



Product designation				
Contact characteristics Number of poles Nr. 3 Rated insulation voltage Ui IEC/EN V 1000 Rated impulse withstand voltage Uimp kV 8 Operational frequency min Hz 25 max Hz 400 IEC Conventional free air thermal current Ith A 70 Operational current Ie AC-1 (≤40°C) A 60 AC-1 (≤55°C) A 60 AC-1 (≤55°C) A 50 AC-1 (≤70°C) A 50 AC-1 (≤70°C) A 50 AC-3 (5440V ≤55°C) A 40 AC-4 (4000V) A 24 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400	Product designation			Power contactor
Number of poles Nr. 3 Rated insulation voltage Ui IEC/EN V 1000 Rated insulation voltage Uimp kV 8 Operational frequency min Hz 25 max Hz 400 400 IEC Conventional free air thermal current lth A 70 70 Operational current le AC-1 (≤40°C) A 60 AC-1 (≤55°C) A 60 AC-1 (≤70°C) A 50 AC-3 (≤400°V) A 24 AC-4 (400°V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 22 440V kW 22 500V kW 22 690V kW 22 690V kW 30 1000V kW 30 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40	Product type designation			BF40
Rated insulation voltage Ui IEC/EN Rated impulse withstand voltage Uimp Rated Operational frequency Rin Hz 25 max Hz 400 RAC-1 (≤40°C) A 70 RAC-1 (≤55°C) A 60 AC-1 (≤55°C) A 50 AC-1 (≤70°C) A 50 AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) Rated operational power AC-3 (T≤55°C) Rated operational current AC-3 (T≤55°C) Rated operational power AC-1 (T≤40°C) Rate	Contact characteristics			
Rated impulse withstand voltage Ulimp 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 (55°C) A 50 AC-1 (55°C) A 50 AC-3 (≤440∨ ≤55°C) A 40 AC-4 (400∨) A 24 Rated operational power AC-3 (T≤55°C) Rated operational power AC-3 (T≤55°C) Rated operational current AC-3 (T≤40°C) Rated operational power AC-1 (T≤40°C) Rated operational power AC-3 (T≤55°C) Rated operational power AC-3	Number of poles		Nr.	3
Operational frequency min max hz do Hz do 20 do IEC Conventional free air thermal current lth A 70 70 Operational current le AC-1 (\$40°C) A 70 AC-1 (\$55°C) A 60 AC-1 (\$55°C) A 40 AC-3 (\$4400 ×55°C) A 40 AC-3 (\$4400 ×55°C) A 40 AC-4 (4000) A 24 AC-3 (\$4400 × 55°C) A 40 AC-4 (4000) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 A000 kW 18.5 A15V kW 22 A40V kW 30 A40V kW 46 A40V kW 40 A40V kW 46 A40V kW 40 A40V kW 46 A40V kW 40 A40V kW 46 A40V kW 40 A40V kW 46 A40V kW 40	Rated insulation voltage Ui IEC/EN		V	1000
Min Hz 25 max Hz 400 EC Conventional free air thermal current lth	Rated impulse withstand voltage Uimp		kV	8
EC Conventional free air thermal current lth	Operational frequency			
EC Conventional free air thermal current lth		min	Hz	25
Operational current le AC-1 (≤40°C) A 70 AC-1 (≤55°C) A 60 AC-1 (≤55°C) A 50 AC-1 (≤55°C) A 40 AC-1 (≤50°C) A 20 AC-1 (≤50°C) A 40 AC-1 (≤40°C) A 24 AC-1 (≤40°C) AC-1		max	Hz	400
AC-1 (≤40°C) A 70 AC-1 (≤55°C) A 60 AC-1 (≤70°C) A 50 AC-1 (≤70°C) A 40 AC-3 (≤440V ≤55°C) A 40 AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V kW 18.5 415V A 40 440V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 440V A 40 415V A 40 4415V A 40 4415V A 40 500V A 33 690V 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	IEC Conventional free air thermal current Ith		Α	70
AC-1 (≤55°C) A 60 AC-1 (≤70°C) A 50 AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 400V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 440V A 40 500V A 33 690V A 32 1000V A 31 Rated operational power AC-1 (T≤40°C) 230V A 40 440V A 40 500V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 440V 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 -	Operational current le			
AC-1 (≤55°C) A 60 AC-1 (≤70°C) A 50 AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 400V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 440V A 40 500V A 33 690V A 32 1000V A 31 Rated operational power AC-1 (T≤40°C) 230V A 40 440V A 40 500V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 440V 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 -		AC-1 (≤40°C)	Α	70
AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 415V A 40 440V A 40 500V A 32 500V 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		•	Α	60
AC-3 (≤440V ≤55°C) A 40 AC-4 (400V) A 24 Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 415V A 40 440V A 40 500V A 32 500V 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		•	Α	50
Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 415V A 40 415V A 40 415V A 40 440V A 40 500V A 33 690V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 400V 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			Α	
Rated operational power AC-3 (T≤55°C) 230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 30 1000V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 415V A 40 415V A 40 500V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 46 500V kW 58 690V kW 79 IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series \$\frac{\\$\cupe{2}\\$2\\$4\\$4\\$4\\$4\\$4\\$4\\$4\\$4\\$4\\$4\\$4\\$4\\$4\				24
230V kW 11 400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 30 1000V kW 18.5 8 1000V kW 40 415V kW 40 440V kW 46 500V kW 58 690V kW 79 8 1000V kW 58 690V kW 79 1000V kW 58 690V kW 79 1000V 8 1000V 1000V 1000V 1000V 1000V 1000V 1000V 1000V 1000V	Rated operational power AC-3 (T≤55°C)	,		
400V kW 18.5 415V kW 22 440V kW 22 500V kW 30 1000V kW 30 1000V kW 30 1000V kW 18.5 Rated operational current AC-3 (T≤55°C) 230V A 40 440V A 40 415V A 40 440V A 40 440V A 33 690V 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		230V	kW	11
415V kW 22 440V kW 22 500V kW 22 500V kW 30 1000V kW 30 1000V kW 18.5		400V	kW	
A40V kW 22			kW	
690V kW 30 1000V kW 18.5		440V	kW	
690V kW 30 1000V kW 18.5		500V	kW	22
Rated operational current AC-3 (T≤55°C) 230V A 40 400V A 40 415V A 40 440V A 40 500V A 33 690V A 32 1000V A 21 Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 58 690V 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 -		690V	kW	30
230V		1000V	kW	18.5
230V	Rated operational current AC-3 (T≤55°C)			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		230V	Α	40
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		400V	Α	40
S00V A 33 690V A 32 1000V A 21		415V	Α	40
Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 79		440V	Α	40
Rated operational power AC-1 (T≤40°C) 230V kW 26 400V kW 46 500V kW 58 690V kW 79		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		690V	Α	32
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		1000V	Α	21
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Rated operational power AC-1 (T≤40°C)			
	, , ,	230V	kW	26
EC max current le in DC1 with L/R \leq 1ms with 1 poles in series \leq 24V A 40 48V A 35 75V A 30 110V A 8 220V A -				
EC max current le in DC1 with L/R \leq 1ms with 1 poles in series \leq 24V A 40 48V A 35 75V A 30 110V A 8 220V A -		500V	kW	58
		690V	kW	
	IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	·	≤24V	Α	40
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$				
220V A − IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series				
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series				_
	IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	•	≤24V	Α	48



	48V	Α	48
	75V	Α	45
	110V	Α	42
	220V	Α	5
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		,,	
120 max current to in 201 with 2/102 miles with 5 poics in series	≤24V	Α	48
	≥24 V 48 V		
		A	48
	75V	Α	48
	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	A	23
	75V	A	19
	75V 110V	A	
			3
150	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			
· ·	≤24V	Α	40
	48V	Α	40
	75V	Α	38
	110V	A	27
	220V	A	32
IFC many asymmetric in DC2 DC5 with L/D < 45 man with A nales in agriculture.	220 V		32
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	40.41.4		
	≤24V	A	_
	48V	Α	_
	75V	Α	_
	110V	Α	_
	220V	Α	40
Short-time allowable current for 10s (IEC/EN60947-1)		Α	400
Protection fuse			
	gG (IEC)	Α	100
	aM (IEC)	Α	50
Making capacity (RMS value)	\ -/	Α	400
Breaking capacity at voltage		,,	
breaking capacity at voltage	440V	۸	320
		A	
	500V	A	265
	690V	A	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			

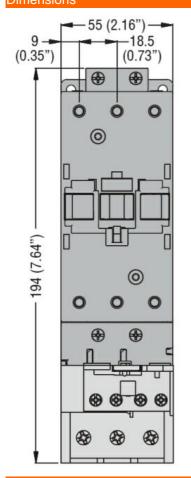


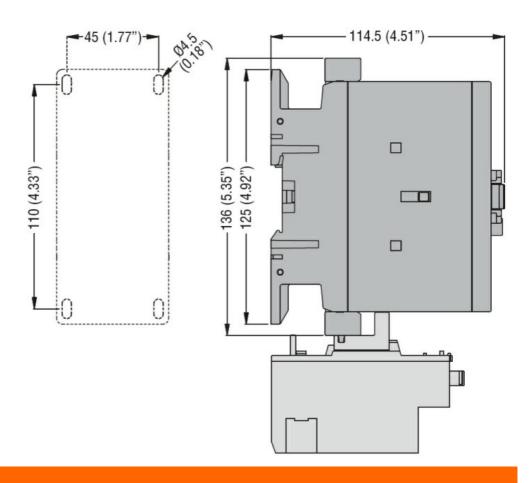
		min	Nm	4
		max	Nm	5
		min	lbin	2.95
		max	lbin	3.69
Tightening torque for	coil terminal			
		min	Nm	0.8
		max	Nm	1
		min	lbin	0.8
		max	lbin	0.74
Max number of wires	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			
		max		2
	Flexible w/o lug conductor section			
		min	mm²	1.5
		max	mm²	35
	Flexible c/w lug conductor section	max		
	TONIDIO OF WIND CONTROLOT SECTION	min	mm²	1.5
		max	mm²	35
Power terminal protec	otion apparding to IEC/EN 60520	IIIax	111111	IP20 front
	ction according to IEC/EN 60529			IP20 IIONI
Mechanical features				
Operating position		1		Madhalas
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN ra
				35mm
Veight			g	1060
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1500000
Safety related data				
Performance level B1	10d according to EN/ISO 13489-1			
		rated load	cycles	1500000
		mechanical load	cycles	15000000
		moonamoan load	Cyclcs	1300000
MC compatibility		modiamodi ioda	Cycles	yes
		mosnamoar load	oyolo3	
AC coil operating	50/60Hz, 60Hz	mosnamoarioaa	dydica	
AC coil operating	50/60Hz, 60Hz			yes
AC coil operating	50/60Hz, 60Hz	min	V	yes 100
AC coil operating Rated AC voltage at 5				yes
AC coil operating Rated AC voltage at 5		min	V	yes 100
AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz	min	V	yes 100
AC coil operating Rated AC voltage at 5		min max	V	yes 100 250
AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz	min max min	V V	yes 100 250 80 Us min
AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up	min max	V	yes 100 250
C coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz	min max min max	V V WUs %Us	100 250 80 Us min 110 Us max
AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up drop-out	min max min	V V	yes 100 250 80 Us min
AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	min max min max	V V WUs %Us	90 Us min 110 Us max
AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up drop-out	min max min max max	V V WUs %Us	yes 100 250 80 Us min 110 Us max ≤70 Us min
AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	min max min max	V V V %Us %Us	yes 100 250 80 Us min 110 Us max ≤70 Us min 80 Us min
AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz pick-up	min max min max max	V V WUs %Us	yes 100 250 80 Us min 110 Us max ≤70 Us min
EMC compatibility AC coil operating Rated AC voltage at 5 AC operating voltage	of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	min max min max max	V V V %Us %Us	yes 100 250 80 Us min 110 Us max ≤70 Us min 80 Us min



	of 50/60Hz coil a	powered at 50Hz			
	01 00/001 12 0011	50W6164 41 001 12	in-rush	VA	35120
			holding	VA	1.53.7
	of 50/60Hz coil a	powered at 60Hz	9		
	0. 00,00.12 00.1	50 W 51 50 41 50 11 12	in-rush	VA	35120
			holding	VA	1.53.7
Dissipation at holding :	≤20°C 50Hz			W	12.5
DC coil operating					
DC rated control voltage	ne				
	5 -		min	V	100
			max	V	250
DC operating voltage				-	
	pick-up				
	process		min	%Us	80 Us min
			max	%Us	110 Us max
	drop-out			,,,,,	
	op		max	%Us	≤70 Us min
Average coil consump	tion ≤20°C		max		
	_v		in-rush	W	2368
			holding	W	1.21,9
Max cycles frequency					,•
Mechanical operation				cycles/h	1500
Operating times				0,0100/11	1000
Average time for Us co	ontrol				
The age and the good	in AC				
	,	Closing NO			
		G.00g . 10	min	ms	12
			max	ms	28
		Opening NO			
		1 0	min	ms	8
			max	ms	22
	in DC				
		Closing NO			
		ŭ	min	ms	40
			max	ms	85
		Opening NO			
			min	ms	20
			max	ms	55
UL technical data					
Rated operational volta	age AC (UL)			V	600
Full-load current (FLA)	for three-phase A	C 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				
					

		AC current	Α	70
Short-circuit protect	ion fuse, 600V			
•	High fault			
	Ğ	Short circuit current	kA	100
		Fuse rating	Α	150
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	150
		Fuse class		RK5
Ambient conditions				
Temperature				
	Operating temperature			
	, , ,	min	°C	-40
		max	°C	70
	Storage temperature			
		min	°C	-50
		max	°C	80
Max altitude			m	3000
Resistance & Prote	ction			
Pollution degree				3
Dimensions				

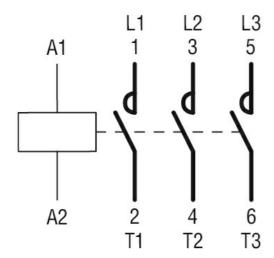




Wiring diagrams

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 40A, AC/DC COIL, 100...250VAC/DC



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