Isolation Amplifier

High Current Isolation Amplifier

AD-TV 380 GA

Description

The isolating amplifier of the type family AD-TV 380 serves the galvanic isolation, conversion and amplification of analog signal magnitudes. By using the front mounted zero and gain trimmers, the output signal can be adjusted. The output is designed for currents up to 200 mA. Input, output and supply voltage are galvanically isolated from each other. The output signal is independent of the connected load up to a maximum value.

Application

For registration, galvanic 3-way separation, conversion and amplification of bi-polar measuring magnitudes (voltage or current)



Specific characteristics

- zero and gain trimmers
- high-efficiency power supply unit with a range of 20 ... 30 V DC
- bipolar input
- high current Output

Business data

Order number

AD-TV 380 GA

Technical specifications

Input current

Measuring range +/- 0/4 ... 20 mA Input resistance 50 Ohm

Input voltage

Measuring range +/- 0/2 ... 10 V Input resistance 100 kOhm

Output current

Output range max. 0 ... 200 mA

Max. burden 40 Ohm at 200 mA

Residual ripple 20 µAss

Supply

Voltage range DC 20 ... 30 V DC
Nominal voltage DC 24 V DC
Power consumption DC 6 W

Transmission behaviour

Basic accuracy < 0,2 %
Temperature influence < 100 ppm/K

Response time ~ 1 ms (smaller on request)

Housing

Dimensions (WxHxD) 100x119x73 mm

Type of protection IP 20
Connection method screw clamp

Terminals, wire cross section $\,$ 2,5 mm 2 flex wire / 4 mm 2 one wire

Bolting torque terminals 0,5 Nm Weight $\sim 300 \text{ g}$

Manner of fastening 35 mm DIN rail 35mm

Environmental conditions

Ambient temperature 0 ... 50 °C

Storage and transport -10 ... 70 °C (no thawing)

EMC

Product family standard EN 61326 1)

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

 $\label{eq:local_supply} \begin{array}{ll} \mbox{Input / output} & 3,75 \ \mbox{kV}, \ 50 \ \mbox{Hz (1 min.)} \\ \mbox{Signal / supply unit} & 2 \ \mbox{kV}, \ 50 \ \mbox{Hz (1 min.)} \\ \end{array}$

Protection circuits

Input electrical surge protection
Output electrical surge protection
Power supply Protection against overvoltage,
overcurrent and reverse polarity

1) During checking, slight signal deviations are possible



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