



Product designation Product type designation		Power contactor BF38
Contact characteristics		
Number of poles	Nr.	3
Rated insulation voltage Ui IEC/EN	V	690
Rated impulse withstand voltage Uimp	kV	6
Operational frequency		
min	Hz	25
max	Hz	400
IEC Conventional free air thermal current Ith	Α	56
Operational current le		
AC-1 (≤40°C)	Α	56
AC-1 (≤40°C) with 16mm² wire and fork end I	ugA	60
AC-1 (≤55°C)	Α	45
AC-1 (≤55°C) with 16mm² wire and fork end I	ugA	48
AC-1 (≤70°C)	Α	40
AC-1 (≤70°C) with 16mm² wire and fork end I	_	42
AC-3 (≤440V ≤55°C)	A	38
AC-4 (400V)	Α	15.5
Rated operational power AC-3 (T≤55°C)		
230V	kW	11
400V	kW	18.5
415V	kW	18.5
440V	kW	18.5
500V	kW	20
Poted energtional newer AC 1 (T<10°C)	kW	22
Rated operational power AC-1 (T≤40°C) 230V	kW	21
400V	kW	36
500V	kW	45
690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series	IXVV	02
≤24V	Α	35
48V	Α	30
75V	Α	23
110V	Α	8
220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		_
≤24V	Α	36
48V	Α	34
75V	Α	29
110V	Α	32
220V	Α	4
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		
≤24V	Α	36



	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	30
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	36
	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	38
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	24
	48V	Α	20
	75V	Α	17
	110V	Α	2,5
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	28
	48V	Α	25
	75V	Α	22
	110V	Α	18
	220V	Α	3
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	15
Short-time allowable current for 10s (IEC/EN60947-1)		Α	320
Protection fuse			
	gG (IEC)	Α	63
	aM (IEC)	Α	40
Making capacity (RMS value)		Α	380
Breaking capacity at voltage			
	440V	Α	304
	500V	Α	240
	690V	Α	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
	Ith	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
Tightening torque for coil terminal			

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			
		max		6
	Flexible w/o lug conductor section			
		min	mm²	2.5
		max	mm²	16
	Flexible c/w lug conductor section			
		min	mm²	1
		max	mm²	10
	Flexible with insulated spade lug conduct	or section		
		min	mm²	1
		max	mm²	10
Power terminal protect	tion according to IEC/EN 60529			IP20 when
				properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	429
Conductor section				
	AWG/kcmil conductor section			
		max		6
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	1400000
Safety related data				
Performance level B1	0d according to EN/ISO 13489-1			
		rated load	cycles	1400000
		mechanical load	cycles	20000000
Mirror contats accordi	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			
		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	20



		max	%Us	55
AC average coil consu	ımption at 20°C	THOX:	7000	
· ·	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	75
		holding	VA	9
	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	70
	. ( 0011	holding	VA	6.5
	of 60Hz coil powered at 60Hz	in-rush	VA	75
		holding	VA VA	9
Dissipation at holding :	≤20°C 50Hz	Holding	W	2.5
Max cycles frequency	-20 0 00112		**	2.0
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us co	ontrol			
	in AC			
	Closing NO			
		min	ms	8
		max	ms	24
	Opening NO		no -	E
		min max	ms ms	5 15
	Closing NC	Шах	1115	15
	Closing NC	min	ms	9
		max	ms	20
	Opening NC			
		min	ms	9
		max	ms	17
UL technical data	<u> </u>			
Full-load current (FLA)	) for three-phase AC motor			
		at 480V	A	40
Violded machanical na	a wfo remon oo	at 600V	Α	32
Yielded mechanical pe	for single-phase AC motor			
	ioi sirigie-priase AC motor	110/120V	HP	3
		230V	HP	7.5
	for three-phase AC motor		- **	
	•	200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE				
	Contactor	A O	Α.	
Chart airquit protoction	a funo 600V	AC current	Α	55
Short-circuit protection				
	High fault	Short circuit current	kA	100
		Fuse rating	A	100
		Fuse class		J
	Standard fault	. 200 0.000		
		Short circuit current	kA	5
		Fuse rating	Α	150
Ambient conditions				

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 50/60HZ,

### Temperature

Operating temp	рe	ra	tu	re
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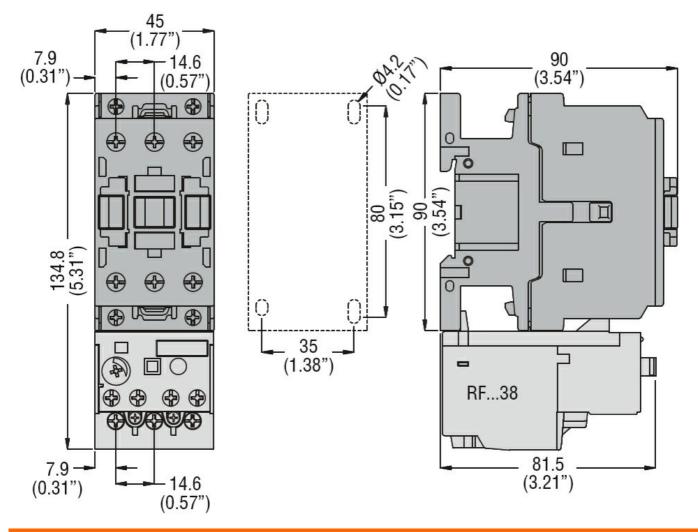
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
		m	3000
n			

Resistance & Protection

Pollution degree 3

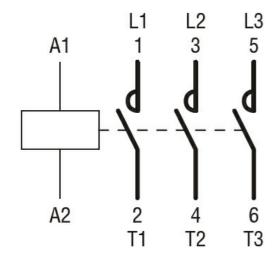
### **Dimensions**

Max altitude



Wiring diagrams

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 50/60HZ,



### 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

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation		Power contactor
Product type designation  Contact characteristics		BF38
Number of poles	Nr.	3
Rated insulation voltage Ui IEC/EN	V	690
Rated insulation voltage of EC/EN  Rated impulse withstand voltage Uimp	kV	6
Operational frequency	ΝV	
min	Hz	25
max	Hz	400
IEC Conventional free air thermal current Ith	A	56
Operational current le	- / \	
AC-1 (≤40°C)	Α	56
AC-1 (≤40°C) with 16mm² wire and fork end I		60
AC-1 (≤55°C)	A	45
AC-1 (≤55°C) with 16mm² wire and fork end I		48
AC-1 (≤70°C)	A	40
AC-1 (≤70°C) with 16mm² wire and fork end l		42
AC-3 (≤440V ≤55°C)	Ã	38
AC-4 (400V)	Α	15.5
Rated operational power AC-3 (T≤55°C)		
230V	kW	11
400V	kW	18.5
415V	kW	18.5
440V	kW	18.5
500V	kW	20
690V	kW	22
Rated operational power AC-1 (T≤40°C)		
230V	kW	21
400V	kW	36
500V	kW	45
690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series		
≤24V	Α	35
48V	A	30
75V	A	23
110V	A	8
220V	A	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	۸	00
≤24V	A	36
48V 75V	A	34
75V 110V	A A	29 32
220V	A	32 4
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		<del>-</del>
≤24V	Α	36
324 V	$\boldsymbol{\alpha}$	30



	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	30
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	36
	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	38
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	24
	48V	Α	20
	75V	Α	17
	110V	Α	2,5
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	28
	48V	Α	25
	75V	Α	22
	110V	Α	18
	220V	Α	3
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	A	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	A	15
Short-time allowable current for 10s (IEC/EN60947-1)		Α	320
Protection fuse			
	gG (IEC)	Α	63
	aM (IEC)	Α	40
Making capacity (RMS value)		A	380
Breaking capacity at voltage			
	440V	Α	304
	500V	Α	240
	690V	A	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
	Ith	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
Tightening torque for coil terminal			

Tightening torque for coil terminal



		min	Nm	0.8
		max min	Nm Ibin	1 0.8
		max	Ibin	0.74
Max number of wires s	imultaneously connectable	IIIdA	Nr.	2
Conductor section	initial and a second contribution		141.	
Conductor Cockers	AWG/Kcmil			
		max		6
	Flexible w/o lug conductor section			
		min	mm²	2.5
		max	mm²	16
	Flexible c/w lug conductor section			
		min	mm²	1
		max	mm²	10
	Flexible with insulated spade lug conduct		3	4
		min	mm²	1
-		max	mm²	10 IP20 when
Power terminal protect	tion according to IEC/EN 60529			properly wired
Mechanical features				Proporty milou
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	430
Conductor section				_
	AWG/kcmil conductor section			
		max		6
Operations				0000000
Mechanical life			cycles	20000000
Electrical life			cycles	1400000
Safety related data	Od according to EN/ISO 13489-1			
r enormance level bit	od according to EN/150 15469-1	rated load	cycles	1400000
		mechanical load	cycles	2000000
Mirror contats according	ng to IEC/EN 609474-4-1	moonamour load	0,0.00	yes
EMC compatibility	<u> </u>			yes
AC coil operating				
Rated AC voltage at 5	0/60Hz		V	48
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out		0.44	00
		min	%Us	20
	of 50/001  - acil ac acil a cont	max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up	مناهمين	0/11-	0.5
		min	%Us	85
	drop-out	max	%Us	110
	drop-out	min	%Us	20
		111111	/003	۷

		max	%Us	55
AC average coil consu	ımption at 20°C	THOX:	7000	
· ·	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	75
		holding	VA	9
	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	70
	. ( 0011	holding	VA	6.5
	of 60Hz coil powered at 60Hz	in-rush	VA	75
		holding	VA VA	9
Dissipation at holding :	≤20°C 50Hz	Holding	W	2.5
Max cycles frequency	-20 0 00112		• • • • • • • • • • • • • • • • • • • •	2.0
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us co	ontrol			
	in AC			
	Closing NO			
		min	ms	8
		max	ms	24
	Opening NO		no -	E
		min max	ms ms	5 15
	Closing NC	Шах	1115	15
	Closing NC	min	ms	9
		max	ms	20
	Opening NC			
		min	ms	9
		max	ms	17
UL technical data	<u> </u>			
Full-load current (FLA)	) for three-phase AC motor			
		at 480V	A	40
Violded machanical na	a wfo remon oo	at 600V	Α	32
Yielded mechanical pe	for single-phase AC motor			
	ioi sirigie-priase AC motor	110/120V	HP	3
		230V	HP	7.5
	for three-phase AC motor		- **	
	•	200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE				
	Contactor	A O	Α.	
Chart airquit protoction	a funo 600V	AC current	Α	55
Short-circuit protection				
	High fault	Short circuit current	kA	100
		Fuse rating	A	100
		Fuse class		J
	Standard fault	. 200 0.000		
		Short circuit current	kA	5
		Fuse rating	Α	150
Ambient conditions				

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 50/60HZ,

### Temperature

Operating	temperature

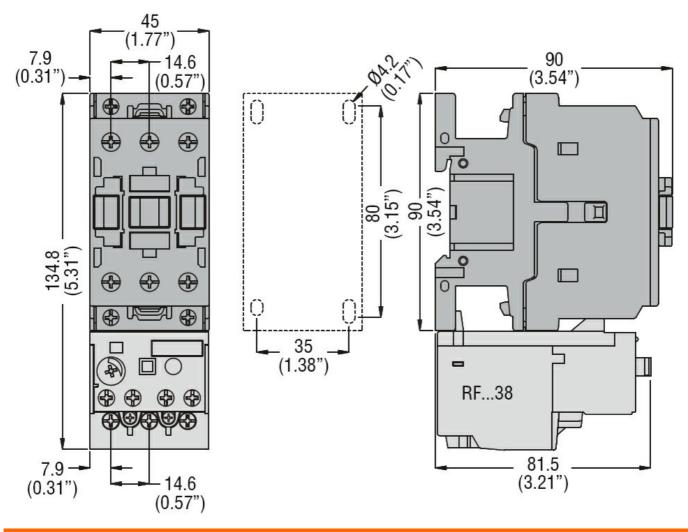
	min	°C	-50	
	max	°C	70	
Storage temperature				
	min	°C	-60	
	max	°C	80	
		m	3000	
& Protection				

Resistance & Protection

Pollution degree 3

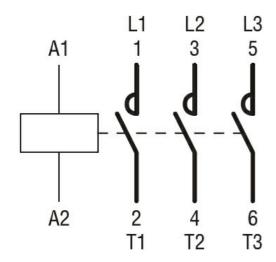
### **Dimensions**

Max altitude



Wiring diagrams

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 50/60HZ,



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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

