



Product designation         Power contactor Product type designation         Product				30 30 10
Product type designation   SP\$0	Product designation			Power contactor
Number of poles   Nime   Ni				BF50
Rated insulation voltage UirEC/EN         V         1000           Rated impulse withstand voltage Uimp         kV         8           Operational frequency         min         Hz         25           imax         Hz         400           IEC Conventional free air thermal current Ith         A         90           Operational current le         AC-1 (≤40°C)         A         90           AC-1 (≤70°C)         A         65         AC-1 (≤70°C)         A         65           AC-3 (≤440V ≤55°C)         A         50         AC-2 (400V)         A         20           Rated operational power AC-3 (T≤55°C)         230V         kW         11         400V         kW         22           400V         kW         22         415V         kW         22         415V         kW         22           400V         kW         22         690V         kW         30         1000V         kW         30           8         230V         kW         32         40V         kW         22         690V         kW         30         1000V         kW         30         100V         kW         30         100V         kW         40V         40V         40V				
Rated impulse withstand voltage Ulimp	Number of poles		Nr.	3
Operational frequency         min max Hz max         Hz hz Hz Hz Hz         400           IEC Conventional free air thermal current lth         A 90           Operational current le           AC-1 (≤40°C) A 90 AC-1 (≤55°C) A 75 AC-1 (≤70°C) A 65 AC-3 (≤4400 ≤55°C) A 50 AC-3 (≤4400 ≤55°C) A 50 AC-4 (4000V) A 28           Rated operational power AC-3 (T≤55°C)           230V kW 11 400V kW 22 415V kW 22 440V kW 22 500V kW 30 1000V kW 30 1000V kW 30 1000V kW 18.5           Rated operational power AC-1 (T≤40°C)           230V kW 34 400V kW 59 500V kW 74 690V kW 102           IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series           ≤24V A 45 46 60 48V A 60 75V A 40 110V A 8 220V A -           IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series           ≤24V A 60 48V	Rated insulation voltage Ui IEC/EN		V	1000
Min	Rated impulse withstand voltage Uimp		kV	8
EC Conventional free air thermal current lth	Operational frequency			
EC Conventional free air thermal current lth		min	Hz	25
Operational current le         AC-1 (≤40°C) A 90 AC-1 (≤55°C) A 75 AC-1 (≤75°C) A 65 AC-3 (≤440V ≤55°C) A 50 AC-4 (400V) A 28         Rated operational power AC-3 (T≤55°C)         230V kW 11 400V kW 22 415V kW 22 4415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5         Rated operational power AC-1 (T≤40°C)         230V kW 34 40V kW 25 500V kW 74 690V kW 102         Rated operational power AC-1 (T≤40°C)         230V kW 34 40V kW 59 500V kW 74 690V kW 102         IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series         ≤24V A 45 48V A 40 75V A 40 110V A 8 220V A -         IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series         ≤24V A 60 48V A 60 110V A 50 220V A 7         IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series         ≤24V A 60 60 110V A 50 220V A 7         IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series          ≤24V A 60 60 110V A 50 220V A 7         IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series          ≤24V A 60 48V A 60 60 48V A 60          (EC max current le in DC1 with L/R ≤ 1ms with 3 poles in series          (EC max current le in DC1 with L/R ≤ 1ms with 3 poles in series          (EC max c		max	Hz	400
AC-1 (s40°C)	IEC Conventional free air thermal current Ith		Α	90
AC-1 (≤55°C)   A   75     AC-3 (≤70°C)   A   65     AC-3 (≤440V ≤55°C)   A   50     AC-4 (400V)   A   28     Rated operational power AC-3 (T≤55°C)     230V   kW   11     400V   kW   22     415V   kW   22     440V   kW   22     440V   kW   22     500V   kW   30     1000V   kW   18.5     Rated operational power AC-1 (T≤40°C)     230V   kW   34     400V   kW   59     500V   kW   74     690V   kW   102     IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series     524V   A   45     48V   A   40     110V   A   8     220V   A   -     IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series     524V   A   60     48V   A   60     75V   A   60     110V   A   50     220V   A   7     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     524V   A   60     75V   A   60     110V   A   50     220V   A   7     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     524V   A   60     75V   A   60     110V   A   50     220V   A   7     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     524V   A   60     75V   75V   75V     75V   75V     75V   75V     75V   75V     75V   75V     75V   75	Operational current le			
AC-1 (≤70°C) A 55 A 50 AC-3 (≤440V ≤55°C) A 50 AC-4 (400V) A 28  Rated operational power AC-3 (T≤55°C)  230V kW 11 400V kW 22 415V kW 22 440V kW 22 500V kW 32 500V kW 18.5  Rated operational power AC-1 (T≤40°C)  230V kW 34 400V kW 59 500V kW 74 690V kW 102  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 45 48V A 40 75V A 40 110V A 8 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 60 48V A 60 110V A 50 220V A 7  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			Α	90
AC-3 (≤440V ≤55°C)		AC-1 (≤55°C)	Α	75
AC-4 (400V)			Α	65
Rated operational power AC-3 (T≤55°C)  230V kW 11 400V kW 22 415V kW 22 440V kW 22 500V kW 30 1000V kW 30 1000V kW 18.5  Rated operational power AC-1 (T≤40°C)  230V kW 34 400V kW 59 500V kW 74 690V kW 102  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 45 48V A 40 110V A 8 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 60 48V A 60 75V A 60 110V A 50 220V A 7  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60 48V A 60 75V A 60 110V A 50 220V A 7		AC-3 (≤440V ≤55°C)	Α	50
230V   kW   11   400V   kW   22   415V   kW   22   415V   kW   22   445V   kW   22   500V   kW   22   500V   kW   30   1000V   kW   18.5   8   1000V   kW   18.5   8   1000V   kW   59   500V   kW   74   690V   kW   102   8   1000V   100V   10		AC-4 (400V)	Α	28
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Rated operational power AC-3 (T≤55°C)			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		230V	kW	11
A40V   kW   22		400V	kW	22
Soov   kW   30   1000V   kW   18.5		415V	kW	22
Rated operational power AC-1 (T≤40°C)   Rated operational power AC-1 (T≤40°C)   230V   kW   34   4400V   kW   59   500V   kW   74   690V   kW   102     IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series   ≤24V   A   45   48V   A   40   110V   A   8   220V   A   -     IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series   ≤24V   A   60   48V   A   60   110V   A   50   220V   A   7     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series   ≤24V   A   60   48V		440V	kW	22
Rated operational power AC-1 (T≤40°C)   230V   kW   34   400V   kW   59   500V   kW   74   690V   kW   102		500V	kW	22
Rated operational power AC-1 (T≤40°C)  230V kW 34 400V kW 59 500V kW 74 690V kW 102  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 45 48V A 40 75V A 40 110V A 8 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 60 110V A 8 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60 110V A 50 220V A 7  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60 48V A 60		690V	kW	30
		1000V	kW	18.5
A00V   kW   59   500V   kW   74   690V   kW   102	Rated operational power AC-1 (T≤40°C)			
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series   S24V   A   45   48V   A   40   75V   A   40   110V   A   8   220V   A   -			kW	
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series   S24V   A   45		400V	kW	59
SEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series   S24V			kW	
		690V	kW	102
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		≤24V	Α	45
110V   A   8   220V   A   -		48V	Α	40
EC max current le in DC1 with L/R $\leq$ 1ms with 2 poles in series   $\leq$ 24V   A   60   48V   A   60   75V   A   60   110V   A   50   220V   A   7		75V	Α	40
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		110V	Α	8
		220V	Α	_
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
		≤24V	Α	60
		48V	Α	60
		75V	Α	60
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60  48V A 60		110V	Α	50
≤24V A 60 48V A 60		220V	Α	7
48V A 60	IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
		≤24V	Α	60
75V A 60		48V	Α	60
		75V	Α	60



	110V	Α	55
	220V	Α	75
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	60
	220V	Α	90
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	30
	48V	Α	25
	75V	Α	22
	110V	Α	3
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
·	≤24V	Α	35
	48V	Α	35
	75V	Α	30
	110V	Α	25
	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series		<u> </u>	
	≤24V	Α	50
	48V	Α	50
	75V	Α	45
	110V	Α	30
	220V	A	40
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	2201		
TEO MAX GUITOR TO MEDOO DOO WILL ETY = TOMO WILL 4 POICE III SONES	≤24V	Α	55
	48V	Α	55
	75V	Α	55
	110V	A	45
	220V	Α	50
Short-time allowable current for 10s (IEC/EN60947-1)	2201	A	400
Protection fuse			400
r rotection ruse	gG (IEC)	Α	100
	aM (IEC)	A	50
Making capacity (RMS value)	aivi (IEC)	A	500
		A	500
Breaking capacity at voltage	4401/	٨	400
	440V	A	400
	500V	A	352
Decistance per pela (everage value)	690V	A	312
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)	1.1	14.	٥.5
	Ith	W	6.5
<del></del>	AC3	W	2
Tightening torque for terminals	_		
	min	Nm	4
	max	Nm	5
	min	lbin	2.95
	max	lbin	3.69
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1



		min	lbin	0.8
		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	ANNO 46			
	AWG/Kcmil			•
	Fig. 3.1	max		2
	Flexible w/o lug conductor section		2	4.5
		min	mm²	1.5
	Clavible a/w lug conductor coction	max	mm²	35
	Flexible c/w lug conductor section	min	mm²	1.5
		max	mm²	35
Power terminal protec	tion according to IEC/EN 60529	IIIdA	111111	IP20 front
Mechanical features	tion according to IEC/EN 00323			11 20 110111
Operating position				
Operating position		normal		Vertical plan
		allowable		±30°
		anomano		Screw / DIN rail
Fixing				35mm
Weight			g	1020
Conductor section				
	AWG/kcmil conductor section			
		max		2
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1400000
Safety related data				
Performance level B1	0d according to EN/ISO 13489-1			
		rated load	cycles	1400000
		mechanical load	cycles	15000000
	ng to IEC/EN 609474-4-1			yes
EMC compatibility				yes
AC coil operating				
Rated AC voltage at 5	0/60Hz		V	24
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out		0/11-	00
		min	%Us	20
	of EO/COLIT and powered at COLIT	max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up	min	%Us	85
		min	%Us	110
	drop-out	max	/0US	110
	diop-out	min	%Us	40
		max	%Us	55
AC average coil consu	umption at 20°C	IIIdA	/003	
To average con const	of 50/60Hz coil powered at 50Hz			
	51 50/501 12 5011 powered at 501 12	in-rush	VA	210
		holding	VA	15
		Holding	V /- \	10



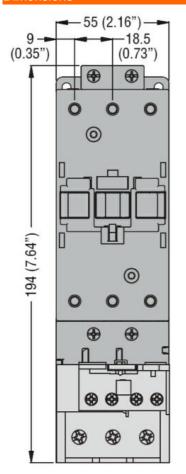


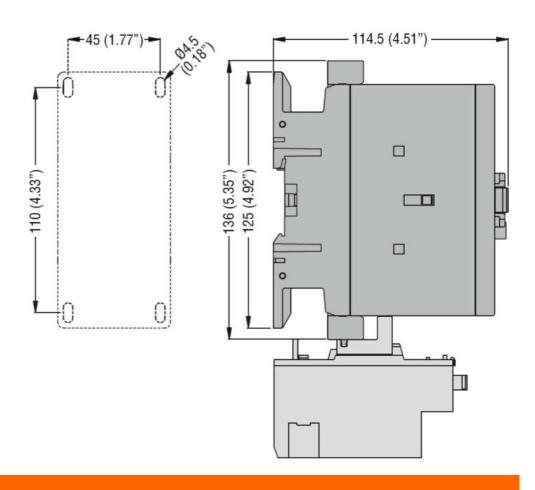
	of 50/60Hz coil powere	ed at 60Hz			
			in-rush	VA	195
			holding	VA	13
	of 60Hz coil powered a	nt 60Hz			
	0. 00. <u>12</u> 00 po0.00.		in-rush	VA	210
			holding	VA	15
Dissipation at holding ≤	≤20°C 50Hz		9	W	5
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times				0,0100/11	0000
Average time for Us co	ntrol				
Average unit for 05 00	in AC				
	11710	Closing NO			
		Olosing NO	min	ms	12
			max	ms	28
		Opening NO	Παλ	1113	20
			min	ms	8
			max	ms	22
	in DC		IIIdx	1113	
	III DC	Closing NO			
		Sideling INO	min	ms	40
					85
		Opening NO	max	ms	65
		Opening NO	min	ms	20
			max	ms	55
UL technical data			IIIdX	1115	55
	for three-phase AC mot	or			
i dii-load culterit (i LA)	ioi tillee-pilase AC illot	Oi	at 480V	Α	52
			at 600V	A	41
Violded machanical no	rformonoo		at 000 v		41
Yielded mechanical pe		otor			
	for single-phase AC m	OlOI	110/120V	HP	E
			230V		5 10
	for three phase AC ma	40.0	230 V	HP	
	for three-phase AC mo	บเบโ	000/0001	LID	1 5
			200/208V	HP	15
			220/230V	HP	20
			460/480V	HP	40
0			575/600V	HP	40
General USE	0				
	Contactor		A .	Α.	00
01 1 1 1 1	( 000)/		AC current	Α	90
Short-circuit protection					
	High fault				
			Short circuit current	kA	100
			Fuse rating	Α	150
			Fuse class		J
	Standard fault		<b>0</b> 1		_
			Short circuit current	kA	5
			Fuse rating	Α	150
			Fuse class		RK5
Ambient conditions					
Temperature					
	Operating temperature				
			min	°C	-50



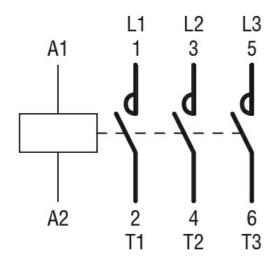
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3

#### **Dimensions**





#### Wiring diagrams



#### Certifications and compliance

Compliance



#### BF5000A024

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 50A, AC COIL 50/60HZ, 24VAC

	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	
	CCC
	cULus
ETIMA A LANGE CONTRACTOR	

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching



Product designation			Power contactor
Product type designation			BF50
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	90
Operational current le			
	AC-1 (≤40°C)	Α	90
	AC-1 (≤55°C)	Α	75
	AC-1 (≤70°C)	Α	65
	AC-3 (≤440V ≤55°C)	Α	50
	AC-4 (400V)	Α	28
Rated operational power AC-3 (T≤55°C)	- ( )		
· · · · · · · · · · · · · · · · · · ·	230V	kW	11
	400V	kW	22
	415V	kW	22
	440V	kW	22
	500V	kW	22
	690V	kW	30
	1000V	kW	18.5
Rated operational power AC-1 (T≤40°C)	10001		10.0
Traise specialisms perior, to T (T=10 G)	230V	kW	34
	400V	kW	59
	500V	kW	74
	690V	kW	102
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series	000 V	1000	102
TEO THEX SUITER IN BOT WILL ETC = THIS WILL I POICS IN SCHOOL	≤24V	Α	45
	48V	A	40
	75V	A	40
	110V	A	8
	220V	A	O
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	220 V	^	_
TEC max current le in DCT with L/R \( \) mis with 2 poles in series	<241/	۸	60
	≤24V	A	60
	48V	A	60
	75V	A	60
	110V	A	50
IFO	220V	A	7
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	.0.01		0.0
	≤24V	Α	60
	48V	Α	60
	75V	Α	60



