

Dual-output galvanic isolators / power supplies (Splitters)

Product features

- signal splitting: transmission of an input signal to two independent outputs
- switch-selectable signal ranges on inputs and outputs: 0-20 mA / 4-20 mA / 0-10 V / 2-10 V (in any combination)
- 4-way isolation
- 20 V transmitter power at the input for two wire transmitters
- nonlinearity: < 0,02% TYP
- temperature coefficient: 25 ppm / °C TYP
- 24 VDC ±10% or 230 V AC/DC ±10% power supply
- TS-35 rail mounting, 12.5 mm width



Type designation

DT1122 24 VDC POWER SUPPLY

DT1122 PS 230 V AC/DC POWER SUPPLY

The **DT1122** transmits the signal of a transmitter (or other signal source) connected to its input to two galvanically isolated outputs.

This feature may be required for applications where two parallel signal processors (PLC, DCS) are operating or a local indicator of the transmitter signal is required in addition to the signal processor.

Galvanic isolation is 4-way, i.e. the input, outputs and power supply are galvanically isolated of each other.

The input and output signal ranges can be selected in any combination using the front switches.

The signal ranges are as follows:

0-20 mA / 4-20 mA current or 0-10 / 2-10 V voltage

A 20 V / 24 mA transmitter power is available at the input to power passive 4-20 mA two-wire transmitters.

The device has two inputs:

- current: 0-20 mA / 4-20 mA *
- voltage: 0-10 V / 2-10 V *

* only one input can be used at a time

and two outputs:

- output 1: 0-20 mA / 4-20 mA / 0-10 V / 2-10 V
- output 2: 0-20 mA / 4-20 mA / 0-10 V / 2-10 V

The device can be ordered with two types of power supply:

- DT1122: 24 VDC ±10%
- DT1122 PS: 230 V AC/DC ±10%

The transmission characteristics are outstandingly good: nonlinearity < 0,02% TYP, temperature coefficient: 25 ppm / °C TYP

Front LED indicators provide information on the presence of power and possible fault conditions.

Safety data:

The connection terminals of the input the outputs and the supply voltage are isolated from each other, the isolation is in compliance with the standard EN 61010-1, taking into consideration the following:

Pollution level: 2
 Measurement category: II

Input parameters (current):

Input signal: DC current
 Ranges: see previous page
 Input resistance: 10,6 ohm
 Overload: 400 mA

Input parameters (voltage):

Input signal: DC voltage
 Ranges: see previous page
 Input resistance: 102 kohm
 Overload: 100 V

Transmitter power supply:

Transmitter power supply: > 20 VDC @ 20 mA load
 Overcurrent protection: 25 mA
 Number of output channels: 2

Output parameters (current):

Output signal: DC current
 Ranges: see previous page
 Load resistance: ≤ 500 ohm
 Overdriving ability: 22.5 mA

Output parameters (voltage):

Output signal: DC voltage
 Ranges: see previous page
 Load resistance: ≥ 500 ohm
 Overdriving ability: 11 V

Transmission characteristics:

Output signal error: 0.1% FSR @ 25 °C ±2 °C
 Non-linearity: 0,02% (max.)
 Temperature coefficient: 25 ppm / °C TYP, 50 ppm max.
 Supply-voltage effect: practically zero
 Settling time: 250 ms (10-90%) / 300 ms (99%)

Galvanic isolation:

Working voltage: 250 V_{eff} (between the input, the outputs and the power supply terminals)
 Test voltage: Type test: 4250 VDC (1 min.), Routine test: 2500 VDC (1 min.)

Power supply:

Supply voltage: DT1122: 24 VDC ±10%, DT1122 PS: 230 V AC/DC ±10%,
 Power consumption: DT1122: ≤ 2,2 W DT1122 PS: 3,3 W, 5,2 VA

Ambient conditions:

Operating temperature range: 0-50 °C (-20 °C-60 °C for customer request)
 Relative humidity: 90% (max., non-condensing)
 Place of installation: cabinet
 Mounting position: vertical (horizontal rail position)

Electromagnetic compatibility (EMC): Accordance with the standard EN 61326-1

Noise emission: Group 1, Class B
 Immunity: industrial area
 ESD: 4 kV/8 kV surface / air
 BURST: 2 kV/1 kV power / signal
 SURGE: 1 kV
 Conducted RF immunity: 3 V_{eff}

General data:

Housing: TS-35 rail mounting housing material: polyamide PA6.6
 Connection: Pluggable screw-terminal
 Connecting cable: 0,25-2,5 mm²
 Dimensions / Weight: 12,5 × 99 × 115 mm (width × height × depth) / 0,15 kg
 Protection: IP 20

Detailed information see in operating instructions. The Manufacturer maintains the right to change the technical data!