



Product designation

Thyristor
modules

Product type designation

DCTL

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 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 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 | | | Bars - 25x5mm, hole diam. 11mm |
| Conductor cross section | | | |
| | Max | mm ² | 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) |
| | Max | AWG | |
| 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 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 |

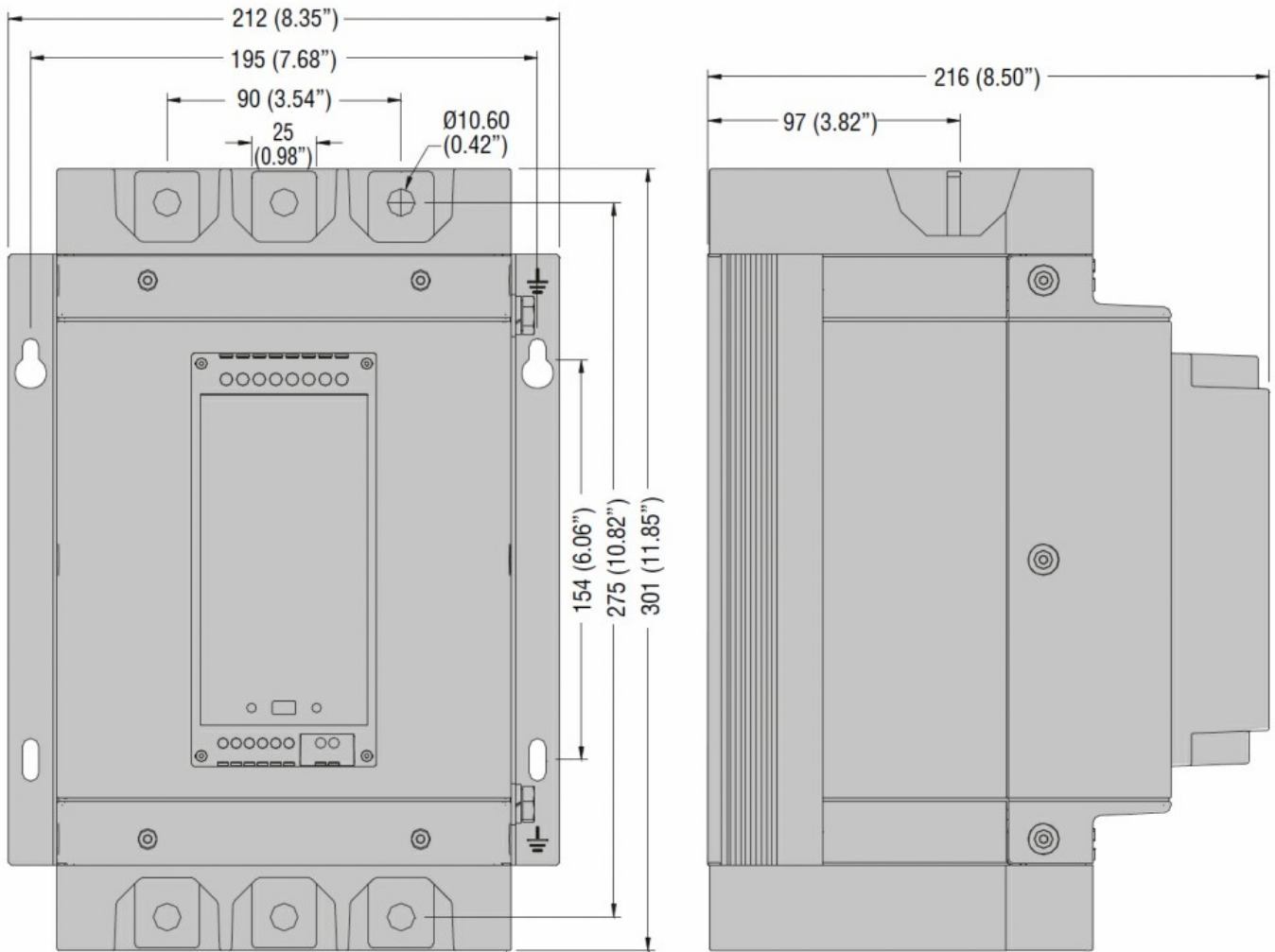
Ambient conditions

| | | | |
|--------------------------|----------------------------|----|---|
| 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

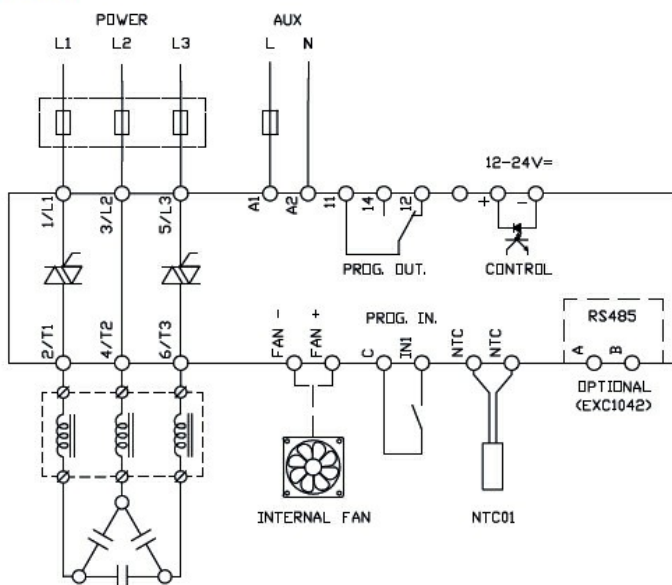
| | | | |
|------------------------|------------------------|----|---|
| Execution | Internal panel version | | |
| Material | Polycarbonate | | |
| Degree of protection | IP00 | | |
| Dimensions (W x H x D) | | mm | 212 x 301 x 216 (with EXA01 lugs and EXA02 terminals protection: 212 x 468 x 216) |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

Dimensions



Wiring diagrams

DCTL



Certifications and compliance

Compliance

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

IEC/EN 61000-6-4

Certificates

cULus

ETIM classification

ETIM 8.0

EC002055 -
Solid state relay