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching



			•
Product designation			Power contactor
Product type designation			BF38
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	56
Operational current le			
·	AC-1 (≤40°C)	Α	56
	AC-1 (≤40°C) with 16mm² wire and fork end	lugA	60
	^ AC-1 (≤55°C)	A	45
	AC-1 (≤55°C) with 16mm² wire and fork end	lugA	48
	AC-1 (≤70°C)	A	40
	AC-1 (≤70°C) with 16mm² wire and fork end	lugA	42
	^ AC-3 (≤440V ≤55°C)	Ã	38
	AC-4 (400V)	Α	15.5
Rated operational power AC-3 (T≤55°C)	,		
	230V	kW	11
	400V	kW	18.5
	415V	kW	18.5
	440V	kW	18.5
	500V	kW	20
	690V	kW	22
Rated operational power AC-1 (T≤40°C)			
	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms wi	th 1 poles in series		
	≤24V	Α	35
	48V	Α	30
	75V	Α	23
	110V	Α	8
	220V	Α	
IEC max current le in DC1 with L/R ≤ 1ms wi	th 2 poles in series		
	≤24V	Α	36
	48V	Α	34
	75V	Α	29
	110V	Α	32
	220V	Α	4
IEC max current le in DC1 with L/R ≤ 1ms wi	th 3 poles in series		
	≤24V	Α	36



	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	30
EC max current le in DC1 with L/R ≤ 1ms with 4 poles in series	<del>-</del>		
	≤24V	Α	36
	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	38
EC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
·	≤24V	Α	24
	48V	Α	20
	75V	Α	17
	110V	Α	2,5
	220V	Α	_
EC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
·	≤24V	Α	28
	48V	Α	25
	75V	Α	22
	110V	Α	18
	220V	Α	3
EC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	15
Short-time allowable current for 10s (IEC/EN60947-1)		Α	320
Protection fuse			
	gG (IEC)	Α	63
	aM (IEC)	Α	40
Making capacity (RMS value)		Α	380
Breaking capacity at voltage			
· · · · · · · · · · · · · · · · · · ·	440V	Α	304
	500V	Α	240
	690V	Α	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
· · · · · · · · · · · · · · · · · · ·	Ith	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
Tightening torque for coil terminal			

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			
		max		6
	Flexible w/o lug conductor section			
		min	mm²	2.5
		max	mm²	16
	Flexible c/w lug conductor section			
		min	mm²	1
		max	mm²	10
	Flexible with insulated spade lug conduct	or section		
		min	mm²	1
		max	mm²	10
Dower terminal protect	ation apparding to IEC/EN 60520			IP20 when
	ction according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	423
Conductor section				
	AWG/kcmil conductor section			
		max		6
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	1400000
Safety related data				
	0d according to EN/ISO 13489-1			
	3	rated load	cycles	1400000
		mechanical load	cycles	20000000
Mirror contats accordi	ing to IEC/EN 609474-4-1	os.isanoanioaa	-, 0.00	yes
EMC compatibility				yes
AC coil operating				, 55
Rated AC voltage at 5	50/60Hz		V	110
AC operating voltage	70700112		v	110
7.0 operating voltage	of 50/60Hz coil powered at 50Hz			
	pick-up			
	pick-up	min	%Us	80
		min		
	طعم منظ	max	%Us	110
	drop-out	,	0/110	20
		min	%Us	20
	of EO/COLIT poil reward at COLIT	max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up		0/11-	0.5
		min	%Us	85
		max	%Us	110
	drop-out		0/!!	00
		min	%Us	20

		max	%Us	55
AC average coil consu	ımption at 20°C	THOX:	7000	
· ·	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	75
		holding	VA	9
	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	70
	. ( 0011	holding	VA	6.5
	of 60Hz coil powered at 60Hz	in-rush	VA	75
		holding	VA VA	9
Dissipation at holding :	≤20°C 50Hz	Holding	W	2.5
Max cycles frequency	-20 0 00112		• • • • • • • • • • • • • • • • • • • •	2.0
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us co	ontrol			
	in AC			
	Closing NO			
		min	ms	8
		max	ms	24
	Opening NO		no -	E
		min max	ms ms	5 15
	Closing NC	Шах	1115	15
	Closing NC	min	ms	9
		max	ms	20
	Opening NC			
		min	ms	9
		max	ms	17
UL technical data	<u> </u>			
Full-load current (FLA)	) for three-phase AC motor			
		at 480V	A	40
Violded machanical na	a wfo remon oo	at 600V	Α	32
Yielded mechanical pe	for single-phase AC motor			
	ioi sirigie-priase AC motor	110/120V	HP	3
		230V	HP	7.5
	for three-phase AC motor		- **	
	•	200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE				
	Contactor	A O	Α.	
Chart airquit protoction	a funo 600V	AC current	Α	55
Short-circuit protection				
	High fault	Short circuit current	kA	100
		Fuse rating	A	100
		Fuse class		J
	Standard fault	. 200 0.000		
		Short circuit current	kA	5
		Fuse rating	Α	150
Ambient conditions				

### THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 50/60HZ,

### Temperature

Operating	temperature

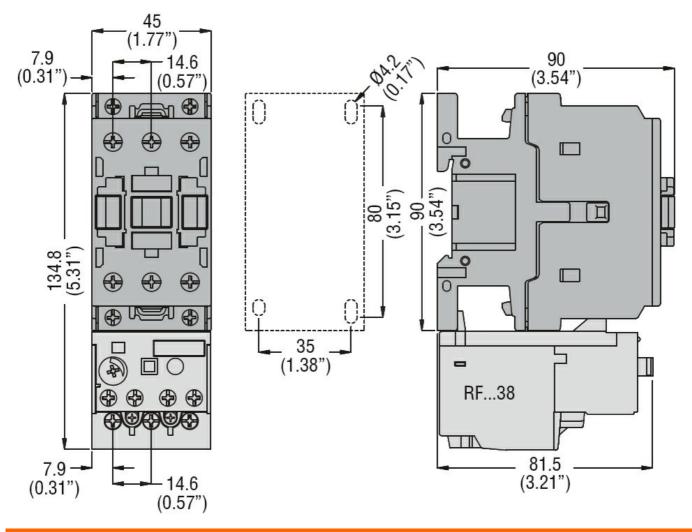
1 0 1			
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
		m	3000
& Protection			

Resistance & Protection

Pollution degree 3

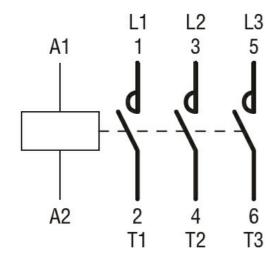
### **Dimensions**

Max altitude



Wiring diagrams

### THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 50/60HZ,



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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

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation		Power contactor
Product type designation  Contact characteristics		BF38
Number of poles	Nr.	3
Rated insulation voltage Ui IEC/EN	V	690
Rated insulation voltage of EC/EN  Rated impulse withstand voltage Uimp	kV	6
Operational frequency	ΝV	
min	Hz	25
max	Hz	400
IEC Conventional free air thermal current Ith	A	56
Operational current le	- / \	
AC-1 (≤40°C)	Α	56
AC-1 (≤40°C) with 16mm² wire and fork end I		60
AC-1 (≤55°C)	A	45
AC-1 (≤55°C) with 16mm² wire and fork end I		48
AC-1 (≤70°C)	A	40
AC-1 (≤70°C) with 16mm² wire and fork end l		42
AC-3 (≤440V ≤55°C)	Ã	38
AC-4 (400V)	Α	15.5
Rated operational power AC-3 (T≤55°C)		
230V	kW	11
400V	kW	18.5
415V	kW	18.5
440V	kW	18.5
500V	kW	20
690V	kW	22
Rated operational power AC-1 (T≤40°C)		
230V	kW	21
400V	kW	36
500V	kW	45
690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series		
≤24V	Α	35
48V	A	30
75V	A	23
110V	A	8
220V	A	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	۸	00
≤24V	A	36
48V 75V	A	34
75V 110V	A A	29 32
220V	A	32 4
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		<del>-</del>
≤24V	Α	36
324 V	$\boldsymbol{\alpha}$	30



	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	30
EC max current le in DC1 with L/R ≤ 1ms with 4 poles in series	<del>-</del>		
	≤24V	Α	36
	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	38
EC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
·	≤24V	Α	24
	48V	Α	20
	75V	Α	17
	110V	Α	2,5
	220V	Α	_
EC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
·	≤24V	Α	28
	48V	Α	25
	75V	Α	22
	110V	Α	18
	220V	Α	3
EC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	15
Short-time allowable current for 10s (IEC/EN60947-1)		Α	320
Protection fuse			
	gG (IEC)	Α	63
	aM (IEC)	Α	40
Making capacity (RMS value)		Α	380
Breaking capacity at voltage			
· · · · · · · · · · · · · · · · · · ·	440V	Α	304
	500V	Α	240
	690V	Α	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
· · · · · · · · · · · · · · · · · · ·	Ith	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
Tightening torque for coil terminal			



Max number of wires simultaneously connectable
Max number of wires simultaneously connectable   Nr.   2
Max number of wires simultaneously connectable         max         bin         0.74           Conductor section         AWG/Kcmil         max         6           Flexible w/o lug conductor section         min         mm²         2.5           Flexible c/w lug conductor section         min         mm²         16           Flexible c/w lug conductor section         min         mm²         1           Flexible with insulated spade lug conductor section         min         mm²         1           Power terminal protection according to IEC/EN 60529         min         mm²         1           Mechanical features         property wired           Operating position         normal         value         2           Fixing         screw / DIN rail         35mm           Weight         gcrew / DIN rail <t< td=""></t<>
Max number of wires simultaneously connectable         Nr.         2           Conductor section         AWG/Kcmil         max         6           Flexible w/o lug conductor section         min         mm²         2.5           Flexible c/w lug conductor section         min         mm²         16           Flexible with insulated spade lug conductor section         min         mm²         1           Flexible with insulated spade lug conductor section         min         mm²         1           Power terminal protection according to IEC/EN 60529         mm²         1         IP20 when properly wired           Mechanical features         Operating position         normal allowable         ±30°         ±30°           Fixing         g         426         Screw / DIN rail 35mm           Weight         g         426           Conductor section         max         6           AWG/kcmil conductor section         max         6           Perfactions         meximal securities         1400000           Safety related data         cycles         20000000           Performance level B10d according to EN/ISO 13489-1         rated load mechanical load cycles         1400000           Mirror contats according to IEC/EN 609474-4-1         yes
Conductor section           Flexible w/o lug conductor section           Flexible c/w lug conductor section           Flexible c/w lug conductor section           Flexible with insulated spade lug conductor section           Flexible with insulated spade lug conductor section           min         mm²         1           Power terminal protection according to IEC/EN 60529         IP20 when properly wired           Mechanical features           Operating position         normal allowable         Vertical plan ±30°           Exizing         Vertical plan ±30°           Screw / DIN rail 35mm           Weight         g         \$crew / DIN rail 35mm           Weight         g         \$crew / DIN rail 35mm           Mechanical life         cycles         20000000           Bleating allowable         \$crew / DIN rail 35mm           Weight         \$cycles         20000000           Bleating allowable         \$crew / DIN rail 35mm           \$crew / DIN rail 35mm         \$crew / DIN rail 3
AWG/Kcmil   Flexible w/o lug conductor section   min max   mm²   2.5 max   max   mm²   16   max   mm²   16   max   mm²   16   max   mm²   16   max   mm²   10   max   max   mm²   10   max   max
Flexible w/o lug conductor section
Flexible c/w lug conductor section
Flexible c/w lug conductor section
Flexible c/w lug conductor section   min max
Propertions
Periodic   Periodic
Flexible with insulated spade lug conductor section
Mechanical features         max         mm² nm² nm² nm² nm² nm² nm² nm² nm² nm²
Power terminal protection according to IEC/EN 60529         max         mm²         10           Mechanical features           Operating position         normal allowable         Vertical plan allowable         \$ 430°           Fixing         \$ 5 crew / DIN rail 35mm           Weight         g         426           Conductor section         max         6           Operations           Mechanical life         cycles         20000000           Electrical life         cycles         20000000           Safety related data           Performance level B10d according to EN/ISO 13489-1         rated load cycles         1400000 cycles         20000000           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         V         230           AC operating voltage         19         230
Power terminal protection according to IEC/EN 60529   IP20 when properly wired
Nechanical features   Superity wired   Nechanical features   Nechanical
Mechanical features           Operating position         normal allowable         Vertical plan ±30°           Fixing         Screw / DIN rail 35mm           Weight         g         426           Conductor section         max         6           AWG/kcmil conductor section         max         6           Mechanical life         cycles         20000000           Electrical life         cycles         20000000           Safety related data         cycles         1400000           Performance level B10d according to EN/ISO 13489-1         rated load cycles         1400000 condensed           Mirror contats according to IEC/EN 609474-4-1         yes         200000000           EMC compatibility         yes         yes           AC coil operating         V         230           AC coperating voltage         of 50/60Hz coil powered at 50Hz         V         230
Operating position         normal allowable         Vertical plan ±30°           Fixing         Screw / DIN rail 35mm           Weight         g         426           Conductor section         max         6           Operations           Mechanical life         cycles         20000000           Electrical life         cycles         1400000           Safety related data         rated load         cycles         1400000           Performance level B10d according to EN/ISO 13489-1         rated load         cycles         1400000           Mirror contats according to IEC/EN 609474-4-1         yes         20000000           EMC compatibility         yes           AC coil operating         V         230           AC coil operating voltage         of 50/60Hz coil powered at 50Hz
Normal allowable         Vertical plan + 30°           Fixing         Screw / DIN rail 35mm           Weight         g         426           Conductor section           MayG/kcmil conductor section         max         6           Operations           Mechanical life         cycles         20000000           Electrical life         cycles         1400000           Safety related data           Performance level B10d according to EN/ISO 13489-1         rated load cycles         1400000 cycles         20000000           Mirror contats according to IEC/EN 609474-4-1         yes         EMC compatibility         yes           AC coil operating         V         230           AC coil operating         V         230           AC operating voltage         of 50/60Hz coil powered at 50Hz
sallowable         ±30°           Fixing         Screw / DIN rail 35mm           Weight         g         426           Conductor section           AWG/kcmil conductor section           max         6           Operations           Mechanical life         cycles         20000000           Electrical life         cycles         20000000           Safety related data           Performance level B10d according to EN/ISO 13489-1         rated load cycles         1400000 cycles           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         V         230           AC coil operating voltage         V         230
Fixing         Screw / DIN rail 35mm           Weight         g         426           Conductor section         max         6           Operations         Mechanical life         cycles         20000000           Electrical life         cycles         1400000           Safety related data         Performance level B10d according to EN/ISO 13489-1         rated load mechanical load cycles         1400000           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         V         230           AC operating voltage         of 50/60Hz coil powered at 50Hz
Weight         g 426           Conductor section           AWG/kcmil conductor section           max         6           Operations           Mechanical life         cycles         20000000           Electrical life         cycles         1400000           Safety related data           Performance level B10d according to EN/ISO 13489-1         rated load cycles         1400000 cycles         20000000           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating           Rated AC voltage at 50/60Hz         V         230           AC operating voltage         of 50/60Hz coil powered at 50Hz
Conductor section           Max         6           Operations           Mechanical life         cycles         20000000           Electrical life         cycles         1400000           Safety related data         Performance level B10d according to EN/ISO 13489-1         rated load cycles         1400000 mechanical load cycles         200000000           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         Rated AC voltage at 50/60Hz         V         230           AC operating voltage         of 50/60Hz coil powered at 50Hz
max         6           Operations         Mechanical life         cycles         20000000           Electrical life         cycles         1400000           Safety related data           rated load coording to EN/ISO 13489-1           rated load cycles         1400000 cycles           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         V         230           AC operating voltage         of 50/60Hz coil powered at 50Hz
Operations           Mechanical life         cycles         20000000           Electrical life         cycles         1400000           Safety related data           Performance level B10d according to EN/ISO 13489-1           rated load mechanical load cycles         1400000           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         V           Rated AC voltage at 50/60Hz         V           AC operating voltage         of 50/60Hz coil powered at 50Hz
Mechanical life         cycles         20000000           Electrical life         cycles         1400000           Safety related data           Performance level B10d according to EN/ISO 13489-1           rated load cycles         1400000 cycles           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes           AC coil operating         V         230           AC operating voltage         of 50/60Hz coil powered at 50Hz
Electrical life cycles 1400000  Safety related data  Performance level B10d according to EN/ISO 13489-1  rated load cycles 1400000  mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility yes  AC coil operating  Rated AC voltage at 50/60Hz  of 50/60Hz coil powered at 50Hz
Safety related data  Performance level B10d according to EN/ISO 13489-1  rated load cycles 1400000 mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1 yes  EMC compatibility yes  AC coil operating  Rated AC voltage at 50/60Hz V 230  AC operating voltage  of 50/60Hz coil powered at 50Hz
Performance level B10d according to EN/ISO 13489-1  rated load cycles 1400000 mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility yes  AC coil operating  Rated AC voltage at 50/60Hz V 230  AC operating voltage  of 50/60Hz coil powered at 50Hz
Rated AC voltage at 50/60Hz coil powered at 50Hz  rated load cycles 1400000 mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1 yes  EMC compatibility yes  Rated AC voltage at 50/60Hz V 230  V 230
Mirror contats according to IEC/EN 609474-4-1 yes  EMC compatibility yes  AC coil operating  Rated AC voltage at 50/60Hz V 230  AC operating voltage  of 50/60Hz coil powered at 50Hz
Mirror contats according to IEC/EN 609474-4-1  EMC compatibility  AC coil operating  Rated AC voltage at 50/60Hz  AC operating voltage  of 50/60Hz coil powered at 50Hz
EMC compatibility  AC coil operating  Rated AC voltage at 50/60Hz  AC operating voltage  of 50/60Hz coil powered at 50Hz
AC coil operating  Rated AC voltage at 50/60Hz  AC operating voltage  of 50/60Hz coil powered at 50Hz
Rated AC voltage at 50/60Hz V 230 AC operating voltage of 50/60Hz coil powered at 50Hz
AC operating voltage of 50/60Hz coil powered at 50Hz
of 50/60Hz coil powered at 50Hz
·
Lion Ab
min %Us 80
max %Us 110
drop-out
min %Us 20
max %Us 55
of 50/60Hz coil powered at 60Hz
of 50/60Hz coil powered at 60Hz pick-up
of 50/60Hz coil powered at 60Hz pick-up min %Us 85
of 50/60Hz coil powered at 60Hz pick-up min %Us 85 max %Us 110
of 50/60Hz coil powered at 60Hz pick-up min %Us 85



		max	%Us	55
AC average coil consu	ımption at 20°C	THOX:	7000	
· ·	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	75
		holding	VA	9
	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	70
	. ( 0011	holding	VA	6.5
	of 60Hz coil powered at 60Hz	in-rush	VA	75
		holding	VA VA	9
Dissipation at holding :	≤20°C 50Hz	Holding	W	2.5
Max cycles frequency	-20 0 00112		**	2.0
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us co	ontrol			
	in AC			
	Closing NO			
		min	ms	8
		max	ms	24
	Opening NO		no -	E
		min max	ms ms	5 15
	Closing NC	Шах	1115	15
	Closing NC	min	ms	9
		max	ms	20
	Opening NC			
		min	ms	9
		max	ms	17
UL technical data	<u> </u>			
Full-load current (FLA)	) for three-phase AC motor			
		at 480V	A	40
Violded machanical na	a wfo remon a o	at 600V	Α	32
Yielded mechanical pe	for single-phase AC motor			
	ioi sirigie-priase AC motor	110/120V	HP	3
		230V	HP	7.5
	for three-phase AC motor		- **	
	•	200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE				
	Contactor	A O	Α.	
Chart airquit protoction	a funo 600V	AC current	Α	55
Short-circuit protection				
	High fault	Short circuit current	kA	100
		Fuse rating	A	100
		Fuse class		J
	Standard fault	. 200 0.000		
		Short circuit current	kA	5
		Fuse rating	Α	150
Ambient conditions				

# THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 50/60HZ, 230VAC

### Temperature

Operating temp	рe	ra	tu	re
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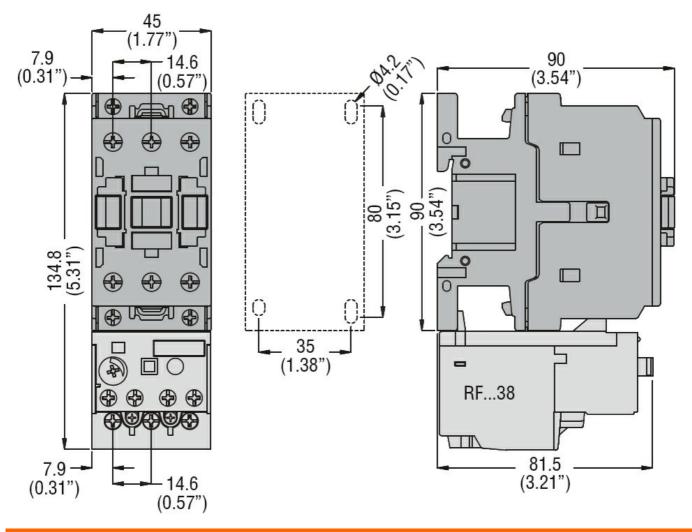
	min	°C	-50
	max	°C	70
Storage temperature			_
	min	°C	-60
	max	°C	80
		m	3000
& Protection			

Resistance & Protection

Pollution degree 3

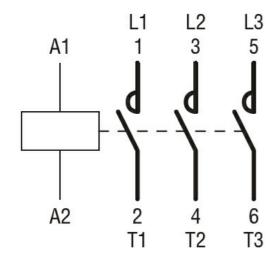
### **Dimensions**

Max altitude



Wiring diagrams

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 50/60HZ,



### 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

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





			•
Product designation			Power contactor
Product type designation			BF38
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	56
Operational current le			
	AC-1 (≤40°C)	Α	56
	AC-1 (≤40°C) with 16mm² wire and fork end	lugA	60
	AC-1 (≤55°C)	Α	45
	AC-1 (≤55°C) with 16mm² wire and fork end	lugA	48
	AC-1 (≤70°C)	Α	40
	AC-1 (≤70°C) with 16mm² wire and fork end	lugA	42
	AC-3 (≤440V ≤55°C)	Α	38
	AC-4 (400V)	Α	15.5
Rated operational power AC-3 (T≤55°C)			
	230V	kW	11
	400V	kW	18.5
	415V	kW	18.5
	440V	kW	18.5
	500V	kW	20
	690V	kW	22
Rated operational power AC-1 (T≤40°C)			
	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms wi	•		
	≤24V	Α	35
	48V	Α	30
	75V	Α	23
	110V	Α	8
	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms wi	th 2 poles in series		
	≤24V	Α	36
	48V	Α	34
	75V	Α	29
	110V	Α	32
	220V	Α	4
IEC max current le in DC1 with L/R ≤ 1ms wi	th 3 poles in series		
	≤24V	Α	36



	48V	Α	34	
	75V	Α	33	
	110V	Α	34	
	220V	Α	30	
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series	2201	- , ,		
TEO MAX GUITOR TO IN BOT WILL ENTE THIS WILL I POIGO IN GOING	≤24V	Α	36	
	48V	A	34	
	75V	A	33	
	110V	A	34	
	220V	A	38	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series	220 V		30	
TEC max current le in DC3-DC3 with L/R \( \) 13ms with 1 poles in series	<24\/	۸	24	
	≤24V	A	24	
	48V	A	20	
	75V	A	17	
	110V	A	2,5	
	220V	Α	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series		_		
	≤24V	Α	28	
	48V	Α	25	
	75V	Α	22	
	110V	Α	18	
	220V	Α	3	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series				
	≤24V	Α	32	
	48V	Α	28	
	75V	Α	28	
	110V	Α	23	
	220V	Α	25	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series				
	≤24V	Α	32	
	48V	Α	28	
	75V	Α	28	
	110V	Α	23	
	220V	Α	15	
Short-time allowable current for 10s (IEC/EN60947-1)		Α	320	
Protection fuse				
	gG (IEC)	Α	63	
	aM (IEC)	A	40	
Making capacity (RMS value)	()	Α	380	
Breaking capacity at voltage				
	440V	Α	304	
	500V	A	240	
	690V	A	192	
Resistance per pole (average value)	090 V	mΩ	2	
Power dissipation per pole (average value)		11122		
i ower dissipation per pole (average value)	ITP	147	6	
	Ith	W W	6 2.9	
Tightoning targue for terminals	AC3	٧٧	۷.۶	
Tightening torque for terminals		<b>N</b> 1 .	0.5	
	min	Nm	2.5	
	max ·	Nm	3	
	min	lbin	1.8	
	max	Ibin	2.2	
Tightening torque for coil terminal				

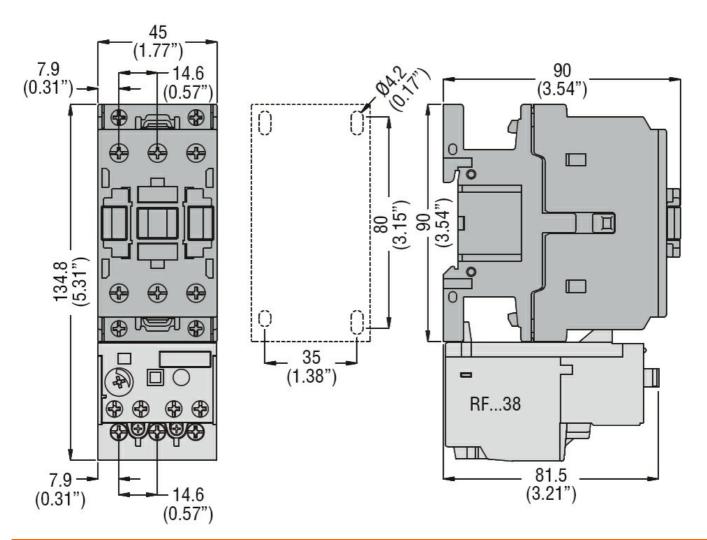


		min	Nim	0.0
		min max	Nm Nm	0.8 1
		min	lbin	0.8
		max	lbin	0.74
Max number of wires	simultaneously connectable	THEX.	Nr.	2
Conductor section				
	AWG/Kcmil			
		max		6
	Flexible w/o lug conductor section			
		min	mm²	2.5
		max	mm²	16
	Flexible c/w lug conductor section		•	
		min	mm²	1
	Electric St. Sec. Later Level 1. Level	max	mm²	10
	Flexible with insulated spade lug conduct		mama <sup>2</sup>	1
		min	mm² mm²	1 10
		max	111111	IP20 when
Power terminal prote	ection according to IEC/EN 60529			properly wired
Mechanical features				, , , , , , ,
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	426
Conductor section				
	AWG/kcmil conductor section			
O		max		6
Operations  Mechanical life			ovelee.	2000000
Electrical life			cycles	20000000 1400000
Safety related data			cycles	1400000
	10d according to EN/ISO 13489-1			
T CHOIMANGE IEVEL D	100 0001ding to 214/100 10400 1	rated load	cycles	1400000
		mechanical load	cycles	20000000
Mirror contats accord	ding to IEC/EN 609474-4-1		-,	yes
EMC compatibility	-			yes
AC coil operating				,
Rated AC voltage at	60Hz		V	230
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out		0	
		min	%Us	20
A.O		max	%Us	55
AC average coil cons	•			
	of 60Hz coil powered at 60Hz	tar area l	١/٨	75
		in-rush	VA VA	75 9
Discipation at halding	7 <20°C 50∐-7	holding		
Dissipation at holding			W	2.5
Max cycles frequenc	У			

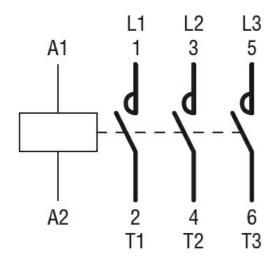


Mechanical operation	on		cycles/h	3600
Operating times				
Average time for U	s control			
	in AC			
	Closing NO			
		min	ms	8
		max	ms	24
	Opening NO			
		min	ms	5
		max	ms	15
	Closing NC			
		min	ms	9
		max	ms	20
	Opening NC			
		min	ms	9
		max	ms	17
UL technical data				
Full-load current (F	LA) for three-phase AC motor			
		at 480V	Α	40
		at 600V	Α	32
Yielded mechanica	l performance			
	for single-phase AC motor			
		110/120V	HP	3
		230V	HP	7.5
	for three-phase AC motor			
		200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE				
	Contactor			
		AC current	Α	55
Short-circuit protect	ction fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	100
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	150
Ambient conditions	; 			
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Prote	ection			
Pollution degree				3
Dimensions				

# THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 50/60HZ, 230VAC - IEC/EN/BS 60335-1



### Wiring diagrams



### Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60335-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1



### BF3800A230V260

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 50/60HZ, 230VAC - IEC/EN/BS 60335-1

	UL 60947-1	
	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation		Power contactor
Product type designation  Contact characteristics		BF38
Number of poles	Nr.	3
Rated insulation voltage Ui IEC/EN	V	690
Rated insulation voltage of IEC/EN  Rated impulse withstand voltage Uimp	kV	6
Operational frequency	ΝV	
min	Hz	25
max	Hz	400
IEC Conventional free air thermal current Ith	A	56
Operational current le	- / \	
AC-1 (≤40°C)	Α	56
AC-1 (≤40°C) with 16mm² wire and fork end I		60
AC-1 (≤55°C)	A	45
AC-1 (≤55°C) with 16mm² wire and fork end I		48
AC-1 (≤70°C)	A	40
AC-1 (≤70°C) with 16mm² wire and fork end l		42
AC-3 (≤440V ≤55°C)	Ã	38
AC-4 (400V)	Α	15.5
Rated operational power AC-3 (T≤55°C)		
230V	kW	11
400V	kW	18.5
415V	kW	18.5
440V	kW	18.5
500V	kW	20
690V	kW	22
Rated operational power AC-1 (T≤40°C)		
230V	kW	21
400V	kW	36
500V	kW	45
690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series		
≤24V	Α	35
48V	A	30
75V	A	23
110V	A	8
220V	A	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	۸	00
≤24V	A	36
48V 75V	A	34
75V 110V	A A	29 32
220V	A	32 4
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		<del>-</del>
≤24V	Α	36
324 V	$\boldsymbol{\alpha}$	30



	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	30
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	36
	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	38
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	24
	48V	Α	20
	75V	Α	17
	110V	Α	2,5
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	28
	48V	Α	25
	75V	Α	22
	110V	Α	18
	220V	Α	3
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	A	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	A	15
Short-time allowable current for 10s (IEC/EN60947-1)		Α	320
Protection fuse			
	gG (IEC)	Α	63
	aM (IEC)	Α	40
Making capacity (RMS value)		A	380
Breaking capacity at voltage			
	440V	Α	304
	500V	Α	240
	690V	A	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
	Ith	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
Tightening torque for coil terminal			

Tightening torque for coil terminal





		min	Nm	0.8
		max	Nm	1
		min	lbin Ibin	0.8 0.74
Max number of wires	simultaneously connectable	max	Nr.	2
Conductor section	simultaneously connectable		INI.	
Conductor Coction	AWG/Kcmil			
		max		6
	Flexible w/o lug conductor section			
	-	min	mm²	2.5
		max	mm²	16
	Flexible c/w lug conductor section			
		min	mm²	1
		max	mm²	10
	Flexible with insulated spade lug conductor		2	
		min	mm²	1
		max	mm²	10 IP20 when
Power terminal protect	tion according to IEC/EN 60529			properly wired
Mechanical features				property when
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	433
Conductor section				
	AWG/kcmil conductor section			
		max		6
Operations				0000000
Mechanical life Electrical life			cycles	20000000
Safety related data			cycles	1400000
_	0d according to EN/ISO 13489-1			
T CHOITHANGE ICVOLDT	od according to ENVIOC 13403 1	rated load	cycles	1400000
		mechanical load	cycles	20000000
Mirror contats accordi	ng to IEC/EN 609474-4-1		-,	yes
EMC compatibility				yes
AC coil operating				
Rated AC voltage at 5	0/60Hz		V	400
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80
	1	max	%Us	110
	drop-out		0/110	20
		min	%Us %Us	20 55
	of 50/60Hz coil powered at 60Hz	max	/0US	33
	pick-up			
	ριοκ αρ	min	%Us	85
		max	%Us	110
	drop-out		<del>-</del>	
	·	min	%Us	20



			max	%Us	55
AC average coil cons	sumption at 20°C				
	of 50/60Hz coil pow	ered at 50Hz			
			in-rush	VA	75
			holding	VA	9
	of 50/60Hz coil pow	ered at 60Hz		) /A	70
			in-rush	VA	70
	of 60Uz ooil noworo	d at 60U-7	holding	VA	6.5
	of 60Hz coil powere	u at 60HZ	in-rush	VA	75
			holding	VA	9
Dissipation at holding	n ≤20°C 50Hz		Holding	W	2.5
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us	control				
	in AC				
		Closing NO			
			min	ms	8
		0	max	ms	24
		Opening NO			_
			min	ms	5
		Closing NC	max	ms	15
		Closing NC	min	ms	9
			max	ms	20
		Opening NC			
		1 0	min	ms	9
			max	ms	17
UL technical data					
Full-load current (FL/	A) for three-phase AC m	notor			
			at 480V	Α	40
			at 600V	A	32
Yielded mechanical p					
	for single-phase AC	motor	110/120\/	UD	2
			110/120V 230V	HP HP	3 7.5
	for three-phase AC	motor	2301	1 IF	1.5
	ioi unee-pilase AC		200/208V	HP	10
			220/230V	HP	15
			460/480V	HP	30
			575/600V	HP	30
General USE					
	Contactor				
			AC current	Α	55
	on fuse, 600V				
Short-circuit protection					
Short-circuit protection	High fault			1. 1	100
Short-circuit protection	High fault		Short circuit current	kA	
Short-circuit protection	High fault		Fuse rating	KA A	100
Short-circuit protection					
Short-circuit protection	High fault  Standard fault		Fuse rating Fuse class	A	100 J
Short-circuit protection			Fuse rating		100

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 50/60HZ, 400VAC

### Temperature

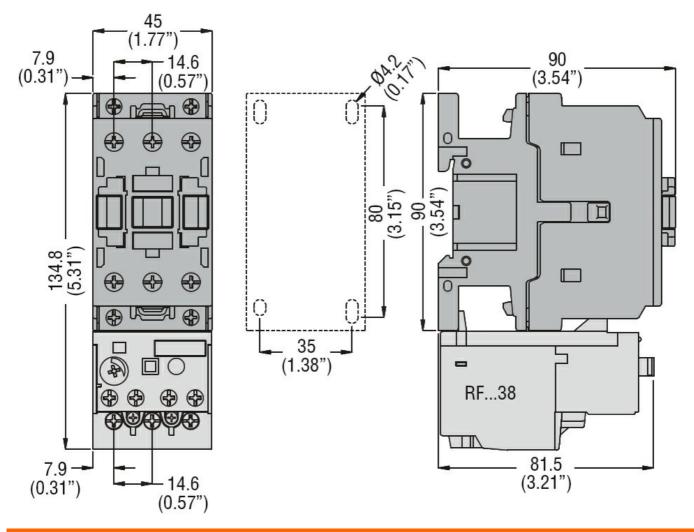
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
		m	3000
Protection			

Resistance & Protectior

Pollution degree 3

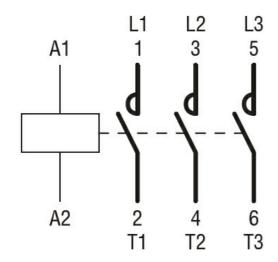
### **Dimensions**

Max altitude



Wiring diagrams

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 50/60HZ,



### 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

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation Product type designation			Power contactor BF38
Contact characteristics			2. 00
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	56
Operational current le			
	AC-1 (≤40°C)	Α	56
	AC-1 (≤40°C) with 16mm² wire and fork end	lugA	60
	AC-1 (≤55°C)	Α	45
	AC-1 (≤55°C) with 16mm² wire and fork end		48
	AC-1 (≤70°C)	Α	40
	AC-1 (≤70°C) with 16mm² wire and fork end	_	42
	AC-3 (≤440V ≤55°C)	A	38
D. I. J	AC-4 (400V)	A	15.5
Rated operational power AC-3 (T≤55°C)	2001/	1.347	44
	230V	kW	11
	400V 415V	kW kW	18.5 18.5
	440V	kW	18.5
	500V	kW	20
	690V	kW	22
Rated operational power AC-1 (T≤40°C)	0001	1000	
rtated operational power /to 1 (1=10 0)	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms wit	th 1 poles in series		
	≤24V	Α	35
	48V	Α	30
	75V	Α	23
	110V	Α	8
	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms wit			
	≤24V	Α	36
	48V	Α	34
	75V	Α	29
	110V	Α	32
	220V	Α	4
IEC max current le in DC1 with L/R ≤ 1ms wit	th 3 poles in series ≤24V	Α	36



	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	30
EC max current le in DC1 with L/R ≤ 1ms with 4 poles in series	<del>-</del>		
	≤24V	Α	36
	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	38
EC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
·	≤24V	Α	24
	48V	Α	20
	75V	Α	17
	110V	Α	2,5
	220V	Α	_
EC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
·	≤24V	Α	28
	48V	Α	25
	75V	Α	22
	110V	Α	18
	220V	Α	3
EC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	15
Short-time allowable current for 10s (IEC/EN60947-1)		Α	320
Protection fuse			
	gG (IEC)	Α	63
	aM (IEC)	Α	40
Making capacity (RMS value)		Α	380
Breaking capacity at voltage			
· · · · · · · · · · · · · · · · · · ·	440V	Α	304
	500V	Α	240
	690V	Α	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
· · · · · · · · · · · · · · · · · · ·	Ith	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
Tightening torque for coil terminal			

Tightening torque for coil terminal





			Nima	0.0
		min max	Nm Nm	0.8 1
		min	Ibin	0.8
		max	Ibin	0.74
Max number of wires simulta	neously connectable	max	Nr.	2
Conductor section	,			
AWO	G/Kcmil			
		max		6
Flex	ible w/o lug conductor section			
		min	mm²	2.5
		max	mm²	16
Flex	ible c/w lug conductor section			
		min	mm²	1
<del></del>		max	mm²	10
Flex	ible with insulated spade lug conductor		2	4
		min	mm²	1
		max	mm²	10 IP20 when
Power terminal protection ac	ccording to IEC/EN 60529			properly wired
Mechanical features				property whea
Operating position				
311111		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	424
Conductor section				
AWO	G/kcmil conductor section			
		max		6
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	1400000
Safety related data	"			
Performance level B10d acc	ording to EN/ISO 13489-1			4.400000
		rated load	cycles	1400000
Mirror contate according to I	TC/TN 600474 4 4	mechanical load	cycles	20000000
Mirror contats according to I	EC/EN 609474-4-1			yes
EMC compatibility AC coil operating				yes
Rated AC voltage at 60Hz			V	24
AC operating voltage			V	24
	OHz coil powered at 60Hz			
01 00	pick-up			
	F.5., 4P	min	%Us	80
		max	%Us	110
	drop-out	-	-	
	·	min	%Us	20
		max	%Us	55
AC average coil consumption	n at 20°C			
of 60	OHz coil powered at 60Hz			
0. 0.		in-rush	VA	75
		holding	VA	9
Dissipation at holding ≤20°C Max cycles frequency	50Hz		VA W	9 2.5

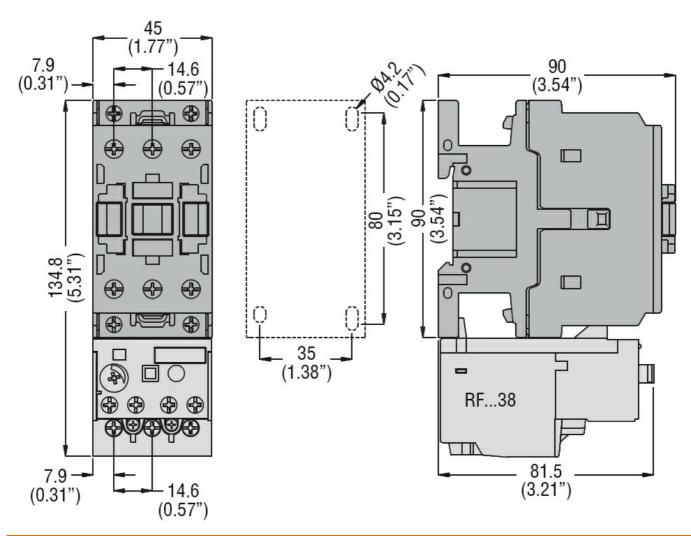




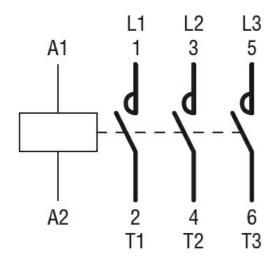
Mechanical operati	on		cycles/h	3600
Operating times				
Average time for U	s control			
J	in AC			
	Closing NO			
	5.55g	min	ms	8
		max	ms	24
	Opening NO			
	Spsgs	min	ms	5
		max	ms	15
	Closing NC	max	1110	10
	Closing No	min	ms	9
		max	ms	20
	Opening NC	max	1110	20
	Opening No	min	ms	9
				17
UL technical data		max	ms	17
	LA) for three-phase AC motor			
i dii iodu cultetii (F	Ligital tillog pilase Ao Hiotol	at 480V	Α	40
		at 600V	A	32
Violded masharisa	l porformanco	ai 000V	А	JZ
Yielded mechanica				
	for single-phase AC motor	440/400	LID	0
		110/120V	HP	3
		230V	HP	7.5
	for three-phase AC motor	/		
		200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE				
	Contactor			
		AC current	Α	55
Short-circuit protect	ction fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	100
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	150
Ambient conditions	;			
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
	- ·	min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Prote	ection			
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



#### BF3800A02460

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 60HZ,

	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation Product type designation		Power contactor BF38
Contact characteristics		
Number of poles	Nr.	3
Rated insulation voltage Ui IEC/EN	V	690
Rated impulse withstand voltage Uimp	kV	6
Operational frequency		
min	Hz	25
max	Hz	400
IEC Conventional free air thermal current Ith	Α	56
Operational current le		
AC-1 (≤40°C)	Α	56
AC-1 (≤40°C) with 16mm² wire and fork end I	ugA	60
AC-1 (≤55°C)	Α	45
AC-1 (≤55°C) with 16mm² wire and fork end I	ugA	48
AC-1 (≤70°C)	Α	40
AC-1 (≤70°C) with 16mm² wire and fork end I	_	42
AC-3 (≤440V ≤55°C)	A	38
AC-4 (400V)	Α	15.5
Rated operational power AC-3 (T≤55°C)		
230V	kW	11
400V	kW	18.5
415V	kW	18.5
440V	kW	18.5
500V	kW	20
Poted energtional newer AC 1 (T<10°C)	kW	22
Rated operational power AC-1 (T≤40°C) 230V	kW	21
400V	kW	36
500V	kW	45
690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series	IXVV	02
≤24V	Α	35
48V	Α	30
75V	Α	23
110V	Α	8
220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		_
≤24V	Α	36
48V	Α	34
75V	Α	29
110V	Α	32
220V	Α	4
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		
≤24V	Α	36



	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	30
EC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	36
	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	38
EC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
·	≤24V	Α	24
	48V	Α	20
	75V	Α	17
	110V	Α	2,5
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
·	≤24V	Α	28
	48V	Α	25
	75V	Α	22
	110V	Α	18
	220V	Α	3
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	15
Short-time allowable current for 10s (IEC/EN60947-1)		Α	320
Protection fuse			
	gG (IEC)	Α	63
	aM (IEC)	Α	40
Making capacity (RMS value)		Α	380
Breaking capacity at voltage			
	440V	Α	304
	500V	Α	240
	690V	Α	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
	lth	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
Fightening torque for coil terminal			

Tightening torque for coil terminal





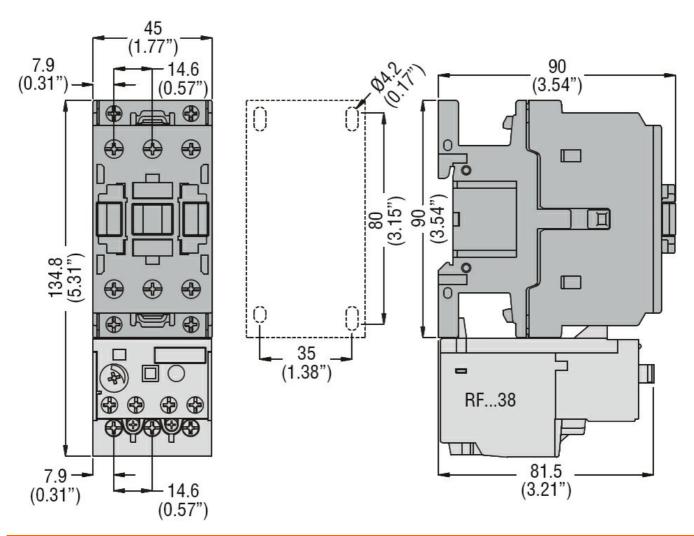
			Nima	0.0
		min	Nm Nm	0.8 1
		max min	Ibin	0.8
		max	Ibin	0.74
Max number of wires simultaneou	usly connectable	IIIdA	Nr.	2
Conductor section	aciy comicolabic		141.	
AWG/Kc	mil			
		max		6
Flexible	w/o lug conductor section			
		min	mm²	2.5
		max	mm²	16
Flexible of	c/w lug conductor section			
		min	mm²	1
		max	mm²	10
Flexible v	with insulated spade lug conduc	ctor section		
		min	mm²	1
		max	mm²	10
Power terminal protection accord	ling to IEC/EN 60529			IP20 when
Mechanical features				properly wired
Operating position				
operating position		normal		Vertical plan
		allowable		±30°
Fixing		ane wasie		Screw / DIN rail 35mm
Weight			g	430
Conductor section			<u> </u>	
	mil conductor section			
		max		6
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	1400000
Safety related data				
Performance level B10d according	ng to EN/ISO 13489-1			
		rated load	cycles	1400000
		mechanical load	cycles	20000000
Mirror contats according to IEC/E	:N 609474-4-1			yes
EMC compatibility				yes
AC coil operating			\/	40
Rated AC voltage at 60Hz			V	48
AC operating voltage	coil noward at 6047			
OI 60HZ (	coil powered at 60Hz			
	pick-up	min	%Us	80
		max	%Us	110
		Παλ	,,,,,,	110
	drop-out			
	drop-out	min	%Us	20
	drop-out	min max	%Us %Us	20 55
AC average coil consumption at 2				
AC average coil consumption at 2	20°C			
	20°C	max	%Us	55
	20°C coil powered at 60Hz	max in-rush	%Us VA	75



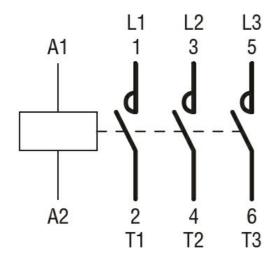
Mechanical operation	on		cycles/h	3600
Operating times				
Average time for Us	control			
	in AC			
	Closing NO			
		min	ms	8
		max	ms	24
	Opening NO			
		min	ms	5
		max	ms	15
	Closing NC			
		min	ms	9
		max	ms	20
	Opening NC			
		min	ms	9
		max	ms	17
UL technical data				
Full-load current (Fl	_A) for three-phase AC motor			
		at 480V	Α	40
		at 600V	Α	32
Yielded mechanical	performance			
	for single-phase AC motor			
		110/120V	HP	3
		230V	HP	7.5
	for three-phase AC motor			
		200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE				
	Contactor			
		AC current	Α	55
Short-circuit protect	ion fuse, 600V			
•	High fault			
	<b>9</b> ·	Short circuit current	kA	100
		Fuse rating	A	100
		Fuse class	= =	J
	Standard fault	1 320 1.300		
	2-20-00-0-00-0	Short circuit current	kA	5
		Fuse rating	A	150
Ambient conditions				
Temperature				
	Operating temperature			
	2 por same ground or same	min	°C	-50
		max	°C	70
	Storage temperature	HIAX		. •
	Storage temperature	min	°C	-60
		max	°C	80
Max altitude		IIIdX	m	3000
Nax allitude Resistance & Prote	ction		111	3000
	GROTE			3
Pollution degree				J
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



#### BF3800A04860

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 60HZ,

	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classification		
		ECOOOGG

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation		Power contactor
Product type designation  Contact characteristics		BF38
Number of poles	Nr.	3
Rated insulation voltage Ui IEC/EN	V	690
Rated insulation voltage of IEC/EN  Rated impulse withstand voltage Uimp	kV	6
Operational frequency	ΚV	
min	Hz	25
max	Hz	400
IEC Conventional free air thermal current Ith	A	56
Operational current le	- / \	
AC-1 (≤40°C)	Α	56
AC-1 (≤40°C) with 16mm² wire and fork end I		60
AC-1 (≤55°C)	A	45
AC-1 (≤55°C) with 16mm² wire and fork end I		48
AC-1 (≤70°C)	A	40
AC-1 (≤70°C) with 16mm² wire and fork end l		42
AC-3 (≤440V ≤55°C)	Ã	38
AC-4 (400V)	Α	15.5
Rated operational power AC-3 (T≤55°C)		
230V	kW	11
400V	kW	18.5
415V	kW	18.5
440V	kW	18.5
500V	kW	20
690V	kW	22
Rated operational power AC-1 (T≤40°C)		
230V	kW	21
400V	kW	36
500V	kW	45
690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series		
≤24V	Α	35
48V	A	30
75V	A	23
110V	A	8
220V	A	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	۸	00
≤24V	A	36
48V 75V	A	34
75V 110V	A A	29 32
220V	A	32 4
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		<del>-</del>
≤24V	Α	36
324 V	$\boldsymbol{\alpha}$	30



	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	30
EC max current le in DC1 with L/R ≤ 1ms with 4 poles in series	<del>-</del>		
	≤24V	Α	36
	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	38
EC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
·	≤24V	Α	24
	48V	Α	20
	75V	Α	17
	110V	Α	2,5
	220V	Α	_
EC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
·	≤24V	Α	28
	48V	Α	25
	75V	Α	22
	110V	Α	18
	220V	Α	3
EC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	15
Short-time allowable current for 10s (IEC/EN60947-1)		Α	320
Protection fuse			
	gG (IEC)	Α	63
	aM (IEC)	Α	40
Making capacity (RMS value)		Α	380
Breaking capacity at voltage			
· · · · · · · · · · · · · · · · · · ·	440V	Α	304
	500V	Α	240
	690V	Α	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
· · · · · · · · · · · · · · · · · · ·	Ith	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
Tightening torque for coil terminal			

Tightening torque for coil terminal





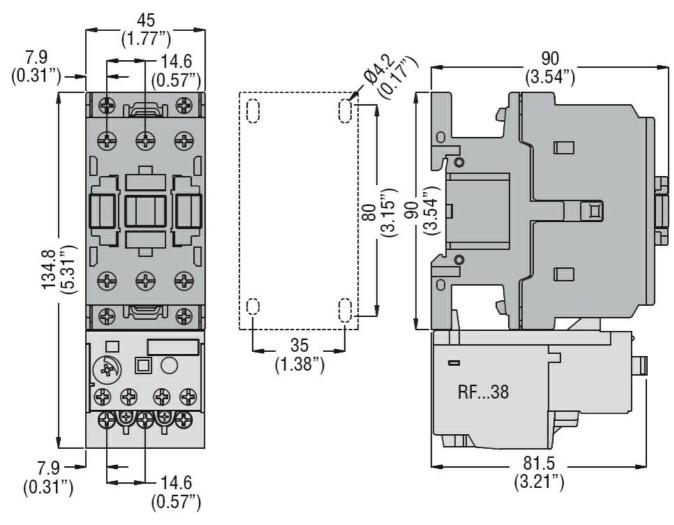
			Nima	0.0
		min	Nm Nm	0.8 1
		max min	Ibin	0.8
		max	lbin	0.74
Max number of wires	simultaneously connectable	max	Nr.	2
Conductor section	omakanooddy comicolable		141.	
	AWG/Kcmil			
		max		6
	Flexible w/o lug conductor section			
	· ·	min	mm²	2.5
		max	mm²	16
	Flexible c/w lug conductor section			
		min	mm²	1
		max	mm²	10
	Flexible with insulated spade lug conduct	or section		
		min	mm²	1
		max	mm²	10
Power terminal prote	ction according to IEC/EN 60529			IP20 when
Mechanical features				properly wired
Operating position				
Operating position		normal		Vertical plan
		allowable		±30°
Fixing		allewasie		Screw / DIN rail 35mm
Weight			g	423
Conductor section			9	.20
	AWG/kcmil conductor section			
		max		6
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	1400000
Safety related data				
Performance level B	10d according to EN/ISO 13489-1			
		rated load	cycles	1400000
		mechanical load	cycles	20000000
	ling to IEC/EN 609474-4-1			yes
EMC compatibility				yes
AC coil operating				
Rated AC voltage at 0			V	120
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	pick-up	•	0/11-	0.0
		min	%Us	80
	drap out	max	%Us	110
	drop-out	min	%Us	20
		max	%Us	55
AC average coil cons	sumption at 20°C	IIIdX	/003	
A avorage con cons	of 60Hz coil powered at 60Hz			
	or our iz con powered at our iz	in-rush	VA	75
		holding	VA	9
Dissipation at holding	ı ≤20°C 50Hz	Holding	W	2.5
Max cycles frequency			v v	<u></u>
max by oles inequelles				



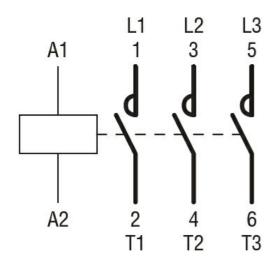


Closing NO	Mechanical operation	١		cycles/h	3600
Average time for Us control in AC    Closing NO					
in AC    Closing NO		control			
Min	-	in AC			
Min					
Max		3	min	ms	8
Min ms 5 max ms 15					
Min		Opening NO			
Closing NC		, ,	min	ms	5
Closing NC			max	ms	15
Min ms   9 max ms   20		Closing NC			
Max		Ç	min	ms	9
Min min ms   9 min ms   17			max	ms	
Min min ms   9 min ms   17		Opening NC			
Max		, ,	min	ms	9
Full-load current (FLA) for three-phase AC motor  at 480V			max	ms	
Full-load current (FLA) for three-phase AC motor  at 480V	UL technical data				
At 480V   A   40   at 600V   A   32		A) for three-phase AC motor			
Yielded mechanical performance   For single-phase AC motor   110/120V	,	•	at 480V	Α	40
Yielded mechanical performance   for single-phase AC motor   110/120V   HP   3   230V   HP   7.5					
For single-phase AC motor	Yielded mechanical	performance			
110/120V					
Contactor   Cont		rer emgre pridee / te meter	110/120V	HP	3
For three-phase AC motor   200/208V					
200/208V		for three-phase AC motor	2001	• • • •	
220/230V		for times phase no motor	200/208\/	HP	10
A60/480V					
S75/600V HP 30   S75/600V HIGH Full Full Full Full Full Full Full Ful					
Contactor					
Contactor   AC current   A   55	General LISE		010/0001		
AC current	Ocheral OOL	Contactor			
Short-circuit protection fuse, 600V   High fault   Short circuit current   kA   100   Fuse rating   A   100   Fuse class   J   Standard fault   Short circuit current   kA   5   Fuse rating   A   150   Standard fault   Short circuit current   kA   5   Fuse rating   A   150   Standard fault   Short circuit current   kA   5   Fuse rating   A   150   Standard fault   Short circuit current   kA   5   Fuse rating   A   150   Standard fault   Short circuit current   kA   5   Fuse rating   A   150   Standard fault   Short circuit current   kA   5   Fuse rating   A   150   Standard fault   Short circuit current   kA   5   Fuse rating   A   150   Standard fault   Short circuit current   kA   5   Fuse rating   A   150   Standard fault   Short circuit current   kA   5   Fuse rating   A   150   Standard fault   Short circuit current   kA   5   Fuse rating   A   150   Standard fault   Short circuit current   kA   5   Fuse rating   A   150   Standard fault   Short circuit current   kA   5   Fuse rating   A   150   Standard fault   Short circuit current   Shor		Contactor	AC current	Δ	55
High fault	Short-circuit protecti	on fuso 600V	AC current		33
Short circuit current   KA   100   Fuse rating   A   100   Fuse class   J	Short-circuit protecti				
Fuse rating		nigri iauli	Chart singuit summent	I.Λ	400
Standard fault   Short circuit current   kA   5   Fuse rating   A   150					
Standard fault  Short circuit current kA 5 Fuse rating A 150  Ambient conditions  Temperature  Operating temperature  min °C -50 max °C 70  Storage temperature  min °C -60 max °C 80			_	А	
Short circuit current KA 5 Fuse rating A 150  Ambient conditions  Temperature  Operating temperature  min °C -50 max °C 70  Storage temperature  min °C -60 max °C 80		Ctandard fault	ruse ciass		J
Fuse rating A 150		Standard fault	Chart alreadt arms of	I. A	_
Ambient conditions           Temperature         Operating temperature           min °C -50 max °C 70           Storage temperature         min °C -60 max °C 80					
Operating temperature	Ambient conditions		Fuse rating	А	100
Operating temperature    min °C -50     max °C 70     Storage temperature     min °C -60     max °C 80					
min °C -50 max °C 70  Storage temperature  min °C -60 max °C 80	ı emperature	O constitution to the constitution of			
max         °C         70           Storage temperature         min         °C         -60           max         °C         80		Operating temperature		0.0	50
Storage temperature  min °C -60  max °C 80					
min °C -60 max °C 80		01	max	Ĵ.	10
max °C 80		Storage temperature	_	o <del>-</del>	
Max altitude m 3000			max		
				m	3000
Resistance & Protection		tion			
Pollution degree 3					3
Dimensions	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



#### BF3800A12060

AC switching

	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classification		
ETIM 8.0		EC000066 - Power contactor,





Product designation Product type designation		Power contactor BF38
Contact characteristics		
Number of poles	Nr.	3
Rated insulation voltage Ui IEC/EN	V	690
Rated impulse withstand voltage Uimp	kV	6
Operational frequency		
min	Hz	25
max	Hz	400
IEC Conventional free air thermal current Ith	Α	56
Operational current le		
AC-1 (≤40°C)	Α	56
AC-1 (≤40°C) with 16mm² wire and fork end I	ugA	60
AC-1 (≤55°C)	Α	45
AC-1 (≤55°C) with 16mm² wire and fork end I	ugA	48
AC-1 (≤70°C)	Α	40
AC-1 (≤70°C) with 16mm² wire and fork end I	_	42
AC-3 (≤440V ≤55°C)	A	38
AC-4 (400V)	Α	15.5
Rated operational power AC-3 (T≤55°C)		
230V	kW	11
400V	kW	18.5
415V	kW	18.5
440V	kW	18.5
500V	kW	20
Poted energtional newer AC 1 (T<10°C)	kW	22
Rated operational power AC-1 (T≤40°C) 230V	kW	21
400V	kW	36
500V	kW	45
690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series	IXVV	02
≤24V	Α	35
48V	Α	30
75V	Α	23
110V	Α	8
220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series		_
≤24V	Α	36
48V	Α	34
75V	Α	29
110V	Α	32
220V	Α	4
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		
≤24V	Α	36



	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	30
EC max current le in DC1 with L/R ≤ 1ms with 4 poles in series	<del>-</del>		
	≤24V	Α	36
	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	38
EC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
·	≤24V	Α	24
	48V	Α	20
	75V	Α	17
	110V	Α	2,5
	220V	Α	_
EC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
·	≤24V	Α	28
	48V	Α	25
	75V	Α	22
	110V	Α	18
	220V	Α	3
EC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	15
Short-time allowable current for 10s (IEC/EN60947-1)		Α	320
Protection fuse			
	gG (IEC)	Α	63
	aM (IEC)	Α	40
Making capacity (RMS value)		Α	380
Breaking capacity at voltage			
· · · · · · · · · · · · · · · · · · ·	440V	Α	304
	500V	Α	240
	690V	Α	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
· · · · · · · · · · · · · · · · · · ·	Ith	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
Tightening torque for coil terminal			

Tightening torque for coil terminal





	o Neo	0.0
mi ma		0.8 1
mi		0.8
ma		0.74
Max number of wires simultaneously connectable	Nr.	2
Conductor section		
AWG/Kcmil		
ma	x	6
Flexible w/o lug conductor section		
mi	n mm²	2.5
ma	x mm²	16
Flexible c/w lug conductor section		
mi		1
ma	x mm²	10
Flexible with insulated spade lug conductor section		
mi		1
ma	x mm²	10
Power terminal protection according to IEC/EN 60529		IP20 when
Mechanical features		properly wired
Operating position	اد	Vertical plan
allowabl		±30°
Fixing	<u>,                                      </u>	Screw / DIN rail
Woight		35mm
Weight Conductor parties	g	415
Conductor section  AWG/kcmil conductor section		
AVVG/RCITIII conductor section ma	v	6
Operations	`	0
Mechanical life	cycles	20000000
Electrical life	cycles	1400000
Safety related data	2, 2.23	
Performance level B10d according to EN/ISO 13489-1		
rated loa	d cycles	1400000
mechanical loa	•	20000000
Mirror contats according to IEC/EN 609474-4-1		yes
EMC compatibility		yes
AC coil operating		·
Rated AC voltage at 60Hz	V	220
AC operating voltage		
of 60Hz coil powered at 60Hz		
pick-up		
mi	n %Us	80
ma	x %Us	110
drop-out		
mi		20
ma	x %Us	55
AC average coil consumption at 20°C		
of 60Hz coil powered at 60Hz		
in-rus		75
holdin	-	9
Dissipation at holding ≤20°C 50Hz  Max cycles frequency	W	2.5

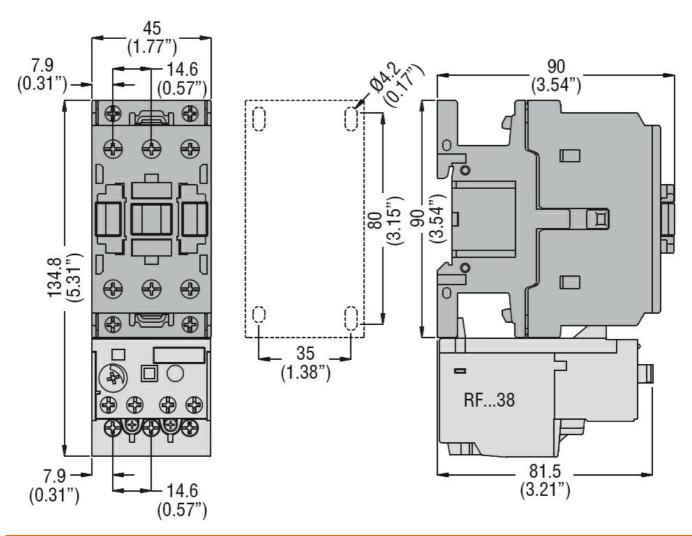


Mechanical operati	on		cycles/h	3600
Operating times				
Average time for U	s control			
J	in AC			
	Closing NO			
	5.55g	min	ms	8
		max	ms	24
	Opening NO			
	Spsgs	min	ms	5
		max	ms	15
	Closing NC	max	1110	10
	Closing No	min	ms	9
		max	ms	20
	Opening NC	max	1110	20
	Opening No	min	ms	9
				17
UL technical data		max	ms	17
	LA) for three-phase AC motor			
i dii iodu cultetii (F	Ligital tillog pilase Ao Hiotol	at 480V	Α	40
		at 600V	A	32
Violded masharisa	l porformanco	ai 000V	А	JZ
Yielded mechanica				
	for single-phase AC motor	440/400	LID	0
		110/120V	HP	3
		230V	HP	7.5
	for three-phase AC motor	/		
		200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE				
	Contactor			
		AC current	Α	55
Short-circuit protect	ction fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	100
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	150
Ambient conditions	;			
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
	- ·	min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Prote	ection			
Pollution degree				3
Dimensions				

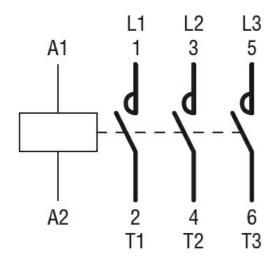
220VAC



#### **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



#### BF3800A22060

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 60HZ, 220VAC

	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classification		
		EC000066 -

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation Product type designation			Power contactor BF38
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	56
Operational current le			
	AC-1 (≤40°C)	Α	56
	AC-1 (≤40°C) with 16mm² wire and fork end	_	60
	AC-1 (≤55°C)	Α	45
	AC-1 (≤55°C) with 16mm² wire and fork end	_	48
	AC-1 (≤70°C)	A	40
	AC-1 (≤70°C) with 16mm² wire and fork end	_	42
	AC-3 (≤440V ≤55°C)	A	38
Dated energtional newer AC 2 (T <fe°c)< td=""><td>AC-4 (400V)</td><td>A</td><td>15.5</td></fe°c)<>	AC-4 (400V)	A	15.5
Rated operational power AC-3 (T≤55°C)	2201/	LAAZ	44
	230V	kW	11
	400V 415V	kW kW	18.5 18.5
	440V	kW	18.5
	500V	kW	20
	690V	kW	22
Rated operational power AC-1 (T≤40°C)	090 V	KVV	22
reaced operational power real (1240 0)	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms with			
	≤24V	Α	35
	48V	Α	30
	75V	Α	23
	110V	Α	8
	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with	2 poles in series		
	≤24V	Α	36
	48V	Α	34
	75V	Α	29
	110V	Α	32
	220V	Α	4
IEC max current le in DC1 with L/R ≤ 1ms with	n 3 poles in series ≤24V	Α	36
		-	-



	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	30
EC max current le in DC1 with L/R ≤ 1ms with 4 poles in series	<del>-</del>		
	≤24V	Α	36
	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	38
EC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
·	≤24V	Α	24
	48V	Α	20
	75V	Α	17
	110V	Α	2,5
	220V	Α	_
EC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
·	≤24V	Α	28
	48V	Α	25
	75V	Α	22
	110V	Α	18
	220V	Α	3
EC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	15
Short-time allowable current for 10s (IEC/EN60947-1)		Α	320
Protection fuse			
	gG (IEC)	Α	63
	aM (IEC)	Α	40
Making capacity (RMS value)		Α	380
Breaking capacity at voltage			
· · · · · · · · · · · · · · · · · · ·	440V	Α	304
	500V	Α	240
	690V	Α	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
· · · · · · · · · · · · · · · · · · ·	Ith	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
Tightening torque for coil terminal			

Tightening torque for coil terminal



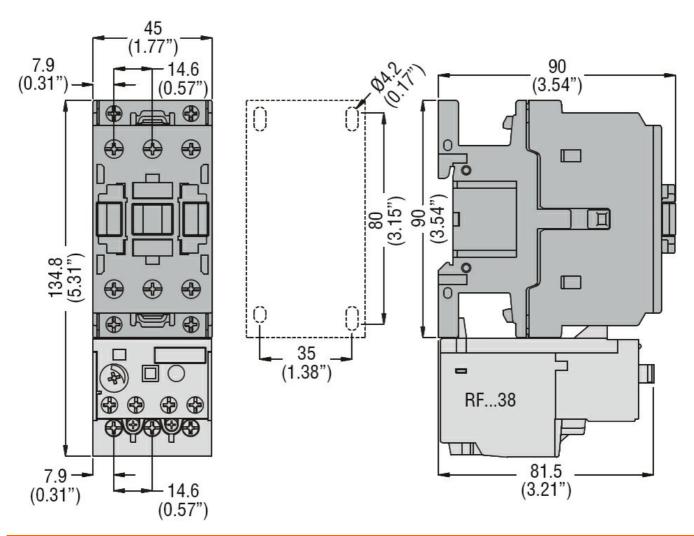


			Nima	0.0
		min max	Nm Nm	0.8 1
		min	Ibin	0.8
		max	Ibin	0.74
Max number of wires	simultaneously connectable	max	Nr.	2
Conductor section				
	AWG/Kcmil			
		max		6
	Flexible w/o lug conductor section			
		min	mm²	2.5
		max	mm²	16
	Flexible c/w lug conductor section			
		min	mm²	1
	Florible with insulated and deliver and has	max	mm²	10
	Flexible with insulated spade lug conducte		mm²	1
		min	mm² mm²	1 10
		max	111111	IP20 when
Power terminal prote	ection according to IEC/EN 60529			properly wired
Mechanical features				, , , , , , , , , , , , , , , , , , , ,
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	418
Conductor section				
	AWG/kcmil conductor section			
		max		6
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	1400000
Safety related data	10d according to EN/ISO 13489-1			
i enomiance level b	Tod according to EN/ISO 13469-1	rated load	cycles	1400000
T enormance level D	Tod according to EN/ISO 13469-1	rated load	cycles	1400000
	-	rated load mechanical load	cycles cycles	20000000
Mirror contats accord	ding to IEC/EN 609474-4-1		-	20000000 yes
Mirror contats accord	-		-	20000000
Mirror contats accord EMC compatibility AC coil operating	ding to IEC/EN 609474-4-1		cycles	20000000 yes yes
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at	ding to IEC/EN 609474-4-1 60Hz		-	20000000 yes
Mirror contats accord EMC compatibility AC coil operating	ding to IEC/EN 609474-4-1 60Hz		cycles	20000000 yes yes
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at	ding to IEC/EN 609474-4-1 60Hz		cycles	20000000 yes yes
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at	ding to IEC/EN 609474-4-1  60Hz  of 60Hz coil powered at 60Hz		cycles	20000000 yes yes
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at	ding to IEC/EN 609474-4-1  60Hz  of 60Hz coil powered at 60Hz	mechanical load	V	20000000 yes yes 230
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at	ding to IEC/EN 609474-4-1  60Hz  of 60Hz coil powered at 60Hz	mechanical load  min max	v V %Us %Us	20000000 yes yes 230 80 110
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at	ding to IEC/EN 609474-4-1  60Hz  of 60Hz coil powered at 60Hz pick-up	mechanical load	v V %Us %Us %Us	20000000 yes yes 230  80 110 20
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at AC operating voltage	ding to IEC/EN 609474-4-1  60Hz  of 60Hz coil powered at 60Hz pick-up  drop-out	mechanical load  min max	v V %Us %Us	20000000 yes yes 230 80 110
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at	ding to IEC/EN 609474-4-1  60Hz  of 60Hz coil powered at 60Hz pick-up  drop-out	mechanical load  min max min	v V %Us %Us %Us	20000000 yes yes 230  80 110 20
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at AC operating voltage	ding to IEC/EN 609474-4-1  60Hz  of 60Hz coil powered at 60Hz pick-up  drop-out	mechanical load  min max  min max	v %Us %Us %Us %Us	20000000  yes  yes  230  80 110  20 55
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at AC operating voltage	ding to IEC/EN 609474-4-1  60Hz  of 60Hz coil powered at 60Hz pick-up  drop-out	mechanical load  min max  min max  in-rush	v V %Us %Us %Us %Us	20000000  yes  yes  230  80 110  20 55
Mirror contats accord EMC compatibility AC coil operating Rated AC voltage at AC operating voltage	ding to IEC/EN 609474-4-1  60Hz  of 60Hz coil powered at 60Hz pick-up  drop-out  sumption at 20°C of 60Hz coil powered at 60Hz	mechanical load  min max  min max	v %Us %Us %Us %Us	20000000  yes  yes  230  80 110  20 55

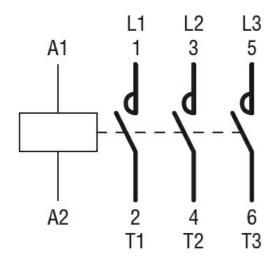


Mechanical operation	on		cycles/h	3600
Operating times				
Average time for Us	control			
	in AC			
	Closing NO			
		min	ms	8
		max	ms	24
	Opening NO			
		min	ms	5
		max	ms	15
	Closing NC			
		min	ms	9
		max	ms	20
	Opening NC			
		min	ms	9
		max	ms	17
UL technical data				
Full-load current (Fl	_A) for three-phase AC motor			
		at 480V	Α	40
		at 600V	Α	32
Yielded mechanical	performance			
	for single-phase AC motor			
		110/120V	HP	3
		230V	HP	7.5
	for three-phase AC motor			
		200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE				
	Contactor			
		AC current	Α	55
Short-circuit protect	ion fuse, 600V			
•	High fault			
	<b>9</b> ·	Short circuit current	kA	100
		Fuse rating	A	100
		Fuse class	= =	J
	Standard fault	1 320 1.300		
	2-20-00-0-00-0	Short circuit current	kA	5
		Fuse rating	A	150
Ambient conditions				
Temperature				
	Operating temperature			
	2 por same ground or same	min	°C	-50
		max	°C	70
	Storage temperature	HIAX		. •
	Storage temperature	min	°C	-60
		max	°C	80
Max altitude		IIIdX	m	3000
Nax allitude Resistance & Prote	ction		111	3000
	GROTE			3
Pollution degree				J
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



#### BF3800A23060

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 60HZ, 230VAC

	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classification		
		EC000066 -

ETIM 8.0

Power contactor, AC switching





Product type designation Contact characteristics	BF38
Number of poles Nr.	3
Rated insulation voltage Ui IEC/EN V	690
Rated impulse withstand voltage Uimp kV	6
Operational frequency	
min Hz	25
max Hz	400
IEC Conventional free air thermal current Ith A	56
Operational current le	
AC-1 (≤40°C) A	56
AC-1 (≤40°C) with 16mm² wire and fork end lugA	60
AC-1 (≤55°C) A	45
AC-1 (≤55°C) with 16mm² wire and fork end lugA	48
AC-1 (≤70°C) A	40 42
AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-3 (≤440V ≤55°C) A	38
AC-4 (400V) A	15.5
Rated operational power AC-3 (T≤55°C)	10.0
230V kW	11
400V kW	18.5
415V kW	18.5
440V kW	18.5
500V kW	20
690V kW	22
Rated operational power AC-1 (T≤40°C)	
230V kW	21
400V kW	36
500V kW	45
690V kW	62
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series	
≤24V A	35
48V A	30
75V A	23
110V A	8
220V A	<del>_</del>
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	26
≤24V A 48V A	36 34
48V A 75V A	34 29
110V A	32
220V A	4
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	•
≤24V A	36



	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	30
EC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	36
	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	38
EC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	24
	48V	Α	20
	75V	Α	17
	110V	Α	2,5
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	28
	48V	Α	25
	75V	Α	22
	110V	Α	18
	220V	Α	3
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	15
Short-time allowable current for 10s (IEC/EN60947-1)		Α	320
Protection fuse			
	gG (IEC)	Α	63
	aM (IEC)	Α	40
Making capacity (RMS value)		Α	380
Breaking capacity at voltage			
	440V	Α	304
	500V	Α	240
	690V	Α	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
	Ith	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
Tightening torque for coil terminal			

Tightening torque for coil terminal





		Nima	0.0
			0.8 1
			0.8
			0.74
taneously connectable	max		2
tariodaly cominication		141.	
VG/Kcmil			
	max		6
exible w/o lug conductor section			
-	min	mm²	2.5
	max	mm²	16
exible c/w lug conductor section			
	min	mm²	1
	max	mm²	10
exible with insulated spade lug conduc	tor section		
	min	mm²	1
	max	mm²	10
according to IEC/EN 60529			IP20 when
			properly wired
	normal		Vertical plan
			±30°
	anowabic		Screw / DIN rail
			35mm
		g	422
VG/kcmil conductor section			_
	max		6
		ovelee.	20000000
			20000000
		cycles	1400000
coording to EN/ISO 13/89-1			
coording to ENVISO 13409-1	rated load	cycles	1400000
		-	20000000
JEC/EN 609474-4-1	mediamed load	Cycles	yes
120/21100017111			yes
			yee
		V	460
60Hz coil powered at 60Hz			
pick-up			
• •	min	%Us	80
	max	%Us	110
drop-out			
•	min	%Us	20
	max	%Us	55
60Hz coil powered at 60Hz			
	in-rush	VA	75
	holding	VA	9
C 50Hz		W	2.5
	according to IEC/EN 60529  VG/kcmil conductor section  ccording to EN/ISO 13489-1  DIEC/EN 609474-4-1  60Hz coil powered at 60Hz pick-up	VG/Kcmil max exible w/o lug conductor section min max exible c/w lug conductor section min max exible with insulated spade lug conductor section min max exible with insulated spade lug conductor section min max excording to IEC/EN 60529  NG/kcmil conductor section max excording to EN/ISO 13489-1 rated load mechanical load excording to EN/ISO 13489-1  Fated load me	Max

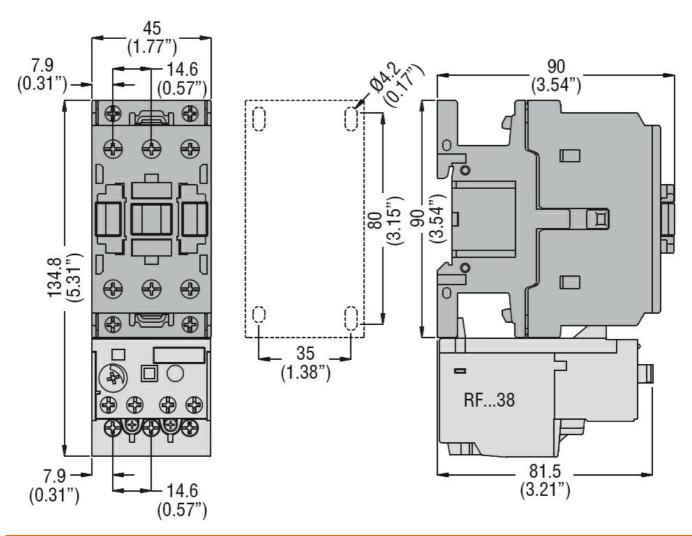




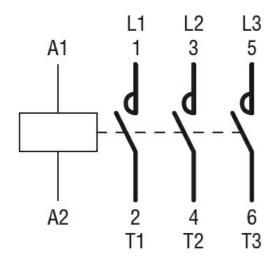
Mechanical operation	on		cycles/h	3600
Operating times				
Average time for U	s control			
-	in AC			
	Closing NO			
	_	min	ms	8
		max	ms	24
	Opening NO			
		min	ms	5
		max	ms	15
	Closing NC			
		min	ms	9
		max	ms	20
	Opening NC			
		min	ms	9
		max	ms	17
UL technical data				
Full-load current (F	LA) for three-phase AC motor			
		at 480V	Α	40
		at 600V	Α	32
Yielded mechanica	l performance			
	for single-phase AC motor			
		110/120V	HP	3
		230V	HP	7.5
	for three-phase AC motor			
	·	200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE				
	Contactor			
		AC current	Α	55
Short-circuit protec	tion fuse, 600V			
•	High fault			
	<b>3</b>	Short circuit current	kA	100
		Fuse rating	Α	100
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	150
Ambient conditions				
Temperature				
•	Operating temperature			
	, 5 ,	min	°C	-50
		max	°C	70
	Storage temperature			<del>-</del>
	- 10. 250 10p 0. 2.010	min	°C	-60
		max	°C	80
Max altitude		max	m	3000
Resistance & Prote	ection			
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



#### BF3800A46060

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 60HZ,

	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation		Power contactor
Product type designation  Contact characteristics		BF38
Number of poles	Nr.	3
Rated insulation voltage Ui IEC/EN	V	690
Rated impulse withstand voltage Uimp	kV	6
Operational frequency	ΝV	0
min	Hz	25
max	Hz	400
IEC Conventional free air thermal current Ith	A	56
Operational current le		
AC-1 (≤40°C)	Α	56
AC-1 (≤40°C) with 16mm² wire and fork end I		60
AC-1 (≤55°C)	A	45
AC-1 (≤55°C) with 16mm² wire and fork end I		48
AC-1 (≤70°C)	A	40
AC-1 (≤70°C) with 16mm² wire and fork end I		42
AC-3 (≤440V ≤55°C)	Ã	38
AC-4 (400V)	Α	15.5
Rated operational power AC-3 (T≤55°C)		
230V	kW	11
400V	kW	18.5
415V	kW	18.5
440V	kW	18.5
500V	kW	20
690V	kW	22
Rated operational power AC-1 (T≤40°C)		
230V	kW	21
400V	kW	36
500V	kW	45
690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series		
≤24V	Α	35
48V	Α	30
75V	Α	23
110V	A	8
220V	Α	
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	^	00
≤24V	A	36
48V	A	34
75V	A	29
110V 220V	A A	32 4
	А	4
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V	Α	36
≥24 V	$\overline{}$	30



	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	30
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	36
	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	38
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	24
	48V	Α	20
	75V	Α	17
	110V	Α	2,5
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	28
	48V	Α	25
	75V	Α	22
	110V	Α	18
	220V	Α	3
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	A	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	A	15
Short-time allowable current for 10s (IEC/EN60947-1)		Α	320
Protection fuse			
	gG (IEC)	Α	63
	aM (IEC)	Α	40
Making capacity (RMS value)		A	380
Breaking capacity at voltage			
	440V	Α	304
	500V	Α	240
	690V	A	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
	Ith	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
Tightening torque for coil terminal			

Tightening torque for coil terminal





		min	Nm	0.8
		max	Nm	1
		min	Ibin	0.8
		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			
		max		6
	Flexible w/o lug conductor section			
		min	mm²	2.5
		max	mm²	16
	Flexible c/w lug conductor section			
		min	mm²	1
		max	mm²	10
	Flexible with insulated spade lug conductor	or section		
		min	mm²	1
		max	mm²	10
Power terminal protec	tion according to IEC/EN 60529			IP20 when
	tion according to IEC/EN 60329			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	416
Conductor section				
	AWG/kcmil conductor section			
	7 TV G/Normin conductor cochem	max		6
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	1400000
Safety related data			0,0.00	110000
	0d according to EN/ISO 13489-1			
T CHOITIANOC ICVCI DT	od docording to ETV/100 10400 1	rated load	cycles	1400000
		mechanical load	cycles	20000000
Mirror contate accordi	ng to IEC/EN 609474-4-1	THECHAINCAI IOAU	Cycles	
EMC compatibility	119 to 120/214 0034/4-4-1			yes
AC coil operating				yes
Rated AC voltage at 6	∩⊔ <sub>7</sub>		V	575
	UI IZ		V	3/3
AC operating voltage	of COLLE and provided at COLL			
	of 60Hz coil powered at 60Hz			
	pick-up	•	0///	0.0
		min	%Us	80
		max	%Us	110
	drop-out		0417	00
		min	%Us	20
		max	%Us	55
		max	7000	
AC average coil consu	•	max	7000	
AC average coil consu	umption at 20°C of 60Hz coil powered at 60Hz			
AC average coil consu	•	in-rush	VA	75
	of 60Hz coil powered at 60Hz		VA VA	75 9
AC average coil consultation of the consultation at holding Max cycles frequency	of 60Hz coil powered at 60Hz	in-rush	VA	75

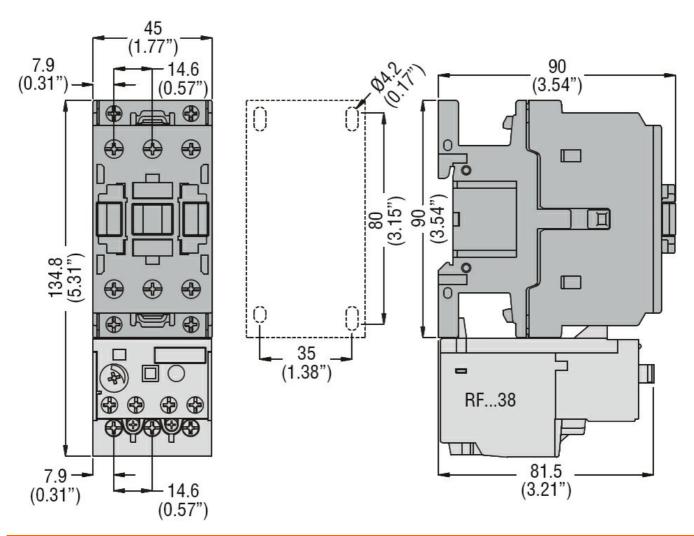




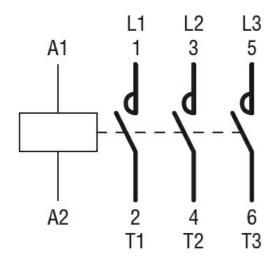
Mechanical operati	on		cycles/h	3600
Operating times				
Average time for U	s control			
Ü	in AC			
	Closing NO			
		min	ms	8
		max	ms	24
	Opening NO			
	a paramig	min	ms	5
		max	ms	15
	Closing NC			. •
	3.03m/g 113	min	ms	9
		max	ms	20
	Opening NC	max		
	Oponing 110	min	ms	9
		max	ms	17
UL technical data		IIIdX	1113	• •
	LA) for three-phase AC motor			
i an iodd ddifont (f	English three phase no motor	at 480V	Α	40
		at 600V	A	32
Yielded mechanica	l porformanco	at 000 v	^	52
nelueu mechanica	for single-phase AC motor			
	for single-phase AC motor	110/120V	HP	3
		230V	HP	7.5
	for three-phase AC motor	000/000	LID	4.0
		200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE	•			
	Contactor			
<u></u>		AC current	Α	55
Short-circuit protect				
	High fault	_		
		Short circuit current	kA	100
		Fuse rating	Α	100
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	150
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Prote	ection			
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



#### BF3800A57560

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, AC COIL 60HZ,

	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classification		
		E000000

ETIM 8.0

EC000066 -Power contactor, AC switching