	110V	Α	55	
	220V	Α	75	
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series				
	≤24V	Α	60	
	48V	Α	60	
	75V	Α	60	
	110V	Α	60	
	220V	Α	90	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series				
	≤24V	Α	30	
	48V	Α	25	
	75V	Α	22	
	110V	Α	3	
	220V	Α	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series				
	≤24V	Α	35	
	48V	Α	35	
	75V	Α	30	
	110V	Α	25	
	220V	Α	5	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series				
	≤24V	Α	50	
	48V	Α	50	
	75V	Α	45	
	110V	Α	30	
	220V	Α	40	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series				
	≤24V	Α	55	
	48V	Α	55	
	75V	Α	55	
	110V	Α	45	
	220V	<u>A</u>	50	
Short-time allowable current for 10s (IEC/EN60947-1)		A	400	
Protection fuse	0 ((=0)		4.0.0	
	gG (IEC)	Α	100	
W. I. (DMO 1.)	aM (IEC)	Α	50	
Making capacity (RMS value)		Α	500	
Breaking capacity at voltage	4.401.4		400	
	440V	A	400	
	500V	A	352	
Decision of the control of	690V	Α	312	
Resistance per pole (average value)		mΩ	0.8	
Power dissipation per pole (average value)	1.7	147	0.5	
	Ith	W	6.5	
Tinhtonia a tannua fantamainala	AC3	W	2	
Tightening torque for terminals		N.I.	4	
	min	Nm	4	
	max	Nm	5	
	min	Ibin	2.95	
Timbtoning toward for call towards	max	Ibin	3.69	
Tightening torque for coil terminal		N.L.	0.0	
	min	Nm Næ	0.8	
	max	Nm	1	



min	Ibin	0.8
max	Ibin	0.74
	Nr.	2
		0
max		2
min	mm²	1.5
		35
IIIax	111111	33
min	mm²	1.5
		35
- max		IP20 front
		II Zo IIOIR
normal		Vertical plan
allowable		±30°
3		Screw / DIN rail
		35mm
	g	1020
max		2
	cycles	15000000
	cycles	1400000
	cycles	1400000
mechanical load	cycles	15000000
		yes
		yes
	V	48
	0/11	
		80
max	%Us	110
min	0/116	20
		20 55
IIIdX	70US	55
min	%   le	85
		110
IIIdX	/003	110
min	%Us	40
111111		
may	%l Js	00
max	%Us	55
max	%Us	55
in-rush holding	%Us VA VA	210 15
	max min max min max  min max	max min mm² max mm² min mm² min mm² max mm²  normal allowable  g max  cycles cycles cycles  rated load cycles cycles  rated load cycles cycles  rated load cycles cycles  mechanical load cycles  which max with the companies of t



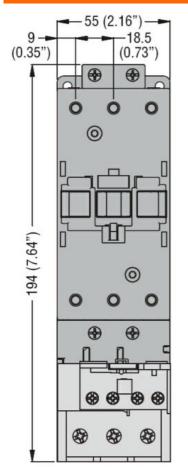


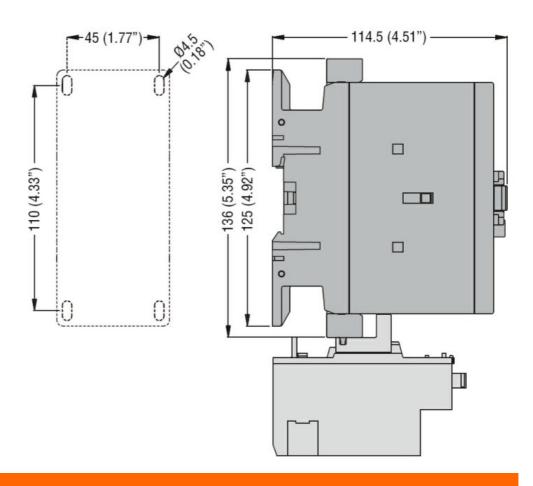
	of 50/60Hz coil powere	ed at 60Hz			
			in-rush	VA	195
			holding	VA	13
	of 60Hz coil powered a	nt 60Hz			
	0. 00 <u> </u>		in-rush	VA	210
			holding	VA	15
Dissipation at holding ≤	≤20°C 50Hz		9	W	5
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times				0,0100/11	0000
Average time for Us co	ntrol				
Average unit for 05 00	in AC				
	11710	Closing NO			
		Olosing NO	min	ms	12
			max	ms	28
		Opening NO	Παλ	1113	20
			min	ms	8
			max	ms	22
	in DC		IIIdx	1113	
	III DC	Closing NO			
		Sideling INO	min	ms	40
					85
		Opening NO	max	ms	65
		Opening NO	min	ms	20
			max	ms	55
UL technical data			IIIdX	1115	55
	for three-phase AC mot	or			
i dii-load culterit (i LA)	ioi tillee-pilase AC illot	Oi	at 480V	Α	52
			at 600V	A	41
Violded machanical no	rformonoo		at 000 v		41
Yielded mechanical pe		otor			
	for single-phase AC m	OlOI	110/120V	HP	E
			230V		5 10
	for three phase AC ma	40.0	230 V	HP	
	for three-phase AC mo	บเบโ	000/0001	LID	1 5
			200/208V	HP	15
			220/230V	HP	20
			460/480V	HP	40
0			575/600V	HP	40
General USE	0				
	Contactor		A .	Α.	00
01 1 1 1 1	( 000)/		AC current	Α	90
Short-circuit protection					
	High fault				
			Short circuit current	kA	100
			Fuse rating	Α	150
			Fuse class		J
	Standard fault		<b>0</b> 1		_
			Short circuit current	kA	5
			Fuse rating	Α	150
			Fuse class		RK5
Ambient conditions					
Temperature					
	Operating temperature				
			min	°C	-50



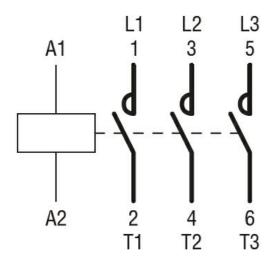
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3

#### **Dimensions**





#### Wiring diagrams



#### Certifications and compliance

Compliance



#### BF5000A048

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 50A, AC COIL 50/60HZ, 48VAC

	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	
	CCC
	cULus
ETIMA I SO S	

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching



Product designation         Power contactor           Contact type designation         BF50           Contact contact sites         V           Number of poles         Nr.         3           Rated insulation voltage Ui IEC/EN         V         1000           Rated insulation voltage Uimp         kV         8           Operational frequency         min         Hz         25           max         Hz         400         400           IEC Conventional free air thermal current Ith         AC         90         40           Operational current Ie         AC-1 (\$40°C)         A         90         40         65         66				
Product type designation	Product designation			Power contactor
Number of poles   Number of	<u> </u>			
Number of poles	,, <u> </u>			
Rated insulation voltage UireC/EN         V         1000           Rated impulse withstand voltage Uimp         kV         8           Operational frequency         min         Hz         25           IEC Conventional free air thermal current Ith         A         90           Operational current le         AC-1 (≤40°C)         A         90           AC-1 (≤55°C)         A         75         AC-1 (≤70°C)         A         65           AC-3 (≤4400 ≤55°C)         A         50         AC-4 (400V)         A         28           Rated operational power AC-3 (T≤55°C)         230V         kW         11         400V         kW         22           440V         kW         22         415V         kW         22         415V         kW         22           490V         kW         22         690V         kW         30         1000V         kW         30           Rated operational power AC-1 (T≤40°C)         230V         kW         34         40V         kW         22           690V         kW         30         1000V         kW         30         1000V         kW         10           IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series         ≤24V			Nr.	3
Rated impulse withstand voltage Uimp			V	1000
Operational frequency         min max Hz max         Hz hz Hz Hz Hz         400           IEC Conventional free air thermal current lth         A 90           Operational current le           AC-1 (≤40°C) A 90 AC-1 (≤55°C) A 75 AC-1 (≤75°C) A 75 AC-1 (≤75°C) A 50 AC-3 (≤440V ≤55°C) A 50 AC-3 (≤440V ≤55°C) A 28           Rated operational power AC-3 (T≤55°C)           230V kW 11 400V kW 22 415V kW 22 4440V kW 22 500V kW 30 1000V kW 59 500V kW 30 1000V kW 59 500V kW 74 690V kW 102           Rated operational power AC-1 (T≤40°C)           230V kW 34 400V kW 59 500V kW 74 690V kW 102           IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series           ≤24V A 45 48V A 40 75V A 40 110V A 8 220V A -           IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series           ≤24V A 60 48V A 60 75V A 60 110V A 50 220V A 7           IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series           ≤24V A 60 48V A 60 48V A 60 48V A 60			kV	8
Min				
EC Conventional free air thermal current lth		min	Hz	25
Operational current le         AC-1 (≤40°C)       A       90         AC-1 (≤55°C)       A       75         AC-1 (≤70°C)       A       65         AC-3 (≤440V ≤55°C)       A       50         AC-4 (400V)       A       28         Rated operational power AC-3 (T≤55°C)         230V       kW       11         400V       kW       22         440V       kW       22         500V       kW       22         690V       kW       30         1000V       kW       18.5         Rated operational power AC-1 (T≤40°C)         230V       kW       34         400V       kW       59         500V       kW       102         IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series         ≤24V       A       45         48V       A       40         75V       A       40         110V       A       8         220V       A       -         IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series       ≤24V       A       60         110V       A       50		max	Hz	
AC-1 (≤40°C)	IEC Conventional free air thermal current Ith		Α	90
AC-1 (≤40°C)	Operational current le			
AC-1 (≤55°C)	•	AC-1 (≤40°C)	Α	90
AC-1 (≤70°C)   A   65     AC-3 (≤440V ≤55°C)   A   50     AC-4 (400V)   A   28     Rated operational power AC-3 (T≤55°C)     230V   kW   11     400V   kW   22     415V   kW   22     440V   kW   22     500V   kW   30     1000V   kW   18.5     Rated operational power AC-1 (T≤40°C)     230V   kW   34     400V   kW   59     500V   kW   74     690V   kW   102     IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series     524V   A   45     48V   A   40     110V   A   8     220V   A   -     IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series     524V   A   60     48V   A   60     110V   A   50     220V   A   7     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     524V   A   60     110V   A   50     220V   A   7     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     524V   A   60     110V   A   50     220V   A   7     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     524V   A   60     110V   A   50     220V   A   7     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     524V   A   60     48V   A   60     48V   A   60     48V   A   60     48V   A   60			Α	75
AC-3 (≤440V ≤55°C)			Α	65
Rated operational power AC-3 (T≤55°C)  230V kW 11 400V kW 22 415V kW 22 440V kW 22 500V kW 30 1000V kW 30 1000V kW 18.5  Rated operational power AC-1 (T≤40°C)  230V kW 34 400V kW 59 500V kW 74 690V kW 102  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 45 48V A 40 110V A 8 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 60 48V A 60 110V A 50 220V A 7  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60 48V A 60 110V A 50 220V A 7			Α	50
230V   kW   11   400V   kW   22   415V   kW   22   415V   kW   22   415V   kW   22   500V   kW   22   500V   kW   30   1000V   kW   18.5   8   1000V   kW   18.5   8   1000V   kW   59   500V   kW   74   690V   kW   102   8   1000V   kW   102   1000V		AC-4 (400V)	Α	28
230V   kW   11   400V   kW   22   415V   kW   22   415V   kW   22   415V   kW   22   500V   kW   22   500V   kW   30   1000V   kW   18.5   8   1000V   kW   18.5   8   1000V   kW   59   500V   kW   74   690V   kW   102   8   1000V   kW   102   1000V	Rated operational power AC-3 (T≤55°C)	,		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		230V	kW	11
440V   kW   22   500V   kW   22   690V   kW   30   1000V   kW   18.5		400V	kW	22
Soov   kW   30   1000V   kW   18.5		415V	kW	22
Rated operational power AC-1 (T≤40°C)   230V   kW   34   4400V   kW   59   500V   kW   102		440V	kW	22
Rated operational power AC-1 (T≤40°C)   230V   kW   34   400V   kW   59   500V   kW   74   690V   kW   102		500V	kW	22
Rated operational power AC-1 (T≤40°C)  230V kW 34 400V kW 59 500V kW 74 690V kW 102  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 45 48V A 40 75V A 40 110V A 8 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 60 48V A 60 48V A 60 110V A 50 220V A 7  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60 48V A 60 48V A 60 48V A 60 48V A 60		690V	kW	30
		1000V	kW	18.5
A00V   kW   59   500V   kW   74   690V   kW   102	Rated operational power AC-1 (T≤40°C)			
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series   S24V   A   45   48V   A   40   75V   A   40   110V   A   8   220V   A   -		230V	kW	34
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series		400V	kW	59
Section   Sec		500V	kW	74
		690V	kW	102
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		≤24V	Α	45
110V   A   8   220V   A   -		48V	Α	40
EC max current le in DC1 with L/R $\leq$ 1ms with 2 poles in series   $\leq$ 24V   A   60   48V   A   60   75V   A   60   110V   A   50   220V   A   7		75V	Α	40
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			Α	8
		220V	Α	_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
			Α	60
			Α	60
			Α	60
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60  48V A 60				
≤24V A 60 48V A 60		220V	Α	7
48V A 60	IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
75V A 60				
		75V	Α	60



	110V	Α	55
	220V	Α	75
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	60
	220V	Α	90
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	30
	48V	Α	25
	75V	Α	22
	110V	Α	3
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
·	≤24V	Α	35
	48V	Α	35
	75V	Α	30
	110V	Α	25
	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series		<u> </u>	
	≤24V	Α	50
	48V	Α	50
	75V	Α	45
	110V	Α	30
	220V	A	40
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	2201		
TEO MAX GUITOR TO MEDOO DOO WILL ETY = TOMO WILL 4 POICE III SONES	≤24V	Α	55
	48V	Α	55
	75V	Α	55
	110V	A	45
	220V	Α	50
Short-time allowable current for 10s (IEC/EN60947-1)	2201	A	400
Protection fuse			400
r rotection ruse	gG (IEC)	Α	100
	aM (IEC)	A	50
Making capacity (RMS value)	aivi (IEC)	A	500
		A	500
Breaking capacity at voltage	4401/	٨	400
	440V	A	400
	500V	A	352
Decistance per pela (everage value)	690V	A	312
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)	1.1	14.	٥.5
	Ith	W	6.5
<del></del>	AC3	W	2
Tightening torque for terminals	_		
	min	Nm	4
	max	Nm	5
	min	lbin	2.95
	max	lbin	3.69
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1



		min	lbin	0.8
		max	lbin	0.74
	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			•
	<del></del>	max		2
	Flexible w/o lug conductor section		2	4.5
		min	mm²	1.5
	Florible of the large conductor agetics	max	mm²	35
	Flexible c/w lug conductor section	min	mm²	1.5
		max	mm²	35
Power terminal protec	ction according to IEC/EN 60529	IIIdA	111111	IP20 front
Mechanical features	tion according to IEC/EIV 00329			IF 20 HOIR
Operating position				
Operating position		normal		Vertical plan
		allowable		±30°
		anowasio		Screw / DIN rail
Fixing				35mm
Weight			g	1020
Conductor section				
	AWG/kcmil conductor section			
		max		2
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1400000
Safety related data				
Performance level B1	0d according to EN/ISO 13489-1			
		rated load	cycles	1400000
		mechanical load	cycles	15000000
Mirror contats accordi	ng to IEC/EN 609474-4-1			yes
EMC compatibility				yes
AC coil operating				
Rated AC voltage at 5	50/60Hz		V	110
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out		0/11-	00
		min	%Us	20
	of 50/601  = asil novement at 601  =	max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up	min	%Us	85
		min	%Us	110
	drop-out	max	/0US	110
	αιορ-οαι	min	%Us	40
		max	%Us	55
AC average coil cons	umption at 20°C	IIIdA	/003	
AS average con consi	of 50/60Hz coil powered at 50Hz			
	or our our iz our powered at our iz	in-rush	VA	210
		holding	VA	15
		Holding	V / 1	10



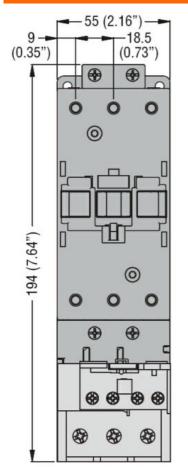


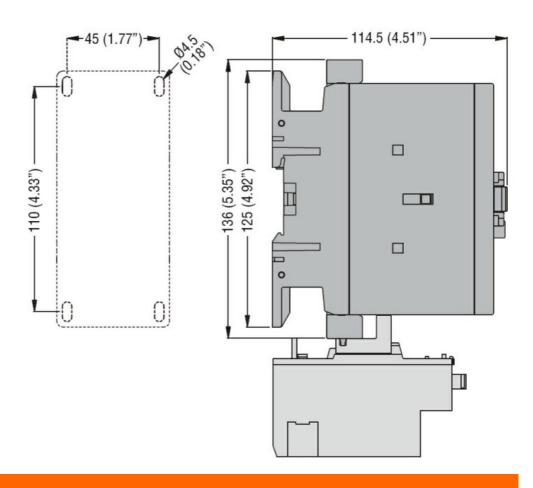
	of 50/60Hz coil powere	ed at 60Hz			
			in-rush	VA	195
			holding	VA	13
	of 60Hz coil powered a	nt 60Hz			
	0. 00. <u>12</u> 00 po0.00.		in-rush	VA	210
			holding	VA	15
Dissipation at holding ≤	≤20°C 50Hz		9	W	5
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times				0,0100/11	0000
Average time for Us co	ntrol				
Average unit for 05 00	in AC				
	11710	Closing NO			
		Olosing NO	min	ms	12
			max	ms	28
		Opening NO	Παλ	1113	20
			min	ms	8
			max	ms	22
	in DC		IIIdx	1113	
	III DC	Closing NO			
		Sideling INO	min	ms	40
					85
		Opening NO	max	ms	65
		Opening NO	min	ms	20
			max	ms	55
UL technical data			IIIdX	1115	55
	for three-phase AC mot	or			
i dii-load culterit (i LA)	ioi tillee-pilase AC illot	Oi	at 480V	Α	52
			at 600V	A	41
Violded machanical no	rformonoo		at 000 v		41
Yielded mechanical pe		otor			
	for single-phase AC m	OlOI	110/120V	HP	E
			230V		5 10
	for three phase AC ma	40.0	230 V	HP	
	for three-phase AC mo	บเบโ	000/0001	LID	1 5
			200/208V	HP	15
			220/230V	HP	20
			460/480V	HP	40
0			575/600V	HP	40
General USE	0				
	Contactor		A .	Α.	00
01 1 1 1 1 1	( 000)/		AC current	Α	90
Short-circuit protection					
	High fault				
			Short circuit current	kA	100
			Fuse rating	Α	150
			Fuse class		J
	Standard fault		<b>0</b> 1		_
			Short circuit current	kA	5
			Fuse rating	Α	150
			Fuse class		RK5
Ambient conditions					
Temperature					
	Operating temperature				
			min	°C	-50



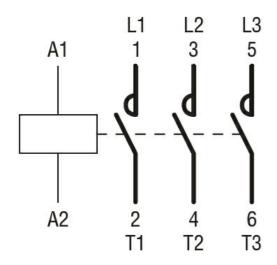
max	°C	70
min	°C	-60
max	°C	80
	m	3000
		3
	min	min °C max °C

#### Dimensions





#### Wiring diagrams



#### Certifications and compliance

Compliance



#### BF5000A110

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 50A, AC COIL 50/60HZ, 110VAC

	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	
	CCC
	cULus
ETIM elegation	

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching



Product designation   Product type   Product				30 30 30
Product type designation   Series	Product designation			Power contactor
Number of poles				BF50
Rated insulation voltage Ui IEC/EN         V         1000           Rated impulse withstand voltage Uimp         kV         8           Operational frequency         min         Hz         25           IEC Conventional free air thermal current Ith         A         90           Operational current le         AC-1 (≤40°C)         A         90           AC-1 (≤70°C)         A         65         AC-1 (≤70°C)         A         65           AC-3 (≤4400 ≤55°C)         A         50         AC-2 (400°V)         A         50           Rated operational power AC-3 (T≤55°C)         230V         kW         11         1         400V         kW         22         415V         kW         22         415V         kW         22         420V         kW         22         420V         kW         22         690V         kW         30				
Rated impulse withstand voltage Uimp	Number of poles		Nr.	3
Operational frequency         min max Hz max         Hz hz Hz Hz Hz         400           IEC Conventional free air thermal current lth         A 90           Operational current le           AC-1 (≤40°C) A 90 AC-1 (≤55°C) A 75 AC-1 (≤70°C) A 65 AC-3 (≤440V ≤55°C) A 50 AC-3 (≤440V ≤55°C) A 50 AC-4 (400V) A 28           Rated operational power AC-3 (T≤55°C)           230V kW 11 400V kW 22 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5           Rated operational power AC-1 (T≤40°C)           230V kW 34 400V kW 59 500V kW 74 690V kW 102           IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series           ≤24V A 45 48 40 75 V A 60 48V A 60 75 V A 60 110V A 8 220V A -           IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series           ≤24V A 60 48V A 60 48V A 60 A 6	Rated insulation voltage Ui IEC/EN		V	1000
Min	Rated impulse withstand voltage Uimp		kV	8
EC Conventional free air thermal current lth	Operational frequency			
EC Conventional free air thermal current lith		min	Hz	25
Operational current le         AC-1 (≤40°C)       A       90         AC-1 (≤55°C)       A       75         AC-1 (≤70°C)       A       65         AC-3 (≤440V ≤55°C)       A       50         AC-4 (400V)       A       28         Rated operational power AC-3 (T≤55°C)         230V       kW       11         400V       kW       22         440V       kW       22         500V       kW       22         690V       kW       30         1000V       kW       18.5         Rated operational power AC-1 (T≤40°C)         230V       kW       34         400V       kW       34         400V       kW       34         400V       kW       59         500V       kW       74         690V       kW       102         IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series         ≤24V       A       60         48V       A       60         110V       A       50         220V       A       7         IEC max current le in DC1 with L/R ≤ 1ms with 3 poles		max	Hz	400
AC-1 (s40°C)	IEC Conventional free air thermal current Ith		Α	90
AC-1 (≤55°C)	Operational current le			
AC-1 (≤70°C)		AC-1 (≤40°C)	Α	90
AC-3 (≤440V ≤55°C)		AC-1 (≤55°C)	Α	75
AC-4 (400V)		AC-1 (≤70°C)	Α	65
Rated operational power AC-3 (T≤55°C)  230V kW 11 400V kW 22 415V kW 22 440V kW 22 500V kW 30 1000V kW 30 1000V kW 18.5  Rated operational power AC-1 (T≤40°C)  230V kW 34 400V kW 59 500V kW 74 690V kW 102  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 45 48V A 40 110V A 8 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 60 48V A 60 75V A 60 110V A 50 220V A 7  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60 48V A 60		AC-3 (≤440V ≤55°C)	Α	50
230V   kW   11   400V   kW   22   415V   kW   22   415V   kW   22   415V   kW   22   415V   kW   22   500V   kW   22   500V   kW   30   1000V   kW   18.5   8   1000V   kW   18.5   8   1000V   kW   59   500V   kW   74   690V   kW   102   8   1000V   kW   102   8   1000V   kW   102   8   1000V   kW   102   8   1000V   1000V		AC-4 (400V)	Α	28
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Rated operational power AC-3 (T≤55°C)			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		230V	kW	11
A40V   kW   22		400V	kW	22
Soov   kW   30   1000V   kW   18.5		415V	kW	22
Rated operational power AC-1 (T≤40°C)   Rated operational power AC-1 (T≤40°C)		440V	kW	22
Rated operational power AC-1 (T≤40°C)   230V   kW   34   400V   kW   59   500V   kW   74   690V   kW   102		500V	kW	22
Rated operational power AC-1 (T≤40°C)  230V kW 34 400V kW 59 500V kW 74 690V kW 102  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 45 48V A 40 75V A 40 110V A 8 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 60 110V A 8 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60 110V A 50 220V A 7  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60 48V A 60		690V	kW	30
		1000V	kW	18.5
A00V   kW   59   500V   kW   74   690V   kW   102	Rated operational power AC-1 (T≤40°C)			
EC max current le in DC1 with L/R $\leq$ 1ms with 1 poles in series   $\leq$ 24V   A   45   48V   A   40   75V   A   40   110V   A   8   220V   A   -		230V	kW	34
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series   S24V   A   45		400V	kW	59
SEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series   S24V		500V	kW	74
		690V	kW	102
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		≤24V	Α	45
110V   A   8   220V   A   -		48V	Α	40
EC max current le in DC1 with L/R $\leq$ 1ms with 2 poles in series   $\leq$ 24V   A   60   48V   A   60   75V   A   60   110V   A   50   220V   A   7		75V	Α	40
IEC max current le in DC1 with L/R $\leq$ 1ms with 2 poles in series   $\leq$ 24V   A   60   48V   A   60   75V   A   60   110V   A   50   220V   A   7		110V	Α	8
		220V	Α	_
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
		≤24V	Α	60
		48V	Α	60
		75V	Α	60
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60  48V A 60		110V	Α	50
≤24V A 60 48V A 60		220V	Α	7
48V A 60	IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
		≤24V	Α	60
75V A 60		48V	Α	60
		75V	Α	60



	110V	Α	55
	220V	Α	75
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	60
	220V	Α	90
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	30
	48V	Α	25
	75V	Α	22
	110V	Α	3
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
·	≤24V	Α	35
	48V	Α	35
	75V	Α	30
	110V	Α	25
	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series		<u> </u>	
	≤24V	Α	50
	48V	Α	50
	75V	Α	45
	110V	Α	30
	220V	A	40
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	2201		
TEO MAX GUITOR TO MEDOO DOO WILL ETY = TOMO WILL 4 POICE III SONES	≤24V	Α	55
	48V	Α	55
	75V	Α	55
	110V	A	45
	220V	Α	50
Short-time allowable current for 10s (IEC/EN60947-1)	2201	A	400
Protection fuse			400
r rotection ruse	gG (IEC)	Α	100
	aM (IEC)	A	50
Making capacity (RMS value)	aivi (IEC)	A	500
		A	500
Breaking capacity at voltage	4401/	٨	400
	440V	A	400
	500V	A	352
Decistance per pela (everage value)	690V	A	312
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)	1.1	14.	٥.5
	Ith	W	6.5
<del></del>	AC3	W	2
Tightening torque for terminals	_		
	min	Nm	4
	max	Nm	5
	min	lbin	2.95
	max	lbin	3.69
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1



Weight         g         1020           Conductor section         max         2           Operations           Mechanical life         cycles         15000000           Electrical life         cycles         1400000           Safety related data           Performance level B10d according to EN/ISO 13489-1         rated load cycles         1400000           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         Rated AC voltage at 50/60Hz         V         230					
Max number of wires simultaneously connectable         Nr.         2           Conductor section         max         2           Flexible w/o lug conductor section         min         mm²         1.5           Flexible c/w lug conductor section         min         mm²         1.5           Flexible c/w lug conductor section         min         mm²         1.5           max         min         mm²         1.5           max         min         mm²         1.5           max         min         mm²         1.5           min         mm²         1.5         mm²         3.5           Power terminal protection according to IEC/EN 60529         mm²         1.5         mm²         3.5           Powerating position         normal allowable         \$30°         \$3			min		
AWG/Kcmil			max		
AWG/Kcmil   Plexible w/o lug conductor section   min min min mm/ mm/ mm/ mm/ mm/ mm/ mm/ mm/ mm/ mm		simultaneously connectable		Nr.	2
Plexible w/o lug conductor section	Conductor section	ANNO 46			
Flexible w/o lug conductor section   min   mm²   1.5   max   mm²   3.5   max   3.5   max   max		AWG/Kcmil			•
Place   Plac		Fig. 3.1	max		2
Place   Plac		Flexible w/o lug conductor section	•		4 5
Flexible c/w lug conductor section					
Province   Province		Elevible alvebra and destant and a	max	mm-	35
Power terminal protection according to IEC/EN 60529   IP20 front   I		Flexible c/w lug conductor section	min	mama <sup>2</sup>	1 E
Power terminal protection according to IEC/EN 60529   IP20 front   I					
Mechanical features   Special position   Special plan   Special	Dower terminal protec	tion according to IEC/EN 60520	IIIdX	111111	
Departing position		tion according to IEC/EN 60329			IP 20 HOHL
Normal allowable   Series					
Screw   DIN rail   DIN rail	operating position		normal		Vertical plan
Screw / DIN rail   35mm   35					
Neight   g   1020     Conductor section			allowabic		
Mechanical life	Fixing				
AWG/kcmil conductor section   max   2	Weight			a	
AWG/kcmil conductor section    max	_				
Max   2   2   2   2   2   2   2   2   2		AWG/kcmil conductor section			
Cycles   15000000			max		2
Mechanical life   Cycles   15000000	Operations				
Cycles   140000   Cycles   15000000   Cycles   150000000   Cycles   15000000   Cycles   150000000   Cycles   15000000   Cycles   15000000   Cycles   15000000   Cycles   15000000   Cycles   150000000   Cycles   150000000   Cycles   150000000   Cycles   150000000   Cycles   150000000   Cycles   150000000   Cycles   15000000000   Cycles   1500000000   Cycles   15000000000   Cycles   15000000000   Cycles   1500000000	Mechanical life			cycles	15000000
Performance level B10d according to EN/ISO 13489-1  rated load mechanical load cycles 1400000 mechanical load cycles 15000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility yes  AC coil operating  Rated AC voltage at 50/60Hz  AC operating voltage  of 50/60Hz coil powered at 50Hz  pick-up  min will wills 80  max wills 110  drop-out  min wills 20  max wills 55  of 50/60Hz coil powered at 60Hz  pick-up  are min wills 55  of 50/60Hz coil powered at 60Hz  pick-up  min wills 85  are wills 110  drop-out  min wills 40  max wills 110  drop-out  min wills 40  max wills 55  AC average coil consumption at 20°C  of 50/60Hz coil powered at 50Hz  in-rush VA 210	Electrical life				1400000
Rated load   Roycles   1400000	Safety related data				
Mirror contats according to IEC/EN 609474-4-1   yes	Performance level B1	0d according to EN/ISO 13489-1			
Mirror contats according to IEC/EN 609474-4-1  EMC compatibility  AC coil operating  Rated AC voltage at 50/60Hz  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 85  max %Us 110  drop-out  min %Us 85  max %Us 155  AC average coil consumption at 20°C  of 50/60Hz coil powered at 50Hz  in-rush VA 210			rated load	cycles	1400000
EMC compatibility  AC coil operating  Rated AC voltage at 50/60Hz  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 85  max %Us 55  AC average coil consumption at 20°C  of 50/60Hz coil powered at 50Hz  in-rush VA 210			mechanical load	cycles	15000000
AC coil operating   Rated AC voltage at 50/60Hz   V   230	Mirror contats accordi	ng to IEC/EN 609474-4-1			yes
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  pick-up  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  drop-out  min %Us 40 max %Us 55  AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz  in-rush VA 210	EMC compatibility				yes
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 85 max %Us 110  drop-out  min %Us 85 max %Us 110  drop-out  min %Us 40 max %Us 55  AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz  in-rush VA 210	AC coil operating				
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 85 max %Us 110  drop-out  min %Us 85 max %Us 110  drop-out  min %Us 85 max %Us 55  AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz  in-rush VA 210	Rated AC voltage at 5	0/60Hz		V	230
Pick-up   min %Us 80   max %Us 110   Moreover   min %Us 20   max %Us 55   Moreover   min %Us 55   Moreover   min %Us 85   max %Us 110   Moreover   min %Us 85   max %Us 110   Moreover   min %Us 85   max %Us 110   Moreover   min %Us 40   max %Us 55   Moreover   Moreover   min %Us 40   max %Us 55   Moreover   min %Us 55   Moreover   min %Us 55   Moreover   min %Us 55   Moreover   min %Us 40   max 60   max 6	AC operating voltage				
Min   Mus   80   max   Mus   110   min   Mus   20   max   Mus   55		-			
Max   %Us   110		pick-up			
drop-out   min   %Us   20   max   %Us   55			min		
min   %Us   20   max   %Us   55			max	%Us	110
max		drop-out		0/11	
of 50/60Hz coil powered at 60Hz pick-up  min %Us 85 max %Us 110  drop-out  min %Us 40 max %Us 55  AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz  in-rush VA 210					
pick-up  min %Us 85 max %Us 110  drop-out  min %Us 40 max %Us 55  AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz  in-rush VA 210		( 50/00LL	max	%Us	55
min %Us 85 max %Us 110  drop-out  min %Us 40 max %Us 55  AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz  in-rush VA 210		•			
max   %Us   110		ріск-ир		0/11-	0.5
drop-out  min %Us 40 max %Us 55  AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 210					
min %Us 40 max %Us 55  AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 210		drap out	max	-⁄₀US	110
max %Us 55  AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 210		drop-out	min	% I Io	40
AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 210					
of 50/60Hz coil powered at 50Hz in-rush VA 210	AC average coil cons	umption at 20°C	IIIdX	/005	55
in-rush VA 210	no average con const				
		or 50/00112 con powered at 50112	in_ruch	\/Δ	210
Holding VA 15					
			Holding	٧٨	10

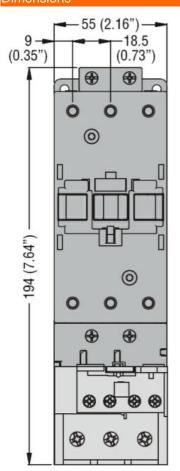


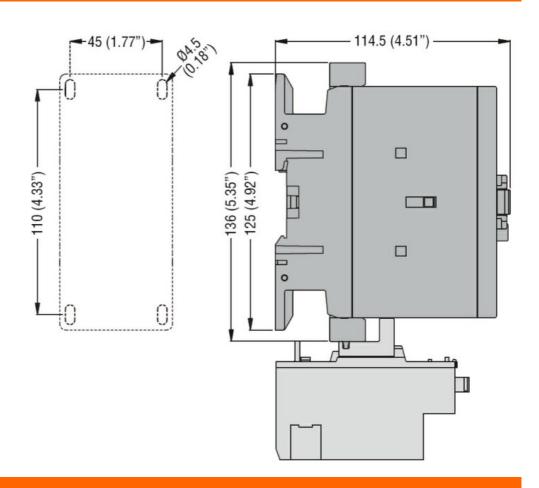
	of 50/60Hz coil powered at 60Hz			
	or 30/00112 con powered at our iz	in-rush	VA	195
		holding	VA	13
	of 60Hz coil powered at 60Hz	Holding	VA	10
	or our iz con powered at our iz	in-rush	VA	210
		holding	VA VA	15
Dissipation at holding s	<20°C EU∏-	Holding	W	5
Max cycles frequency	\$20 C 301 IZ		VV	3
			ovoloo/b	2600
Mechanical operation Operating times			cycles/h	3600
-	entral			
Average time for Us co	in AC			
	Closing NO	min	<b></b> .	10
		min	ms	12
	Opening NO	max	ms	28
	Opening NO			0
		min	ms	8
III to obvioul data		max	ms	22
UL technical data	for three phase AC			
rull-load current (FLA)	for three-phase AC motor		Α.	50
		at 480V	A	52
	_	at 600V	Α	41
Yielded mechanical pe				
	for single-phase AC motor			
		110/120V	HP	5
	-	230V	HP	10
	for three-phase AC motor			
		200/208V	HP	15
		220/230V	HP	20
		460/480V	HP	40
		575/600V	HP	40
General USE				
	Contactor			
		AC current	Α	90
Short-circuit protection	fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	150
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	150
		Fuse class		RK5
Ambient conditions				
Temperature				
	Operating temperature			
	· •	min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude		<del></del>	m	3000
Resistance & Protection	on			
Pollution degree				3
				<del>-</del>



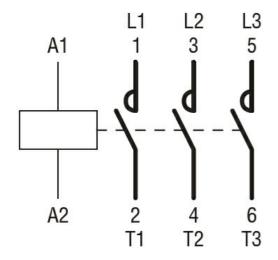
**ENERGY AND AUTOMATION** 

#### **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

BF5000A230



#### BF5000A230

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

CCC
cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation			Power contactor
Product type designation			BF50
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	90
Operational current le			
	AC-1 (≤40°C)	Α	90
	AC-1 (≤55°C)	Α	75
	AC-1 (≤70°C)	Α	65
	AC-3 (≤440V ≤55°C)	Α	50
	AC-4 (400V)	Α	28
Rated operational power AC-3 (T≤55°C)			
(	230V	kW	11
	400V	kW	22
	415V	kW	22
	440V	kW	22
	500V	kW	22
	690V	kW	30
	1000V	kW	18.5
Rated operational power AC-1 (T≤40°C)	1000 V	N V V	10.5
Nated operational power AC-1 (1540 C)	2201/	1.1.1.7	2.4
	230V	kW	34
	400V	kW	59 74
	500V	kW	74
IFO	690V	kW	102
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series	.0.07		. –
	≤24V	Α	45
	48V	Α	40
	75V	Α	40
	110V	Α	8
	220V	Α	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	50
	220V	Α	7

≤24V

48V

75V

Α

Α

60

60

60

IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series



	110V	Α	55
	220V	Α	75
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	60
	220V	Α	90
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	30
	48V	Α	25
	75V	Α	22
	110V	Α	3
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	35
	48V	Α	35
	75V	Α	30
	110V	Α	25
	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	50
	48V	Α	50
	75V	Α	45
	110V	Α	30
	220V	Α	40
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	55
	48V	Α	55
	75V	Α	55
	110V	Α	45
	220V	<u>A</u>	50
Short-time allowable current for 10s (IEC/EN60947-1)		A	400
Protection fuse	0 ((=0)		400
	gG (IEC)	Α	100
W. I. (DMO 1.)	aM (IEC)	Α	50
Making capacity (RMS value)		Α	500
Breaking capacity at voltage	4.63.4		400
	440V	A	400
	500V	A	352
Decistance normale (everyone value)	690V	Α	312
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)	1.7	147	0.5
	Ith	W	6.5
Tinhtonia a tannua fantamainala	AC3	W	2
Tightening torque for terminals			4
	min	Nm	4
	max	Nm	5
	min	Ibin	2.95
Timbtoning toward for call towards	max	Ibin	3.69
Tightening torque for coil terminal		N I.a.:	0.0
	min	Nm Næ	0.8
	max	Nm	1





BF5000A400

		min	Ibin	0.8
		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	ANAC/Kamil			
	AWG/Kcmil	max		2
	Flexible w/o lug conductor section	Παλ		2
	r lexible w/o lag corraductor decitori	min	mm²	1.5
		max	mm²	35
	Flexible c/w lug conductor section			
	-	min	mm²	1.5
		max	mm²	35
	ction according to IEC/EN 60529			IP20 front
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	1020
Conductor section			<u> </u>	.020
	AWG/kcmil conductor section			
		max		2
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1400000
			cycles	1400000
Safety related data			cycles	1400000
	10d according to EN/ISO 13489-1			
	l 0d according to EN/ISO 13489-1	rated load	cycles	1400000
Performance level B1		rated load mechanical load		1400000 15000000
Performance level B1  Mirror contats accord	I 0d according to EN/ISO 13489-1 ing to IEC/EN 609474-4-1		cycles	1400000 15000000 yes
Performance level B1  Mirror contats accord  EMC compatibility			cycles	1400000 15000000
Performance level B1  Mirror contats accord  EMC compatibility  AC coil operating	ing to IEC/EN 609474-4-1		cycles cycles	1400000 15000000 yes yes
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	ing to IEC/EN 609474-4-1 50/60Hz		cycles	1400000 15000000 yes
Performance level B1  Mirror contats accord  EMC compatibility  AC coil operating	ing to IEC/EN 609474-4-1 50/60Hz		cycles cycles	1400000 15000000 yes yes
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	ing to IEC/EN 609474-4-1  50/60Hz  of 50/60Hz coil powered at 50Hz		cycles cycles	1400000 15000000 yes yes
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	ing to IEC/EN 609474-4-1 50/60Hz		cycles cycles	1400000 15000000 yes yes
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	ing to IEC/EN 609474-4-1  50/60Hz  of 50/60Hz coil powered at 50Hz	mechanical load	cycles cycles	1400000 15000000 yes yes 400
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	ing to IEC/EN 609474-4-1  50/60Hz  of 50/60Hz coil powered at 50Hz	mechanical load	cycles cycles V	1400000 15000000 yes yes 400
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	of 50/60Hz coil powered at 50Hz pick-up	mechanical load	cycles cycles V WUs %Us %Us	1400000 15000000 yes yes 400 80 110
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	of 50/60Hz coil powered at 50Hz pick-up	mechanical load  min max	cycles cycles V	1400000 15000000 yes yes 400
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz	mechanical load  min max min	cycles cycles V WUs %Us %Us	1400000 15000000 yes yes 400
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	of 50/60Hz coil powered at 50Hz pick-up	mechanical load  min max  min max	cycles cycles V %Us %Us %Us %Us	1400000 15000000 yes yes 400 80 110 20 55
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz	mechanical load  min max min max min	cycles cycles V %Us %Us %Us	1400000 15000000 yes yes 400 80 110 20 55
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	of 50/60Hz coil powered at 50Hz pick-up  of 50/60Hz coil powered at 60Hz pick-up	mechanical load  min max  min max	cycles cycles V %Us %Us %Us %Us	1400000 15000000 yes yes 400 80 110 20 55
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz	mechanical load  min max  min max  min max	cycles cycles V %Us %Us %Us %Us	1400000 150000000 yes yes 400 80 110 20 55
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	of 50/60Hz coil powered at 50Hz pick-up  of 50/60Hz coil powered at 60Hz pick-up	mechanical load  min max  min max  min max  min max	cycles cycles V  %Us %Us %Us %Us %Us %Us	1400000 15000000 yes yes 400 80 110 20 55
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at 8 AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up  of 50/60Hz coil powered at 60Hz pick-up  drop-out  drop-out  drop-out	mechanical load  min max  min max  min max	cycles cycles V %Us %Us %Us %Us	1400000 150000000 yes yes 400 80 110 20 55
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at 8 AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up  of 50/60Hz coil powered at 60Hz pick-up  drop-out  drop-out	mechanical load  min max  min max  min max  min max	cycles cycles V  %Us %Us %Us %Us %Us %Us	1400000 15000000 yes yes 400 80 110 20 55
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at \$	of 50/60Hz coil powered at 50Hz pick-up  of 50/60Hz coil powered at 60Hz pick-up  drop-out  drop-out  drop-out	mechanical load  min max  min max  min max  min max	cycles cycles V  %Us %Us %Us %Us %Us %Us	1400000 15000000 yes yes 400 80 110 20 55



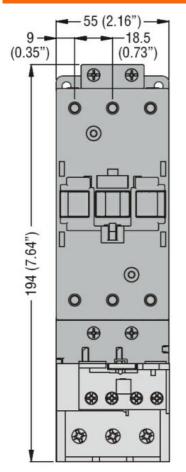


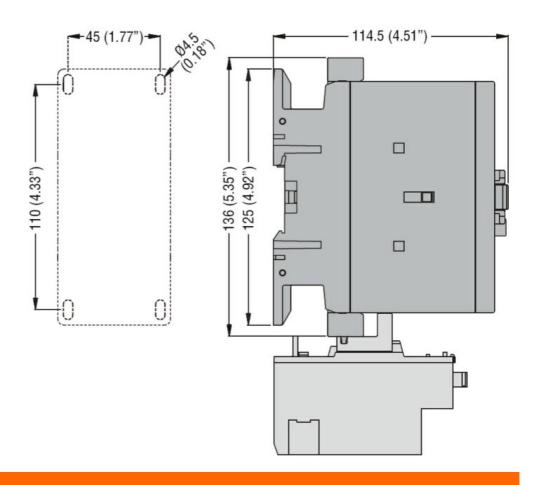
	of 50/60Hz coil powere	ed at 60Hz			
			in-rush	VA	195
			holding	VA	13
	of 60Hz coil powered a	at 60Hz			
	0. 00. <u>12</u> 00 po0.00.		in-rush	VA	210
			holding	VA	15
Dissipation at holding ≤	≤20°C 50Hz		9	W	5
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times				0,0100/11	0000
Average time for Us co	ntrol				
Average unit for 05 00	in AC				
	11710	Closing NO			
		Closing IVC	min	ms	12
			max	ms	28
		Opening NO	Παλ	1113	20
			min	ms	8
			max	ms	22
	in DC		IIIdx	1113	
	III DC	Closing NO			
		Sideling INO	min	ms	40
					85
		Opening NO	max	ms	65
		Opening NO	min	ms	20
					55
UL technical data			max	ms	55
	for three-phase AC mot	or			
i dii-load culterit (i LA)	ioi tillee-pilase AC illot	Oi	at 480V	Α	52
			at 600V	A	41
Violded machanical no	rformonoo		at 000 v		41
Yielded mechanical pe		otor			
	for single-phase AC m	Oloi	110/120V	HP	E
			230V		5 10
	for three phase AC ma	.4	230 V	HP	10
	for three-phase AC mo	NOF	000/0001	LID	15
			200/208V	HP	15
			220/230V	HP	20
			460/480V	HP	40
0			575/600V	HP	40
General USE	0				
	Contactor		A .	Δ.	00
01 1 1 1 1 1	( 000)/		AC current	Α	90
Short-circuit protection					
	High fault				
			Short circuit current	kA	100
			Fuse rating	Α	150
			Fuse class		J
	Standard fault		<b>0</b> 1		_
			Short circuit current	kA	5
			Fuse rating	Α	150
			Fuse class		RK5
Ambient conditions					
Temperature					
	Operating temperature				
			min	°C	-50



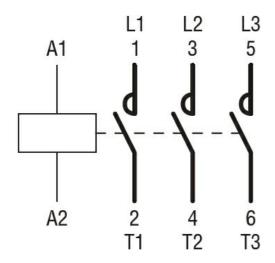
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3

### Dimensions





#### Wiring diagrams



#### Certifications and compliance

Compliance



#### BF5000A400

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 50A, AC COIL 50/60HZ, 400VAC

	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	
	CCC
	cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation Power contactor Product type designation **BF50** Contact characteristics Number of poles Nr. 3 Rated insulation voltage Ui IEC/EN ٧ 1000 k√ Rated impulse withstand voltage Uimp 8 Operational frequency min Η 25 max Hz 400 IEC Conventional free air thermal current Ith 90 Α Operational current le AC-1 (≤40°C) Α 90 AC-1 (≤55°C) Α 75 AC-1 (≤70°C) Α 65 AC-3 (≤440V ≤55°C) Α 50 AC-4 (400V) 28 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 22 415V kW 22 440V kW 22 500V kW 22 690V kW 30 1000V kW 18.5 Rated operational power AC-1 (T≤40°C) 230V kW 34 400V kW 59 500V kW 74 690V kW 102 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V Α 45 48V Α 40 75V 40 Α 110V Α 8 220V Α IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V Α 60 48V Α 60 75V Α 60 110V Α 50 7 220V IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V Α 60 48V Α 60 75V Α 60



	110V	Α	55
	220V	Α	75
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	60
	220V	Α	90
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	30
	48V	Α	25
	75V	Α	22
	110V	Α	3
	220V	Α	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	35
	48V	Α	35
	75V	Α	30
	110V	Α	25
	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	50
	48V	Α	50
	75V	Α	45
	110V	Α	30
	220V	Α	40
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	55
	48V	Α	55
	75V	Α	55
	110V	Α	45
01 + 12 - 14 - 14 - 15 - 15 - 15 - 15 - 15 - 15	220V	Α .	50
Short-time allowable current for 10s (IEC/EN60947-1)		Α	400
Protection fuse	0 (150)		400
	gG (IEC)	A	100
Malian and it (DMO all a)	aM (IEC)	A	50
Making capacity (RMS value)		Α	500
Breaking capacity at voltage	4.401.4	^	400
	440V	A	400
	500V	A	352
Posietones per pole (everese velve)	690V	A	312
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)	141	147	0.5
	Ith	W	6.5
Tightonia a torque for torquia la	AC3	VV	2
Tightening torque for terminals	!	N I.a.	4
	min	Nm	4
	max	Nm	5
	min	lbin Ibin	2.95
Tightoning torque for coil terminal	max	Ibin	3.69
Tightening torque for coil terminal	min	Nlm	0.8
	min max	Nm Nm	0.8 1
	IIIaX	INIII	i



