

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 50A, AC COIL 50/60HZ, 24VAC



Product designation			Power contactor
Product type designation			BF50
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency			
operational moduloney	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith	max	A	90
Operational current le			30
Operational current le	AC-1 (≤40°C)	Α	90
	· · · · · · · · · · · · · · · · · · ·		
	AC-1 (≤55°C)	A	75 65
Λ.	AC-1 (≤70°C)	A	65
A	C-3 (≤440V ≤55°C)	A	50
D. I. I	AC-4 (400V)	Α	28
Rated operational power AC-3 (T≤55°C)			
	230V	kW	11
	400V	kW	22
	415V	kW	22
	440V	kW	22
	500V	kW	22
	690V	kW	30
	1000V	kW	22
Rated operational current AC-3 (T≤55°C)			
	230V	Α	50
	400V	Α	50
	415V	Α	50
	440V	Α	50
	500V	Α	44
	690V	Α	39
	1000V	Α	23
Rated operational power AC-1 (T≤40°C)			
	230V	kW	34
	400V	kW	59
	500V	kW	74
	690V	kW	102
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series			
·	≤24V	Α	45
	48V	Α	40
	75V	Α	40
	110V	Α	8
	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	Α	60
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	48V	Α	60
	75V	Α	60
	110V	Α	50
	220V	Α	7
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			_
· ·	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	55
	220V	Α	75
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			_
'	≤24V	Α	60
	48V	Α	60
	75V	Α	60
	110V	Α	60
	220V	Α	90
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
TEO Max cancilla in Boo Boo Mar Erra Tomo Mar 1 poloc in conco	≤24V	Α	30
	48V	A	25
	75V	A	22
	110V	A	3
	220V	A	- -
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	220 V		
TEC max current le in DC3-DC3 with L/N = 13ms with 2 poles in series	≤24V	۸	25
	≥24V 48V	A	35
		A	35
	75V	A	30
	110V	A	25
IFO	220V	Α	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	10.41.7		50
	≤24V	A	50
	48V	A	50
	75V	A	45
	110V	A	30
150	220V	Α	40
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series		_	
	≤24V	Α	55
	48V	Α	55
	75V	Α	55
	110V	Α	45
	220V	A	50
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	500
Breaking capacity at voltage			
	440V	Α	400
	500V	Α	352
	690V	Α	312
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)			
· · · · · · · · · · · · · · · · · · ·	Ith	W	6.5
	AC-3	W	2
Tightening torque for terminals			



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		min	Nm	4
		max	Nm	5
		min	Ibin	2.95
		max	Ibin	3.69
Tightening torque for o	coil terminal			
		min	Nm	0.8
		max	Nm	1
		min	Ibin	0.8
		max	Ibin	0.74
Max number of wires s	simultaneously connectable		Nr.	2
Conductor section	·			
	AWG/Kcmil			
		max		2
	Flexible w/o lug conductor section			
	Tioxibio Wo lag conductor cocton	min	mm²	1.5
		max	mm²	35
	Flexible c/w lug conductor section	Παλ	111111	
	Flexible C/W lug colludctor section	min	mm²	1.5
		min		35
Dawer tarminal protect	tion according to IFC/FN C0F20	max	mm²	
	tion according to IEC/EN 60529			IP20 front
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail
				35mm
Weight			g	1020
^ 1 (''				
Conductor section				
Conductor section	AWG/kcmil conductor section			
Conductor section	AWG/kcmil conductor section	max		2
Operations	AWG/kcmil conductor section	max		2
	AWG/kcmil conductor section	max	cycles	15000000
Operations	AWG/kcmil conductor section	max		
Operations Mechanical life Electrical life	AWG/kcmil conductor section	max	cycles cycles	15000000
Operations Mechanical life Electrical life Safety related data		max		15000000
Operations Mechanical life Electrical life Safety related data	AWG/kcmil conductor section Od according to EN/ISO 13489-1		cycles	15000000 1400000
Operations Mechanical life Electrical life Safety related data		rated load	cycles	15000000 1400000 1400000
Operations Mechanical life Electrical life Safety related data Performance level B10	0d according to EN/ISO 13489-1		cycles	15000000 1400000 1400000 15000000
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according		rated load	cycles	15000000 1400000 1400000 15000000 yes
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility	0d according to EN/ISO 13489-1	rated load	cycles	15000000 1400000 1400000 15000000
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats accordin EMC compatibility AC coil operating	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1	rated load	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats accordin EMC compatibility AC coil operating Rated AC voltage at 5	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1	rated load	cycles	15000000 1400000 1400000 15000000 yes
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats accordin EMC compatibility AC coil operating	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz	rated load	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats accordin EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz of 50/60Hz coil powered at 50Hz	rated load	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats accordin EMC compatibility AC coil operating Rated AC voltage at 5	0d according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz	rated load mechanical load	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats accordin EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz of 50/60Hz coil powered at 50Hz	rated load mechanical load min	cycles cycles cycles	15000000 1400000 1400000 150000000 yes yes 24
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats accordin EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz of 50/60Hz coil powered at 50Hz pick-up	rated load mechanical load	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats accordin EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz of 50/60Hz coil powered at 50Hz	rated load mechanical load min max	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes 24
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats accordin EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz of 50/60Hz coil powered at 50Hz pick-up	rated load mechanical load min	cycles cycles cycles V %Us %Us %Us	15000000 1400000 1400000 15000000 yes yes 24
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats accordin EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz of 50/60Hz coil powered at 50Hz pick-up	rated load mechanical load min max	cycles cycles cycles	15000000 1400000 1400000 15000000 yes yes 24
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats accordin EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz of 50/60Hz coil powered at 50Hz pick-up	rated load mechanical load min max min	cycles cycles cycles V %Us %Us %Us	15000000 1400000 1400000 15000000 yes yes 24
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats according EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 0/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out	rated load mechanical load min max min	cycles cycles cycles V %Us %Us %Us	15000000 1400000 1400000 15000000 yes yes 24
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats accordin EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 O/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	rated load mechanical load min max min	cycles cycles cycles V %Us %Us %Us	15000000 1400000 1400000 15000000 yes yes 24
Operations Mechanical life Electrical life Safety related data Performance level B10 Mirror contats accordin EMC compatibility AC coil operating Rated AC voltage at 5	Od according to EN/ISO 13489-1 ng to IEC/EN 609474-4-1 O/60Hz of 50/60Hz coil powered at 50Hz pick-up drop-out of 50/60Hz coil powered at 60Hz	rated load mechanical load min max min max	cycles cycles cycles V %Us %Us %Us %Us %Us	15000000 1400000 1400000 15000000 yes yes 24 80 110 20 55



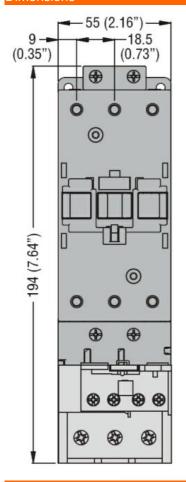
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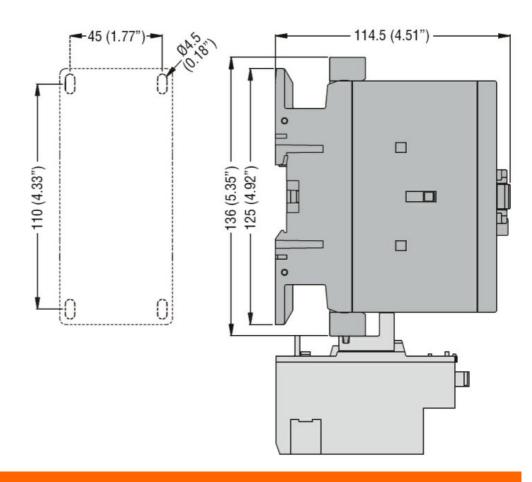
	drop-out			
	2.21	min	%Us	40
		max	%Us	55
AC average coil consur	mption at 20°C			
	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	210
		holding	VA	15
	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	195
		holding	VA	13
	of 60Hz coil powered at 60Hz			
		in-rush	VA	210
	2000 5011	holding	VA	15
Dissipation at holding ≤	20°C 50Hz		W	5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us co				
	in AC			
	Closing NO		mc	12
		min	ms	28
	Opening NO	max	ms	20
	Opening NO	min	ms	8
		max	ms	22
	in DC	Παλ	1113	
	Closing NO			
	Closhing 140	min	ms	40
		max	ms	85
	Opening NO			
	- 1 - 3 -	min	ms	20
		max	ms	55
UL technical data				
Full-load current (FLA)	for three-phase AC motor			
		at 480V	Α	52
		at 600V	Α	41
Yielded mechanical per	formance			
	for single-phase AC motor			
		110/120V	HP	5
		230V	HP	10
	for three-phase AC motor			
		200/208V	HP	15
		220/230V	HP	20
		460/480V	HP	40
0		575/600V	HP	40
General USE	O. Marta			
	Contactor	A C	۸	00
Chart aireadt aretestic	func 600V	AC current	Α	90
Short-circuit protection				
	High fault	Chart aireailt ac ar	I. A	100
		Short circuit current	kA A	100
		Fuse rating Fuse class	A	150 J
	Standard fault	Fuse Class		J
	Statiualu lault			



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	Short circuit current Fuse rating Fuse class	kA A	5 150 RK5
Ambient conditions			
Temperature			
Operating temperature			
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions			

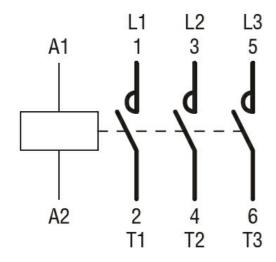




Wiring diagrams

ENERGY AND AUTOMATION

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 50A, 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

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching