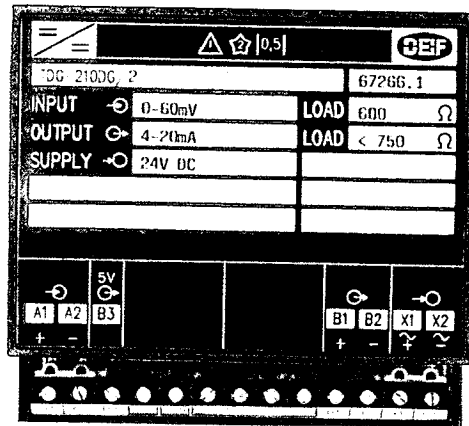


Insulation amplifiers DC/DC amplifiers



Type TDG-210DG

4921220011E



- Conversion of measuring signal possible
(E.g. -10...0...10mA into 4...20mA)
- Suppression of negative input signals possible
- Aux. voltage: 57.7...440V AC or 24...220V DC
- For mounting on DIN rail

DEIF A/S

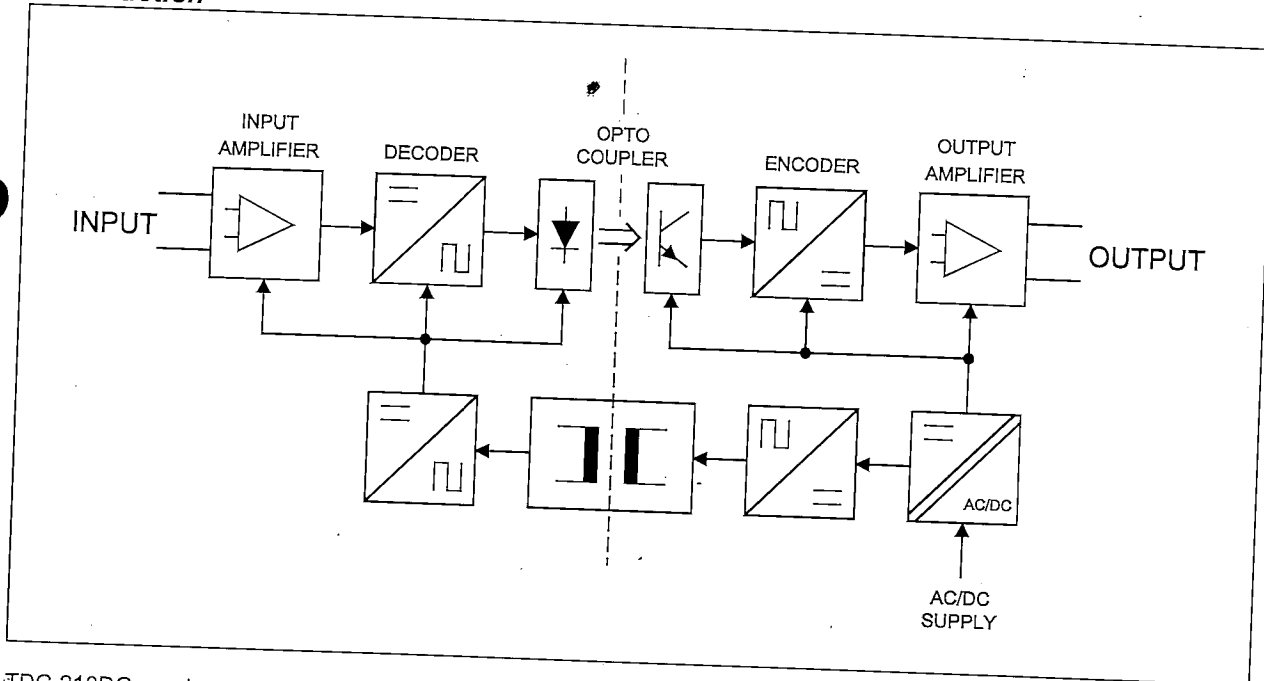


Application

TDG-210DG is a CE marked DC/DC amplifier with galvanic separation between input and output. It is typically used for:

- **Converting one type of DC signal into another DC signal**
(E.g. from -10...0...10mA into 4...20mA)
- **Converting potentiometer input into a DC signal**
(E.g. from 0...1k Ω into 0...10V)
- **Separating a number of earthing points**
If a cable is connected to earth at more than one point, a measuring error may develop or noise problems may arise if the earth potentials of these vary.
- **Galvanic separation of current signals**
As measuring equipment connected to the current output of a transducer is connected in series, simultaneous earthing of more than one input of connected measuring equipment will result in short-circuit of the input of intermediate measuring units.
- **Conversion of measuring signal**
If increasing output is requested at decreasing input, this may be achieved by means of the insulation amplifier, at the same time providing galvanic separation between the 2 measuring circuits.
(E.g. from 10...0V DC into 0...5mA).
- **Adaption of measuring range**
The input may be suppressed, i.e. only a part of the range is used.
(E.g. from 10...20mA to 0...10V DC).
- **Separation of measuring circuits**
In case of remote transmission of a DC signal - typically a 4...20mA signal to a number of measuring points situated well away from each other - separation into galvanically separated measuring circuits is often requested to isolate a possible fault and confine this to the faulty circuit.
- **Measuring on DC shunts**
The potential of a DC measuring shunt (0...60mV) is sometimes high when compared to earth. A leakage between the measuring cable and earth will result in a measuring error. The galvanic separation at the same time provides protection against accidental contact to the high potential.
- **Measuring of DC voltages**
Especially when measuring high DC voltages galvanic separation between input and output is an absolute necessity for safety purposes and due to differences in the potentials of input and output. TDG-210DG is available for measuring of voltages up to 500V DC.

Construction



TDG-210DG requires auxiliary voltage and is fed through a transformer or a 24/48/110/220V DC inverter. The secondary voltage is rectified and fed to the encoder and output amplifier shown to the right of the galvanic interface. The secondary voltage is also fed through a DC/DC inverter. The input signal is amplified and is, through optocouplers, transmitted to the output amplifier.

This measuring method combines high accuracy of measurement with long-term stability.

Standard input and output may be set by means of jumpers, whereas special input is factory calibrated.