Device Description

Isolation Amplifier TV40GVC with Front Panel Adjustment

DSL-electronic® GmbH expand its family of custom design isolation amplifiers with the new innovative TV40GVC. This product features highest functionality and reliability.

- Customizing signal conditioning with Front-Panel-Adjustment
  All norm signals at input and output are arbitrary

- Universal power supply for 20 ... 253 VDC or 50 ... 253 VAC
  for worldwide use

- Galvanic 3-Way isolation of input, output and the supply voltage
  protection against erroneous measurements due to ground loops and sturgeon voltage spread

- Extremely slim and compact design
  18 mm housing with plug-in terminals

- Interface to programming via PC
  Programming / Parametrization is possible via optional configuration software

- Highest reliability
  no cost for maintenance
Connection Diagramm

Factory setting, norm signals are given by switch 1 and 2

Activated the front-adjustment for Offset (Null) and final value alignment range: +/- 20%

Factory setting, input- and output-signals are given by switch 1 until 3

VarioConfig use configuration settings, switch switch 1 until 3 are inoperable

Trimmer off

Trimmer on

DIP

PC

Connector block at the top

Connector block at the bottom
### Technical Characteristics

**Input Current**
- Measurement Range: 0-20 mA; 4-20 mA
- Resolution: 10 Bit
- Input Resistance: 50 Ohm

**Input Voltage**
- Measurement Range: 0-10 V; 2-10 V
- Resolution: 10 Bit
- Input Resistance: 100 kOhm

**Input Filter** (optional available)
- Filter: 10 ms/filter value (0 until 30,000)

**Output Current**
- Output Range: 0-20 mA; 4-20 mA
- Resolution: 11 Bit
- Maximum Load: 400 Ohm
- Ripple: <50 µA

**Output Voltage**
- Output Range: 0-10 V, 2-10 V
- Resolution: 11 Bit
- Minimum Load: 10 kOhm
- Ripple: <20 µV
- Linearity Error: < 0.5 % from final value

**Total Precision**
- Device: 0.3%
- Temperature Influence: < 100 ppm / K
- Reaction Time: ca. 70 ms (10-90%)

**Trimmer Function**
- Alignment Range: ca. +/-20%

**Auxiliary Voltage**
- Supply Voltage: 20-253 VDC or rather 50-253 VAC
- Max. Power Consumption: 1.2 W/2.8 VA

**Case**
- Case Size: 18*110*128mm (Width*Height*Depth)
- Protection Class: IP 20
- Connection Technology: Abziehbare Schraubklemmen
- Cap Rail Norm: Cap Rail (EN 50022)
- Weight: 130 gram

**Ambient Conditions**
- Ambient Temperature Range: 0-50°C
- Storage/Transport Temperature Range: -10→70°C

**EMV**
- Norm of Product Line: EN 61326
- Transient Emissions: EN 55011, CISPR11 Kl.B
- During interference minor signal deviations are possible

**Galvanic Isolation, Test Voltage**
- Input/Output: 2.5 kV RMS (1 Min.)
- Signal/Supply: 4 kV RMS (1 Min.)

**Protection Circuit**
- Input/Output: Over-voltage, over-current
- Power Supply: Over-current, over-voltage, over temperature