

## Characteristics:

### General Description:

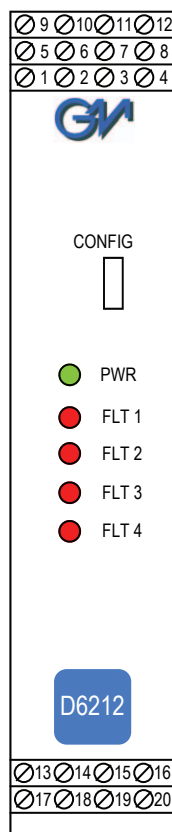
The quadruple channel Repeater Power Supply D6212Q provides a fully floating DC supply for energizing conventional 2 wires 4-20 mA transmitters, and repeats the current to drive a load.

### Function:

4 channels analog input for 2 wires loop powered transmitters, provides isolation between input, output and supply, and current (sink and source mode) output signal. The module is fully configurable to achieve any desired input/output combination: any number of outputs can be independently linked to each input. As an example, it is possible to obtain a Quadruplicator by linking all Outputs to Input 1 or a double Duplicator linking Output 1,2 to Input 1 and Output 3,4 to Input 2. D6212Q can be configured via SWC5090 PC software, which is also able to monitor real-time Input/Output status and log data to file. Modbus RTU RS-485 output is available on Bus connector.

Mounting on standard DIN-Rail or on customized Termination Boards, in Safe Area.

## Front Panel and Features:



- Quadruple channels for 2 wires Transmitters.
- 4-20 mA Input, Output Signal.
- Input and Output short circuit proof.
- Sink or Source current Outputs.
- Modbus RTU RS-485 Output.
- Fully configurable via software.
- High Accuracy,  $\mu$ P controlled converter.
- High Density, four channels per unit.
- Simplified installation using standard DIN-Rail and plug-in terminal blocks or customized Termination Boards.

## Technical Data:

### Supply:

24 Vdc nom (18 to 30 Vdc) reverse polarity protected, ripple within voltage limits  $\leq 5$  Vpp, 2 A time lag fuse internally protected.

**Current consumption @ 24 V:** 150 mA with 20 mA output typical.

**Power dissipation:** 2 W with 24 V supply voltage and 20 mA output typical.

### Isolation (Test Voltage):

In/Out 2.5 KV; In/Supply 2.5 KV; Out/Supply 500 V

### Input:

4 to 20 mA (2 wire Tx current limited at  $\approx 22$  mA).

### Transmitter line voltage:

14.0 V typical at 20 mA with max. 30 mVrms ripple.

### Output:

4 to 20 mA, on max. 300  $\Omega$  load source mode, current limited at 22 mA. In sink mode, external voltage generator range is V min. 3.5V at 0  $\Omega$  load and V max. 30V. If generator voltage  $V_g > 10$  V, a series resistance  $\geq (V_g - 10)/0.024 \Omega$  is needed. The maximum value of series resistance is  $(V_g - 3.5)/0.024 \Omega$ .

**Response time:** 200 ms (10 to 90 % step change).

**Output ripple:**  $\leq 30$  mVrms.

**Modbus Output:** Modbus RTU protocol up to 115.200 baud on Bus connector.

### Performance:

Ref. Conditions 24 V supply, 250  $\Omega$  load,  $23 \pm 1$  °C ambient temperature.

**Calibration accuracy:**  $\leq \pm 0.1$  % of full scale.

**Linearity error:**  $\leq \pm 0.05$  % of full scale.

**Supply voltage influence:**  $\leq \pm 0.05$  % of full scale for a min to max supply change.

**Load influence:**  $\leq \pm 0.05$  % of full scale for a 0 to 100 % load resistance change.

**Temperature influence:**  $\leq \pm 0.01$  % on zero and span for a 1 °C change.

### Compatibility:

**CE** CE mark compliant, conforms to 2004/108/CE EMC Directive.

### Environmental conditions:

**Operating:** temperature limits – 40 to + 70 °C, relative humidity 95 %, up to 55 °C.

**Storage:** temperature limits – 45 to + 80 °C.

### Approvals:

SIL 2 / SIL 3 conforms to IEC61508.

### Mounting:

T35 DIN-Rail according to EN50022, with or without Power Bus or on customized Termination Board.

**Weight:** about 145 g.

**Connection:** by polarized plug-in disconnect screw terminal blocks to accommodate terminations up to 2.5 mm<sup>2</sup>.

**Location:** Safe Area/Non Hazardous Location installation.

**Protection class:** IP 20.

**Dimensions:** Width 22.5 mm, Depth 123 mm, Height 120 mm.

## Ordering Information:

Model: D6212Q

Operating parameters are programmable by the GM Pocket Portable Configurator PPC5092 via RS-232 serial line and SWC5090 Configurator software.

Image:



Function Diagram:

SAFE AREA

