



Product designation

Thyristor  
modules  
DCTL

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 (Ie)	A	144
Step power at		
400VAC	kvar	100
440VAC	kvar	110
480VAC	kvar	120
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 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	

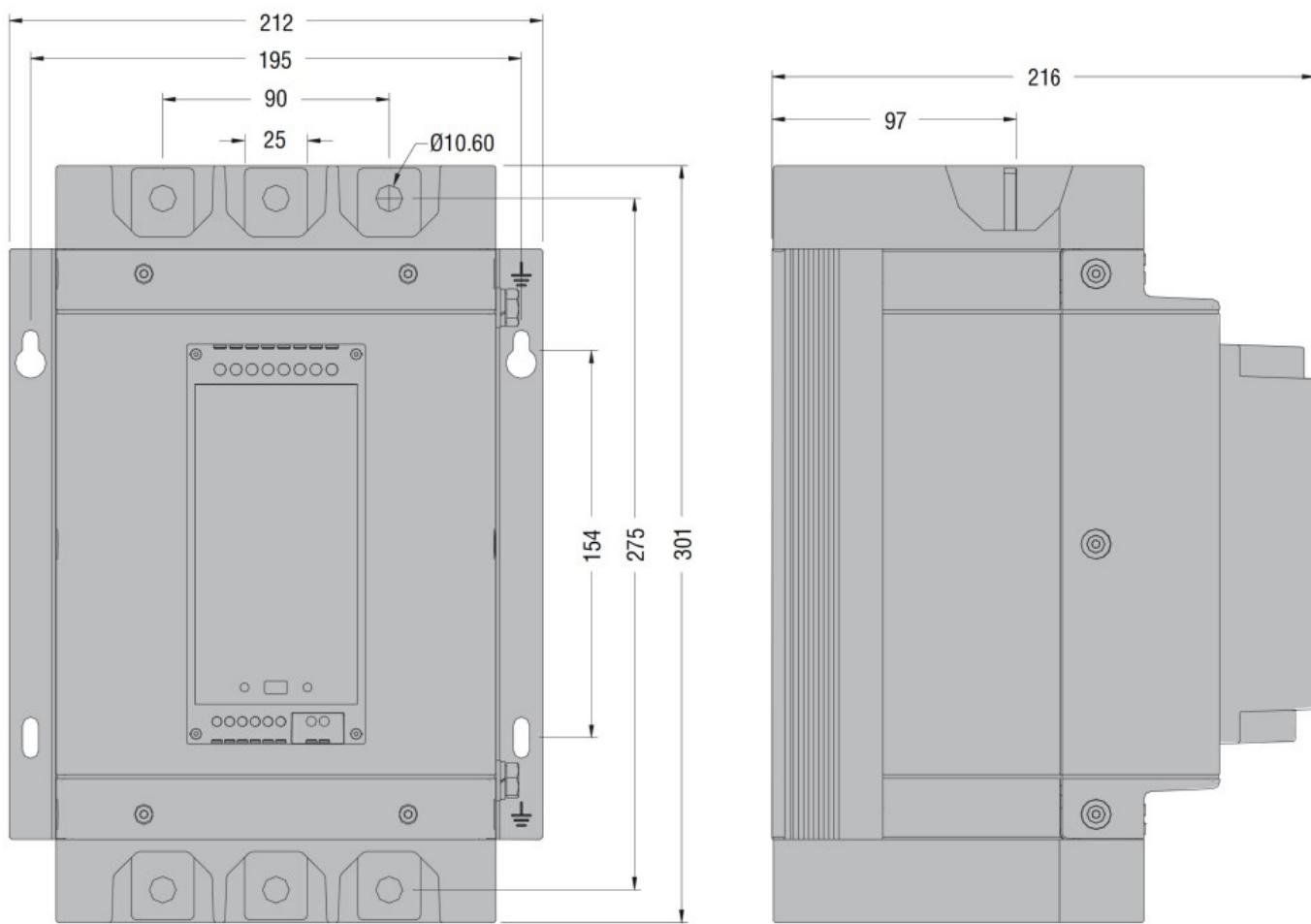
Digital inputs

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	

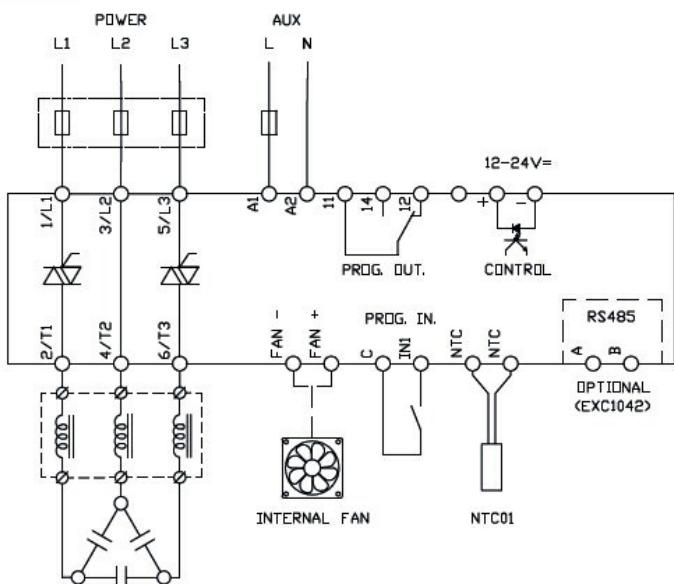
Sensor type	NTC (ordering code NTC01)				
Measuring range	°C	-25...+85			
Maximum connection lenght	mt	3			
Fan power supply					
Terminals	FAN +/-				
Supply voltage (internal)	5VDC (provided by DCTL)				
Fan type	2 built-in fans type EXP8004				
Relay outputs					
Number of relay output	Nr.	1			
Contact 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: 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	Bars - 25x5mm, hole diam. 11mm				
Conductor cross section	Max	mm <sup>2</sup>	50 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)	Max	AWG	Nm 35Nm (42Nm for EXA01 lugs) 309 in-lbs (375 in-lbs for EXA01 lugs)		
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
<b>Connections - fan and digital input</b>		
<b>Type of terminal</b>		
Conductor cross section		Screw
	min	mm <sup>2</sup> 0.2
	Max	mm <sup>2</sup> 2.5
	min	AWG 24
	Max	AWG 12
<b>Tightening torque (Max)</b>		
	Nm	0.44
	lbin	4
<b>Ambient conditions</b>		
<b>Temperature</b>		
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
<b>Relative humidity</b>		
		% <80%
<b>Maximum Pollution degree</b>		
		2
<b>Overvoltage category</b>		
		III
Max altitude	m	2000m without derating
<b>Climatic sequence</b>		
		Z/ABDM (IEC/EN 60068-2-61)
<b>Shock resistance</b>		
		15g (IEC/EN 60068-2-27)
<b>Vibration resistance</b>		
		0.7g (IEC/EN 60068-2-6)
<b>Housing</b>		
<b>Execution</b>		
		Internal panel version
<b>Material</b>		
<b>Degree of protection</b>		
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
<b>Dimensions</b>		



### 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