electric THYRISTOR MODULE, 9KVAR AT 480VAC, RATED OPERATING VOLTAGE 400...480VAC, WITH CURRENT CONTROL

**ENERGY AND AUTOMATION** 



Product designation			Thyristor modules
Product type designation			DCTL
General characteristics			
Rated voltage		V	400480
Operating voltage range			340528
Rated frequency		Hz	50/60
Operating frequency range		Hz	4565
Rated current (le)		Α	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			DCRG8F +
Rated auxiliary supply voltage Us			DCRG8F +
			DCRG8F + EXP1012)
Rated auxiliary supply voltage Us	min	VAC	DCRG8F + EXP1012)
Rated auxiliary supply voltage Us  AC	min Max	VAC	DCRG8F + EXP1012) 100 240
Rated auxiliary supply voltage Us AC  Auxiliary rated frequency		VAC Hz	DCRG8F + EXP1012) 100 240 50/60
Auxiliary rated frequency Power consumption Max		VAC Hz VA	DCRG8F + EXP1012) 100 240 50/60 11.8
Rated auxiliary supply voltage Us AC  Auxiliary rated frequency Power consumption Max Power dissipation Max		VAC Hz	DCRG8F + EXP1012) 100 240 50/60
Rated auxiliary supply voltage Us AC  Auxiliary rated frequency Power consumption Max Power dissipation Max Control input		VAC Hz VA	DCRG8F + EXP1012)  100 240 50/60 11.8 4.6
Auxiliary rated frequency Power consumption Max Power dissipation Max Control input Terminals		VAC Hz VA	100 240 50/60 11.8 4.6
Rated auxiliary supply voltage Us AC  Auxiliary rated frequency Power consumption Max Power dissipation Max Control input Terminals Rated voltage		VAC Hz VA	DCRG8F + EXP1012)  100 240 50/60 11.8 4.6  CONTROL +/- 12-24VDC
Rated auxiliary supply voltage Us AC  Auxiliary rated frequency Power consumption Max Power dissipation Max  Control input Terminals Rated voltage Operating range		VAC Hz VA	100 240 50/60 11.8 4.6
Rated auxiliary supply voltage Us AC  Auxiliary rated frequency Power consumption Max Power dissipation Max Control input Terminals Rated voltage Operating range Digital inputs		VAC Hz VA	100 240 50/60 11.8 4.6 CONTROL +/- 12-24VDC 830VDC
Rated auxiliary supply voltage Us AC  Auxiliary rated frequency Power consumption Max Power dissipation Max Control input Terminals Rated voltage Operating range Digital inputs Terminals		VAC Hz VA	100 240 50/60 11.8 4.6 CONTROL +/- 12-24VDC 830VDC
Rated auxiliary supply voltage Us AC  Auxiliary rated frequency Power consumption Max Power dissipation Max  Control input Terminals Rated voltage Operating range Digital inputs Terminals Applied voltage at contact (internal)		VAC Hz VA W	100 240 50/60 11.8 4.6 CONTROL +/- 12-24VDC 830VDC
Rated auxiliary supply voltage Us		VAC Hz VA W	DCRG8F + EXP1012)  100 240 50/60 11.8 4.6  CONTROL +/- 12-24VDC 830VDC  C-IN1 5VDC ≤10
Rated auxiliary supply voltage Us		VAC Hz VA W  mA VDC	DCRG8F + EXP1012)  100 240 50/60 11.8 4.6  CONTROL +/- 12-24VDC 830VDC  C-IN1 5VDC ≤10 ≤0.8
Rated auxiliary supply voltage Us		MAC Hz VA W  mA VDC VDC	DCRG8F + EXP1012)  100 240 50/60 11.8 4.6  CONTROL +/- 12-24VDC 830VDC  C-IN1 5VDC ≤10 ≤0.8 ≥3.2
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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: 10x10³ NC contact: 20x10³
Mechanical life		cycles	10 <sup>7</sup>
Insulations			
Rated insulation voltage Ui IEC/EN		V	480
Rated impulse withstand voltage Uimp		kV	4
Rated impulse withstand voltage Uimp  Connections - power terminals		kV	
· · · · · · · · · · · · · · · · · · ·		kV	Fixed - double
Connections - power terminals		kV	
Connections - power terminals  Type of terminal	min	kV mm²	Fixed - double
Connections - power terminals  Type of terminal	min Max		Fixed - double lock clamp
Connections - power terminals  Type of terminal	Max min	mm² mm² AWG	Fixed - double lock clamp  2 x 2.5 2 x 35 2 x 18
Connections - power terminals  Type of terminal  Conductor cross section	Max	mm² mm²	Fixed - double lock clamp  2 x 2.5 2 x 35
Connections - power terminals  Type of terminal	Max min	mm² mm² AWG AWG	Fixed - double lock clamp  2 x 2.5 2 x 35 2 x 18 2 x 2
Connections - power terminals  Type of terminal  Conductor cross section	Max min	mm² mm² AWG AWG	Fixed - double lock clamp  2 x 2.5 2 x 35 2 x 18 2 x 2  4-5
Connections - power terminals  Type of terminal  Conductor cross section  Tightening torque (Max)	Max min	mm² mm² AWG AWG	Fixed - double lock clamp  2 x 2.5 2 x 35 2 x 18 2 x 2
Connections - power terminals  Type of terminal  Conductor cross section  Tightening torque (Max)  Connections - relay output	Max min	mm² mm² AWG AWG	Fixed - double lock clamp  2 x 2.5 2 x 35 2 x 18 2 x 2  4-5 2.95-3.69 lbft
Connections - power terminals  Type of terminal  Conductor cross section  Tightening torque (Max)  Connections - relay output  Type of terminal	Max min	mm² mm² AWG AWG	Fixed - double lock clamp  2 x 2.5 2 x 35 2 x 18 2 x 2  4-5
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Type of terminal  Conductor cross section  Tightening torque (Max)  Connections - relay output Type of terminal  Conductor cross section	Max min Max min Max min	mm² mm² AWG AWG  Nm Ibin/Ibft  mm² awG AWG  Nm	Fixed - double lock clamp  2 x 2.5 2 x 35 2 x 18 2 x 2  4-5 2.95-3.69 lbft  Screw  0.2 4 26 10 0.8
Connections - power terminals  Type of terminal  Conductor cross section  Tightening torque (Max)  Connections - relay output  Type of terminal  Conductor cross section  Tightening torque (Max)	Max min Max min Max min	mm² AWG AWG  Nm Ibin/lbft  mm² AWG AWG	Fixed - double lock clamp  2 x 2.5 2 x 35 2 x 18 2 x 2  4-5 2.95-3.69 lbft  Screw  0.2 4 26 10
Connections - power terminals  Type of terminal  Conductor cross section  Tightening torque (Max)  Connections - relay output  Type of terminal  Conductor cross section  Tightening torque (Max)  Connections - fan and digital input	Max min Max min Max min	mm² mm² AWG AWG  Nm Ibin/Ibft  mm² awG AWG  Nm	Fixed - double lock clamp  2 x 2.5 2 x 35 2 x 18 2 x 2  4-5 2.95-3.69 lbft  Screw  0.2 4 26 10 0.8 7
Connections - power terminals  Type of terminal  Conductor cross section  Tightening torque (Max)  Connections - relay output  Type of terminal  Conductor cross section  Tightening torque (Max)  Connections - fan and digital input  Type of terminal	Max min Max min Max min	mm² mm² AWG AWG  Nm Ibin/Ibft  mm² awG AWG  Nm	Fixed - double lock clamp  2 x 2.5 2 x 35 2 x 18 2 x 2  4-5 2.95-3.69 lbft  Screw  0.2 4 26 10 0.8
Connections - power terminals  Type of terminal  Conductor cross section  Tightening torque (Max)  Connections - relay output  Type of terminal  Conductor cross section  Tightening torque (Max)  Connections - fan and digital input	Max min Max min Max min Max	mm² mm² AWG AWG  Nm Ibin/lbft  mm² mm² AWG AWG  Nm Ibin	Fixed - double lock clamp  2 x 2.5 2 x 35 2 x 18 2 x 2  4-5 2.95-3.69 lbft  Screw  0.2 4 26 10 0.8 7 Screw
Connections - power terminals  Type of terminal  Conductor cross section  Tightening torque (Max)  Connections - relay output  Type of terminal  Conductor cross section  Tightening torque (Max)  Connections - fan and digital input  Type of terminal	Max min Max min Max min	mm² mm² AWG AWG  Nm Ibin/Ibft  mm² awG AWG  Nm	Fixed - double lock clamp  2 x 2.5 2 x 35 2 x 18 2 x 2  4-5 2.95-3.69 lbft  Screw  0.2 4 26 10 0.8 7



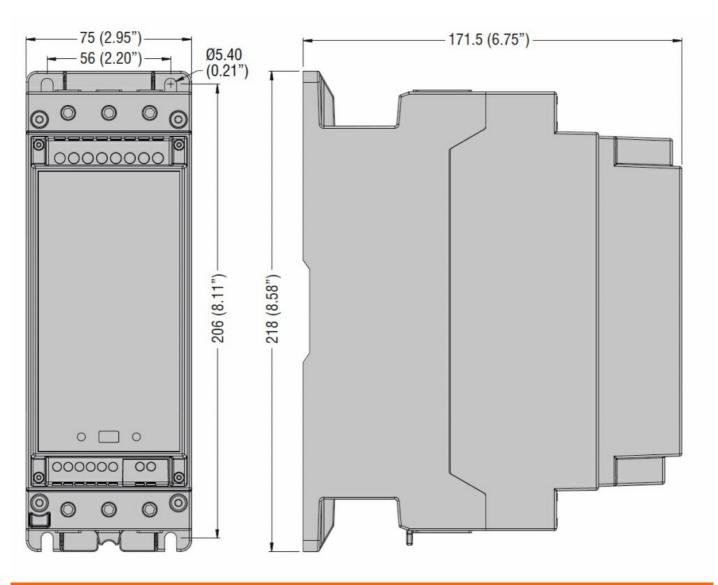
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**ENERGY AND AUTOMATION** 

		min Max	AWG AWG	24 12
Tightening torque (Ma	ax)			
			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			derating)
	Glorage temperature	min	°C	-30
		max	°C	+80
Relative humidity			%	<80%
Maximum Pollution de	egree			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
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				

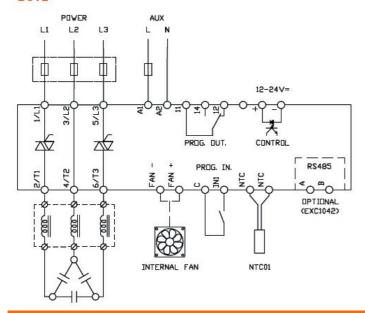
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## Wiring diagrams

### DCTL



# Certifications and compliance

## Compliance



# **DCTLA4800090**

EC002055 -

Solid state relay

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**ENERGY AND AUTOMATION** 

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

IEC/EN 61000-6-4

Certificates

cULus

ETIM classification

ETIM 8.0