

# EM-M21A Pt-100 TO 4...20 mA CURRENT LOOP CONVERTER



## FEATURES:

- Wide operating voltage range
- 4...20 mA / 1...5 V output
- Multiple ranges
- Three wire compensated
- Linearisation inbuilt
- Adjustable zero and gain
- Over voltage protected
- Incorrect polarity protected
- Easy to connect
- Rail mountable

EM-M21A is a multiscale converter for thermal transducer Pt-100. Pt-100 transducer is connected to converter with three wires. In this way the cable resistance is compensated. The converter has four selectable temperature ranges and a -50 °C settable offset. The gain and zero adjustments have no mutual effect. The output signal is 4...20 mA current signal, and the nonlinearity of the Pt-100 is already corrected in the converter. The converter acquires its operating voltage from the current loop and needs no additional supply. EM-M21A can be connected as a voltage transmitter 1...5 V according to the figure below. Converter is efficiently protected against misconnections and voltage surges.

## TECHNICAL DATA:

|                     |   |
|---------------------|---|
| Supply              | 12...32 Vdc   |
| Temperature ranges  | 0...100 °C<br>0...200 °C<br>0...300 °C<br>0...400 °C<br>-50...+50 °C<br>-50...+150 °C<br>-50...+250 °C<br>-50...+350 °C |
| Output signal       | 4...20 mA / 1...5 V   |
| Linearity error     | < 0.1 %   |
| Thermal drift       | < 100 ppm/°C  |
| Cable compensation  | 0.1 % / 10 ohm (Rc < 50 ohm)  |
| Transducer supply   | appr. 1 mA  |
| Loop resistance     | 0...700 ohm ( 24 V )  |
| Oper. ambient temp. | 0...60 °C   |

LARGEST POSSIBLE MEAS. RESISTOR AS A FUNCTION OF OPER. VOLTAGE

