

Control Electronics

D700 Digital AVR

The **D700** is a digital Automatic Voltage Regulator (AVR) for alternators requiring a nominal excitation current up to 25A.

It has been designed for reliable electric power generation, with built-in options and settings to fit any installation, on or off-grid.

The **D700** can be controlled through the integrated display or using the built-in webserver interface. It can also be configured through USB without external supply.

It also includes numerous inputs and outputs, and communication ports that match current industry standards.



KEY FEATURES

Regulation modes

- Voltage
- PF at generator output
- PF at power delivery point
- kVAr
- Field current (manual mode)

Regulation features

- Voltage equalization prior to synchronization
- Droop management for generator sets paralleling
- Cross current compensation
- Soft start
- Load impact recovery help
- Negative field forcing

kW, kVAr & kVA monitoring

Manual mode with follower and bumpless transfer

Protection & Limitation

- Under and over field current limitation
- Loss of field sensing
- Generator output under/over voltage
- Loss of voltage sensing
- Under speed management

Data logger

Diodes fault

Synchronization management

Black start possible

ELECTRIC FEATURES

Generator voltage sensing

- 3 phase, 2 phase or 1 phase & neutral
- Range: 0-230-400-530VAC

Grid voltage sensing

- 3 phase, 2 phase or 1 phase & neutral
- Range: 0-230-400-530VAC

Generator current sensing (CT)

- 1 or 3 phase
- Range: 0-1A or 0-5A

Grid current sensing (CT)

- 1 phase
- Range: 0-1A or 0-5A

Current sensing for "cross-current compensation"

- 1 phase
- Range: 0-1A or 0-5A

Power supply

- AC input:
 - PMG, AREP, SHUNT
 - 2 independent circuits
 - Range: 50-277VAC
- DC input (preloading system not supplied):
 - Range: 50-400VDC

Excitation

- Rated current (permanent): 0-25A
- Short circuit current (10s max): 50A at 25°C
- Exciter resistance: > 4 ohms

Auxiliary supply range: 18-35VDC

- Consumption: < 1A

Frequency range: 30-400Hz

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INPUTS & OUPUTS

16 digital inputs

- Programmable

4 analog inputs

- Programmable: 4-20mA / $\pm 10V$ / 0-10V /pot.
- Programmable functions

6 temperature sensing inputs

- Type: PT100
- Programmable threshold

12 digital outputs

- 6 transistorized outputs:
 - Characteristics: 60mA - 30VAC
- 6 relay outputs:
 - Characteristics: 30VDC - 3A / 125VAC - 1A
- Reversible programmable logic
- Programmable functions

12 analog outputs

- Programmable: 4-20mA / $\pm 10V$ / 0-10V /pot.
- Programmable functions

COMMUNICATION & SETTINGS

Dedicated configuration software

Ethernet Modbus port

USB port

Serial port to control an additional power stage

Serial port for external display

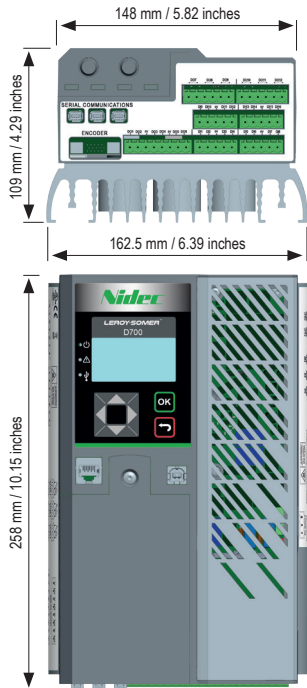
Dedicated port for redundancy between 2 AVR (bumpless system)

Optional COMPACT COM card from HMS for fieldbus

Integrated display allowing full configuration & consultation

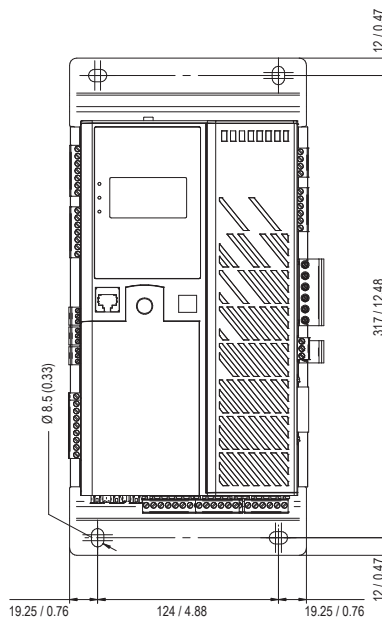
Programmable logical functions

DIMENSIONS

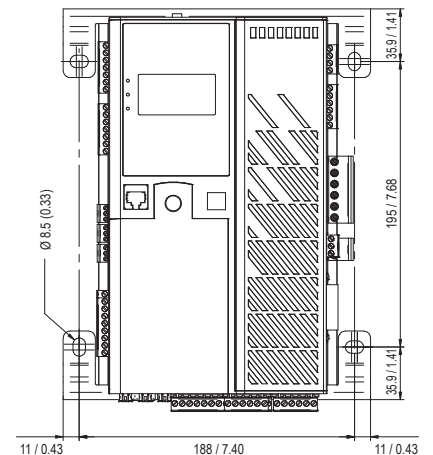


UNIVERSAL FITTING

Adapted mounting plate.



Other mounting plate available (additional kit).



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