

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 70A, AC COIL 60HZ, 120VAC



Product designation Power contactor BF40 Product type designation SF40 Contact characteristics Nr. 4 Number of poles N.V. 4 Rated insulation voltage UiriEC/EN V. 1000 Rated insulation voltage Uirip kV. 8 Operational frequency min Hz. 25 IEC Conventional free air thermal current Ith A. 70 Operational current Ie AC-1 (≤40°C) A. 60 AC-1 (≤55°C) A. 60 AC-1 (≤70°C) A. 60 AC-3 (≤440V ≤55°C) A. 40 AC-1 (≤70°C) A. 50 AC-1 (≤70°C) A. 40 AC-1 (≤70°C) A. 40 <th></th> <th></th> <th></th> <th></th>				
Product type designation Service Servic	Product designation			Power contactor
Nor. 4				BF40
Rated insulation voltage Ui IEC/EN V 1000 Rated impulse withstand voltage Uimp kV 8 Operational frequency min Hz 25 max Hz 400 IEC Conventional free air thermal current lth A 70 Operational current le AC-1 (≤40°C) A 70 AC-1 (≤55°C) A 60 AC-1 (≤70°C) A 50 AC-3 (≤440V ≤55°C) A 60 AC-4 (400V) A 24 Rated operational current AC-3 (T≤55°C) 230V A 40 415V A 40 440V A 21 Rated operational power AC-1 (T≤40°C) 230V KW 26 400V KW 46 500V KW 58 690V KW 58 690V KW 58 690V KW 58 690V A 30 110V A 8 220V A 40 48V A 48 48V A	,, <u> </u>			
Rated insulation voltage Ui IEC/EN V 1000 Rated impulse withstand voltage Uimp kV 8 Operational frequency min Hz 25 max Hz 400 IEC Conventional free air thermal current lth A 70 Operational current le AC-1 (≤40°C) A 70 AC-1 (≤55°C) A 60 AC-1 (≤70°C) A 50 AC-3 (≤440V ≤55°C) A 60 AC-4 (400V) A 24 Rated operational current AC-3 (T≤55°C) 230V A 40 415V A 40 440V A 21 Rated operational power AC-1 (T≤40°C) 230V KW 26 400V KW 46 500V KW 58 690V KW 58 690V KW 58 690V KW 58 690V A 30 110V A 8 220V A 40 48V A 48 48V A	Number of poles		Nr.	4
Rated impulse withstand voltage Uimp			V	1000
Partitional frequency Partition Par			kV	8
EC Conventional free air thermal current lth				
EC Conventional free air thermal current lth		min	Hz	25
AC-1 (≤40°C)		max	Hz	
AC-1 (≤40°C)	IEC Conventional free air thermal current Ith		Α	70
AC-1 (≤40°C)	Operational current le			
AC-1 (S55°C) A 60 AC-1 (S70°C) A 50 AC-1 (S70°C) A 50 AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 AC-4 (400V) A 24 AC-4 (400V) A 24 AC-4 (400V) A 24 AC-4 (400V) A 40 AC-4 (400V) AC-4 (•	AC-1 (≤40°C)	Α	70
AC-1 (≤70°C) A 50 A 40 AC-3 (≤440V ≤55°C) A 40 AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 AC-4 (400V) A 24 AC-4 (400V) A 24 AC-4 (400V) A 24 AC-4 (400V) A 40 AC-4 (400V) AC-4 (4		•		
AC-3 (≤440V ≤55°C)		,		
AC-4 (400V)				
Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 440V A 40 440V A 33 650V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 58 690V kW 79 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 40 48V A 35 75V A 30 110V A 8 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 48 48V A 48 75V A 48 75V A 45 110V A 45 110V A 48 75V A 5 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		,		
230V	Rated operational current AC-3 (T≤55°C)	,		
400V		230V	Α	40
440V				
Soov A 33 690V A 32 1000V A 21		415V	Α	40
Rated operational power AC-1 (T≤40°C) 230V kW 26 4400V kW 46 500V kW 58 690V kW 79		440V	Α	40
Rated operational power AC-1 (T≤40°C)		500V	Α	33
Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 58 690V kW 79 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series ≤24V A 40 48V A 35 75V A 30 110V A 8 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 48 48V A 48 48V A 48 75V A 45 110V A 48 48V A 48 75V A 45 110V A 42 220V A 5		690V	Α	
		1000V	Α	21
	Rated operational power AC-1 (T≤40°C)			
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series S24V A 40 48V A 35 75V A 30 110V A 8 220V A - EC max current le in DC1 with L/R ≤ 1ms with 2 poles in series S24V A 48 48V A 48 48V A 48 48V A 48 48V A 45 110V A 45 110V A 42 220V A 5 EC max current le in DC1 with L/R ≤ 1ms with 3 poles in series S24V A 48 48 48 48 48 48 48	, ,	230V	kW	26
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series S24V		400V	kW	46
SEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series S24V		500V	kW	58
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		690V	kW	79
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		≤24V	Α	40
110V A 8 220V A -		48V	Α	35
EC max current le in DC1 with L/R \leq 1ms with 2 poles in series \leq 24V A 48 48V A 48 48V A 45 45 410V A 42 42 42 42 42 43 48 48 48 48 48 48 48		75V	Α	30
IEC max current le in DC1 with L/R \leq 1ms with 2 poles in series		110V	Α	8
		220V	Α	_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
		≤24V	Α	48
		48V	Α	48
		75V	Α	45
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 48 48V A 48		110V	Α	42
≤24V A 48 48V A 48		220V	Α	5
48V A 48	IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
		≤24V	Α	48
75V A 48		48V	Α	48
		75V	Α	





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	110V	Α	44	
	220V	Α	56	
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series				
	≤24V	Α	_	
	48V	Α	_	
	75V	Α	_	
	110V	Α	_	
	220V	Α	70	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series				
	≤24V	Α	27	
	48V	Α	23	
	75V	Α	19	
	110V	Α	3	
	220V	Α	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series				
·	≤24V	Α	32	
	48V	Α	30	
	75V	Α	27	
	110V	Α	22	
	220V	Α	5	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	220 1	- , ,		-
TEO THAN GUITOR TO IT DOO DOO WILL ETC = TOTAL WILL O POICE IT SELLES	≤24V	Α	40	
	48V	A	40	
	75V	A	38	
	110V	A	27	
	220V	A	32	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	220 V		32	
120 max current le in 200-200 with 2/10 13 with 4 poles in series	≤24V	Α		
	324 V 48 V	A	_	
	75V	A		
	110V	A	_	
	220V	A	- 40	
Short-time allowable current for 10s (IEC/EN60947-1)	220 V		400	
		Α	400	
Protection fuse	~C (IEC)	۸	100	
	gG (IEC)	A	100	
Making and ait (DMO calca)	aM (IEC)	A	50	
Making capacity (RMS value)		Α	400	
Breaking capacity at voltage	4.401.7	Δ.	202	
	440V	A	320	
	500V	A	265	
	690V	Α	256	
Resistance per pole (average value)		mΩ	0.8	
Power dissipation per pole (average value)				
	Ith	W	3.9	
	AC-3	W	1.3	
Tightening torque for terminals				
	min	Nm	4	
	max	Nm	5	
	min	lbin	2.95	
	max	Ibin	3.69	
Tightening torque for coil terminal				
	min	Nm	8.0	
	max	Nm	1	

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FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 70A, AC COIL 60HZ,

		min	Ibin	0.8
		max	Ibin	0.74
Max number of wires s	imultaneously connectable		Nr.	2
Conductor section	•			
	AWG/Kcmil			
	7.17 6/1.611	max		2
	Flexible w/o lug conductor section	max		
	r lexible w/o lug corluctor section	min	mm²	1.5
			mm²	35
	Florible alvelue conductor costion	max	111111	30
	Flexible c/w lug conductor section			4.5
		min	mm²	1.5
		max	mm²	35
	tion according to IEC/EN 60529			IP20 front
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
				Screw / DIN rail
Fixing				35mm
Weight			g	1240
Conductor section			9	
Conductor occitors	AWG/kcmil conductor section			
	AVVO/ROTHII COTIQUOTOL SCOTION	mov		2
Operations		max		
•			e velee	45000000
Mechanical life			cycles	15000000
Electrical life			cycles	1500000
Safety related data				
Performance level B10	od according to EN/ISO 13489-1			
		rated load	cycles	1500000
		mechanical load	cycles	15000000
Mirror contats according	ng to IEC/EN 609474-4-1			yes
EMC compatibility	-			yes
AC coil operating				
Rated AC voltage at 60)Hz		V	120
AC operating voltage	v		•	·
, to operating voitage	of 60Hz coil powered at 60Hz			
	pick-up		0/11-	0.0
		min	%Us	80
		max	%Us	110
	drop-out		0/1:	
		min	%Us	20
_		max	%Us	55
AC average coil consu	imption at 20°C			
	of 60Hz coil powered at 60Hz			
		in-rush	VA	210
		holding	VA	15
Dissipation at holding :	≤20°C 50Hz		W	5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times			Jy 5105/11	
Average time for Us co	ontrol			

Closing NO

in AC



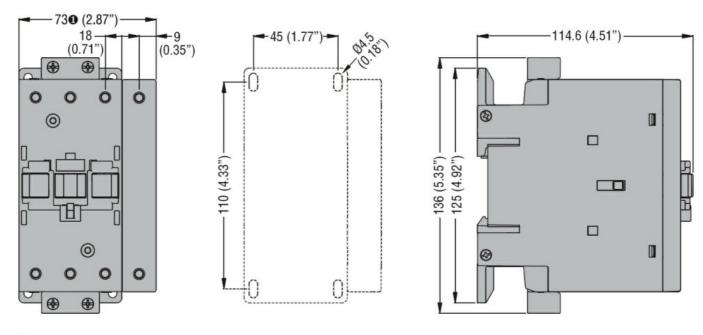


FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 70A, AC COIL 60HZ,

Max						
Opening NO						
Max			0 1 110	max	ms	28
Max attitude Max M			Opening NO			
In DC						
Closing NO				max	ms	
Min		in DC				
Opening NO			Closing NO			
Opening NO						
Max a min Max				max	ms	85
Value Contactor Contacto			Opening NO			
Ult technical data Full-load current (FLA) for three-phase AC motor						
Full-load current (FLA) for three-phase AC motor at 480V A 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 A 70 Short-circuit protection fuse, 600V High fault Short circuit current Fuse rating A 150 Fuse rating A 150 Fuse class J Standard fault Short circuit current Fuse rating A 150 Fuse class J Standard fault Short circuit current Fuse rating A 150 Fuse class J Standard fault Short circuit current Fuse rating A 150 Fuse class J Standard fault Short circuit current Fuse rating A 150 Fuse class J Standard fault Short circuit current Fuse rating A 150 Fuse class C 70 Storage temperature Operating temperature min °C -50 max °C 70 Storage temperature min °C -60 max °C -60				max	ms	55
A						
Yielded mechanical performance for single-phase AC motor 1110/120V HP 3 230V HP 7.5 for three-phase AC motor 200/208V HP 15 460/480V HP 30 575/600V HP 30 General USE Contactor AC current A 70 Short-circuit protection fuse, 600V High fault Short circuit current Fuse rating A 150 Fuse rating A 150 Fuse class J Standard fault Short circuit current Fuse class RK5 Ambient conditions Temperature A 150 Fuse class RK5 Ambient conditions Temperature min °C -50 **C -50 max °C -70 Storage temperature min °C -60 **C -60 max °C -60	Full-load current (FL	A) for three-phase	AC motor			
Yielded mechanical performance for single-phase AC motor 110/120V HP 3 230V HP 7.5 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td></t<>						
For single-phase AC motor 110/120V HP 3 230V HP 7.5				at 600V	Α	32
110/120V	Yielded mechanical	•				
Part		for single-phas	e AC motor			
For three-phase AC motor 200/208V				110/120V	HP	3
Contactor				230V	HP	7.5
Contactor		for three-phase	e AC motor			
A60/480V				200/208V	HP	10
S75/600V				220/230V	HP	15
Contactor				460/480V	HP	30
Contactor AC current A 70				575/600V	HP	30
AC current	General USE					
Short-circuit protection fuse, 600V High fault Short circuit current kA 100 Fuse rating A 150 Fuse class J Standard fault Short circuit current kA 5 Fuse rating A 150 Fuse rating A 150 Fuse rating A 150 Fuse rating A 150 Fuse class RK5		Contactor				
High fault				AC current	Α	70
Short circuit current Fuse rating Fuse rating Fuse class J Standard fault Short circuit current Fuse rating Fuse class J Standard fault Short circuit current Fuse rating Fuse rating Fuse rating Fuse class RK5 RK5 Fuse class RK5 RK5 Fuse rating Fuse class Fuse class Fuse class RK5 Fuse rating	Short-circuit protect	ion fuse, 600V				_
Fuse rating Fuse class		High fault				
Fuse class J		_		Short circuit current	kA	100
Standard fault				Fuse rating	Α	150
Short circuit current KA 5 Fuse rating Fuse class RK5				Fuse class		J
Short circuit current KA 5 Fuse rating Fuse class RK5		Standard fault				
Fuse rating Fuse class RK5				Short circuit current	kA	5
Fuse class RK5				Fuse rating	Α	150
Operating temperature						RK5
Operating temperature	Ambient conditions					
Operating temperature min %C -50 max %C 70 Storage temperature min %C -60 max %C 80 Max altitude m 3000 Resistance & Protection 3						
min max °C 70 Storage temperature min °C -60 max °C 80 Max altitude m 3000 Resistance & Protection 3	-	Operating temp	perature			
max °C 70 Storage temperature min °C -60 max °C 80 Max altitude m 3000 Resistance & Protection Pollution degree 3				min	°C	-50
Storage temperature min or company or c						
min max °C -60 max -60 max °C 80 Max altitude m 3000 Resistance & Protection 3 Pollution degree 3		Storage tempe	rature	·		
Max altitudemax°C80Resistance & Protectionm3000Pollution degree3		3 · · · · · · · · · · · · · · · · · · ·		min	°C	-60
Max altitude m 3000 Resistance & Protection Pollution degree 3						
Resistance & Protection Pollution degree 3	Max altitude					
Pollution degree 3		ction				
<u> </u>						3
	Dimensions					

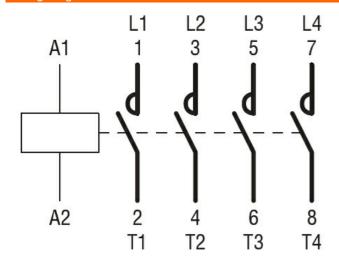
ENERGY AND AUTOMATION

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 70A, AC COIL 60HZ, 120VAC



① BF80T2 82mm/3.23"

Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching