC average coil consu	•			
	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	160230
		holding	VA	1.53.0
	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	160230
		holding	VA	1.53.0
	of 60Hz coil powered at 60Hz			
		in-rush	VA	160230
		holding	VA	1.53.0
Dissipation at holding ≤	≤20°C 50Hz		W	1.53.0
DC coil operating				
DC rated control voltage	ge			
		min	V	250
		max	V	500
DC operating voltage				
	pick-up			
		min	%Us	85 Us min
		max	%Us	110 Us max



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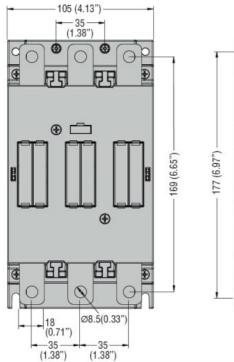
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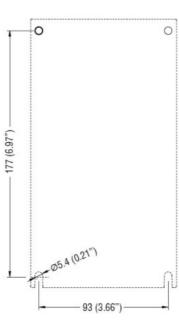
electric THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 160A, AC/DC COIL, 250... 500VAC/DC

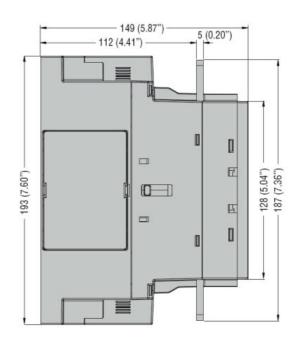
Average time for Us control in AC					
Average coil consumption ≤20°C in-rush W 160230 holding W 1.53.0 Max cycles frequency		drop-out			
In-rush Moding			max	%Us	≤70 Us min
Max cycles frequency	Average coil consumpti	on ≤20°C			
Mac cycles frequency Mechanical operation cycles/h 1000 Operating times Average time for Us control in AC min ms 50 max ms 100 Closing NO min ms 35 max ms 75 ULt technical data Yielded mechanical performance for three-phase AC motor 200/208V HP 50 220/230V HP 60 460/480V HP 125 575/600V HP 150 General USE Contactor AC current A 250 Short-circuit protection fuse, 600V High fault Short circuit current kA 100 Fuse rating A 400 Fuse class J Standard fault Short circuit current kA 10 Fuse class J Ambient conditions RK5 Temperature Puse class RK5 Ambient conditions RK5 Temperature min °C -40 max °C 70 Storage temperature min °C -50 max °C 80 Max altitude max °C 80					
Mechanical operating times Average time for Us control in AC Closing NO min ms ms ms max ms			holding	W	1.53.0
Closing NO	Max cycles frequency				
Average time for Us control in AC Closing NO min ms 50 max ms 100 Opening NO min ms 35 max ms 75 UL technical data Yielded mechanical performance for three-phase AC motor 100	Mechanical operation			cycles/h	1000
In AC	Operating times				
Closing NO	Average time for Us cor	ntrol			
Max Min Min		in AC			
Opening NO		Closing NO			
Opening NO			min	ms	50
Max Min Min			max	ms	100
Max Max		Opening NO			
Vielded mechanical performance For three-phase AC motor 200/208V			min	ms	
Yielded mechanical performance for three-phase AC motor 200/208V HP 50 220/230V HP 60 460/480V HP 125 575/600V HP 150 150 150 150 General USE Contactor AC current A 250 2			max	ms	75
For three-phase AC motor 200/208V HP 50 220/230V HP 60 460/480V HP 125 575/600V HP 150					
200/208V	Yielded mechanical per	formance			
220/230V		for three-phase AC motor			
A60/480V					
S75/600V				HP	
Contactor					
Contactor AC current A 250			575/600V	HP	150
AC current	General USE				
Short-circuit protection fuse, 600V High fault Short circuit current kA 100 Fuse rating A 400 Fuse class J Standard fault Short circuit current kA 10 Fuse rating A 400 Fuse rating A 400 Fuse rating A 400 Fuse class RK5 RK5 Ambient conditions Fuse class RK5 R		Contactor			
High fault			AC current	Α	250
Short circuit current	Short-circuit protection	fuse, 600V			
Fuse rating Fuse class J		High fault			
Fuse class J			Short circuit current	kA	100
Standard fault Short circuit current kA 10 Fuse rating A 400 Fuse class RK5			Fuse rating	Α	400
Short circuit current			Fuse class		J
Fuse rating Fuse class Fuse class RK5		Standard fault			
Fuse class RK5			Short circuit current	kA	10
Ambient conditions				Α	
Operating temperature			Fuse class		RK5
Operating temperature min °C -40 max °C 70 Storage temperature min °C -50 max °C 80 Max altitude m 3000	Ambient conditions				
min %C -40 max %C 70 Storage temperature min %C -50 max %C 80 Max altitude m 3000	Temperature				
max °C 70 Storage temperature min °C -50 max °C 80 Max altitude m 3000		Operating temperature			
Storage temperature min °C -50 max °C 80 Max altitude m 3000			min		
min °C -50 max °C 80 Max altitude m 3000			max	°C	70
max °C 80 Max altitude m 3000		Storage temperature			
Max altitude m 3000			min		
			max	°C	80
Resistance & Protection	Max altitude			m	3000
	Pollution degree				3
Dimensions	Dimensions				

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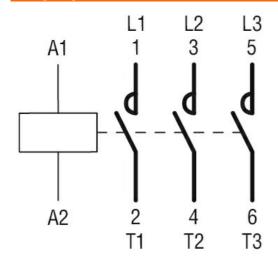
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Wiring diagrams



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

cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching