



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)			
	230V	kW	45
	400V	kW	75
	415V	kW	90
	440V	kW	90
	500V	kW	110
	690V	kW	132
	1000V	kW	75
Rated operational current AC-3 (T≤55°C)			
	230V	Α	160
	400V	Α	160
	415V	Α	160
	440V	Α	160
	500V	Α	150
	690V	Α	135
	1000V	A	60
Rated operational power AC-1 (T≤40°C)			
	230V	kW	95
	400V	kW	165
	500V	kW	181
	690V	kW	284
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	Α	250
	48V	Α	250
	75V	Α	250
	110V	Α	110
	220V	Α	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤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
	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	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	250
	48V	A	250
	75V	Α	160
	110V	Α	120
	220V	Α	90
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	250
	48V	A	250
	75V	A	160
	110V	Α	140
	220V	Α	120
	330V	A	90
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	330 V		
TEO MAX current le in 600-600 with 6/1/ 2 10/1/3 with 4 poles in series	≤24V	Α	250
	48V	A	250
	75V	A	160
	110V	A	140
	220V	A	140
	330V	A	140
	460V		90
Short-time allowable current for 10s (IEC/EN60947-1)	4007	A A	1280
		А	1200
Protection fuse	~O (IFO)	Λ.	245
	gG (IEC)	A	315
Making consoits (DMC value)	aM (IEC)	A	200
Making capacity (RMS value)		Α	1360
Breaking capacity at voltage	4.401		4000
	440V	A	1360
	500V	A	1326
	690V	A	1139
Resistance per pole (average value)		mΩ	0.18



Power dissipation per	r pole (average value)			
		Ith	W	11
		AC-3	W	4.5
Tightening torque for	terminals			
		min	Nm	18
		max	Nm	18
		min	Ibin	159
		max	Ibin	159
Tightening torque for	coil terminal			
riginog terque ter		min	Nm	0.8
		max	Nm	1
Power terminal prote	ction according to IEC/EN 60529	Пах	1 4111	IP00
Mechanical features	ction according to 120/214 00323			11 00
Operating position				
Sperating position		normal		Vertical plan
		normal		Vertical plan
Tivia a		allowable		±30°
Fixing			_	Screw
Weight			g	3000
Operations				100000
Mechanical life			cycles	10000000
Electrical life			cycles	1000000
Safety related data				
Performance level B	10d according to EN/ISO 13489-1			
		rated load	cycles	1000000
EMC compatibility				yes
A CONTRACTOR OF THE CONTRACTOR				•
AC coil operating				·
AC coil operating Rated AC voltage at t	50/60Hz, 60Hz			
	50/60Hz, 60Hz	min	V	24
	50/60Hz, 60Hz	min max	V V	24 60
Rated AC voltage at				
Rated AC voltage at				
Rated AC voltage at	of 50/60Hz coil powered at 50Hz			
Rated AC voltage at		max	V	60
Rated AC voltage at	of 50/60Hz coil powered at 50Hz	max min	V %Us	80 Us min
Rated AC voltage at	of 50/60Hz coil powered at 50Hz pick-up	max	V	60
Rated AC voltage at	of 50/60Hz coil powered at 50Hz	max min max	V %Us %Us	80 Us min 110 Us max
Rated AC voltage at	of 50/60Hz coil powered at 50Hz pick-up drop-out	max min	V %Us	80 Us min
Rated AC voltage at	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	max min max	V %Us %Us	80 Us min 110 Us max
Rated AC voltage at	of 50/60Hz coil powered at 50Hz pick-up drop-out	max min max max	V %Us %Us %Us	80 Us min 110 Us max ≤70 Us min
Rated AC voltage at	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	max min max max	V %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min
Rated AC voltage at	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up	max min max max	V %Us %Us %Us	80 Us min 110 Us max ≤70 Us min
Rated AC voltage at	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	min max min max	%Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min 110 Us max
Rated AC voltage at the AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out	max min max max	V %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min
Rated AC voltage at the AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out drop-out	min max min max	%Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min 110 Us max
Rated AC voltage at the AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out	min max max min max min max	%Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min 110 Us max ≤70 Us min
Rated AC voltage at the AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out drop-out	min max min max max max in-rush	%Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min
Rated AC voltage at the AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out drop-out	min max max min max min max	%Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 80 Us min 110 Us max ≤70 Us min
Rated AC voltage at the AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out drop-out	min max min max max max in-rush	%Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min
Rated AC voltage at the AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out drop-out	min max min max max max in-rush	%Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min
Rated AC voltage at the AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out drop-out	min max max min max max in-rush holding in-rush	%Us %Us %Us %Us %Us %Us	80 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 160230 1.53.0
Rated AC voltage at the AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out sumption at 20°C of 50/60Hz coil powered at 50Hz of 50/60Hz coil powered at 60Hz	min max max min max min max in-rush holding	%Us %Us %Us %Us %Us %Us VA	80 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 160230 1.53.0
Rated AC voltage at the AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out drop-out	min max max min max min max in-rush holding in-rush holding	%Us %Us %Us %Us %Us %Us VA VA	80 Us min 110 Us max ≤70 Us min 10 Us max ≤70 Us min 110 Us max ≤70 Us min 160230 1.53.0
	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up drop-out sumption at 20°C of 50/60Hz coil powered at 50Hz of 50/60Hz coil powered at 60Hz	min max max min max max in-rush holding in-rush	%Us %Us %Us %Us %Us %Us VA	80 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 160230 1.53.0

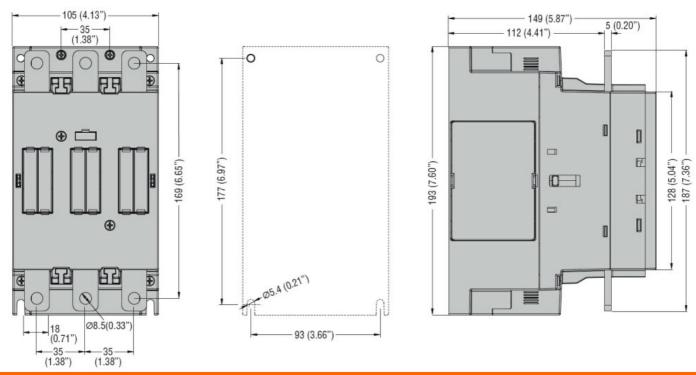


DC coil operating					
DC rated control voltage	ge				
	9-		min	V	20
			max	V	60
DC operating voltage				<u>-</u>	
	pick-up				
	' '		min	%Us	85 Us min
			max	%Us	110 Us max
	drop-out				
	·		max	%Us	≤70 Us min
Average coil consump	otion ≤20°C				
			in-rush	W	160230
			holding	W	1.53.0
Max cycles frequency					
Mechanical operation				cycles/h	1000
Operating times					
Average time for Us co	ontrol				
	in AC				
		Closing NO			
			min	ms	50
			max	ms	100
		Opening NO			
			min	ms	35
			max	ms	75
UL technical data					
Yielded mechanical pe					
	for three-phase AC mo	otor	/		
			200/208V	HP	50
			220/230V	HP	60
			460/480V	HP	125 150
General USE			575/600V	HP	130
General USE	Contactor				
	Contactor		AC current	Α	250
Short-circuit protection	1 fues 600V		AC current	Α	230
Short-circuit protection	High fault				
	riigiriault		Short circuit current	kA	100
			Fuse rating	A	400
			Fuse class	, ,	J
	Standard fault		. 400 0,400		
	Januara raurt		Short circuit current	kA	10
			Fuse rating	A	400
			Fuse class		RK5
Ambient conditions					
Temperature					
-	Operating temperature				
	· - ·		min	°C	-40
			max	°C	70
	Storage temperature				
			min	°C	-50
			max	°C	80
Max altitude				m	3000
Resistance & Protection	on				
Pollution degree					3

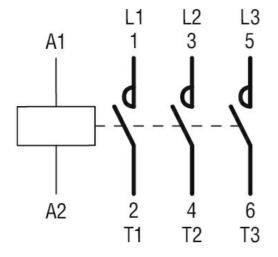
ENERGY AND AUTOMATION

3-POLIGES SCHÜTZ, IEC BETRIEBSSTROM LE (AC3) = 160A, AC/DC-SPULE, 24...60VAC - 20...60VDC

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

cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching