

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 56A, DC COIL, 12VDC, 2NO AND 2NC



Number of poles Nr. 4	Product designation Product type designation			Power contactor BF38
Number of poles Nr. 4 Rated insulation voltage Ui IEC/EN V 690 Rated insulation voltage Withstand voltage Uimp kV 6 Operational frequency min Hz 25 max Hz 400 400 IEC Conventional free air thermal current lth A 56 56 Operational current le AC-1 (≤40°C) with 16mm² wire and fork end lugA 60 AC 45 AC-1 (≤40°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) with 16mm² wire and fork end lugA 48 AC-1 (≤55°C) with 16mm² wire and fork end lugA 48 AC-1 (≤55°C) with 16mm² wire and fork end lugA 48 AC-1 (≤55°C) with 16mm² wire and fork end lugA With 16m² wire and fork end lugA 48 AC-3 (≤4	1, 0			21 00
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 lth A 56 Operational current le AC-1 (≤40°C) with 16mm² wire and fork end lugA 60 AC-1 (≤40°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 42 AC-3 (≤440V ≤55°C) A 38 AC-4 (400V) A 15.5 Rated operational power AC-1 (T≤40°C) 230V kW 21 400V kW 36 30V 40V 45 Action (EC/EN60947-1) A 320			Nr.	4
Rated impulse withstand voltage Uimp			V	690
min Hz 25 max Hz 400 EC Conventional free air thermal current Ith A 56 Operational current Ie AC-1 (≤40°C) with 16mm² wire and fork end lugA 60 AC-1 (≤55°C) with 16mm² wire and fork end lugA 42 AC-1 (≤55°C) with 16mm² wire and fork end lugA 42 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-3 (≤440√ ≤55°C) A 38 AC-4 (400√) A 15.5 Rated operational power AC-1 (T≤40°C) 230√ kW 21 400√ kW 36 500√ kW 45 690√ kW 62 Short-time allowable current for 10s (IEC/EN60947-1) A 320 Protection fuse gG (IEC) A 63 aM (IEC) A 40 Making capacity (RMS value) A 380 Breaking capacity at voltage 440√ A 304 500√ A 240 690√ A 192 Resistance per pole (average value) mΩ 2 Power dissipation per pole (average value) mΩ 2 Power dissipation per pole (average value) mΩ 2 Tightening torque for terminals min Nm 0.8 Tightening torque for coil terminal min Nm 0.8 Tightening torque for coil terminal min Nm 0.8	Rated impulse withstand voltage Uimp		kV	6
Max Hz 400	Operational frequency			
IEC Conventional free air thermal current Ith Operational current Ie AC-1 (≤40°C) A 56		min	Hz	25
Operational current le AC-1 (≤40°C) with 16mm² wire and fork end lugA AC-1 (≤55°C) A 45 AC-1 (≤55°C) with 16mm² wire and fork end lugA AC-1 (≤55°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) A 40 AC-1 (≤70°C) With 16mm² wire and fork end lugA AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-3 (≤440V ≤55°C) A 38 AC-4 (400V) A 15.5 Rated operational power AC-1 (T≤40°C) 230V kW 21 A00V kW 36 500V kW 36 500V kW 45 690V kW 45 690V kW 45 690V kW 45 690V kW 45 62 Short-time allowable current for 10s (IEC/EN60947-1) A 320 A00 A00 A00 A00 A00 A00 A00 A00 A00 A		max	Hz	400
AC-1 (≤40°C) with 16mm² wire and fork end lugA AC-1 (≤55°C) with 16mm² wire and fork end lugA AC-1 (≤55°C) with 16mm² wire and fork end lugA AC-1 (≤55°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) A AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) A AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-3 (≤440V ≤55°C) AC-3 (≤440V ≤540V ≤54	IEC Conventional free air thermal current Ith		Α	56
AC-1 (≤40°C) with 16mm² wire and fork end lugA AC-1 (≤55°C) A 45 AC-1 (≤55°C) with 16mm² wire and fork end lugA AC-1 (≤55°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-3 (≤4400 ≤55°C) A 38 AC-4 (4000 √ A 15.5 A	Operational current le			
AC-1 (≤55°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-3 (≤440V ≤55°C) A 38 AC-4 (400V) A 15.5 AC-4 (400V) A 15.5 Rated operational power AC-1 (T≤40°C) 230V kW 21 400V kW 36 500V kW 45 690V kW 62 Short-time allowable current for 10s (IEC/EN60947-1) A 320 Protection fuse gG (IEC) A 63 aM (IEC) A 40 Making capacity (RMS value) A 380 Breaking capacity at voltage 440V A 304 500V A 240 690V A 192 Resistance per pole (average value) mΩ 2 Power dissipation per pole (average value) mΩ 2 Power dissipation per pole (average value) min Nm 2.5 max Nm 3 min 1bin 1.8 max 1bin 2.2 Tightening torque for coil terminal min Nm 0.8		AC-1 (≤40°C)	Α	56
AC-1 (≤55°C) with 16mm² wire and fork end ugA AC-1 (570°C) A 40 AC-1 (≤70°C) with 16mm² wire and fork end ugA 42 AC-3 (≤4400 ≤55°C) A 38 AC-4 (4000) A 15.5 Rated operational power AC-1 (T≤40°C) 230V kW 21 400V kW 36 500V kW 45 690V kW 62 Short-time allowable current for 10s (IEC/EN60947-1) A 320 Protection fuse gG (IEC) A 63 aM (IEC) A 40 Making capacity (RMS value) A 304 Breaking capacity at voltage 440V A 304 500V A 240 690V A 240 690V A 29 Resistance per pole (average value) Ith W 6 AC-3 W 2.9 Tightening torque for terminals min Nm 2.5 max Nm 3 min Ibin 1.8 max Ibin 2.2 Tightening torque for coil terminal min Nm 0.8		AC-1 (≤40°C) with 16mm² wire and fork end	lugA	60
AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-3 (≤440V ≤55°C) A 38 AC-4 (400V) A 15.5 Rated operational power AC-1 (T≤40°C) Rated operational power AC-1 (T≤40°C) 230V kW 21 400V kW 36 500V kW 62 50		AC-1 (≤55°C)	Α	45
AC-1 (≤70°C) with 16mm² wire and fork end lugA		AC-1 (≤55°C) with 16mm² wire and fork end	lugA	48
AC-3 (≤440V ≤55°C)		AC-1 (≤70°C)	Α	40
AC-4 (400V)		,	lugA	
Rated operational power AC-1 (T≤40°C) 230V kW 36 400V kW 36 500V kW 45 500V kW 62 Short-time allowable current for 10s (IEC/EN60947-1) A 320 Protection fuse gG (IEC) A 40 A 40 Making capacity (RMS value) A 380 Breaking capacity at voltage 440V A 304 500V A 240 690V A 192 Resistance per pole (average value) mΩ 2 Power dissipation per pole (average value) Ith W 6 AC-3 W 2.9 2.5 Tightening torque for terminals min Nm 2.5 max Nm 3 min Ibin 1.8 max Ibin 2.2 1.8 Tightening torque for coil terminal min Nm 0.8		,	Α	38
230V kW 21 400V kW 36 500V kW 45 690V kW 62		AC-4 (400V)	Α	15.5
A00V kW 36 500V kW 45 690V kW 62	Rated operational power AC-1 (T≤40°C)			
Short-time allowable current for 10s (IEC/EN60947-1)		230V	kW	21
Short-time allowable current for 10s (IEC/EN60947-1)				
Short-time allowable current for 10s (IEC/EN60947-1)			kW	
Protection fuse gG (IEC) A 63 aM (IEC) A 40 Making capacity (RMS value) A 380 Breaking capacity at voltage 440V A 304 500V A 240 690V A 192 Resistance per pole (average value) mΩ 2 Power dissipation per pole (average value) Ith W 6 AC-3 W 2.9 Tightening torque for terminals min Nm 2.5 max Nm 3 min Ibin 1.8 max Ibin 2.2 Tightening torque for coil terminal				
GG (IEC)	,	60947-1)	Α	320
A 40 Making capacity (RMS value)	Protection fuse			
Making capacity (RMS value) A 380 Breaking capacity at voltage 440V A 304 500V A 240 690V A 192 Resistance per pole (average value) mΩ 2 Power dissipation per pole (average value) Ith W 6 AC-3 W 2.9 Tightening torque for terminals min Nm 2.5 max Nm 3 min Ibin 1.8 max Ibin 2.2 Tightening torque for coil terminal min Nm 0.8		gG (IEC)	Α	
Breaking capacity at voltage		aM (IEC)		40
440V A 304 500V A 240 690V A 192 7 7 7 7 7 7 7 7 7	Making capacity (RMS value)		Α	380
Soov A 240 690V A 192	Breaking capacity at voltage			
Resistance per pole (average value) mΩ 2			Α	
Resistance per pole (average value) mΩ 2			Α	
Power dissipation per pole (average value) Ith W 6 AC-3 W 2.9 Tightening torque for terminals min Nm 2.5 max Nm 3 min Ibin 1.8 max Ibin 2.2 Tightening torque for coil terminal min Nm 0.8		690V		
Ith W 6 AC-3 W 2.9			mΩ	2
AC-3 W 2.9	Power dissipation per pole (average value)			
Tightening torque for terminals min Nm 2.5 max Nm 3 min Ibin 1.8 max Ibin 2.2 Tightening torque for coil terminal min Nm 0.8				
min Nm 2.5 max Nm 3 min Ibin 1.8 max Ibin 2.2 Tightening torque for coil terminal min Nm 0.8		AC-3	W	2.9
max Nm 3 min Ibin 1.8 max Ibin 2.2 Tightening torque for coil terminal min Nm 0.8	Tightening torque for terminals			
min Ibin 1.8 max Ibin 2.2 Tightening torque for coil terminal min Nm 0.8				
max Ibin 2.2 Tightening torque for coil terminal min Nm 0.8				
Tightening torque for coil terminal min Nm 0.8				
min Nm 0.8	-	max	lbin	2.2
	Tightening torque for coil terminal		_	
max Nm 1				
		max	Nm	1



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		min	lhin	0.0
		min nax	lbin Ibin	0.8 0.74
Max number of wires	simultaneously connectable	Іал	Nr.	2
Conductor section	simultaneously connectable		1 11.	
Conductor Coolien	AWG/Kcmil			
		nax		6
	Flexible w/o lug conductor section			
	_	min	mm²	2.5
	n	nax	mm²	16
	Flexible c/w lug conductor section			
	ı	min	mm²	1
		nax	mm²	10
	Flexible with insulated spade lug conductor section			
		min	mm²	1
	n	nax	mm²	10
Power terminal protect	tion according to IEC/EN 60529			IP20 when properly wired
Mechanical features				
Operating position				
	norr			Vertical plan
	allowa	ble		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	700
Conductor section				
	AWG/kcmil conductor section			
	n	nax		6
Operations				0000000
Mechanical life			cycles	20000000
Electrical life			cycles	1400000
Safety related data	0d according to EN/ISO 12490 1			
renormance level by	0d according to EN/ISO 13489-1 rated to	204	cycles	1400000
	mechanical lo		cycles	20000000
Mirror contats accordi	ng to IEC/EN 609474-4-1	Jau	Сусісз	YES
EMC compatibility	19 10 12 0/211 000 47 4 4 1			yes
DC coil operating				you
DC rated control voltage	ge		V	12
DC operating voltage	-			
, ,	pick-up			
	·	min	%Us	80
	n	nax	%Us	125
	drop-out			
	ı	min	%Us	10
		nax	%Us	40
Average coil consump				
	in-ru		W	5.4
	hold	ing	W	5.4
Max cycles frequency		3		2000
Mechanical operation		3	cycles/h	3600
				3600

in AC

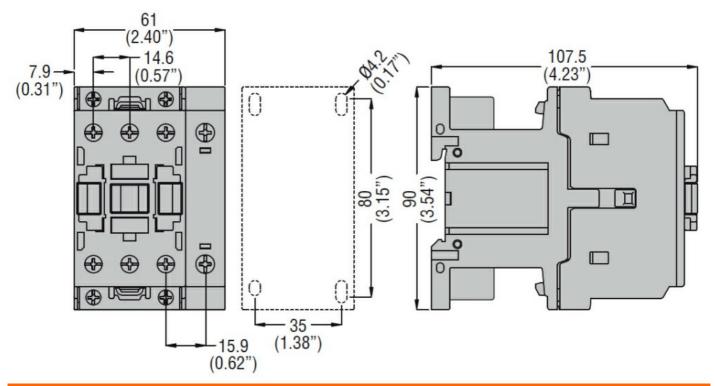


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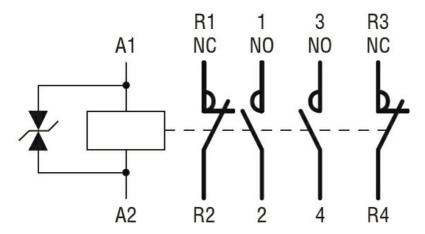
	Closing NO			
		min	ms	8
		max	ms	24
	Opening NO			
	1 3	min	ms	5
		max	ms	15
	Closing NC			
		min	ms	9
		max	ms	20
	Opening NC			
		min	ms	9
		max	ms	17
	in DC			
	Closing NO			
		min	ms	54
	On anima NO	max	ms	66
	Opening NO			4.4
		min	ms	14 17
	Closing NC	max	ms	17
	Closing NC	min	ms	23
		max	ms	28
	Opening NC	IIIdA	1113	20
	Opening NO	min	ms	46
		max	ms	56
UL technical data				
) for three-phase AC motor			
,	•	at 480V	Α	40
		at 600V	Α	32
Yielded mechanical pe	erformance			
	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		_	
Analis and an all the		AC current	Α	55
Ambient conditions				
Temperature	Operating temperature			
	Operating temperature	min	°C	-50
			°C	-50 70
	Storage temperature	max	<u> </u>	10
	Storage temperature	min	°C	-60
		max	°C	80
Max altitude		max	 	3000
Resistance & Protection	on			
Pollution degree				3
Dimensions				

ENERGY AND AUTOMATION

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 56A, DC COIL, 12VDC, 2NO AND 2NC



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

EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching