FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 160A, AC/DC COIL,



Product designation Power contactor
Product type designation BF150

Product type designation			BF150
Contact characteristics			
Number of poles		Nr.	4
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		Α	165
Operational current le			
	AC-1 (≤40°C)	Α	165
	AC-1 (≤55°C)	Α	135
	AC-1 (≤70°C)	Α	118
	AC-3 (≤440V ≤55°C)	Α	150
	AC-4 (400V)	Α	70
Rated operational current AC-3 (T≤55°C)			
	230V	Α	150
	400V	Α	150
	415V	Α	150
	440V	Α	150
	500V	Α	128
	690V	Α	113
	1000V	A	51
Rated operational power AC-1 (T≤40°C)			
	230V	kW	62
	400V	kW	110
	500V	kW	136
	690V	kW	187
IEC max current le in DC1 with L/R ≤ 1ms with 1 poles in series		_	
	≤24V	Α	165
	48V	Α	165
	75V	Α	150
	110V	A	10
IFO	220V	A	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series	40 AV /		405
	≤24V	Α	165
	48V	Α	165
	75V	Α	165
	110V	A	150
150 (1.1. DO4. 11.1.75 : 14	220V	Α	14
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series			
	≤24V	Α	165
	48V	Α	165
	75V	Α	165



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	110V	Α	160
	220V	Α	150
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	165
	48V	Α	165
	75V	Α	165
	110V	Α	165
	220V	Α	165
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	165
	48V	Α	60
	75V	Α	44
	110V	Α	6
·	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	165
	48V	Α	82
	75V	Α	70
	110V	Α	80
·	220V	Α	7
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	165
	48V	Α	195
	75V	Α	110
	110V	Α	120
	220V	Α	120
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series		_	
	≤24V	Α	165
	48V	Α	130
	75V	Α	130
	110V	Α	150
01 4 5 40 (150/51000474)	220V	Α	150
Short-time allowable current for 10s (IEC/EN60947-1)		Α	1200
Protection fuse	0 (150)		050
	gG (IEC)	A	250
Making and its (DMC calca)	aM (IEC)	A	160
Making capacity (RMS value)		Α	1500
Breaking capacity at voltage	4.4017	Λ	4000
	440V	A	1200
	500V	A	1025
Decistance nor role (everence value)	690V	Α	905
Resistance per pole (average value)		mΩ	0.45
Power dissipation per pole (average value)	1.0	147	40
	Ith	W	12
Timber in a town of few town in all	AC-3	W	10.1
Tightening torque for terminals		N I	0
	min	Nm	6
	max	Nm	7
	min	Ibin	35.4
Tightoning torque for soil to make al	max	Ibin	44.3
Tightening torque for coil terminal		N.J	0.0
	min	Nm	0.8
	max	Nm	1



FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 160A, AC/DC COIL,

Max number of wires simultaneously connectable Nic 2			min	lbin	0.59
Max number of wires simultaneously connectable Nr. 2 Conductor section AWG/Kcmil max 2/0 Flexible w/o lug conductor section min mm² 7.0 Flexible c/w lug conductor section min mm² 7.0 Power terminal protection according to IEC/EN 60529 mormal mm² 7.0 Mechanical features poperating position promal allowable 2.30° Screw / DIN rail 35mm Fixing normal allowable 2.30° Screw / DIN rail 35mm					
AWG/Komil	Max number of wires	simultaneously connectable			
Flexible w/o lug conductor section		,			
Flexible w/o lug conductor section min max mm² 1.5 max mm² 70		AWG/Kcmil			
Performance level B10d according to EN/ISO 13489-1 Performance level B10d accord			max		2/0
Plexible c/w lug conductor section min max min max min max min		Flexible w/o lug conductor section			
Flexible c/w lug conductor section			min	mm²	
Minitary			max	mm²	70
Power terminal protection according to IEC/EN 60529		Flexible c/w lug conductor section			
Power terminal protection according to IEC/EN 60529 IP20 front Mechanical features IP20 front Mechanical features IP20 front IP20 fron					
Mechanical features	Danisa tamainal anata	tion according to IEO/EN 00500	max	mm²	
Operating position normal allowable Vertical plan allowable Fixing Screw / DIN rail 35mm Weight g 2 2460 Operations Cycles 15000000 Electrical life cycles 800000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load mechanical load cycles 800000 EMC compatibility 8000000 AC coil operating 800000 Rated AC voltage at 50/60Hz, 60Hz 800000 Properating voltage \$5 Us min max \$Us \$5 Us min max AC operating voltage \$6 Us min max \$Us \$5 Us min max drop-out \$6 Us min max \$Us \$5 Us		ction according to IEC/EN 60529			IP20 front
Note					
Fixing Screw / DIN rail 35mm Screw / DIN rail 35mm Weight Weight Screw / DIN rail 35mm Weight Wei	Operating position		normal		Vertical plan
Screw / DIN rail 35mm DIN rail 35m					
Fixing 9 2460 Operations			allowable		
Weight g 2460 Operations Mechanical life cycles 15000000 Electrical life cycles 800000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load mechanical load cycles 800000 EMC compatibility yes AC coil operating west 15000000 EMC compatibility yes AC coll operating west yes AC coll operating west yes AC operating voltage min V 20 AC operating voltage min %Us 85 Us min max %Us \$110 Us max drop-out max %Us \$70 Us min AC operating voltage Min %Us \$5 Us min Min %Us \$5 Us min Min %Us \$70 Us min AC operating voltage Min %Us \$5 Us min	Fixing				
Operations Mechanical life cycles 15000000 Electrical life cycles 800000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load cycles doubled 800000 EMC compatibility yes AC coil operating Rated AC voltage at 50/60Hz, 60Hz AC operating voltage	Weight			g	2460
Electrical life					
Performance level B10d according to EN/ISO 13489-1 rated load mechanical load cycles 800000 mechanical load cycles 15000000	Mechanical life			cycles	15000000
Performance level B10d according to EN/ISO 13489-1 rated load mechanical load ocycles 800000 mechanical load ocycles 8000000 mechanical load ocycles 80000000 mechanical load ocycles 80000000 mechanical load ocycles 8000000 mechanical load ocycles 8000000 mechanical load ocycles 80000000 mechanical load ocycles 8000000 mechanical load ocycles 8000000 mechanical load ocycles 80000000 mechanical load ocycles 80000000 mechanical load ocycles 80000000 mechanical load ocycles 80000000000000 mechanical load ocycles 8000000000000000000000000000000000000	Electrical life			cycles	800000
Rated load Roycles S00000 Note Not	-				
EMC compatibility yes AC coil operating Rated AC voltage at 50/60Hz, 60Hz Min V 20 Max V 48 AC operating voltage of 50/60Hz coil powered at 50Hz pick-up min max min pick-up min max min max min max min max min max min max min max max min max max min max max max max	Performance level B1	0d according to EN/ISO 13489-1			
EMC compatibility yes AC coil operating Rated AC voltage at 50/60Hz, 60Hz min V 20 max V 48 AC operating voltage of 50/60Hz coil powered at 50Hz pick-up min max %Us 110 Us max drop-out max %Us 110 Us max of 50/60Hz coil powered at 60Hz pick-up min max %Us 110 Us max of 50/60Hz coil powered at 60Hz pick-up AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz of 50/60Hz coil powered at 60Hz in-rush VA 70175 holding VA 1.73.5 of 60Hz coil powered at 60Hz in-rush VA 70175 holding VA 70175 holding VA 70175 holding VA 1.73.5 of 60Hz coil powered at 60Hz in-rush VA 70175 holding VA 1.73.5 of 60Hz coil powered at 60Hz in-rush VA 70175 holding VA 1.73.5 of 60Hz coil powered at 60Hz in-rush VA 70175 holding VA 1.73.5 of 60Hz coil powered at 60Hz in-rush VA 70175 holding VA 1.73.5				-	
AC coil operating Rated AC voltage at 50/60Hz, 60Hz min V 20 max V 48			mechanical load	cycles	15000000
Rated AC voltage at 50/60Hz, 60Hz	EMC compatibility				VAC
Min V 20 max V 48					усо
