# FIELD SELECTABLE ISOLATED High Voltage DC to DC Transmitter

## DPI HV-DC



## Specifications

**Input Ranges**
Min.: 0 to 100V
Max.: 0 to 1200V

**Input Impedance**
2.5 Meg Ohms

**Output Ranges**

| | | |
|---|---|---|
| (Voltage) | Min.: 0 to 1V | Max.: +/- 10V |
| (Current) | Min.: 0 to 2mA | Max.: 0 to 20mA |

**Output Capability**
(Voltage) +/-10VDC, +/- 10mA max
(Current) 25mADC, 20V Compliance @20mA

**Isolation**
2000V RMS min.

**Linearity**
Better than .1% of Span

**Response Time**
100mSec. Typical

**Output Ripple and Noise**
Less than 10mV RMS

**Functional Test Pushbutton**
Adjustable from 0 to 100% of Span.
Factory set @ 50% of Span, +/-1.5%

**Zero/Span Control Range**
+/-15% Typical

**Temperature Stability**
Better than .02% of Span per °C.

**Ambient Temperature Range**
-10 to +60 degrees C (operating)

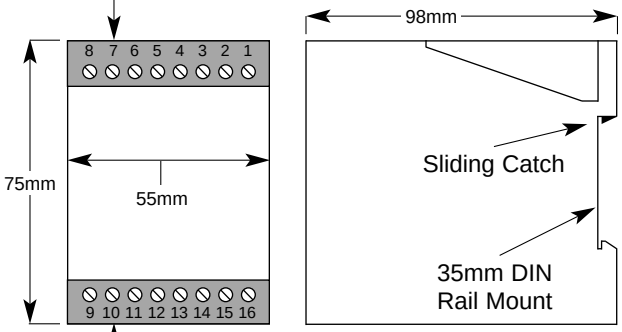
**Power**
Standard: 115VAC +/-10%, 50/60Hz, 2.5W max.
Optional: 230VAC +/-10%, 50/60Hz, 2.5W max.
* 12VAC +/-10%, 50/60Hz, 2.5W max.
* 24VAC +/-10%, 50/60Hz, 2.5W max.

## *FEATURES*

- **Accepts High Voltage Input Ranges from 100VDC to 1200VDC**
- **Selectable from 7 Standard or 1 User Specified Input Range**
- **High Input Impedance for Low Current Consumption**
- **Full Input/Output/Power Isolation Rated at 2000V RMS**
- **DIN Style Package (55mm wide)**
- **Input/Output LoopTracker™ LED's**
- **Functional Test Pushbutton**
- **LIFETIME WARRANTY**

## Electrical Connections & Case Dimensions

| | |
|---|---|
| Terminal 1 | Input Signal (-) |
| Terminal 2 | No Connection |
| Terminal 3 | No Connection |
| Terminal 4 | Input Signal (+) |
| Terminal 5 | No Connection |
| Terminal 6 | No Connection |
| Terminal 7 | No Connection |
| Terminal 8 | No Connection |




| | |
|---|---|
| Terminal 9 | AC Power (+) |
| Terminal 10 | AC Power (-) |
| Terminal 11 | No Connection |
| Terminal 12 | No Connection |
| Terminal 13 | No Connection |
| Terminal 14 | Output Signal (+) |
| Terminal 15 | Output Signal (-) |
| Terminal 16 | No Connection |

## FUNCTIONAL DESCRIPTION

The DPI HV-DC accepts a DC Voltage Input and provides an Optically Isolated DC Voltage or Current Output that is linearly related to the input. This module is unique because it is field rangeable for Voltage Inputs from 100VDC to 1200VDC. Typical applications include Signal Isolation, Signal Conversion, Signal Attenuation or a combination of the three.

The Optical Isolation between Input and Output makes this module useful for Ground Loop Elimination, Common Mode Signal Rejection or Noise Pickup Reduction. The DPI HV-DC uses the latest technology in linear optical isolation for optimum noise immunity and complete freedom from AC artifacts in the Output. In addition, the module Power Supply is isolated, resulting in full 3-way (Input, Output, Power) Isolation. Standard power is 115VAC; options include 230VAC.

The DPI HV-DC distinguishes itself from other similar products in that both it's Input and Output can be field-configured via slide switches. The more common ranges can be selected from a table on the module label. However, a user specified Range is available that can be factory configured to meet your specific requirements. (Consult the factory for assistance.)

The DPI HV-DC is designed to mount on industry-standard DIN rails. The DIN style housing (55mm) allows for side-by-side mounting of multiple modules for maximum I/O density.

## UNIQUE FEATURES

API Exclusive Features include two ***LoopTracker™ LEDs*** and a ***Functional Test Pushbutton***. The LoopTracker™ LEDs (Green for Input; Red for Output) vary in intensity with changes in the Input (process) signal. Monitoring the state of these LEDs can provide a quick visual picture of your process loop at all times. The Functional Test Pushbutton provides a fixed output (independent of the input) when held depressed. The Test Output level can be field-adjusted via a top-accessible multiturn pot to any value from 0 to 100% of the calibrated range. Both the ***LoopTracker™ LEDs*** and ***Functional Test Pushbutton*** greatly aid in the reduction of time during initial start-up and/or troubleshooting.

## OPERATION

The Input Selector switch determines the input range. Depending on the slide switch settings, the input is attenuated as required, filtered, then passed through an optical isolation circuit to the output stage. The slide switch settings and Output Selector switch determine the exact DC Voltage or Current Output available to the user.

## RELATED PRODUCTS

The following products are also available for use with a DC Voltage or Current Input. Refer to the appropriate data sheets in this section for details.

**API 4380 DIN**
Same as DPI HV-DC, but Low Voltage (+/-10VDC) and Current Inputs; Universal Power: 48-300VDC or 80-265VAC.

**API 4380 DD**
Same as DPI HV-DC, but Low Voltage (+/-10VDC) and Current Inputs; Universal Power: 9-30VDC.

**API 4380 G HV**
Same as DPI HV-DC, but Plug-In Style; High Voltage Inputs up to -/+200VDC.

**API 4380 G HV DF**
Same as API 4380 G HV, 100uSec Response Time.

**API 4380 G**
Same as DPI HV-DC, but Plug-In Style; Low Voltage (+/-10VDC) and Current Inputs.

**API 4380 G DF**
Same as API 4380 G, 100uSec Response Time.

**API 4385 G**
Same as API 4380 G, but NON-Interactive Zero & Span Adjustments, +/-100% Offset.

**API 4300 G**
Factory ranged DC to DC Isolating Transmitter. Used in applications requiring special offsets and ranges.

**ABSOLUTE PROCESS INSTRUMENTS, Inc.**

*Proudly Represented By:*

MOD-TRONIC INSTRUMENTS LIMITED
48 Haggert Ave N
Brampton, ON L6X 1Y3
Tel: 905 457-6322
Fax: 905 457-4716
Toll Free: 800 794-5883