

**Description**

The single or dual channel isolation amplifier of the series AD-TV 411 GS and AD-TV 412 GS 2 is being used for the galvanical isolation and amplification of impressed currents of 0-20 mA or 4-20 mA. The output current is unaffected from the connected load. The output follows the input 1:1. Input, output and supply current are separated galvanically. All channels are isolated from each other galvanically. Through its efficient wide-range power supply unit of the isolation amplifier can be operated over a wide supply voltage range with low level of intrinsic heating.

**Application**

Single or dual channel burden amplification and galvanic decoupling of impressed DC current signals.

**Specific characteristics**

- Single or dual channel version available
- Electrical 3-way isolation
- Wide range power supply
- Narrow width housing

**Business data****Order number**

AD-TV 411 GS	single-channel version
AD-TV 412 GS	dual-channel version

**Technical specifications****Input current**

Measuring range	0 ... 20 mA or 4 ... 20 mA
Required input voltage	ca. 0,8 V

**Output current**

Output range	0 ... 20 mA or 4 ... 20 mA
Max. burden	500 Ohm
Residual ripple	40 µAss

**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
Power consumption AC / DC (AD-TV 411 GS)	4 VA / 1,5 W
Power consumption AC / DC (AD-TV 412 GS)	5 VA, 2,5 W

**Transmission behaviour**

Basic accuracy	< 0,2 %
Temperature influence	15 ppm/K
Response time	0,2 ms
Load influence	0,02 % / 100 Ohm

**Housing**

Dimensions (WxHxD)	23x78x103 mm
Type of protection	IP 20
Connection method	detachable terminal clamp
Terminals, wire cross section	2,5 mm <sup>2</sup> flex wire / 4 mm <sup>2</sup> one wire
Bolting torque terminals	0,5 Nm
Weight	~ 160 g
Manner of fastening	35 mm DIN rail 35mm

**Environmental conditions**

Ambient temperature	0 ... 50 °C
Storage and transport	-10 ... 70 °C (no condensation)

**EMC**

Product family standard	EN 61326 <sup>1)</sup>
Emitted interference	EN 55011, CISPR11 Cl. B

**Electrical safety requirements**

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

**Galvanic isolation, test voltages**

Input / output	0,5 kV, 50 Hz (1 min.)
Signal / supply unit	3 kV, 50 Hz (1 min.)
Channel 1 / Channel 2 (TV 412 0,5 kV, 50 Hz (1 min.) GS)	

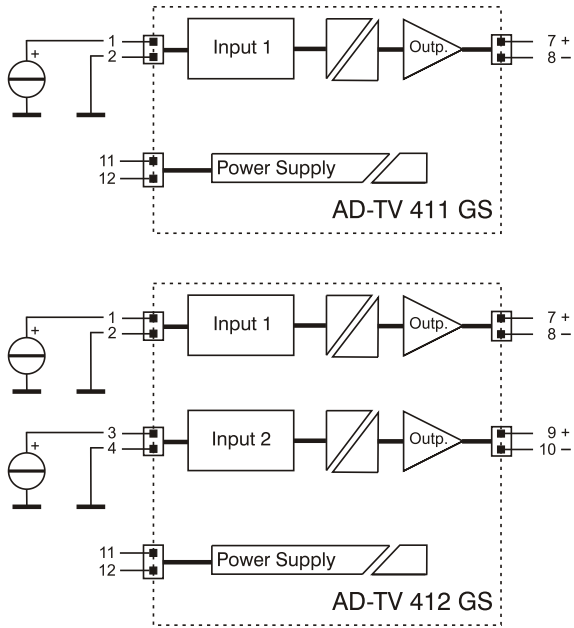
**Protection circuits**

Input	electrical surge protection
Output	electrical surge protection
Power supply	Protection against overvoltage, reverse polarity, over temperature and over current

<sup>1)</sup> During checking, slight signal deviations are possible.

# Current Isolation Amplifier

## Block and wiring diagram



## Dimensions

