



Thyristor  
modules  
DCTL

Product designation

Product type designation

### General characteristics

Rated voltage	V	400...480
Operating voltage range		340...528
Rated frequency	Hz	50/60
Operating frequency range	Hz	45...65
Rated current (I <sub>e</sub> )	A	11
Step power at		
	400VAC	kvar 9
	440VAC	kvar 8
	480VAC	kvar 9
Peak inverse voltage (PIV)	VAC	2200
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 U<sub>s</sub>  
AC

	min	VAC	100
	Max	VAC	240
Auxiliary rated frequency		Hz	50/60
Power consumption Max		VA	11.8
Power dissipation Max		W	4.6

### Control input

Terminals	CONTROL +/-
Rated voltage	12-24VDC
Operating range	8...30VDC

### Digital inputs

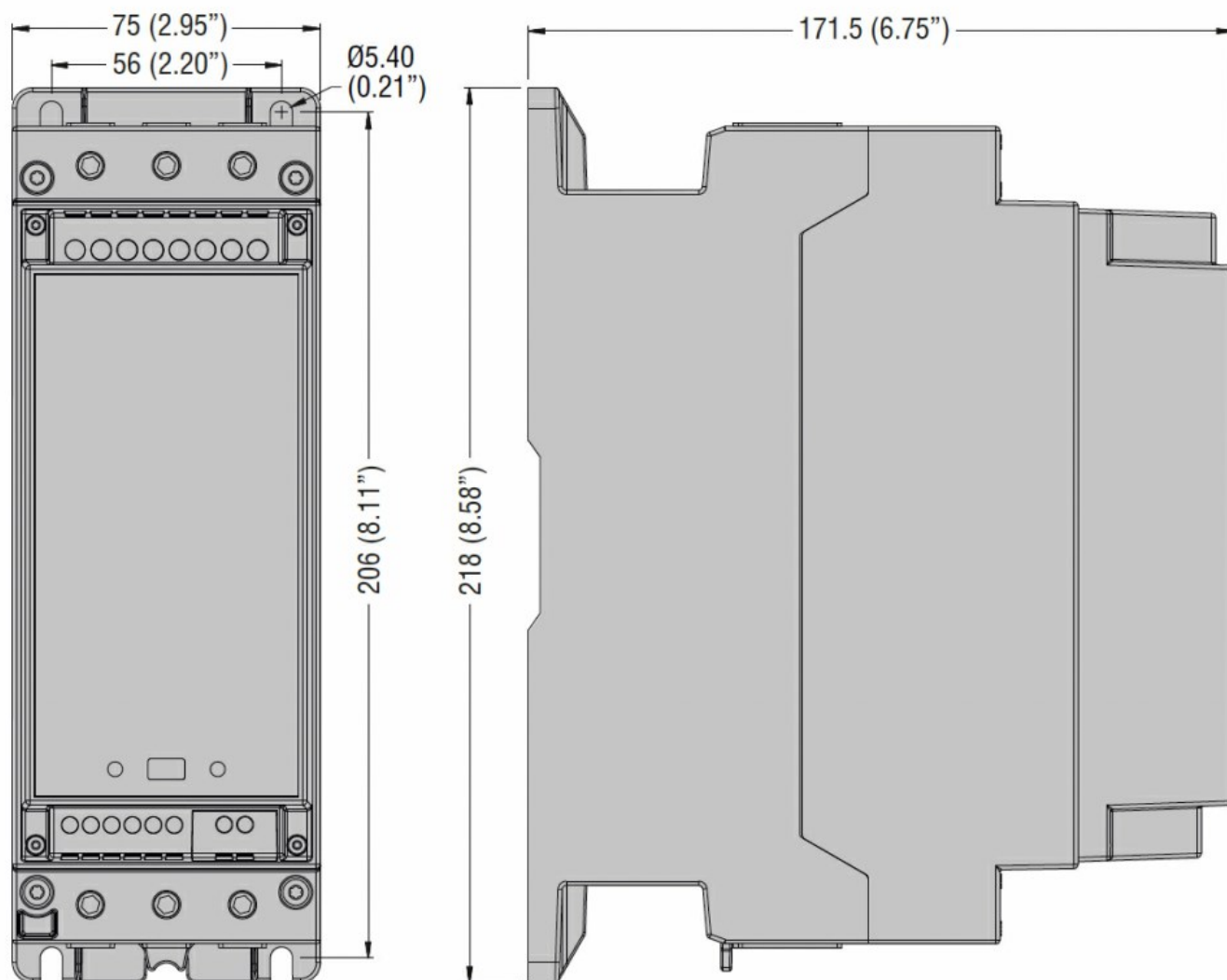
Terminals	C-IN1
Applied voltage at contact (internal)	5VDC
Input current	mA ≤10
Low input signal	VDC ≤0.8
High input signal	VDC ≥3.2
Input signal delay	ms ≥50

### NTC probe input

Terminals	NTC-NTC
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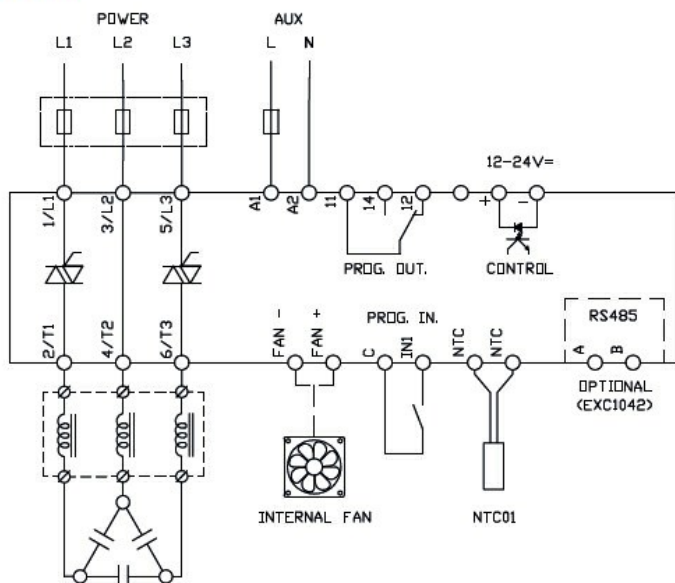
Sensor type			NTC (ordering code NTC01)
Measuring range	°C	-25...+85	
Maximum connection lenght	mt	3	
Fan power supply			
Terminals			FAN +/-
Supply voltage (internal)			5VDC (provided by DCTL)
Fan type			1 built-in fan type EXP8004
Relay outputs			
Number of relay output	Nr.	1	
Contact arrangement	1 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: 10x10 <sup>3</sup> NC contact: 20x10 <sup>3</sup>	
Mechanical life	cycles	10 <sup>7</sup>	
Insulations			
Rated insulation voltage Ui IEC/EN	V	480	
Rated impulse withstand voltage Uimp	kV	4	
Connections - power terminals			
Type of terminal	Fixed - double lock clamp		
Conductor cross section	min	mm <sup>2</sup>	2 x 2.5
	Max	mm <sup>2</sup>	2 x 35
	min	AWG	2 x 18
	Max	AWG	2 x 2
Tightening torque (Max)		Nm	4-5
		lbin/lbft	2.95-3.69 lbft
Connections - relay output			
Type of terminal	Screw		
Conductor cross section	min	mm <sup>2</sup>	0.2
	Max	mm <sup>2</sup>	4
	min	AWG	26
	Max	AWG	10
Tightening torque (Max)		Nm	0.8
		lbin	7
Connections - fan and digital input			
Type of terminal	Screw		
Conductor cross section	min	mm <sup>2</sup>	0.2
	Max	mm <sup>2</sup>	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 without 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
Mounting				Screw fixing or DIN-rail (IEC/EN 60715) with optional accessory EXP8003
Degree of protection				IP00
Dimensions (W x H x D)			mm	75 x 218 x 171.5
Weight			g	1740
Dimensions				



## Wiring diagrams

### DCTL



## Certifications and compliance

### Compliance

IEC/EN 60947-4-3

IEC/EN 61000-6-2

IEC/EN 61000-6-4

Certificates

cULus

ETIM classification

ETIM 8.0

EC002055 -  
Solid state relay