# THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 94A, AC COIL 50/60HZ, 230VAC



Product designation		Power contactor
Product type designation  Contact characteristics		BF94
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	115
Operational current le		·
AC-1 (≤40°C)	Α	115
AC-1 (≤55°C)	Α	95
AC-1 (≤70°C)	Α	80
AC-3 (≤440V ≤55°C)	Α	95
AC-4 (400V)	Α	45
Rated operational power AC-3 (T≤55°C)		
230V	kW	30
400V	kW	55
415V	kW	55
440V	kW	55
500V	kW	55
690V	kW	55
1000V	kW	37
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series	۸	77
≤24V 48V	A A	77 66
75V	A	66
110V	A	8
220V	A	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		
≤24V	Α	110
48V	Α	110
75V		110
110V	Α	90
220V	Α	9
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		
≤24V	Α	110
48V	Α	110
75V	Α	110
110V	Α	93
	А	95
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series		
≤24V	Α	115
48V	Α	115



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	75V	Α	115
	110V	Α	110
	220V	Α	115
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
·	≤24V	Α	45
	48V	Α	33
	75V	Α	33
	110V	Α	3
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
·	≤24V	Α	65
	48V	Α	55
	75V	Α	55
	110V	Α	43
	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
2 1 2 2 2 2 2 3 3 3 3 3 4 4 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	≤24V	Α	86
	48V	Α	75
	75V	A	75 75
	110V	A	64
	220V	A	64
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	2201	- , ,	0 1
120 max carrent le in 200-200 with 2/12 Toma with 4 poics in series	≤24V	Α	96
	48V	A	95
	75V	A	95 95
	110V	A	80
	220V	A	80
Short-time allowable current for 10s (IEC/EN60947-1)	220 V		640
Protection fuse			040
riotection ruse	gG (IEC)	۸	125
		A	100
Making capacity (RMS value)	aM (IEC)	<u>А</u> А	
		A	950
Breaking capacity at voltage	440)/	۸	0.40
	440V	A	640
	500V	A	625
Decision of the second of the	690V	Α	456
Resistance per pole (average value)		mΩ	0.6
Power dissipation per pole (average value)	1.1		
	Ith	W	7.9
	AC3	W	5.4
Tightening torque for terminals	_		
	min	Nm	4
	max	Nm	5
	min	lbin	3
	max	lbin	3.7
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	lbft	0.59
	max	lbft	0.74
Max number of wires simultaneously connectable		nr.	2
Conductor section			

Flexible w/o lug conductor section



# THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 94A, AC COIL 50/60HZ,

Flexible c/w lug conductor section   min   min   mm²   1.5   min   mi			min	mm²	1.5			
Flexible c/w lug conductor section   min   mm²   1.5   max   mm²   3.5   max   mm²   mm²								
Minimax	Flexible c/w lug co	onductor section						
Power terminal protection according to IEC/EN 60529	9		min	mm²	1.5			
Mechanical features			max	mm²	35			
Machanical features	Power terminal protection according to IEC	C/EN 60529			IP20			
Prix	Mechanical features							
Fixing	Operating position							
Screw / DIN rail 35mm			normal		Vertical plan			
Mechanical life			allowable		-			
Operations           Mechanical life         cycles         15000000           Electrical life         cycles         1100000           Safety related data         Performance level B10d according to EN/ISO 13489-1           rated load mechanical load cycles         15000000           Mirror contats according to IEC/EN 609474-4-1         YES           EMC compatibility         Yes           AC coil operating         Y         230           AC operating voltage         of 50/60Hz coil powered at 50Hz pick-up         max         %Us         110           drop-out         min         %Us         20         20           max         %Us         110         40         <	Fixing							
Operations           Mechanical life         cycles         15000000           Electrical life         cycles         1100000           Safety related data           Performance level B10d according to EN/ISO 13489-1           Intervention of the EC/EN 609474-4-1         rated load mechanical load cycles         15000000           Mirror contats according to IEC/EN 609474-4-1         YES           EMC compatibility         Yes           AC coll operating           Rated AC voltage at 50/60Hz         V         230           AC operating voltage           of 50/60Hz coil powered at 50Hz         max         %Us         110           drop-out         min         %Us         20           min         %Us         85           max         %Us         110           drop-out         min         %Us         85           min         %Us         85           max         %Us         110           drop-out         min         %Us         85           max         %Us         55 <td <="" colspan="3" td=""><td>Weight</td><td></td><td></td><td>g</td><td>1</td></td>	<td>Weight</td> <td></td> <td></td> <td>g</td> <td>1</td>			Weight			g	1
Electrical life Safety related data  Performance level B10d according to EN/ISO 13489-1  rated load mechanical load voices 15000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility  AC coll operating  AC operating voltage  of 50/60Hz coil powered at 50Hz pick-up  min	Operations							
Electrical life Safety related data  Performance level B10d according to EN/ISO 13489-1  rated load mechanical load voices 15000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility  AC coll operating  AC operating voltage  of 50/60Hz coil powered at 50Hz pick-up  min	Mechanical life			cycles	15000000			
Safety related data           Performance level B10d according to EN/ISO 13489-1         rated load mechanical load cycles         1000000 1500000           Mirror contats according to IEC/EN 609474-4-1         rated load mechanical load cycles         1000000           Mirror contats according to IEC/EN 609474-4-1         YES           EMC compatibility         Yes           AC coil operating         V         230           AC operating voltage         of 50/60Hz coil powered at 50Hz pick-up         max         %Us         110           drop-out         min         %Us         20           max         %Us         110           drop-out         min         %Us         25           min         %Us         20           max         %Us         110           drop-out         min         %Us         85           max         %Us         110           drop-out         min         %Us         85           min         %Us         20           min         %Us         20           min         %Us         210           holding         VA	Electrical life			-				
Performance level B10d according to EN/ISO 13489-1  rated load   cycles   1000000    Mirror contats according to IEC/EN 609474-4-1  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   max   %Us   110    drop-out   min   %Us   20    max   %Us   110    drop-out   min   %Us   55    of 50/60Hz coil powered at 60Hz    pick-up    min   %Us   85    max   %Us   110    drop-out   min   %Us   85    max   %Us   110    drop-out   min   %Us   85    max   %Us   110    drop-out   min   %Us   55    of 50/60Hz coil powered at 50Hz    for 50/60Hz coil powered at 50Hz    of 50/60Hz coil powered at 50Hz    in-rush   VA   210    holding   VA   13    of 60Hz coil powered at 60Hz    in-rush   VA   210    holding   VA   13    of 60Hz coil powered at 60Hz    in-rush   VA   210    holding   VA   15    Dissipation at holding ≤20°C 50Hz   W   5    Max cycles frequency    Marchanical operation   cycles/h   3600    Operating times								
Mirror contats according to IEC/EN 609474-4-1   Fig.   Section	•	ISO 13489-1						
Mirror contats according to IEC/EN 609474-4-1   YES	9		rated load	cycles	1000000			
Mirror contats according to IEC/EN 609474-4-1         YES           EMC compatibility         Yes           AC coil operating         V         230           AC operating voltage         of 50/60Hz coil powered at 50Hz pick-up         max         %Us         110           drop-out         min         %Us         20 max           of 50/60Hz coil powered at 60Hz pick-up         min         %Us         85 max           of 50/60Hz coil powered at 60Hz pick-up         min         %Us         85 max           AC operating voltage at 20°C of 50/60Hz coil powered at 50Hz         in-rush vA         20 max         %Us         55           AC operating voltage at 20°C of 50/60Hz coil powered at 60Hz         in-rush vA         210 holding vA         15           of 50/60Hz coil powered at 60Hz         in-rush vA         195 holding vA         13           of 60Hz coil powered at 60Hz         in-rush vA         195 holding vA         15           Dissipation at holding <20°C 50Hz			mechanical load	•				
EMC compatibility  AC coil operating  Rated AC voltage at 50/60Hz coil powered at 50Hz pick-up  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 85 max %Us 110  drop-out  min %Us 85 max %Us 110  AC operating voltage at 20°C of 50/60Hz coil powered at 50Hz  in-rush VA 210 holding VA 15  of 50/60Hz coil powered at 60Hz in-rush VA 195 holding VA 13  of 60Hz coil powered at 60Hz in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Cycles/h 3600  Operating times	Mirror contats according to IEC/EN 60947	4-4-1						
Rated AC voltage at 50/60Hz  AC operating voltage  of 50/60Hz coil powered at 50Hz pick-up  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 85 max %Us 110  drop-out  min %Us 85 max %Us 55  AC operating voltage at 20°C of 50/60Hz coil powered at 50Hz  of 50/60Hz coil powered at 50Hz  in-rush VA 210 holding VA 15  of 60Hz coil powered at 60Hz  in-rush VA 195 holding VA 13  of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation cycles/h 3600  Operating times								
Rated AC voltage at 50/60Hz       V 230         AC operating voltage         of 50/60Hz coil powered at 50Hz         pick-up       max %Us 110         min %Us 85         min %Us 85         max %Us 110         drop-out         min %Us 20         max %Us 55         AC operating voltage at 20°C         of 50/60Hz coil powered at 50Hz         in-rush VA 210         holding VA 15         of 50/60Hz coil powered at 60Hz         in-rush VA 195         holding VA 13         of 60Hz coil powered at 60Hz         in-rush VA 210         holding VA 15         Dissipation at holding ≤20°C 50Hz       W 5         Max cycles frequency         Mechanical operation       cycles/h 3600         Operating times								
AC operating voltage  of 50/60Hz coil powered at 50Hz pick-up  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 85 max %Us 110  drop-out  min %Us 20 max %Us 55  AC operating voltage at 20°C of 50/60Hz coil powered at 50Hz  in-rush VA 210 holding VA 15  of 50/60Hz coil powered at 60Hz  in-rush VA 195 holding VA 13  of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation  cycles/h 3600  Operating times				V	230			
of 50/60Hz coil powered at 50Hz pick-up    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     min   %Us   85     max   %Us   110     drop-out   min   %Us   85     max   %Us   110     drop-out   min   %Us   20     max   %Us   55    AC operating voltage at 20°C     of 50/60Hz coil powered at 50Hz   in-rush   VA   210     holding   VA   15     of 50/60Hz coil powered at 60Hz   in-rush   VA   195     holding   VA   13     of 60Hz coil powered at 60Hz   in-rush   VA   210     holding   VA   15     Dissipation at holding   ≤20°C 50Hz   W   5     Max cycles frequency   W   5     Max cycles frequency   Mechanical operation   cycles/h   3600     Operating times   Cycles/h   3600     Operating								
Pick-up   max   %Us   110   Morp-out   min   %Us   20   max   %Us   55   55   Morp-out   min   %Us   20   max   %Us   55   55   Morp-out   min   %Us   85   max   %Us   110   Morp-out   min   %Us   85   max   %Us   110   Morp-out   min   %Us   20   max   %Us   55   Morp-out   Morp-out   min   %Us   20   max   %Us   110   Morp-out   Morp-out   Morp-out   min   %Us   20   max   %Us   110   Morp-out   Morp-out   Morp-out   min   %Us   20   max   %Us   110   Morp-out   Morp-out   Morp-out   min   %Us   20   max   max   Morp-out   Morp-out   min   min   Morp-out   min   min   Morp-out   min   Morp-out   min   Morp-out   min   min   Morp-out   min   min   Morp-out   min   min   Morp-out   min   min   min   Morp-out   min   mi		wered at 50Hz						
Max   Wus   110   Min   Wus   20   Max   Wus   55								
drop-out   min   %Us   20   max   %Us   55			max	%Us	110			
min   %Us   20   max   %Us   55		drop-out						
of 50/60Hz coil powered at 60Hz pick-up  min %Us 85 max %Us 110  drop-out  min %Us 20 max %Us 55  AC operating voltage at 20°C of 50/60Hz coil powered at 50Hz  in-rush VA 210 holding VA 15  of 50/60Hz coil powered at 60Hz  in-rush VA 195 holding VA 13  of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  W 5  Max cycles frequency  Mechanical operation  Cycles/h 3600  Operating times		·	min	%Us	20			
pick-up    min   %Us   85     max   %Us   110     drop-out   min   %Us   20     max   %Us   55     AC operating voltage at 20°C     of 50/60Hz coil powered at 50Hz     in-rush   VA   210     holding   VA   15     of 50/60Hz coil powered at 60Hz     in-rush   VA   195     holding   VA   13     of 60Hz coil powered at 60Hz     in-rush   VA   210     holding   VA   15     Dissipation at holding ≤20°C 50Hz   W   5     Max cycles frequency     Mechanical operation   Cycles/h   3600     Operating times   Cycles/h   3600     O			max	%Us	55			
min   %Us   85   max   %Us   110	of 50/60Hz coil po	wered at 60Hz			_			
Max   %Us   110	·	pick-up						
Min   Wus   20   max   Wus   55			min	%Us	85			
min max       %Us 55         AC operating voltage at 20°C of 50/60Hz coil powered at 50Hz       in-rush VA 210 holding VA 15         of 50/60Hz coil powered at 60Hz       in-rush VA 195 holding VA 13         of 60Hz coil powered at 60Hz       in-rush VA 210 holding VA 15         Dissipation at holding ≤20°C 50Hz       W 5         Max cycles frequency       W 5         Mechanical operation       cycles/h 3600         Operating times			max	%Us	110			
min max       %Us 55         AC operating voltage at 20°C of 50/60Hz coil powered at 50Hz       in-rush VA 210 holding VA 15         of 50/60Hz coil powered at 60Hz       in-rush VA 195 holding VA 13         of 60Hz coil powered at 60Hz       in-rush VA 210 holding VA 15         Dissipation at holding ≤20°C 50Hz       W 5         Max cycles frequency       W 5         Mechanical operation       cycles/h 3600         Operating times		drop-out						
AC operating voltage at 20°C  of 50/60Hz coil powered at 50Hz  in-rush VA 210 holding VA 15  of 50/60Hz coil powered at 60Hz  in-rush VA 195 holding VA 13  of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation cycles/h 3600  Operating times			min	%Us	20			
of 50/60Hz coil powered at 50Hz  in-rush VA 210 holding VA 15  of 50/60Hz coil powered at 60Hz  in-rush VA 195 holding VA 13  of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 13  of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  W 5  Max cycles frequency  Mechanical operation cycles/h 3600  Operating times			max	%Us	55			
in-rush   vA   210   holding   vA   15	AC operating voltage at 20°C							
holding   VA   15	of 50/60Hz coil po	wered at 50Hz						
of 50/60Hz coil powered at 60Hz  in-rush VA 195 holding VA 13  of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  W 5  Max cycles frequency  Mechanical operation  cycles/h 3600  Operating times			in-rush	VA	210			
in-rush holding VA 13  of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  W 5  Max cycles frequency  Mechanical operation  cycles/h 3600  Operating times			holding	VA	15			
holding VA 13  of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz W 5  Max cycles frequency  Mechanical operation cycles/h 3600  Operating times	of 50/60Hz coil po	wered at 60Hz						
of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  W 5  Max cycles frequency  Mechanical operation  cycles/h 3600  Operating times			in-rush	VA	195			
in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz W 5  Max cycles frequency  Mechanical operation cycles/h 3600  Operating times	_		holding	VA	13			
holdingVA15Dissipation at holding ≤20°C 50HzW5Max cycles frequencyStreet of the cycles/h3600Mechanical operationCycles/h3600Operating times	of 60Hz coil powe	red at 60Hz						
Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation  Cycles/h 3600  Operating times			in-rush	VA	210			
Max cycles frequency Mechanical operation cycles/h 3600 Operating times			holding	VA	15			
Mechanical operation cycles/h 3600  Operating times	Dissipation at holding ≤20°C 50Hz			W	5			
Operating times	Max cycles frequency							
	Mechanical operation			cycles/h	3600			
Average time for Us control	Operating times							
	Average time for Us control							

BF9400A230

in AC

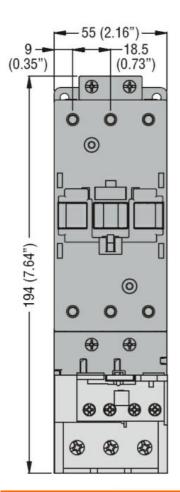


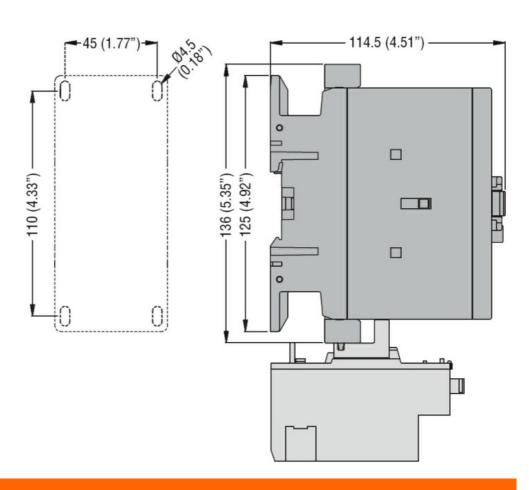
# THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 94A, AC COIL 50/60HZ,

		Closing NO			
			min	ms	12
			max	ms	28
		Opening NO			
			min	ms	8
			max	ms	22
	in DC				
		Closing NO			
			min	ms	40
		0 ' 110	max	ms	85
		Opening NO			22
			min	ms	20
I II de al altra la la de			max	ms	55
UL technical data	fanthura mhara AO mar	<b>.</b>			
Full-load current (FLA)	for three-phase AC mo	tor	-1.4001/	^	77
			at 480V	A	77 77
Wielded week enied a			at 600V	Α	77
Yielded mechanical pe		-4			
	for three-phase AC mo	otor	000/0001/	LID	0.5
			200/208V 220/230V	HP HP	25
			460/480V	HP HP	30 60
			575/600V	HP	75
General USE			373/6007	ПР	75
General USE	Contactor				
	Contactor		AC current	Α	115
Ambient conditions			AC current	A	113
Temperature					
romperature	Operating temperature	2			
	Operating temperature	7	min	°C	-50
			max	°C	70
	Storage temperature		Παλ		
	otorage temperature		min	°C	-60
			max	°C	80
Max altitude			max	m	3000
Resistance & Protection	on				
Pollution degree	<del></del>				3
Dimensions					

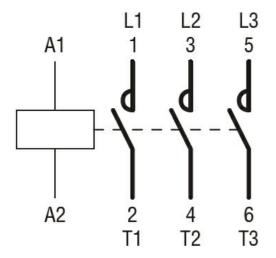


ENERGY AND AUTOMATION





#### Wiring diagrams



### Certifications and compliance

### 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



### BF9400A230

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 94A, AC COIL 50/60HZ, 230VAC

cULus			
EAC			

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching