Lovato electric
ENERGY AND AUTOMATION

BFD150T4E024

FOUR-POLE CONTACTOR, 100A/1000V DC1, AC/DC COIL, 20-48VAC/DC

Product designation			Power contactor
Product type designation			BFD150
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		A	165
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	400V	A	165
	600V	A	165
	800V	A	125
	1000V	A	100
Short-time allowable current for 10s (IEC/EN60947-1)		A	1200
Protection fuse			
	gG (IEC)	A	250
	aM (IEC)	A	160
Resistance per pole (average value)		mΩ	0.45
Power dissipation per pole (average value)			
	Ith	W	12
Tightening torque for terminals			
	min	Nm	6
	max	Nm	7
	min	lbin	4.4
	max	lbin	5.2
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	lbin	Prodotti finiti
	max	lbin	Prodotti finiti
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
Flexible w/o lug conductor section			
	min	mm²	1.5
	max	mm²	70
Flexible c/w lug conductor section			
	min	mm²	1.5
	max	mm²	70
Power terminal protection according to IEC/EN 60529			IP20 front
Mechanical features			
Operating position			
	normal		Vertical plan
	allowable		±30°
Fixing			Screw / DIN rail 35mm
Weight		g	2460
Operations			
Mechanical life		cycles	15000000
Safety related data			
EMC compatibility			Yes
AC coil operating			

Rated AC voltage at 50/60Hz, 60Hz				
		min	V	20
		max	V	48
Rated AC voltage at 50/60Hz			V	24
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80 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	80 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	70…175
		holding	VA	1.7…3.5
	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	70…175
		holding	VA	1.7…3.5
	of 60Hz coil powered at 60Hz			
		in-rush	VA	70…175
		holding	VA	1.7…3.5
Dissipation at holding ≤20°C 50Hz			W	1.3…1,5
DC coil operating				
DC rated control voltage				
		min	V	20
		max	V	48
DC rated control voltage			V	24
DC operating voltage				
	pick-up			
		min	%Us	85 Us min
		max	%Us	110 Us max
	drop-out			
		max	%Us	≤70 Us min
Average coil consumption ≤20°C				
		in-rush	W	70…80
		holding	W	1.3…1.5
Max cycles frequency				
Mechanical operation			cycles/h	2000
Operating times				
Average time for Us control				
	in AC			
	Closing NO			
		min	ms	45
		max	ms	40
	Opening NO			
		min	ms	24
		max	ms	60

	in DC				
		Closing NO			
			min	ms	45
			max	ms	90
		Opening NO			
			min	ms	24
			max	ms	60
UL technical data					
General USE					
	Contactor				
			AC current	A	165
	4 poles in series DC1				
			600V	A	165
Ambient conditions					
Temperature					
	Operating temperature				
			min	°C	-40
			max	°C	70
	Storage temperature				
			min	°C	-50
			max	°C	80
Max altitude				m	3000
Resistance & Protection					
Pollution degree					3
Dimensions					
Wiring diagrams					
Certifications and compliance					
Compliance					
	CSA C22.2 n° 60947-1				
	CSA C22.2 n° 60947-4-1.				
	IEC/EN 60947-1				
	IEC/EN 60947-4-1				
	UL 60947-4-1				
Certificates					
	cULus				
ETIM classification					
ETIM 8.0					EC000066 - Power contactor, AC switching