



Thyristor
modules
DCTL

Product designation

Product type designation

General characteristics

Rated voltage	V	600...690
Operating voltage range		340...759
Rated frequency	Hz	50/60
Operating frequency range	Hz	45...65
Rated current (Ie)	A	48
Step power at		
	400VAC	kvar 50
	440VAC	kvar 37
	480VAC	kvar 40
	525VAC	kvar 44
	600VAC	kvar 50
	690VAC	kvar 50
Peak inverse voltage (PIV)	VAC	3600
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 ³ NC contact: 20x10 ³
Mechanical life	cycles	10 ⁷
Insulations		
Rated insulation voltage Ui IEC/EN	V	690
Rated impulse withstand voltage Uimp	kV	6
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
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

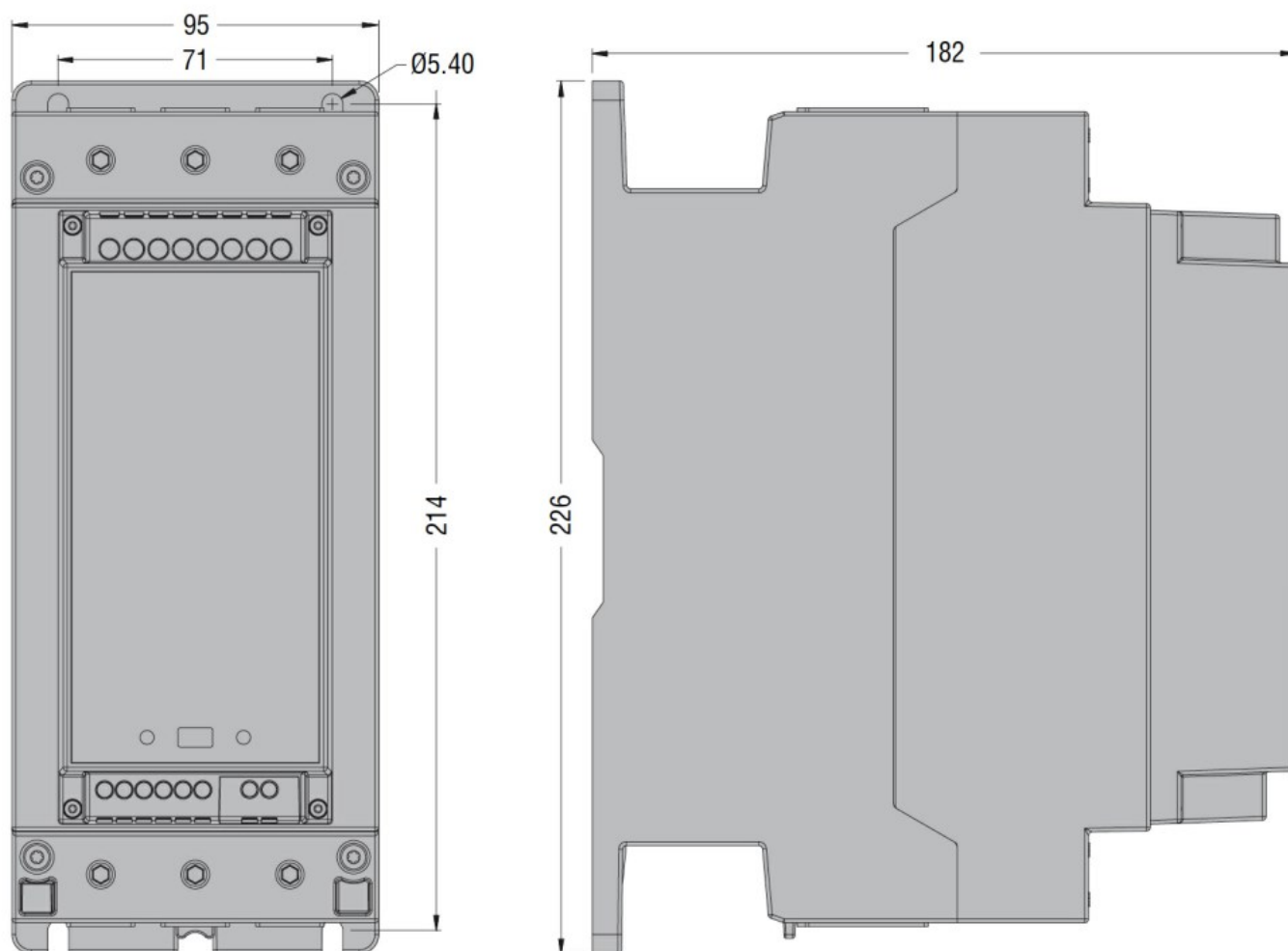
Dimensions (W x H x D)

mm 95 x 226 x 182

Weight

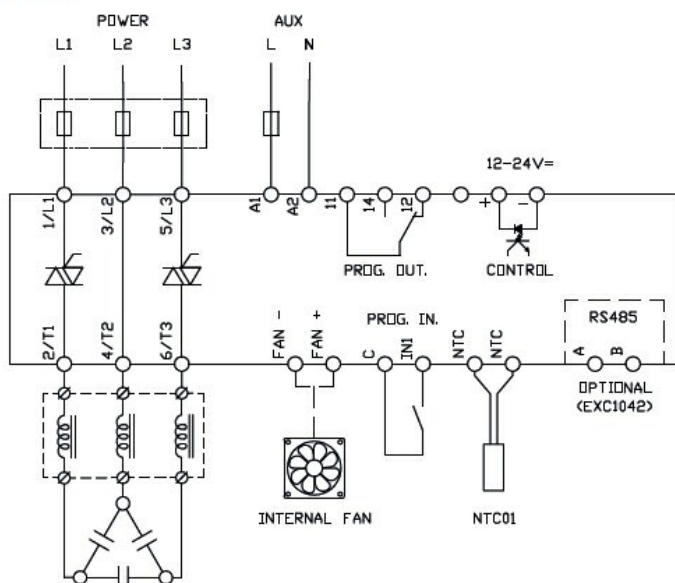
g 2840

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