AWG/Kcmil    max   2     Flexible w/o lug conductor section   min mm²   1.5     max mm²   35     Flexible c/w lug conductor section   min mm²   1.5     max mm²   35     Flexible c/w lug conductor section   min mm²   1.5     max mm²   35     Power terminal protection according to IEC/EN 60529   IP20 front     Mechanical features			min	Ibin	0.8
AWG/Kcmil			max	lbin	0.74
AWG/Kcmil   Plexible w/o lug conductor section   Plexible w/o lug conductor section   Plexible w/o lug conductor section   Plexible c/w lug conductor section	Max number of wires	simultaneously connectable		Nr.	2
Flexible w/o lug conductor section   min max   mm²   1.5 mmx   mm²   35	Conductor section				
Flexible w/o lug conductor section		AWG/Kcmil			
Fiexible c/w lug conductor section			max		2
Flexible c/w lug conductor section   min max mm²   1.5		Flexible w/o lug conductor section			
Flexible c/w lug conductor section			min		
Minimate   Minimate			max	mm²	35
Power terminal protection according to IEC/EN 60529         max         mm²         35           Mechanical features         IP20 front           Operating position         normal allowable         ±30°           Fixing         Screw / DIN rail 35mm           Weight         g         1020           Conductor section         max         2           Operations         cycles         15000000           Mechanical life         cycles         15000000           Electrical life         cycles         1400000           Safety related data         cycles         1400000           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         5           EMC compatibility         yes         yes           AC operating voltage         of 60Hz coil powered at 60Hz pick-up         min         %Us         30           AC operating voltage         of 60Hz coil powered at 60Hz pick-up         min         %Us         30           AC average coil consumption at 20°C of 60Hz coil powered at 60Hz coil powered at 60Hz holding         in-rush voltage         xus         55           AC average coil consumption at holding ≤20°C 50Hz         in-rush holdi		Flexible c/w lug conductor section			
Power terminal protection according to IEC/EN 60529   P20 front					
Mechanical features           Operating position         normal allowable a			max	mm²	
Operating position         normal allowable         Vertical plan allowable         ±30°           Fixing         Screw / DIN rail 35mm         35mm           Weight         g         1020           Conductor section         max         z           Median ical life         cycles         15000000           Mechanical life         cycles         15000000           Electrical life         cycles         1400000           Safety related data         rated load         cycles         1400000           Electrical life         cycles         1400000           Safety related data         yes           Performance level B10d according to EN/ISO 13489-1         rated load         cycles         1400000           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coll operating           Rated AC voltage at 60Hz         yes           AC coll operating         yes           AC coll operating         yes           AC average coil consumption at 20°C		ction according to IEC/EN 60529			IP20 front
Normal allowable   Normal 130   1					
Fixing   Screw / DIN rail   Somm   Screw / DIN rail   Somm   S	Operating position				
Screw / DIN rail 35mm   Scr					
Simm   Weight   Simm   Simm			allowable		
Conductor section           max         2           Operations           Mechanical life         cycles         15000000           Electrical life         cycles         1400000           Safety related data           Performance level B10d according to EN/ISO 13489-1           rated load cycles         1400000           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         yes           Rated AC voltage at 60Hz         V         24           AC operating voltage         of 60Hz coil powered at 60Hz         wull but a compatibility         80           Marea of 60Hz coil powered at 60Hz         min         %Us         80           Marea of 60Hz coil powered at 60Hz         wull but a contract of 60Hz coil powered at 60Hz         wull but a contract of 60Hz coil powered at 60Hz         wull but a contract of 60Hz coil powered at 60Hz         wull but a contract of 60Hz coil powered at 60Hz         wull but a contract of 60Hz         wull but a con	Fixing				
AWG/kcmil conductor section max 2  Operations  Mechanical life cycles 15000000 Electrical life cycles 1400000 Safety related data  Performance level B10d according to EN/ISO 13489-1  Performance level B10d according to EN/ISO 13489-1  I rated load cycles 1400000 mechanical load cycles 15000000  Mirror contats according to IEC/EN 609474-4-1  ENG compatibility yes  AC coll operating  Rated AC voltage at 60Hz  Pick-up  of 60Hz coil powered at 60Hz  pick-up  drop-out  min wulls 80 max wulls 110  drop-out  min wulls 80 max wulls 110  AC average coil consumption at 20°C  of 60Hz coil powered at 60Hz  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operating  Mechanical operating times  Scycles/h 3600  Operating times	Weight			g	1020
Operations           Mechanical life         cycles         15000000           Electrical life         cycles         1400000           Safety related data         rated load         cycles         1400000           Performance level B10d according to EN/ISO 13489-1         rated load         cycles         15000000           Mirror contats according to IEC/EN 609474-4-1         yes         EMC compatibility         yes           AC coil operating         yes         Y         24           AC operating voltage         yes         Y         24           AC operating voltage         min         %Us         80           drop-out         min         %Us         80           drop-out         min         %Us         20           AC average coil consumption at 20°C         of 60Hz coil powered at 60Hz         in-rush         VA         210           AC average coil consumption at 20°C of 60Hz coil powered at 60Hz         in-rush         VA         210           Dissipation at holding ≤20°C 50Hz         W         5           Max cycles frequency         yeles/h         3600	Conductor section				
Operations           Mechanical life         cycles         15000000           Electrical life         cycles         1400000           Safety related data           Performance level B10d according to EN/ISO 13489-1           rated load mechanical load cycles         1400000 cycles         15000000           Mirror contats according to IEC/EN 609474-4-1         yes         yes           EMC compatibility         yes         yes           AC coil operating         V         24           AC operating voltage         yu         24           AC operating voltage         min         %Us         80           Max         %Us         110           drop-out         min         %Us         55           AC average coil consumption at 20°C         of 60Hz coil powered at 60Hz         in-rush holding         VA         210           AC average coil consumption at 20°C of 60Hz coil powered at 60Hz         in-rush holding         VA         210           Dissipation at holding ≤20°C 50Hz         W         5           Max cycles frequency         yu         5           Mechanical operation         cycles/h         3600		AWG/kcmil conductor section			
Mechanical life         cycles         15000000           Electrical life         cycles         1400000           Safety related data           rated load representation of cycles         1400000           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         yes           Rated AC voltage at 60Hz         y         24           AC operating voltage         min         %Us         80           pick-up         min         %Us         80           max         %Us         110           drop-out         min         %Us         20           max         %Us         55           AC average coil consumption at 20°C         of 60Hz coil powered at 60Hz         in-rush         VA         210           holding         VA         15           Dissipation at holding ≤20°C 50Hz         ms         y         5           Max cycles frequency         cycles/h         3600           Operating times         cycles/h         3600			max		2
Electrical life cycles 140000 Safety related data  Performance level B10d according to EN/ISO 13489-1  rated load cycles 1400000 mechanical load cycles 15000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility yes  AC coil operating  Rated AC voltage at 60Hz  AC operating voltage  of 60Hz coil powered at 60Hz  pick-up  min %Us 80  max %Us 110  drop-out  min %Us 20  max %Us 55  AC average coil consumption at 20°C  of 60Hz coil powered at 60Hz  in-rush holding VA 15  Dissipation at holding ≤20°C 50Hz  Max cycles frequency  Mechanical operation  Cycles/h 3600  Operating times	•				
Safety related data         Performance level B10d according to EN/ISO 13489-1       rated load mechanical load cycles       1400000 to 15000000         Mirror contats according to IEC/EN 609474-4-1       yes       yes         EMC compatibility       yes       yes         AC coil operating       V       24         Rated AC voltage at 60Hz       V       24         AC operating voltage       min       %Us       80         max       %Us       110         drop-out       min       %Us       20         max       %Us       55         AC average coil consumption at 20°C       of 60Hz coil powered at 60Hz       in-rush holding       VA       210 holding         Dissipation at holding ≤20°C 50Hz       W       5         Max cycles frequency       W       5         Mechanical operation       cycles/h       3600         Operating times				cycles	
Performance level B10d according to EN/ISO 13489-1         rated load mechanical load       cycles       1400000 15000000         Mirror contats according to IEC/EN 609474-4-1       yes         EMC compatibility       yes         AC coil operating       V       24         Rated AC voltage at 60Hz       V       24         AC operating voltage       min       %Us       80         pick-up       min       %Us       110         drop-out       min       %Us       20         max       %Us       55         AC average coil consumption at 20°C       f60Hz coil powered at 60Hz       in-rush holding       VA       210         Dissipation at holding ≤20°C 50Hz       W       5         Max cycles frequency       W       5         Mechanical operation       cycles/h       3600				cycles	1400000
rated load mechanical load cycles         1400000 mechanical load cycles         15000000           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         V         24           Rated AC voltage at 60Hz         V         24           AC operating voltage         min         %Us         80           pick-up         min         %Us         80           max         %Us         110           drop-out         min         %Us         20           max         %Us         55           AC average coil consumption at 20°C         in-rush         VA         210           holding         VA         15           Dissipation at holding ≤20°C 50Hz         W         5           Max cycles frequency           Mechanical operation         cycles/h         3600	· · · · · · · · · · · · · · · · · · ·				
Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         V         24           Rated AC voltage at 60Hz         V         24           AC operating voltage         min         %Us         80           pick-up         min         %Us         80           max         %Us         110           drop-out         min         %Us         20           max         %Us         55           AC average coil consumption at 20°C         in-rush         VA         210           holding         VA         15           Dissipation at holding ≤20°C 50Hz         W         5           Max cycles frequency           Mechanical operation         cycles/h         3600	Performance level B1	10d according to EN/ISO 13489-1		_	
Mirror contats according to IEC/EN 609474-4-1  EMC compatibility  AC coil operating  Rated AC voltage at 60Hz  AC operating voltage  of 60Hz coil powered at 60Hz  pick-up  min %Us 80  max %Us 110  drop-out  min %Us 20  max %Us 55  AC average coil consumption at 20°C  of 60Hz coil powered at 60Hz  in-rush VA 210  holding VA 15  Dissipation at holding ≤20°C 50Hz  Mechanical operation  Operating times  yes  yes  yes  AC 24  AC 25  AC 24  AC 24  AC 25  AC 26  AC 36  AC				-	
EMC compatibility yes  AC coil operating  Rated AC voltage at 60Hz  Of 60Hz coil powered at 60Hz  pick-up  min %Us 80 max %Us 110  drop-out  min %Us 20 max %Us 55  AC average coil consumption at 20°C  of 60Hz coil powered at 60Hz  in-rush VA 210 holding VA 15  Dissipation at holding ≤20°C 50Hz  Mechanical operation  Cycles/h 3600  Operating times			mechanical load	cycles	
AC coil operating         Rated AC voltage at 60Hz       V       24         AC operating voltage       min %Us 80 max %Us 110 drop-out       %Us 110 drop-out         Min %Us 20 max %Us 55       AC average coil consumption at 20°C 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		ing to IEC/EN 609474-4-1			•
Rated AC voltage at 60Hz         AC operating voltage       of 60Hz coil powered at 60Hz         pick-up       min %Us 80 max %Us 110         drop-out       min %Us 20 max %Us 55         AC average coil consumption at 20°C 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					yes
AC operating voltage  of 60Hz coil powered at 60Hz  pick-up  min %Us 80  max %Us 110  drop-out  min %Us 20  max %Us 55  AC average coil consumption at 20°C  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					0.4
of 60Hz coil powered at 60Hz pick-up  min %Us 80 max %Us 110  drop-out  min %Us 20 max %Us 55  AC average coil consumption at 20°C 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		60Hz		V	24
pick-up         min       %Us       80         max       %Us       110         drop-out       min       %Us       20         max       %Us       55         AC average coil consumption at 20°C       of 60Hz coil powered at 60Hz       in-rush       VA       210         bolding       VA       15         Dissipation at holding ≤20°C 50Hz       W       5         Max cycles frequency         Mechanical operation       cycles/h       3600         Operating times	AC operating voltage				
min wus wus 80 max wus 110         drop-out       min wus wus 110         min wax wus 20 max wus 55         AC average coil consumption at 20°C of 60Hz coil powered at 60Hz       in-rush wus 210 holding wus 15         Dissipation at holding ≤20°C 50Hz       W 5         Max cycles frequency       w 5         Mechanical operation       cycles/h 3600         Operating times					
drop-out         min       %Us       20         max       %Us       55         AC average coil consumption at 20°C       of 60Hz coil powered at 60Hz       in-rush       VA       210         biolding       VA       15         Dissipation at holding ≤20°C 50Hz       W       5         Max cycles frequency         Mechanical operation       cycles/h       3600         Operating times		ріск-ир	!	0/11-	0.0
drop-out  min %Us 20 max %Us 55  AC average coil consumption at 20°C 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 max %Us 55  AC average coil consumption at 20°C 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		drop out	max	%US	110
max %Us 55   AC average coil consumption at 20°C of 60Hz coil powered at 60Hz in-rush holding VA 210 holding   Dissipation at holding ≤20°C 50Hz W 5   Max cycles frequency W 5   Mechanical operation cycles/h 3600   Operating times		drop-out	min	0/ L lo	20
AC average coil consumption at 20°C  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 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 average coil cons	umntion at 20°C	IIIdX	/005	JJ
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	no average con cons	•			
holdingVA15Dissipation at holding ≤20°C 50HzW5Max cycles frequencyStreetStreetMechanical operationCycles/h3600Operating times		or ouriz con powered at ouriz	in_ruch	\/Δ	210
Dissipation at holding ≤20°C 50Hz W 5  Max cycles frequency  Mechanical operation cycles/h 3600  Operating times					
Max cycles frequency Mechanical operation cycles/h 3600 Operating times	Dissination at holding	<20°C 50Hz	notality		
Mechanical operation cycles/h 3600 Operating times				V V	
Operating times				cycles/h	3600
				Oy OlO3/11	
		control			

in AC

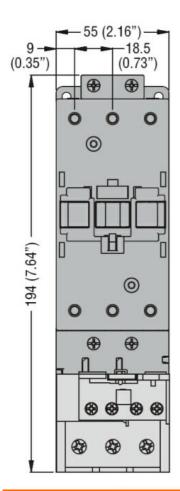
Closing NO

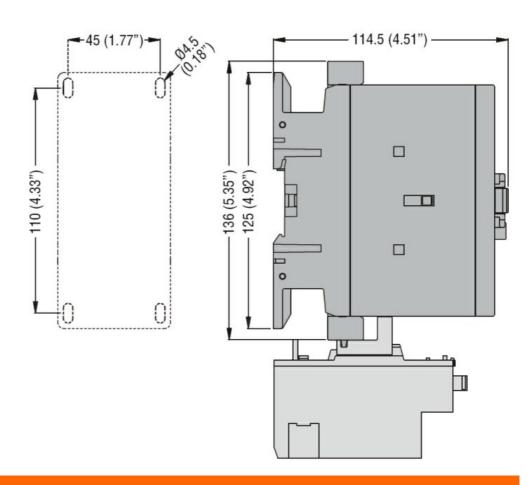




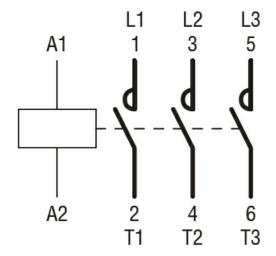
		min	ms	12
		max	ms	28
	Opening NO			
		min	ms	8
		max	ms	22
	in DC			
	Closing NO			
		min	ms	40
		max	ms	85
	Opening NO			
		min	ms	20
		max	ms	55
UL technical data				
Full-load current (FLA	a) for three-phase AC motor			
		at 480V	Α	52
		at 600V	Α	41
Yielded mechanical p				
	for single-phase AC motor			
		110/120V	HP	5
		230V	HP	10
	for three-phase AC motor			
		200/208V	HP	15
		220/230V	HP	20
		460/480V	HP	40
		575/600V	HP	40
General USE				
	Contactor			
		AC current	Α	90
Short-circuit protection				
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	150
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	150
		Fuse class		RK5
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protect	ion			
Pollution degree				3
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

