



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 (I _e)	A	72
Step power at		
	400VAC	kvar 60
	440VAC	kvar 55
	480VAC	kvar 60
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_s
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 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 ³ NC contact: 20x10 ³	
Mechanical life	cycles	10 ⁷	
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 ²	2 x 2.5
	Max	mm ²	2 x 35
	min	AWG	2 x 18
	Max	AWG	2 x 2
Tightening torque (Max)	Nm		5.5-6.5
	lbin/lbft		4.06-4.79 lbft
Connections - relay output			
Type of terminal	Screw		
Conductor cross section	min	mm ²	0.2
	Max	mm ²	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 ²	0.2
	Max	mm ²	2.5

		min	AWG	24
		Max	AWG	12
Tightening torque (Max)				
			Nm	0.44
			lbin	4
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-20
				+45°C without
		max	°C	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	95 x 226 x 182
Weight			g	2840
Dimensions				



The diagram illustrates the typical wiring for the RS485 interface. It is divided into two main sections: Power and AUX.

POWER Section: Three phase lines (L1, L2, L3) are shown. L1 and L2 are connected to a 12-24VDC power source. L3 is connected to a 12-24VDC power source. The power source is connected to the system through a 12-24VDC power source.

AUX Section: The AUX section includes an internal fan, a temperature sensor (NTC01), and an optional excitation source (EXC1042). The internal fan is connected to the system through a 12-24VDC power source. The temperature sensor (NTC01) is connected to the system through a 12-24VDC power source. The optional excitation source (EXC1042) is connected to the system through a 12-24VDC power source.

RS485 Section: The RS485 section includes an RS485 module. The RS485 module is connected to the system through a 12-24VDC power source. The RS485 module is connected to the system through a 12-24VDC power source.

Compliance

IEC/EN 61000-6-2

IEC/EN 61000-6-4

Certificates

cULus

ETIM classification

ETIM 8.0

EC002055 -
Solid state relay