Isolation Amplifier

# Isolation Amplifier (bipolar)

AD-TV 810 GS

## Description

The separation amplifier of type family AD-TV 810 serves the galvanic separation, conversion and amplification of bipolar signal sizes. The very high frequency range allows direct current as well as alternating current transfers. Input, output and the supply voltage are galvanically separated from each other. The output signal is independent of the connected load up to a maximum value. The limit frequency of the amplifier can be set at the front as an option.

## Application

Recording, galvanic 3-way separation, conversion and amplification of bipolar measuring sizes (voltage or current).

## Specific characteristics

- 3dB bandwidth switch (0,1 / 0,5 / 1 / 2 / 20 kHz) are optionally available.

## Business data

**Order number**

AD-TV 810 GS

## Information

**Downloads**

| | |
|---|---|
| Tender text | tv810gs.zip |
| Safety instructions | ad-safety-instructions.pdf |

## Technical specifications

| | |
|---|---|
| **Input current** | |
| Measuring range | -20 ... 20 mA [1] |
| Input resistance | 25 Ohm |
| **Input voltage** | |
| Measuring range | -10 ... 10 V [1] (max. +/- 250V) |
| Input resistance | 100 kOhm (10 kOhm / Volt) |
| **Output current** | |
| Output range | -20 ... 20 mA [1] |
| Max. burden | 500 Ohm |
| Max. residual ripple | 40 µAss |
| **Output voltage** | |
| Output range | -10 ... 10 V [1] |
| Min. burden | 1 kOhm |
| Max. residual ripple | 20 mVss |
| **Supply** | |
| Voltage range AC | 50 ... 253 V AC, 50/60 Hz |
| Nominal voltage AC | 230 V AC |
| Voltage range DC | 20 ... 253 V DC |
| Nominal voltage DC | 24 V DC |
| Input power AC/DC | 3,5 VA / 1,7 W |
| **Transmission behaviour** | |
| Basic accuracy | < 0,2 % of full scale |
| Temperature influence | 100 ppm/K of full scale |
| Frequency range | 0...20 kHz (-3dB) |
| **Housing** | |
| Dimensions (WxHxD) | 23x78x103 mm |
| Type of protection | IP 20 |
| Connection method | screw clamp |
| Terminals, wire cross section | 2,5 mm² flex wire / 4 mm² one wire |
| Bolting torque terminals | 0,5 Nm |
| Weight | ~ 100 g |
| Manner of fastening | 35 mm DIN rail 35mm |
| **Environmental conditions** | |
| Ambient temperature | -10 ... 50 °C |
| Storage and transport | -10 ... 70 °C (no condensation) |



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## Technical specifications

**EMC**

| | |
|---|---|
| Product family standard | EN 61326-1 [2] |
| Emitted interference | EN 55011, CISPR11 Cl. B, Gr. 1 |

**Electrical safety requirements**

| | |
|---|---|
| Product family standard | EN 61010-1 |
| Overvoltage category | II |
| Pollution degree | 2 |

**Galvanic isolation, working voltage**

| | |
|---|---|
| Input / output | 250 V DC or ACeff |
| Input / supply unit | 300 V DC or ACeff |
| Output / supply unit | 300 V DC or ACeff |

**Galvanic isolation, test voltages**

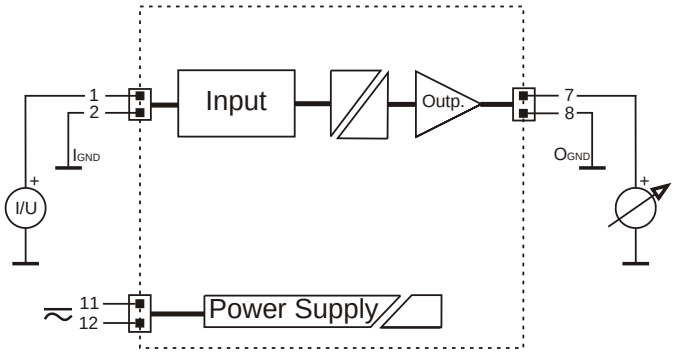
| | |
|---|---|
| Input / output | 3 kV, 50 Hz (1 min.) |
| Input / supply unit | 3 kV, 50 Hz (1 min.) |
| Output / supply unit | 3 kV, 50 Hz (1 min.) |

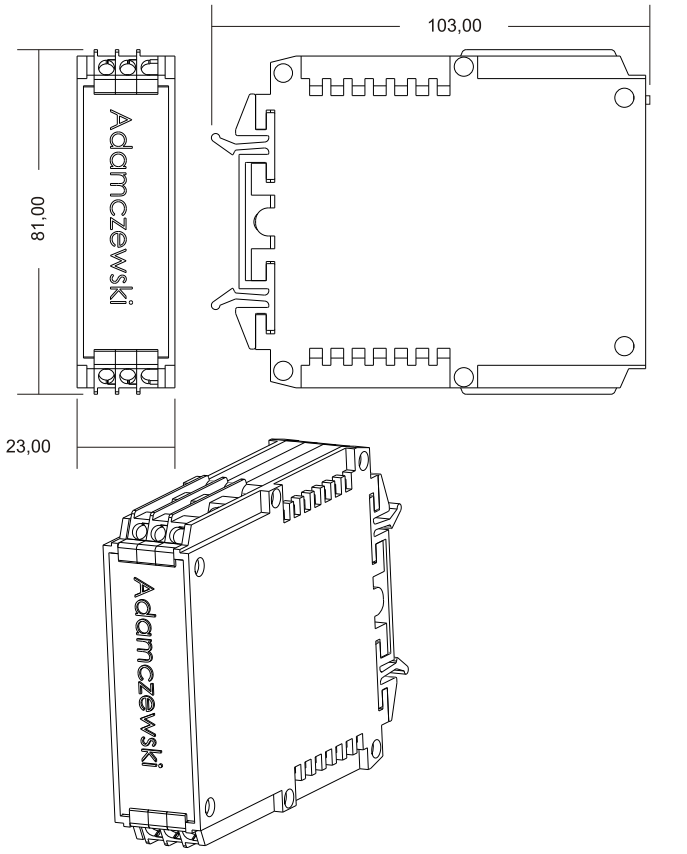
**Protection circuits**

| | |
|---|---|
| Input | electrical surge protection |
| Output | electrical surge protection |
| Power supply | Protection against overvoltage reverse polarity |

1) Values must be adviced by order.
2) During checking, slight signal deviations are possible.

## Block and wiring diagram




## Dimensions