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Lovato electric
ENERGY AND AUTOMATION

DCTLA4001000

Thyristor module, 100kvar at 400VAC, rated operating voltage 400VAC, with current control



Product designation			Thyristor modules
Product type designation			DCTL
General characteristics			
Rated voltage		V	400
Operating voltage range			340…440
Rated frequency		Hz	50/60
Operating frequency range		Hz	45…65
Rated current (Ie)		A	144
Step power at			
	400VAC	kvar	100
Peak inverse voltage (PIV)		VAC	1800
Number of controlled phases		Nr.	2
Control circuit			12-24VDC input or free-voltage input or via RS485 serial port (with optional card EXC1042 in combination with controller DCRG8F + EXP1012)
Auxiliary supply			
Rated auxiliary supply voltage Us AC			
	min	VAC	100
	Max	VAC	240
Auxiliary rated frequency		Hz	50/60
Power consumption Max		VA	14.1
Power dissipation Max		W	5.8
Control input			
Terminals			CONTROL +/-
Rated voltage			12-24VDC
Operating range			8…30VDC
Digital inputs			
Terminals			C-IN1
Applied voltage at contact (internal)			5VDC
Input current		mA	≤10
Low input signal		VDC	≤0.8
High input signal		VDC	≥3.2
Input signal delay		ms	≥50
NTC probe input			
Terminals			NTC-NTC
Sensor type			NTC (ordering code NTC01)

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Measuring range		°C	-25…+85
Maximum connection lenght		mt	3
Fan power supply			
Terminals			FAN +/-
Supply voltage (internal)			5VDC (provided by DCTL)
Fan type			2 built-in fans type EXP8004
Relay outputs			
Number of relay output		Nr.	1
Contact arrangement			1 C/O-SPDT
Rated current			NO contact: AC1 5A 250VAC / 5A 30VDC NC contact: AC1 3A 250VAC / 3A 30VDC
UL/CSA and IEC/EN 60947-5-1 designation			D300
Maximum switching voltage		VAC	250
Electrical life (with rated load)		cycles	NO contact: 10x103 NC contact: 20x103
Mechanical life		cycles	107
Insulations			
Rated insulation voltage Ui IEC/EN		V	480
Rated impulse withstand voltage Uimp		kV	4
Connections - power terminals			
Type of terminal			Bars - 25x5mm, hole diam. 11mm
Conductor cross section			
	Max	mm²	50
	Max	AWG	1 x AWG 3/0 (for cULus compliance you must install n°2 lugs kit code EXA01 + n°2 terminal shrouds kit code EXA02)
Tightening torque (Max)			
		Nm	35Nm (42Nm for EXA01 lugs)
		lbin/lbft	309 in-lbs (375 in-lbs for EXA01 lugs)
Connections - relay output			
Type of terminal			Screw
Conductor cross section			
	min	mm²	0.2
	Max	mm²	4
	min	AWG	26
	Max	AWG	10
Tightening torque (Max)			
		Nm	0.8
		lbin	7

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Connections - fan and digital input				
Type of terminal				Screw
Conductor cross section				
		min	mm²	0.2
		Max	mm²	2.5
		min	AWG	24
		Max	AWG	12
Tightening torque (Max)				
			Nm	0.44
			lbin	4
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-20
		max	°C	+45°C without derating (up to 55°C with derating)
	Storage temperature			
		min	°C	-30
		max	°C	+80
Relative humidity			%	<80%
Maximum Pollution degree				2
Overvoltage category				III
Max altitude			m	2000m wihtout derating
Climatic sequence				Z/ABDM (IEC/EN 60068-2-61)
Shock resistance				15g (IEC/EN 60068-2-27)
Vibration resistance				0.7g (IEC/EN 60068-2-6)
Housing				
Execution				Internal panel version
Material				Polycarbonate
Degree of protection				IP00
Dimensions (W x H x D)			mm	212 x 301 x 216 (with EXA01 lugs and EXA02 terminals protection: 212 x 468 x 216)
Weight			g	6680
Dimensions				