CCC



#### BF5000A02460

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

cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation Power contactor Product type designation **BF50** Contact characteristics Nr. 3 Number of poles Rated insulation voltage Ui IEC/EN ٧ 1000 k√ Rated impulse withstand voltage Uimp 8 Operational frequency min Η 25 max Hz 400 IEC Conventional free air thermal current Ith 90 Α Operational current le AC-1 (≤40°C) Α 90 AC-1 (≤55°C) Α 75 AC-1 (≤70°C) Α 65 AC-3 (≤440V ≤55°C) Α 50 AC-4 (400V) 28 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 22 415V kW 22 440V kW 22 500V kW 22 690V kW 30 1000V kW 18.5 Rated operational power AC-1 (T≤40°C) 230V kW 34 400V kW 59 500V kW 74 690V kW 102 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V Α 45 48V Α 40 75V 40 Α 110V Α 8 220V Α IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V Α 60 48V Α 60 75V Α 60 110V Α 50 7 220V IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V Α 60 48V Α 60 75V Α 60



	110V	Α	55	
	220V	Α	75	
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series				
	≤24V	Α	60	
	48V	Α	60	
	75V	Α	60	
	110V	Α	60	
	220V	Α	90	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series				
	≤24V	Α	30	
	48V	Α	25	
	75V	Α	22	
	110V	Α	3	
	220V	Α	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series				
	≤24V	Α	35	
	48V	Α	35	
	75V	Α	30	
	110V	Α	25	
	220V	Α	5	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series				
	≤24V	Α	50	
	48V	Α	50	
	75V	Α	45	
	110V	Α	30	
	220V	Α	40	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series				
	≤24V	Α	55	
	48V	Α	55	
	75V	Α	55	
	110V	Α	45	
	220V	Α	50	
Short-time allowable current for 10s (IEC/EN60947-1)		A	400	
Protection fuse	0 ((=0)		4.0.0	
	gG (IEC)	Α	100	
W. I. (DMO 1.)	aM (IEC)	Α	50	
Making capacity (RMS value)		Α	500	
Breaking capacity at voltage	4.401.4		400	
	440V	A	400	
	500V	A	352	
Decision of the control of	690V	Α	312	
Resistance per pole (average value)		mΩ	0.8	
Power dissipation per pole (average value)	1.7	147	0.5	
	Ith	W	6.5	
Tinhtonia a tannua fantamainala	AC3	W	2	
Tightening torque for terminals		N.I.	4	
	min	Nm	4	
	max	Nm	5	
	min	Ibin	2.95	
Timbtoning toward for call towards	max	Ibin	3.69	
Tightening torque for coil terminal		N.L.	0.0	
	min	Nm Næ	0.8	
	max	Nm	1	



		min	Ibin	0.8
		max	Ibin	0.74
Max number of wires s	imultaneously connectable		Nr.	2
Conductor section	•			
	AWG/Kcmil			
	7.00 671.611	max		2
	Flexible w/o lug conductor section	max		
	r lexible w/o lug corludctor section	min	mm²	1.5
		min		
		max	mm²	35
	Flexible c/w lug conductor section			
		min	mm²	1.5
		max	mm²	35
Power terminal protect	tion according to IEC/EN 60529			IP20 front
Mechanical features				
Operating position				
, <b>.</b> .		normal		Vertical plan
		allowable		±30°
-		anovidato		Screw / DIN rail
Fixing				35mm
Weight			α	1020
Conductor section			g	1020
Conductor section	ANA(O/I) 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
	AWG/kcmil conductor section			
		max		2
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1400000
Safety related data				
Performance level B10	Od according to EN/ISO 13489-1			
	· ·	rated load	cycles	1400000
		mechanical load	cycles	15000000
Mirror contats according	ng to IEC/EN 609474-4-1		-,	yes
EMC compatibility	19 10 12 07 21 4 000 17 1 1 1			
AC coil operating				yes
	01.1-		\ /	40
Rated AC voltage at 60	J□2		V	48
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
	•	min	%Us	20
		max	%Us	55
AC average coil consu	Imption at 20°C			
2	of 60Hz coil powered at 60Hz			
	or dor iz doir powered at dor iz	in-rush	VA	210
			VA VA	
Disability of the LP	<00°C FOLL-	holding		15
Dissipation at holding :	SZU U 5UHZ		W	5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us co	ontrol			
-	in AC			

in AC

Closing NO

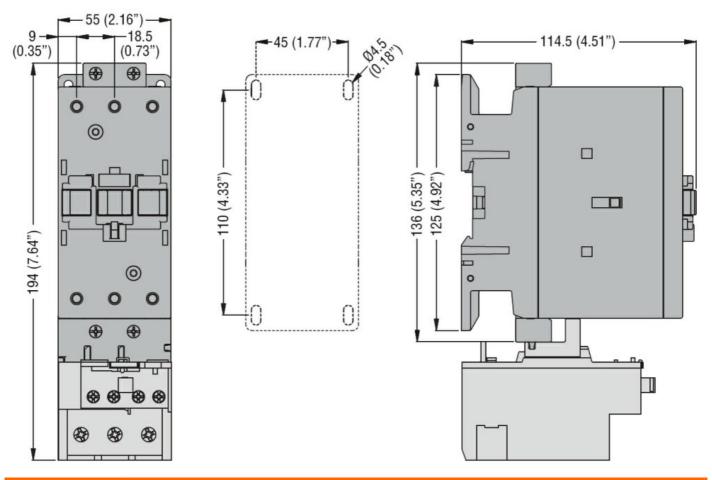




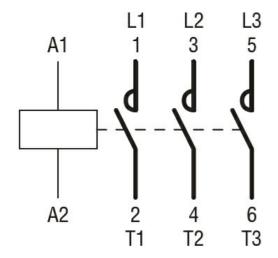
		min	ms	12
		max	ms	28
	Opening NO			
		min	ms	8
		max	ms	22
	in DC			
	Closing NO			
		min	ms	40
		max	ms	85
	Opening NO			
	, -	min	ms	20
		max	ms	55
UL technical data				
	.) for three-phase AC motor			
,	,	at 480V	Α	52
		at 600V	Α	41
Yielded mechanical p	erformance			
	for single-phase AC motor			
	g.e pdee /e ///e/s	110/120V	HP	5
		230V	HP	10
	for three-phase AC motor	2001	• • • •	10
	for timee phase No motor	200/208V	HP	15
		220/230V	HP	20
		460/480V	HP	40
		575/600V	HP	40
General USE		373/0001	- ' ' '	<del></del>
Ochoral COL	Contactor			
	Contactor	AC current	Α	90
Short-circuit protection	n fuse 600V	AO Gaireile		
Onon chedit protectio	High fault			
	riigiriadit	Short circuit current	kA	100
		Fuse rating	A	150
		Fuse class	^	J
	Standard fault	Fuse class		
	Statiuatu iauti	Short circuit current	kA	5
			KA A	
		Fuse rating Fuse class	А	150 RK5
Ambient conditions		Fuse class		CAN
Ambient conditions				
Temperature	Operating temperature			
	Operating temperature	·	°C	FO
		min	°C	-50 -70
	<u> </u>	max	°C	70
	Storage temperature		0.0	00
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protect	on			
Pollution degree				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/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

### Certificates

CCC



### BF5000A04860

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 50A, AC COIL 60HZ, 48VAC

cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching



Product designation			Power contactor
Product type designation			BF50
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	90
Operational current le			
	AC-1 (≤40°C)	Α	90
	AC-1 (≤55°C)	Α	75
	AC-1 (≤70°C)	Α	65
	AC-3 (≤440V ≤55°C)	Α	50
	AC-4 (400V)	Α	28
Rated operational power AC-3 (T≤55°C)	,		
	230V	kW	11
	400V	kW	22
	415V	kW	22
	440V	kW	22
	500V	kW	22
	690V	kW	30
	1000V	kW	18.5
Rated operational power AC-1 (T≤40°C)			
, , , ,	230V	kW	34
	400V	kW	59
AC-1 (≤40°C AC-1 (≤55°C AC-1 (≤70°C AC-3 (≤440V ≤55°C AC-4 (400°C d operational power AC-3 (T≤55°C)  230 400 415 440 500 690 1000 d operational power AC-1 (T≤40°C)  230 400 690 1000  max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24 48 75 110		kW	74
	690V	kW	102
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
·	≤24V	Α	45
	48V	Α	40
oduct type designation ntact characteristics miber of poles ted insulation voltage Ui IEC/EN ted impulse withstand voltage Uimp rerational frequency  C Conventional free air thermal current Ith rerational current le  AC-1 (≤40 AC-1 (≤50 AC-1 (≤70 AC-3 (≤440V ≤55 AC-4 (40  Led operational power AC-3 (T≤55°C)  2: 44 44 45 66 100  ted operational power AC-1 (T≤40°C)  2: 46 C max current le in DC1 with L/R ≤ 1ms with 1 poles in series  C max current le in DC1 with L/R ≤ 1ms with 2 poles in series  C max current le in DC1 with L/R ≤ 1ms with 3 poles in series  C max current le in DC1 with L/R ≤ 1ms with 3 poles in series		Α	40
	110V	Α	8
	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
·	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	50
	220V	Α	7
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
•	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	, ,		



	110V	Α	55
	220V	Α	75
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	60
	220V	Α	90
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	30
	48V	Α	25
	75V	Α	22
	110V	Α	3
	220V	Α	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	35
	48V	Α	35
	75V	Α	30
	110V	Α	25
	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	50
	48V	Α	50
	75V	Α	45
	110V	A	30
150 D00 D05 W 1/D 1/5 W 1/D 1	220V	A	40
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	.0.01	_	
	≤24V	A	55
	48V	A	55
	75V	A	55 45
	110V	A	45
Chart time allowable augreent for 100 (IEC/ENGO047.1)	220V	A A	50
Short-time allowable current for 10s (IEC/EN60947-1)		A	400
Protection fuse	~C (IEC)	۸	100
	gG (IEC)	A	100 50
Making conceits (DMC value)	aM (IEC)	A A	
Making capacity (RMS value)  Breaking capacity at voltage		A	500
breaking capacity at voltage	440\/	۸	400
	440V 500V	A A	400 352
	690V	A	312
Resistance per pole (average value)	090 V	mΩ	0.8
Power dissipation per pole (average value)		11122	0.0
Power dissipation per pole (average value)	Ith	W	6.5
	AC3	W	2
Tightening torque for terminals	A03	VV	
nghtening torque for terminals	min	Nm	4
	max	Nm	5
	min	Ibin	2.95
	max	lbin	3.69
Tightening torque for coil terminal	Παλ	10111	0.00
ngittening torque for contentinal	min	Nm	0.8
	max	Nm	0.6 1
	Παλ	1 11111	1



		min	Ibin	0.8
		max	Ibin	0.74
Max number of wires s	imultaneously connectable		Nr.	2
Conductor section	•			
	AWG/Kcmil			
	/W G/Rollin	max		2
	Flexible w/o lug conductor section	Пах		
	Flexible w/o lug conductor section			4.5
		min	mm²	1.5
		max	mm²	35
	Flexible c/w lug conductor section			
		min	mm²	1.5
-		max	mm²	35
Power terminal protect	tion according to IEC/EN 60529			IP20 front
Mechanical features				
Operating position				
. <b>.</b> .		normal		Vertical plan
		allowable		±30°
		4.10114010		Screw / DIN rail
Fixing				35mm
Weight				1020
Conductor section			g	1020
Conductor section	ANAIC (I consil consideration of the			
	AWG/kcmil conductor section			_
		max		2
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1400000
Safety related data				
Performance level B10	Od according to EN/ISO 13489-1			
		rated load	cycles	1400000
		mechanical load	cycles	15000000
Mirror contats according	ng to IEC/EN 609474-4-1			yes
EMC compatibility	<u>.g .c .= e/ = ecc </u>			yes
AC coil operating				ycs
	011-		1/	100
Rated AC voltage at 60	JПZ		V	120
AC operating voltage	60011			
	of 60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
AC average coil consu	imption at 20°C			
Ü	of 60Hz coil powered at 60Hz			
	1. 10. 12 to. ponorod at 001 12	in-rush	VA	210
		holding	VA	15
Discipation at halding	<20°C E0∐-7	Holding	W	5
Dissipation at holding:	≥2U U 0U∏Z		VV	ບ
Max cycles frequency				0000
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us co	ontrol			
	in AC			

BF5000A12060 The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding

Closing NO

in AC

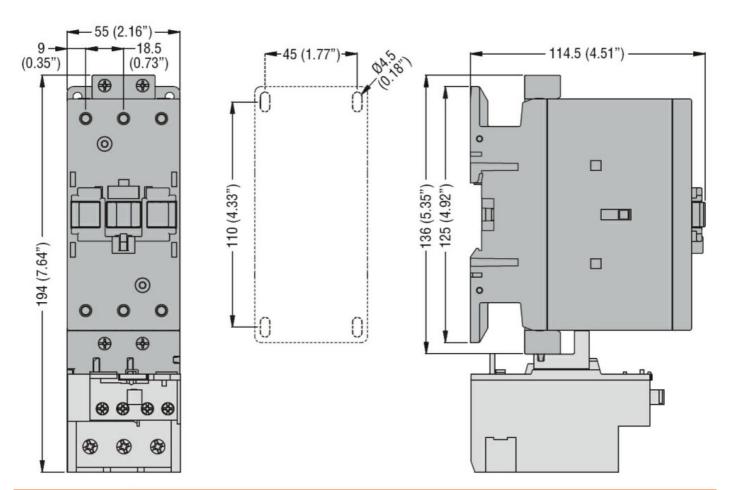




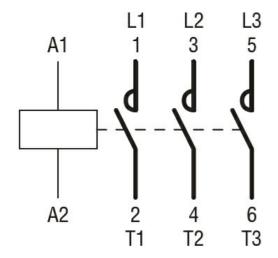
		min	ms	12
		max	ms	28
	Opening NO			
		min	ms	8
		max	ms	22
	in DC			
	Closing NO			
		min	ms	40
		max	ms	85
	Opening NO			
	, -	min	ms	20
		max	ms	55
UL technical data				
	.) for three-phase AC motor			
,	,	at 480V	Α	52
		at 600V	Α	41
Yielded mechanical p	erformance			
	for single-phase AC motor			
	g.e pdee /e ///e/s	110/120V	HP	5
		230V	HP	10
	for three-phase AC motor	2001	• • • •	10
	for timee phase No motor	200/208V	HP	15
		220/230V	HP	20
		460/480V	HP	40
		575/600V	HP	40
General USE		373/0001	- ' ' '	<del></del>
Ochoral COL	Contactor			
	Contactor	AC current	Α	90
Short-circuit protection	n fuse 600V	AO Gaireile		
Onon chedit protectio	High fault			
	riigiriadit	Short circuit current	kA	100
		Fuse rating	A	150
		Fuse class	^	J
	Standard fault	Fuse class		
	Statiuatu iauti	Short circuit current	kA	5
			KA A	
		Fuse rating Fuse class	А	150 RK5
Ambient conditions		Fuse class		CAN
Ambient conditions				
Temperature	Operating temperature			
	Operating temperature	·	°C	FO
		min	°C	-50 -70
	<u> </u>	max	°C	70
	Storage temperature		0.0	00
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protect	on			
Pollution degree				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/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

### Certificates

CCC



### BF5000A12060

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

cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation Power contactor Product type designation **BF50** Contact characteristics Number of poles Nr. 3 Rated insulation voltage Ui IEC/EN ٧ 1000 k√ Rated impulse withstand voltage Uimp 8 Operational frequency min Η 25 max Hz 400 IEC Conventional free air thermal current Ith 90 Α Operational current le AC-1 (≤40°C) Α 90 AC-1 (≤55°C) Α 75 AC-1 (≤70°C) Α 65 AC-3 (≤440V ≤55°C) Α 50 AC-4 (400V) 28 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 22 415V kW 22 440V kW 22 500V kW 22 690V kW 30 1000V kW 18.5 Rated operational power AC-1 (T≤40°C) 230V kW 34 400V kW 59 500V kW 74 690V kW 102 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V Α 45 48V Α 40 75V 40 Α 110V Α 8 220V Α IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V Α 60 48V Α 60 75V Α 60 110V Α 50 7 220V IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V Α 60 48V Α 60 75V Α 60



	110V	Α	55	
	220V	Α	75	
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series				
	≤24V	Α	60	
	48V	Α	60	
	75V	Α	60	
	110V	Α	60	
	220V	Α	90	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series				
	≤24V	Α	30	
	48V	Α	25	
	75V	Α	22	
	110V	Α	3	
	220V	Α	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series				
	≤24V	Α	35	
	48V	Α	35	
	75V	Α	30	
	110V	Α	25	
	220V	Α	5	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series				
	≤24V	Α	50	
	48V	Α	50	
	75V	Α	45	
	110V	Α	30	
	220V	Α	40	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series				
	≤24V	Α	55	
	48V	Α	55	
	75V	Α	55	
	110V	Α	45	
	220V	Α	50	
Short-time allowable current for 10s (IEC/EN60947-1)		A	400	
Protection fuse	0 ((=0)		4.0.0	
	gG (IEC)	Α	100	
W. I. (DMO 1.)	aM (IEC)	Α	50	
Making capacity (RMS value)		Α	500	
Breaking capacity at voltage	4.401.4		400	
	440V	A	400	
	500V	A	352	
Decision of the control of	690V	Α	312	
Resistance per pole (average value)		mΩ	0.8	
Power dissipation per pole (average value)	1.7	147	0.5	
	Ith	W	6.5	
Tinhtonia a tannua fantamainala	AC3	W	2	
Tightening torque for terminals		N.I.	4	
	min	Nm	4	
	max	Nm	5	
	min	Ibin	2.95	
Timbtoning toward for call towards	max	Ibin	3.69	
Tightening torque for coil terminal		N.L.	0.0	
	min	Nm Næ	0.8	
	max	Nm	1	



		min	lbin	0.8
		max	lbin	0.74
Max number of wires s	imultaneously connectable		Nr.	2
Conductor section	•			
	AWG/Kcmil			
	/ W G// G// III	max		2
	Flexible w/o lug conductor section	max		
	r lexible w/o lug corluctor section	min	mm²	1.5
		min		
		max	mm²	35
	Flexible c/w lug conductor section		•	
		min	mm²	1.5
		max	mm²	35
Power terminal protect	tion according to IEC/EN 60529			IP20 front
Mechanical features				
Operating position				
, <b>.</b> .		normal		Vertical plan
		allowable		±30°
		anomabio		Screw / DIN rail
Fixing				35mm
Weight			<u> </u>	1020
Conductor section			g	1020
Conductor section	ANA/O/learnillands Indianas i			
	AWG/kcmil conductor section			
		max		2
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1400000
Safety related data				
Performance level B10	Od according to EN/ISO 13489-1			
	· ·	rated load	cycles	1400000
		mechanical load	cycles	15000000
Mirror contats according	ng to IEC/EN 609474-4-1	THOUSANDAN TOAC	0,0.00	yes
EMC compatibility	ig to 120/214 005474 4 1			
, ,				yes
AC coil operating			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	202
Rated AC voltage at 60	OHz		V	220
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
	•	min	%Us	20
		max	%Us	55
AC average coil consu	umption at 20°C	max		_ <del></del>
avorage con consu	of 60Hz coil powered at 60Hz			
	or our iz our powered at ouriz	in-rush	VA	210
<u></u>	10000 5011	holding	VA	15
Dissipation at holding:	≤20°C 50Hz		W	5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us co	ontrol			
•	in AC			

in AC

Closing NO

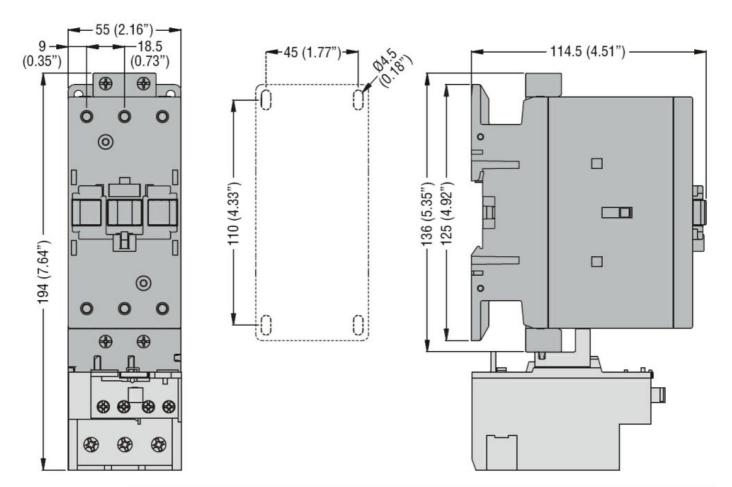




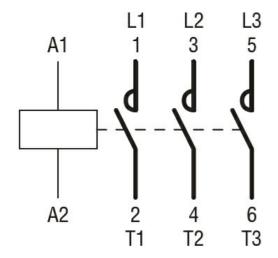
			_		
			min	ms	12
		0 1 110	max	ms	28
		Opening NO			
			min	ms	8
	<del></del>		max	ms	22
	in DC				
		Closing NO			
			min	ms	40
			max	ms	85
		Opening NO			
			min	ms	20
			max	ms	55
UL technical data					
Full-load current (FLA	A) for three-phase A	.C motor			
			at 480V	Α	52
			at 600V	Α	41
Yielded mechanical p					
	for single-phase	AC motor			
			110/120V	HP	5
			230V	HP	10
	for three-phase	AC motor			
			200/208V	HP	15
			220/230V	HP	20
			460/480V	HP	40
			575/600V	HP	40
General USE					
	Contactor				
			AC current	Α	90
Short-circuit protection	n fuse, 600V				
	High fault				
			Short circuit current	kA	100
			Fuse rating	Α	150
			Fuse class		J
	Standard fault	<del></del>	<del></del>		
			Short circuit current	kA	5
			Fuse rating	Α	150
			Fuse class		RK5
Ambient conditions					
Temperature					
	Operating temper	erature			
			min	°C	-50
			max	°C	70
	Storage tempera	ature			
			min	°C	-60
			max	°C	80
Max altitude				m	3000
Resistance & Protect	ion				
Pollution degree					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/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

### Certificates

CCC



### BF5000A22060

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

cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching



**ENERGY AND AUTOMATION** 



Product designation			Power contactor
Product type designation			BF50
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	90
Operational current le			
	AC-1 (≤40°C)	Α	90
	AC-1 (≤55°C)	Α	75
	AC-1 (≤70°C)	Α	65
	AC-3 (≤440V ≤55°C)	Α	50
	AC-4 (400V)	Α	28
Rated operational power AC-3 (T≤55°C)			
	230V	kW	11
	400V	kW	22
	415V	kW	22
	440V	kW	22
	500V	kW	22
	690V	kW	30
	1000V	kW	18.5
Rated operational power AC-1 (T≤40°C)			
	230V	kW	34
	400V	kW	59
	500V	kW	74
	690V	kW	102
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	Α	45
	48V	Α	40
	75V	Α	40
	110V	Α	8
	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	50
	220V	Α	7
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
·	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	-		



	110V	Α	55	
	220V	Α	75	
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series				
	≤24V	Α	60	
	48V	Α	60	
	75V	Α	60	
	110V	Α	60	
	220V	Α	90	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series				
	≤24V	Α	30	
	48V	Α	25	
	75V	Α	22	
	110V	Α	3	
	220V	Α	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series				
	≤24V	Α	35	
	48V	Α	35	
	75V	Α	30	
	110V	Α	25	
	220V	Α	5	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series				
	≤24V	Α	50	
	48V	Α	50	
	75V	Α	45	
	110V	Α	30	
	220V	Α	40	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series				
	≤24V	Α	55	
	48V	Α	55	
	75V	Α	55	
	110V	Α	45	
	220V	Α	50	
Short-time allowable current for 10s (IEC/EN60947-1)		A	400	
Protection fuse	0 ((=0)		4.0.0	
	gG (IEC)	Α	100	
W. I. (DMO 1.)	aM (IEC)	Α	50	
Making capacity (RMS value)		Α	500	
Breaking capacity at voltage	4.401.4		400	
	440V	A	400	
	500V	A	352	
Decision of the control of	690V	Α	312	
Resistance per pole (average value)		mΩ	0.8	
Power dissipation per pole (average value)	1.7	147	0.5	
	Ith	W	6.5	
Tinhtonia a tannua fantamainala	AC3	W	2	
Tightening torque for terminals		N.I.	4	
	min	Nm	4	
	max	Nm	5	
	min	Ibin	2.95	
Timbtoning toward for call towards	max	Ibin	3.69	
Tightening torque for coil terminal		N.L.	0.0	
	min	Nm Næ	0.8	
	max	Nm	1	



		min	Ibin	0.8
		max	Ibin	0.74
Max number of wires s	imultaneously connectable		Nr.	2
Conductor section	•			
	AWG/Kcmil			
	/W S/Rollin	max		2
	Flexible w/o lug conductor section	IIIAX		
	r lexible w/o lug corluctor section	min	mm²	1.5
		min		
		max	mm²	35
	Flexible c/w lug conductor section			
		min	mm²	1.5
		max	mm²	35
Power terminal protect	tion according to IEC/EN 60529			IP20 front
Mechanical features				
Operating position				
· • • • • • • • • • • • • • • • • • • •		normal		Vertical plan
		allowable		±30°
		4.10114010		Screw / DIN rail
Fixing				35mm
Weight			α	1020
Conductor section			g	1020
Conductor section	ANA/O/I			
	AWG/kcmil conductor section			_
		max		2
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1400000
Safety related data				
Performance level B10	Od according to EN/ISO 13489-1			
	•	rated load	cycles	1400000
		mechanical load	cycles	15000000
Mirror contats according	ng to IEC/EN 609474-4-1		-,	yes
EMC compatibility	19 10 12 0/214 000 1/ 1 1 1			
AC coil operating				yes
	01.1-		\ /	000
Rated AC voltage at 60	J□2		V	230
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
	•	min	%Us	20
		max	%Us	55
AC average coil consu	imption at 20°C	<u></u>		
J :::::::	of 60Hz coil powered at 60Hz			
	5. 55. 12 5611 portored at 561 12	in-rush	VA	210
		holding	VA VA	15
Dissipation of In-I-III	<20°C F0U-	noluling		
Dissipation at holding :	≥ZU ∪ DU⊓Z		W	5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us co	ontrol			
	in AC			

BF5000A23060 The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding

Closing NO

in AC

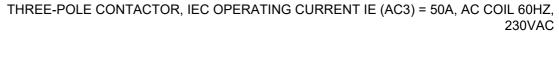


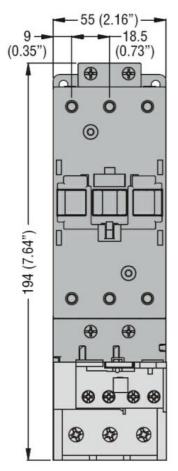


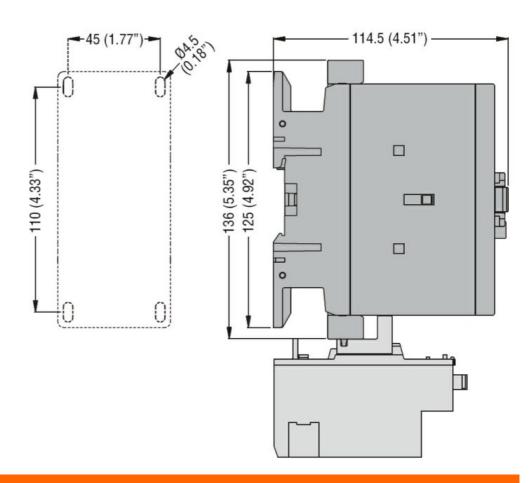
		min	ms	12
		max	ms	28
	Opening NO			
		min	ms	8
		max	ms	22
	in DC			
	Closing NO			
		min	ms	40
		max	ms	85
	Opening NO			
		min	ms	20
		max	ms	55
UL technical data				
Full-load current (FLA	a) for three-phase AC motor			
		at 480V	Α	52
		at 600V	Α	41
Yielded mechanical p				
	for single-phase AC motor			
		110/120V	HP	5
		230V	HP	10
	for three-phase AC motor			
		200/208V	HP	15
		220/230V	HP	20
		460/480V	HP	40
		575/600V	HP	40
General USE				
	Contactor			
		AC current	Α	90
Short-circuit protection				
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	150
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	150
		Fuse class		RK5
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protect	ion			
Pollution degree				3
Dimensions				



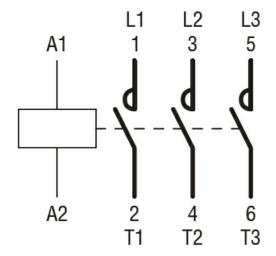
**ENERGY AND AUTOMATION** 







### Wiring diagrams



### Certifications and compliance

#### Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

### Certificates

CCC



### BF5000A23060

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

cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





			100
Product designation			Power contactor
Product type designation			BF50
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	90
Operational current le			
	AC-1 (≤40°C)	Α	90
	AC-1 (≤55°C)	Α	75
	AC-1 (≤70°C)	Α	65
	AC-3 (≤440V ≤55°C)	Α	50
	AC-4 (400V)	Α	28
Rated operational power AC-3 (T≤55°C)			
	230V	kW	11
	400V	kW	22
	415V	kW	22
	440V	kW	22
	500V	kW	22
	690V	kW	30
	1000V	kW	18.5
Rated operational power AC-1 (T≤40°C)			
	230V	kW	34
	400V	kW	59
	500V	kW	74
	690V	kW	102
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	Α	45
	48V	Α	40
	75V	Α	40
	110V	Α	8
	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	50
	220V	Α	7
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
•	≤24V	Α	60
	48V	Α	60
	75V	Α	60
		-	: =





	110V	Α	55
	220V	Α	75
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	60
	220V	Α	90
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	30
	48V	Α	25
	75V	Α	22
	110V	Α	3
	220V	Α	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	35
	48V	Α	35
	75V	Α	30
	110V	Α	25
	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	50
	48V	Α	50
	75V	Α	45
	110V	Α	30
150 D00 D05 W 1/D 1/5 W 1/D 1/5	220V	Α	40
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series		_	
	≤24V	Α	55
	48V	Α	55
	75V	A	55
	110V	A	45
Object time allowable assessed for 40a (IEO/ENICO047.4)	220V	A	50
Short-time allowable current for 10s (IEC/EN60947-1)		Α	400
Protection fuse	~O (IEO)	۸	100
	gG (IEC)	A	100
Maling and the (DMC color)	aM (IEC)	A	50
Making capacity (RMS value)		Α	500
Breaking capacity at voltage	440)/	۸	400
	440V 500V	A	400
	690V	A	352 312
Posistance per pole (average value)	6907	A	0.8
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)	lab.	147	0.5
	Ith	W	6.5
Tightoning targue for terminals	AC3	VV	2
Tightening torque for terminals	:	Nima	4
	min	Nm Nm	4
	max	Nm Ibin	5
	min	lbin Ibin	2.95
Tightening targue for call terminal	max	Ibin	3.69
Tightening torque for coil terminal	min	Nim	0.0
	min	Nm Nm	0.8
	max	INIII	1



		min	Ibin	0.8
		max	lbin	0.74
Max number of wires	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			
		max		2
	Flexible w/o lug conductor section			
		min	mm²	1.5
		max	mm²	35
	Flexible c/w lug conductor section			
		min	mm²	1.5
		max	mm²	35
	ction according to IEC/EN 60529			IP20 front
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	1020
Conductor section				
	AWG/kcmil conductor section			
		max		2
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1400000
Safety related data				
Performance level B1	0d according to EN/ISO 13489-1			
		rated load	cycles	1400000
		mechanical load	cycles	15000000
	ing to IEC/EN 609474-4-1			yes
EMC compatibility				yes
AC coil operating				
Rated AC voltage at 6	60Hz		V	460
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
AC average coil cons	•			
	of 60Hz coil powered at 60Hz			
		in-rush	VA	210
		holding	VA	15
Dissipation at holding			W	5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us of	control			

in AC

Closing NO

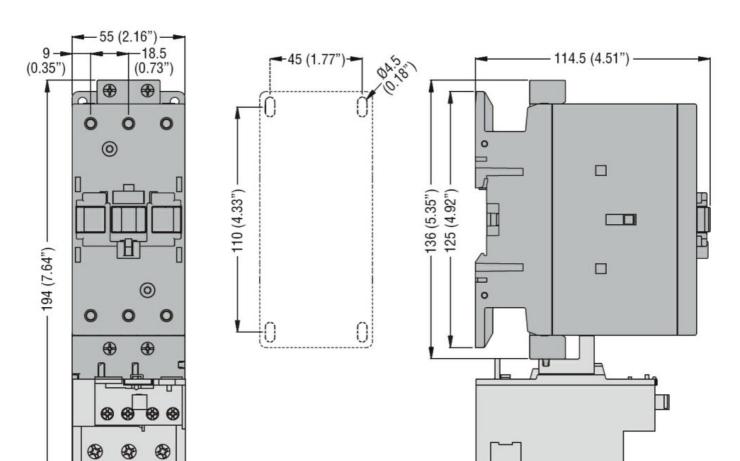




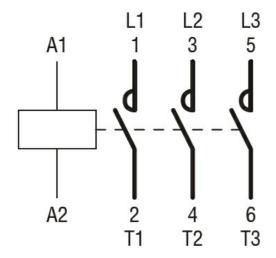
		min	ms	12
		max	ms	28
	Opening NO			
		min	ms	8
		max	ms	22
	in DC			
	Closing NO			
		min	ms	40
		max	ms	85
	Opening NO			
		min	ms	20
		max	ms	55
UL technical data				
Full-load current (FLA)	for three-phase AC motor			
, ,	-	at 480V	Α	52
		at 600V	Α	41
Yielded mechanical per	formance			
	for single-phase AC motor			
	Ter emgre procession	110/120V	HP	5
		230V	HP	10
	for three-phase AC motor	2001	• • • •	10
	Tor three phase Ao motor	200/208V	HP	15
		220/230V	HP	20
		460/480V	HP	40
		575/600V	HP	40
General USE		373/600V	ПЕ	40
General USE	Contactor			
	Contactor	AC ourrent	۸	00
Chart singuit protection	f COOV	AC current	Α	90
Short-circuit protection				
	High fault	01		100
		Short circuit current	kA	100
		Fuse rating	Α	150
		Fuse class		
	Standard fault	<b>0</b> 1		_
		Short circuit current	kA	5
		Fuse rating	Α	150
		Fuse class		RK5
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	n			
Pollution degree				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/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

### Certificates

CCC



### BF5000A46060

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 50A, AC COIL 60HZ, 460VAC

cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation         Power contactor BF50           Product type designation         BF50           Contact Agreements (SU)         Nr.         3           Number of poles         N.         3           Rated invaluation voltage UIIEC/EN         V         1000           Rated invaluation voltage UIImp         kV         8           Operational frequency         min         Hz         25           IEC Conventional free air thermal current Ith         A         90           Operational current Ie         AC-1 (\$40°C)         A         90           AC-1 (\$55°C)         A         50         A         50           AC-1 (\$55°C)         A         50         A         50           AC-1 (\$400°C)         A         50         A         50           AC-2 (\$400 x 55°C)         A         50         A         50           Rated operational power AC-3 (T\$55°C)         A         50         W         22           4400         kW         22         440°         W         22           4400         kW         22         440°         W         22           5000         kW         22         40°         W         22 </th <th></th> <th></th> <th></th> <th></th>				
Contact characteristics         Nr.         3           Rated insulation voltage UI IEC/EN         V         1000           Rated insulation voltage UIImp         kV         8           Operational frequency         min         Hz         25           max         Hz         400           IEC Conventional free air thermal current Ith         A         90           Operational current Ie         AC-1 (≤40°C) A         A         90           AC-1 (≤55°C) A         A         65         AC-1 (≤55°C) A         50           AC-3 (≤440V 55°C) A         A         65         AC-3 (≤440V 55°C) A         50         AC-4 (400V) A         28           Rated operational power AC-3 (T≤5°C)         230V kW         22         415V kW         22         415V kW         22         440V kW         22         690V kW         30         1000V kW         18.5         8         8         1000V kW         18.5         8         1000V kW         18.5         1000V kW         18.5         1000V kW	Product designation			Power contactor
Number of poles	Product type designation			BF50
Rated insulation voltage Ui IEC/EN         V         1000           Rated impulse withstand voltage Uimp         kV         8           Operational frequency         min         Hz         25           IEC Conventional free air thermal current lth         A         90           Operational current le         AC-1 (≤40°C) A         A         90           AC-1 (55°C) A         A         75         AC-1 (570°C) A         65           AC-3 (≤440V ≤55°C) A         A         50         AC-4 (400V) A         28           Rated operational power AC-3 (T≤55°C)         230V kW         11         400V kW         22           415V kW         22         415V kW         22         440V kW         22           440V kW         22         500V kW         30         30           1000V kW         18.5         5         30         40 <td>Contact characteristics</td> <td></td> <td></td> <td></td>	Contact characteristics			
Rated impulse withstand voltage Uimp	Number of poles		Nr.	3
Department   Paragraphic	Rated insulation voltage Ui IEC/EN		V	1000
EC Conventional free air thermal current lth	Rated impulse withstand voltage Uimp		kV	8
EC Conventional free air thermal current lth	Operational frequency			
EC Conventional free air thermal current lth		min	Hz	25
AC-1 (≤40°C)		max	Hz	400
AC-1 (≤40°C)	IEC Conventional free air thermal current Ith		Α	90
AC-1 (≤55°C)   A   75     AC-1 (≤70°C)   A   65     AC-3 (≤440V ≤55°C)   A   50     AC-4 (400V)   A   28     Rated operational power AC-3 (T≤55°C)     230V   kW   11     400V   kW   22     415V   kW   22     440V   kW   22     440V   kW   22     450V   kW   30     1000V   kW   18.5     Rated operational power AC-1 (T≤40°C)     230V   kW   59     500V   kW   74     690V   kW   102     IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series     524V   A   45     48V   A   40     110V   A   8     220V   A   -     IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series     524V   A   60     48V   A   60     110V   A   50     220V   A   7     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     524V   A   60     110V   A   50     220V   A   7     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     524V   A   60     110V   A   50     220V   A   7     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     524V   A   60     110V   A   50     220V   A   7     IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series     524V   A   60     48V   A   60     48V   A   60     48V   A   60	Operational current le			
AC-1 (≤70°C) A 65 AC-3 (≤440V ≤55°C) A 50 AC-4 (400V) A 28  Rated operational power AC-3 (T≤55°C)  230V kW 11 400V kW 22 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5  Rated operational power AC-1 (T≤40°C)  230V kW 34 400V kW 59 500V kW 59 500V kW 74 690V kW 102  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 45 48V A 40 110V A 8 220V A −  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 60 48V A 60 48V A 60 110V A 50 220V A 7  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		AC-1 (≤40°C)	Α	90
AC-3 (≤440V ≤55°C)		AC-1 (≤55°C)	Α	75
AC-4 (400V)			Α	65
Rated operational power AC-3 (T≤55°C)  230V kW 11 400V kW 22 4115V kW 22 4440V kW 22 500V kW 32 500V kW 30 1000V kW 18.5  Rated operational power AC-1 (T≤40°C)  230V kW 34 400V kW 59 500V kW 74 690V kW 102  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 45 48V A 40 110V A 8 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 60 48V A 60 75V A 60 110V A 50 220V A 7  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60 48V A 60 48V A 60 48V A 60		AC-3 (≤440V ≤55°C)	Α	50
230V   kW   11   400V   kW   22   415V   kW   22   415V   kW   22   42   440V   kW   22   42   440V   kW   22   500V   kW   30   1000V   kW   18.5   8   1000V   kW   18.5   8   1000V   kW   59   500V   kW   74   690V   kW   102   8   1000V   kW   102   8   1000V   kW   102   1000V   1		AC-4 (400V)	Α	28
400V   kW   22   415V   kW   22   446V   kW   22   446V   kW   22   500V   kW   22   690V   kW   30   1000V   kW   18.5	Rated operational power AC-3 (T≤55°C)			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		230V	kW	11
A40V   kW   22   500V   kW   22   690V   kW   30   1000V   kW   30   1000V   kW   30   1000V   kW   31   1000V   kW   31   1000V   kW   34   400V   kW   59   500V   kW   74   690V   kW   102   1000V   kW   102   1000V   kW   102   1000V   kW   102   1000V   1		400V	kW	
Soov   kW   22   690V   kW   30   1000V   kW   18.5		415V	kW	22
Rated operational power AC-1 (T≤40°C)   Rated operational power AC-1 (T≤40°C)   230V   kW   34   4400V   kW   59   500V   kW   74   690V   kW   102			kW	
Rated operational power AC-1 (T≤40°C)   230V   kW   34   400V   kW   59   500V   kW   74   690V   kW   102				
Rated operational power AC-1 (T≤40°C)  230V kW 34 400V kW 59 500V kW 74 690V kW 102  IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series  ≤24V A 45 48V A 40 75V A 40 110V A 8 220V A -  IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series  ≤24V A 60 48V A 60 48V A 60 110V A 50 220V A 7  IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60 48V A 60				
		1000V	kW	18.5
A00V   kW   59   500V   kW   74   690V   kW   102	Rated operational power AC-1 (T≤40°C)			
EC max current le in DC1 with L/R $\leq$ 1ms with 1 poles in series   $\leq 24V  A  45  48V  A  40  75V  A  40  110V  A  8  220V  A  -$   IEC max current le in DC1 with L/R $\leq$ 1ms with 2 poles in series   $\leq 24V  A  60  48V  A  60  110V  A  50  220V  A  7$   IEC max current le in DC1 with L/R $\leq$ 1ms with 3 poles in series   $\leq 24V  A  60  110V  A  50  220V  A  7$   IEC max current le in DC1 with L/R $\leq$ 1ms with 3 poles in series   $\leq 24V  A  60  48V  A  60  60  48V  A  60  60  48V  A  60  60  60  60  60  60  60 $				
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series   S24V				
EC max current le in DC1 with L/R $\leq$ 1ms with 1 poles in series   $\leq 24V$   A   45   48V   A   40   75V   A   40   110V   A   8   220V   A   -      EC max current le in DC1 with L/R $\leq$ 1ms with 2 poles in series   $\leq 24V$   A   60   48V   A   60   110V   A   50   220V   A   7      EC max current le in DC1 with L/R $\leq$ 1ms with 3 poles in series   $\leq 24V$   A   60   48V   A   60   60   60   60   60   60   60				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		690V	kW	102
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			Α	
110V				
EC max current le in DC1 with L/R $\leq$ 1ms with 2 poles in series   $\leq$ 24V   A   60   48V   A   60   60   60   60   60   60   60				
IEC max current le in DC1 with L/R $\leq$ 1ms with 2 poles in series				8
		220V	Α	
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series  ≤24V A 60  48V A 60				
≤24V A 60 48V A 60		220V	A	
48V A 60	IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
75V A 60				
		75V	Α	60



	110V	Α	55
	220V	Α	75
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	60
	220V	Α	90
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	30
	48V	Α	25
	75V	Α	22
	110V	Α	3
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	35
	48V	Α	35
	75V	Α	30
	110V	Α	25
	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	50
	48V	Α	50
	75V	Α	45
	110V	Α	30
	220V	Α	40
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	55
	48V	Α	55
	75V	Α	55
	110V	Α	45
	220V	Α	50
Short-time allowable current for 10s (IEC/EN60947-1)		A	400
Protection fuse	0 ((=0)		400
	gG (IEC)	Α	100
W. I. (DMO 1.)	aM (IEC)	Α	50
Making capacity (RMS value)		Α	500
Breaking capacity at voltage	4.63.4		400
	440V	A	400
	500V	A	352
Decistance normale (everyone value)	690V	Α	312
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)	1.7	147	0.5
	Ith	W	6.5
Tinhtonia a tannua fantamainala	AC3	W	2
Tightening torque for terminals			4
	min	Nm	4
	max	Nm	5
	min	Ibin	2.95
Timbtoning toward for call towards	max	Ibin	3.69
Tightening torque for coil terminal		N I.a.:	0.0
	min	Nm Næ	0.8
	max	Nm	1



		_		
		min	Ibin	0.8
		max	Ibin	0.74
Max number of wires s	imultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			
		max		2
	Flexible w/o lug conductor section	THOX		
	Tiexible w/e lag conductor section	min	mm²	1.5
			mm²	35
	Florible alvelue conductor costion	max	1111111	33
	Flexible c/w lug conductor section	•.		4 =
		min	mm²	1.5
		max	mm²	35
	tion according to IEC/EN 60529			IP20 front
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
				Screw / DIN rail
Fixing				35mm
Weight			g	1020
Conductor section			9	1020
Conductor Section	ANA/O/I 'I I ( ( '			
	AWG/kcmil conductor section			
		max		2
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1400000
Safety related data				
Performance level B10	od according to EN/ISO 13489-1			
	•	rated load	cycles	1400000
		mechanical load	cycles	15000000
Mirror contats according	ng to IEC/EN 609474-4-1		0,0.00	yes
EMC compatibility	19 10 12 0/214 000 4/ 4 4 1			
				yes
AC coil operating				575
Rated AC voltage at 60	)Hz		V	575
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
	·	min	%Us	20
		max	%Us	55
AC average coil consu	mption at 20°C			· · · · · · · · · · · · · · · · · · ·
	of 60Hz coil powered at 60Hz			
	or our iz con powered at our iz	in-rush	VA	210
District the state of the state	40000 FOLL	holding	VA	15
Dissipation at holding	\$20°C 50Hz		W	5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us co	ontrol			
	:- A C			

Closing NO

in AC

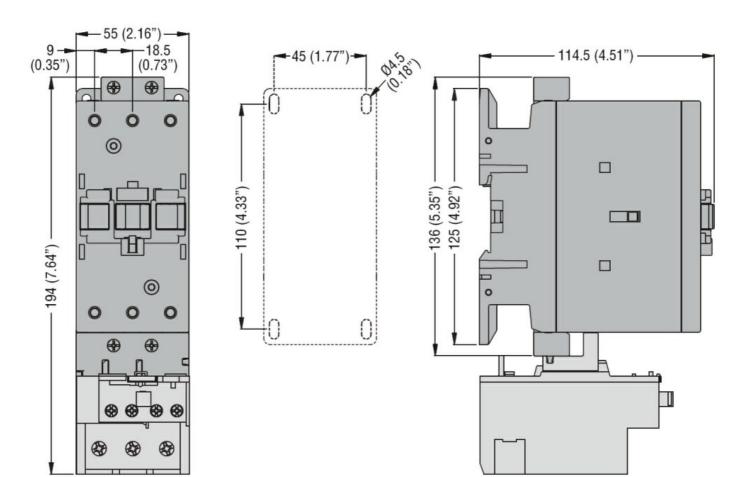




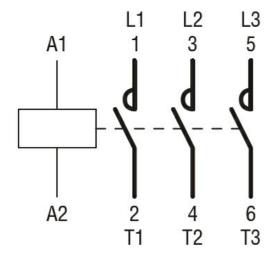
		min	ms	12
		max	ms	28
	Opening NO			
		min	ms	8
		max	ms	22
	in DC			
	Closing NO			
		min	ms	40
		max	ms	85
	Opening NO			
		min	ms	20
		max	ms	55
UL technical data				
Full-load current (FLA	a) for three-phase AC motor			
		at 480V	Α	52
		at 600V	Α	41
Yielded mechanical p				
	for single-phase AC motor			
		110/120V	HP	5
		230V	HP	10
	for three-phase AC motor			
		200/208V	HP	15
		220/230V	HP	20
		460/480V	HP	40
		575/600V	HP	40
General USE				
	Contactor			
		AC current	Α	90
Short-circuit protection				
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	150
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	150
		Fuse class		RK5
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protect	ion			
Pollution degree				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/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

### Certificates

CCC



### BF5000A57560

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

cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching