



FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 56A, AC COIL 60HZ, 460VAC, 2NO AND 2NC



Contact characteristics Number of poles Nr. 4 Rated insulation voltage Ui IEC/EN V 6 Operational frequency min Hz 25 max Hz 400 IEC Conventional frequency min Hz 25 IEC Conventional frequency min Hz 25 IEC Conventional frequency min Hz 25 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 (≤55°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 (≤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 (≤40°C) with 16mm² wire and fork end lugA 48 AC-3 (≤40V ≤55°C) with 16mm² wire and fork end lugA 48	Product designation			Power contactor
Number of poles	Product type designation			BF38
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 46 AC-1 (≤55°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) A 45 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 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-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-1 (≤10°C) with 16mm² wire and fork end lugA 42 AC-1 (≤10°C) with 16mm² wire and fork end lugA 42 AC-1 (≤10°C) with 16mm² wire and fork end lugA AC-1 (≤10°C) with 16mm² wire and fork end lugA AC-1 (≤10°C) with 16mm² wi			Nr	1
Rated impulse withstand voltage Ulimp				
Operational frequency				
Min			K V	0
Max	Operational frequency	min	Нz	25
EC Conventional free air thermal current Ith Operational current Ie AC-1 (≤40°C) A 56				
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 (≤70°C) A 40 AC-1 (≤70°C) A 40 AC-1 (≤70°C) A 40 AC-1 (≤70°C) A 40 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 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) lth W 6 AC-3 W 2.9 Tightening torque for terminals min Nm 2.5 max Nm 3 min 1bin 1.8 max 1bin 2.2 Tightening torque for coil terminal min Nm 0.8	IFC Conventional free air thermal current Ith	max		
AC-1 (≤40°C) with 16mm² wire and fork end lugA 60 AC-1 (≤55°C) with 16mm² wire and fork end lugA 45 AC-1 (≤55°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 AC-3 (≤440V ≤55°C)				
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) A 40 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 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) Breaking capacity at voltage 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 lbin 1.8 max Nm 3 min lbin 1.2 Tightening torque for coil terminal	Operational current to	AC-1 (<40°C)	Δ	56
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-1 (≤70°C) with 16mm² wire and fork end lugA AC-3 (≤440V ≤55°C) A AC-3 (≤440V ≤62°C) A		· · · · · · · · · · · · · · · · · · ·		
AC-1 (≤55°C) with 16mm² wire and fork end lugA AC-1 (≤70°C)		· · · · · · · · · · · · · · · · · · ·	_	
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 Rated operational power AC-1 (T≤40°C) 230V kW 21 400V kW 36 500V kW 45 500V kW 62 500V kW 62 Short-time allowable current for 10s (IEC/EN60947-1) A 320 Protection fuse gG (IEC) A 63 aM (IEC) A 40 A 380 Breaking 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) m 2 Power dissipation per pole (average value) min Nm 2.5 max Nm 3 min Ibin 1.8 min Ibin 1.8 1.8 min Ibin 1.8 2.2 Tightening torque for coil terminal min Nm 0.8		,		
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-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 192 Resistance per pole (average value) mΩ 2 Power dissipation per pole (average value) Tightening torque for terminals min Nm 2.5 max Nm 3 min lbin 1.8 max lbin 2.2 Tightening torque for coil terminal			_	
AC-3 (≤440V ≤55°C) A 38 AC-4 (400V) A 15.5				
AC-4 (400V)				
Rated operational power AC-1 (T≤40°C) 230V kW 21 400V kW 36 500V kW 45 690V 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 mΩ 2 Resistance per pole (average value) mΩ 2 Power dissipation per pole (average value) lth W 6 AC-3 W 2.9 Tightening torque for terminals min Nm 2.5 max Nm 3 min lbin 1.8 max 1bin 2.2 Tightening torque for coil terminal min Nm 0.8		,		
A 00V kW 36 500V kW 45 690V kW 62	Rated operational power AC-1 (T≤40°C)	,		
A 00V kW 36 500V kW 45 690V kW 62	,	230V	kW	21
Soov kW 45 690V kW 62				
Short-time allowable current for 10s (IEC/EN60947-1)		500V	kW	45
Protection fuse gG (IEC)		690V	kW	62
gG (IEC)	Short-time allowable current for 10s (IEC/EN	60947-1)	Α	320
A 40	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	63
Breaking capacity at voltage		aM (IEC)	Α	40
A40V A 304 500V A 240 690V A 192	Making capacity (RMS value)		Α	380
Soov A 240 690V A 192	Breaking capacity at voltage			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		440V	Α	304
Resistance per pole (average value) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		500V	Α	240
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	Α	192
Ith W 6 AC-3 W 2.9	Resistance per pole (average value)		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		Ith	W	6
min Nm 2.5 max Nm 3 min lbin 1.8 max lbin 2.2		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		min	Nm	2.5
Tightening torque for coil terminal max Ibin 2.2 min Nm 0.8		max	Nm	3
Tightening torque for coil terminal min Nm 0.8		min	lbin	1.8
min Nm 0.8		max	lbin	2.2
	Tightening torque for coil terminal			
max Nm 1		min	Nm	0.8
		max	Nm	1





FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 56A, AC COIL 60HZ, 460VAC, 2NO AND 2NC

			0.0
	min	lbin Ibin	0.8 0.74
Max number of wires	simultaneously connectable	Nr.	2
Conductor section	simultaneously connectable	I VII.	
	AWG/Kcmil		
	max		6
	Flexible w/o lug conductor section		
	min	mm²	2.5
	max	mm²	16
	Flexible c/w lug conductor section	2	
	min max	mm² mm²	1 10
	Flexible with insulated spade lug conductor section	111111	10
	min	mm²	1
	max	mm²	10
Dower terminal protec	etion according to IEC/EN 60520		IP20 when
	ction according to IEC/EN 60529		properly wired
Mechanical features			
Operating position			Mantia - L. I
	normal allowable		Vertical plan ±30°
	allowable		Screw / DIN rail
Fixing			35mm
Weight		g	522
Conductor section			
	AWG/kcmil conductor section		
	max		6
Operations			
Mechanical life		cycles	20000000
Electrical life Safety related data		cycles	1400000
•	l0d according to EN/ISO 13489-1		
T chomianoc level B1	rated load	cycles	1400000
	mechanical load	cycles	20000000
Mirror contats accord	ing to IEC/EN 609474-4-1		YES
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 6	30Hz	V	460
AC operating voltage			
	. (0011)		
	of 60Hz coil powered at 60Hz		
	pick-up	% le	80
	pick-up min	%Us %Us	80 110
	pick-up min max	%Us %Us	80 110
	pick-up min		
	pick-up min max drop-out min max	%Us	110
AC average coil cons	pick-up min max drop-out min max umption at 20°C	%Us %Us	110 20
AC average coil cons	pick-up min max drop-out min min max umption at 20°C of 60Hz coil powered at 60Hz	%Us %Us %Us	110 20 55
AC average coil cons	pick-up min max drop-out min max umption at 20°C of 60Hz coil powered at 60Hz in-rush	%Us %Us %Us	110 20 55 75
-	pick-up min max drop-out min max umption at 20°C of 60Hz coil powered at 60Hz in-rush holding	%Us %Us %Us VA VA	110 20 55 75 9
Dissipation at holding	pick-up min max drop-out min max umption at 20°C of 60Hz coil powered at 60Hz in-rush holding ≤20°C 50Hz	%Us %Us %Us	110 20 55 75
AC average coil cons Dissipation at holding Max cycles frequency Mechanical operation	pick-up min max drop-out min max umption at 20°C of 60Hz coil powered at 60Hz in-rush holding ≤20°C 50Hz	%Us %Us %Us VA VA	110 20 55 75 9 2.5



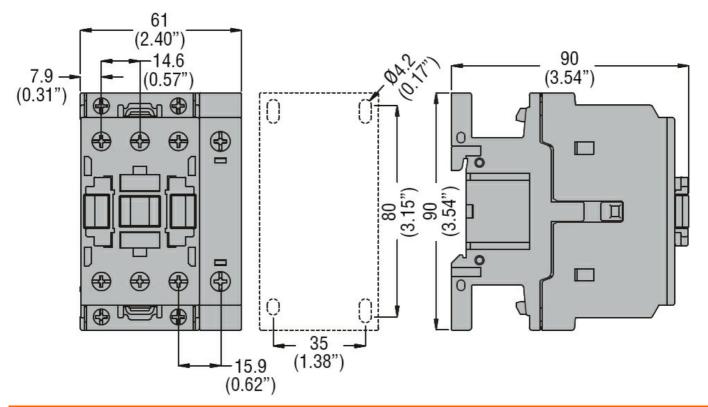


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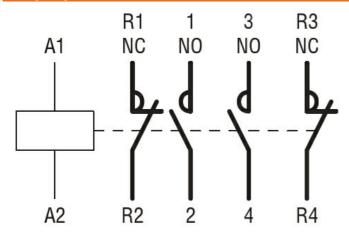
Average time for Us of	ontrol			
	in AC			
	Closing NC)		
		min	ms	8
		max	ms	24
	Opening No			
		min	ms	5
		max	ms	15
	Closing NC			
		min	ms	11
		max	ms	29
	Opening No			
		min	ms	6
		max	ms	14
UL technical data	\(\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
Full-load current (FLA) for three-phase AC motor			40
		at 480V	Α	40
		at 600V	Α	32
Yielded mechanical p				
	for single-phase AC motor			
		110/120V	HP	3
		230V	HP	7.5
	for three-phase AC motor	000/000/		4.0
		200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE				
	Contactor			
A 12 A 194		AC current	Α	55
Ambient conditions				
Temperature				
	Operating temperature		2.0	
		min	°C	-50
		max	°C	70
	Storage temperature	_		00
		min	°C	-60
B. A. 1656 1		max	°C	80
Max altitude			m	3000
Resistance & Protecti	on			
Pollution degree				3
Dimensions				

ENERGY AND AUTOMATION

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 56A, AC COIL 60HZ, 460VAC, 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