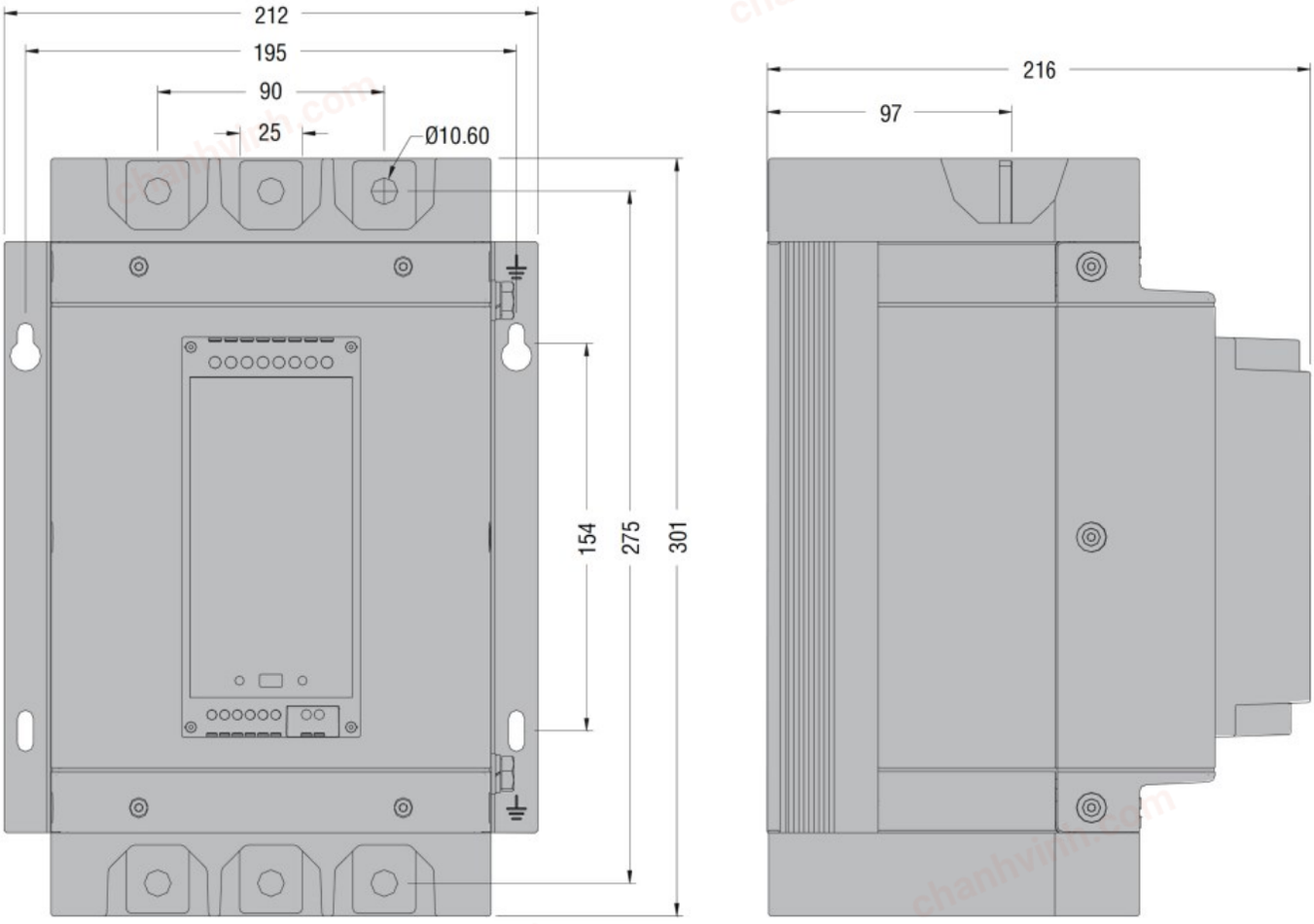
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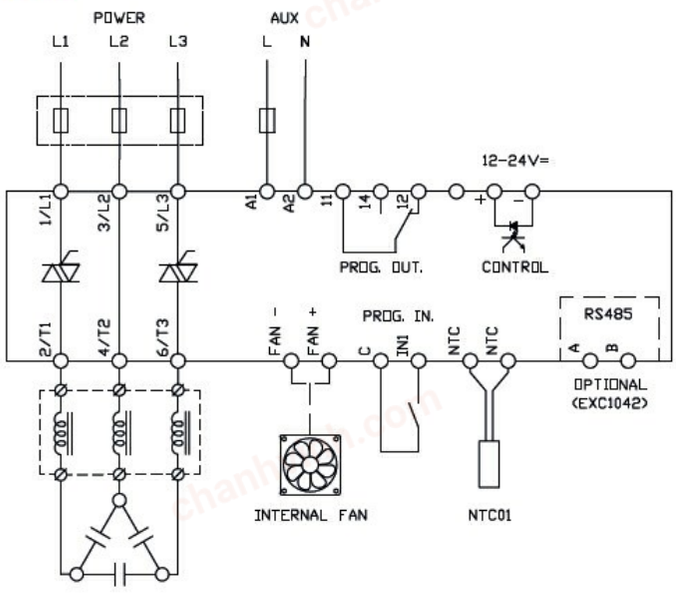
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Wiring diagrams

DCTL



Certifications and compliance

Compliance

IEC/EN 60947-4-3
IEC/EN 61000-6-2
IEC/EN 61000-6-4

Certificates

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cULus

ETIM classification

ETIM 8.0	EC002055 - Solid state relay

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