AC operating voltage of 50/60Hz coil powered at 50Hz pick-up min %Us 85 Us min max %Us 110 Us max drop-out max %Us ≤70 Us min of 50/60Hz coil powered at 60Hz pick-up min %Us 85 Us min max %Us ≤70 Us min max %Us 110 Us max drop-out max %Us \$5 Us min max %Us 110 Us max drop-out max %Us ≤70 Us min AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 70175 holding VA 1.73.5 of 60Hz coil powered at 60Hz in-rush VA 70175 holding VA 1.73.5	AC coil operating	CO/0011 0011			yes
AC operating voltage of 50/60Hz coil powered at 50Hz pick-up min %Us 85 Us min max %Us ≤70 Us min of 50/60Hz coil powered at 60Hz pick-up min %Us 85 Us min max %Us ≤70 Us min of 50/60Hz coil powered at 60Hz pick-up min max %Us 85 Us min max %Us 85 Us min max %Us 110 Us max drop-out max %Us ≤70 Us min AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush vA 70175 holding vA 1.73.5 of 60Hz coil powered at 60Hz in-rush vA 70175 holding vA 1.73.5	AC coil operating	50/60Hz, 60Hz		V	
of 50/60Hz coil powered at 50Hz pick-up min	AC coil operating	50/60Hz, 60Hz			20
Pick-up min %Us 85 Us min max %Us 110 Us max	AC coil operating Rated AC voltage at 5	50/60Hz, 60Hz			20
min max %Us 110 Us max	AC coil operating Rated AC voltage at 5				20
Max Mus 110 Us max	AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz			20
drop-out max %Us ≤70 Us min	AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz	max	V	20 48
max %Us ≤70 Us min	AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz	max min	V %Us	20 48 85 Us min
Pick-up min %Us 85 Us min max %Us 110 Us max	AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up	max min	V %Us	20 48 85 Us min
min %Us 85 Us min max %Us 110 Us max	AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up	max min max	V %Us %Us	20 48 85 Us min 110 Us max
Max %Us 110 Us max	AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up drop-out	max min max	V %Us %Us	20 48 85 Us min 110 Us max
drop-out Max %Us ≤70 Us min AC average coil consumption at 20°C Frush VA 70175 of 50/60Hz coil powered at 50Hz in-rush VA 70175 of 50/60Hz coil powered at 60Hz in-rush VA 70175 holding VA 70175 holding VA 1.73.5	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	max min max max	V %Us %Us %Us	20 48 85 Us min 110 Us max ≤70 Us min
Max %Us ≤70 Us min AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush holding VA 70175 holding in-rush holding VA 1.73.5 of 50/60Hz coil powered at 60Hz in-rush holding VA 70175 holding in-rush holding VA 1.73.5	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	max min max max	V %Us %Us %Us	20 48 85 Us min 110 Us max ≤70 Us min
AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 70175 holding VA 1.73.5 of 50/60Hz coil powered at 60Hz in-rush VA 70175 holding VA 1.73.5 of 60Hz coil powered at 60Hz	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	max min max max	V %Us %Us %Us	20 48 85 Us min 110 Us max ≤70 Us min
of 50/60Hz coil powered at 50Hz in-rush VA 70175 holding VA 1.73.5 of 50/60Hz coil powered at 60Hz in-rush VA 70175 holding VA 1.73.5 of 60Hz coil powered at 60Hz	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	%Us %Us %Us %Us %Us	20 48 85 Us min 110 Us max ≤70 Us min 85 Us min 110 Us max
in-rush VA 70175 holding VA 1.73.5 of 50/60Hz coil powered at 60Hz in-rush VA 70175 holding VA 1.73.5 of 60Hz coil powered at 60Hz	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 pick-up drop-out	min max min max	%Us %Us %Us %Us %Us	20 48 85 Us min 110 Us max ≤70 Us min 85 Us min 110 Us max
holding VA 1.73.5 of 50/60Hz coil powered at 60Hz in-rush VA 70175 holding VA 1.73.5 of 60Hz coil powered at 60Hz	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 pick-up drop-out drop-out	min max min max	%Us %Us %Us %Us %Us	20 48 85 Us min 110 Us max ≤70 Us min 85 Us min 110 Us max
of 50/60Hz coil powered at 60Hz in-rush VA 70175 holding VA 1.73.5 of 60Hz coil powered at 60Hz	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 pick-up drop-out drop-out	min max max min max max	%Us %Us %Us %Us %Us	20 48 85 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min
in-rush VA 70175 holding VA 1.73.5 of 60Hz coil powered at 60Hz	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 pick-up drop-out drop-out	min max max min max max in-rush	%Us %Us %Us %Us %Us	20 48 85 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min
holding VA 1.73.5 of 60Hz coil powered at 60Hz	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 pick-up drop-out drop-out	min max max min max max in-rush	%Us %Us %Us %Us %Us	20 48 85 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min
of 60Hz coil powered at 60Hz	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 pick-up drop-out drop-out	min max max min max min max in-rush holding	%Us %Us %Us %Us %Us %Us	20 48 85 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 70175 1.73.5
·	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 pick-up drop-out drop-out	min max max min max max in-rush holding in-rush	%Us %Us %Us %Us %Us %Us VA	20 48 85 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 70175 1.73.5
111 Tabil 7/1 70170	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 pick-up drop-out umption at 20°C of 50/60Hz coil powered at 50Hz of 50/60Hz coil powered at 60Hz	min max max min max max in-rush holding in-rush	%Us %Us %Us %Us %Us %Us VA	20 48 85 Us min 110 Us max ≤70 Us min 110 Us max ≤70 Us min 70175 1.73.5



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			holding	VA	1.73.5
Dissipation at holding ≤	20°C 50Hz		<u> </u>	W	1.31.5
DC coil operating					
DC rated control voltag	e				
			min	V	20
			max	V	48
DC operating voltage					
	pick-up				
			min	%Us	80 Us min
	drap out		max	%Us	110 Us max
	drop-out		max	%Us	≤70 Us min
Average coil consumpt	ion <20°C		Παλ	7003	<u> </u>
Average oon consumpt			in-rush	W	7080
			holding	W	1.31.5
Max cycles frequency					
Mechanical operation				cycles/h	2000
Operating times					
Average time for Us co					
	in AC				
		Closing NO			
			min	ms	45
		O	max	ms	90
		Opening NO	min	mo	24
			max	ms ms	60
	in DC		Παλ	1113	00
	20	Closing NO			
			min	ms	45
			max	ms	90
		Opening NO			
			min	ms	24
			max	ms	60
UL technical data					
Rated operational volta				V	600
Yielded mechanical pe		-t			
	for three-phase AC mo	ΣίΟΓ	200/2001	ПD	50
			200/208V 220/230V	HP HP	50
			460/480V	HP	100
			575/600V	HP	125
General USE			3.5,550V		
	Contactor				
			AC current	Α	165
Short-circuit protection	fuse, 600V				
	High fault				
			Short circuit current	kA	100
			Fuse rating	Α	200
			Fuse class		J
	Standard fault				
			Short circuit current	kA	10
			Fuse rating	Α	250
Ambient conditions			Fuse class		RK5
Ambient conditions					

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FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 160A, AC/DC COIL,

Temperature

Operating temperature

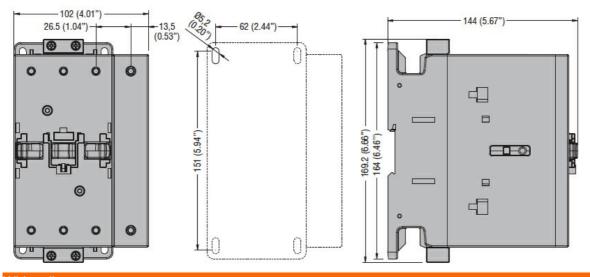
	min	°C	-40	
	max	°C	70	
Storage temperature				
	min	°C	-50	
	max	°C	80	
		m	3000	

Resistance & Protection

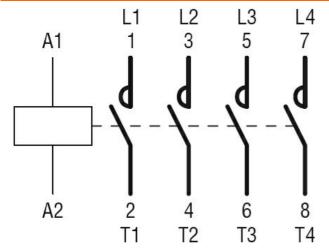
Pollution degree

Dimensions

Max altitude



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



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EAC

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching