



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 (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
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Sensor type			NTC (ordering code NTC01)
Measuring range	°C		-25...+85
Maximum connection length	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
	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	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

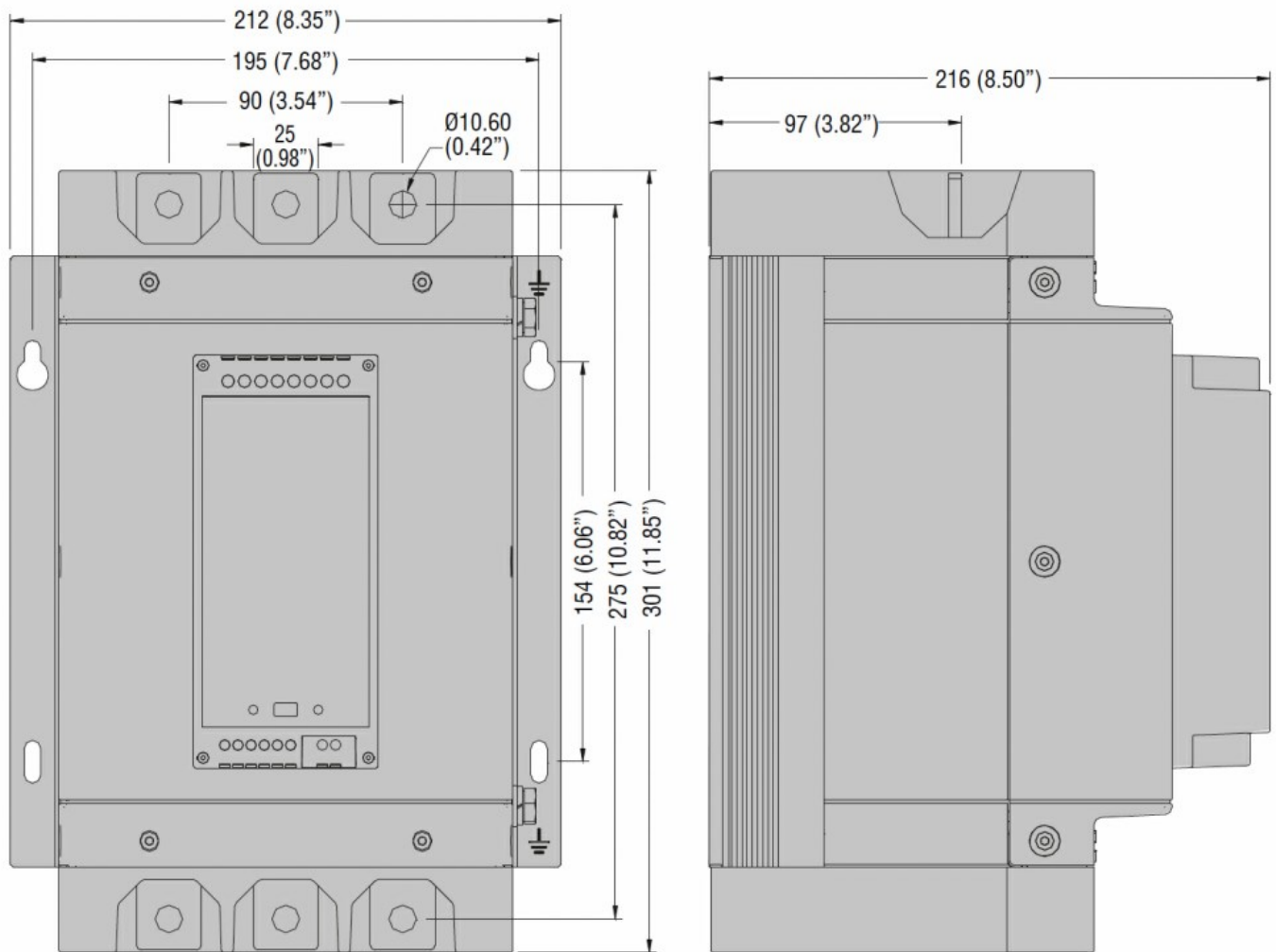
### Ambient conditions

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

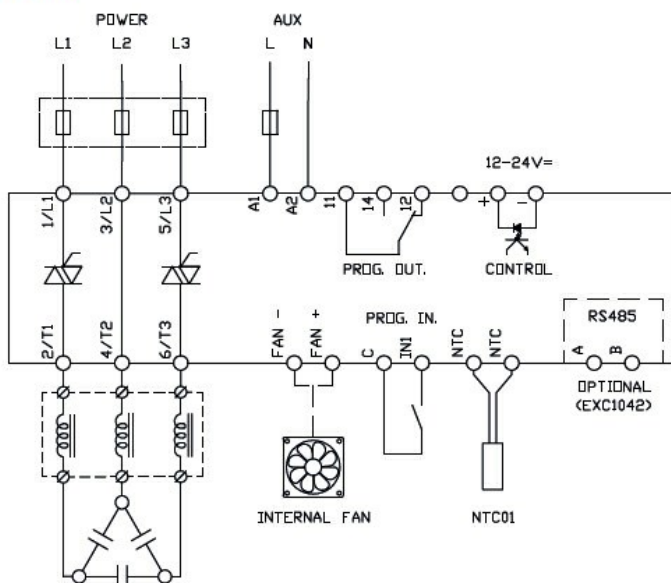
Execution	Internal panel version		
Material	Polycarbonate		
Degree of protection	IP00		
Dimensions (W x H x D)		mm	212 x 301 x 216 (with EXA01 lugs and EXA02 terminals protection: 212 x 468 x 216)
Weight		g	6680

### Dimensions



## Wiring diagrams

### DCTL



## Certifications and compliance

### Compliance

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

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IEC/EN 61000-6-4

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Certificates

cULus

ETIM classification

ETIM 8.0

EC002055 -  
Solid state relay