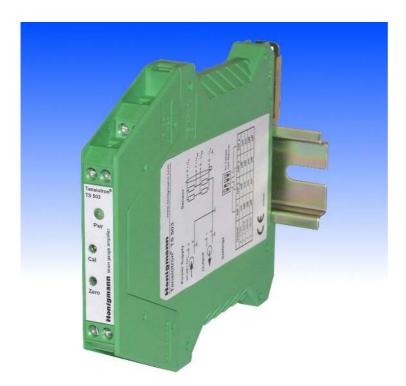
TENSIOTRON® TS 503

Strain Gauge Measuring Amplifier



The compact measuring amplifier

TENSIOTRON® TS 503 is designed

for general-purpose use with most

strain gauge-based sensors, esp. for
tension measurement.

Best temperature stability, long-term stability and high accuracy are guaranteed by modern technology.

The very compact design, convenient mounting and high quality are the features of the amplifier **TS 503**.

Special features:

- Slim-Line housing for DIN-EN rail mounting only 12,5mm width
- great noise immunity and service reliability for use in rough industrial operation
- direct input power supply of 24V DC
 - reverse-polarity protected
 - LED indicates power-on status
- provides a well regulated power supply for sensor excitation
- adjustments for zero and amplification setting by trimpot
- connection via screw terminals
- output signal selectable by DIP-switches

- voltage 0 to ± 10 V or

- current 0/4 to 20mA, unipolar or bipolar

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Technical Data TS 503

| Designation Design Accuracy class | | Tensiotron® TS 503 DIN-rail housing for convenient snap-in installation 0,1 | | | |
|--|----------------|---|-----------------------------|---|---------------------------------|
| | | | Sensors to be connected: | | admissible connection impedance |
| | | | - strain gauge, full bridge | Ω | ≥ 150 |
| Bridge excitation voltage | V DC | 10 ± 0,5 % | | | |
| Nominal gain G _{nom} | | 667 | | | |
| Nominal measuring range U _{sig} | mV | ± 15 | | | |
| Calibration range referenced to G _{nom} | % | 50 to 100 to 500 | | | |
| Adjustment range zero @ G _{nom} | % ¹ | approx. ± 70 | | | |
| Input impedance | Ω | 10 ¹⁰ | | | |
| Cut-off frequency (- 3 dB) | Hz | approx. 55 | | | |
| Output signal (selectable by DIP-switch) | | | | | |
| - voltage output (factory setting) | V | 0 to \pm 10, max. 10 mA | | | |
| - current output bipolar | mA | 0 to \pm 20, admissible load 0 to 500 Ω | | | |
| - current output unipolar | mA | 0 to + 20, admissible load 0 to 500 Ω | | | |
| - current output unipolar | mA | 4 to + 20, admissible load 0 to 500 Ω | | | |
| Nominal temperature range | ° C | 0 to + 60 | | | |
| Operation temperature range | ° C | 0 to + 60 | | | |
| Storage temperature range | ° C | - 25 to + 75 | | | |
| Temperature influence per 10 °C | | | | | |
| - on zero at amplifier output | mV | < 10 (@ G _{nom}) | | | |
| - on calibration | % ¹ | < 0,05 | | | |
| Supply voltage | V DC | 20 to 28 | | | |
| Power consumption | W | max. 2,5 | | | |
| Amplifier connection | | Screw terminals for flexible cable | | | |
| | | 0,14 to 2,5 mm ² | | | |
| Dimensions (L x W x H) | mm | 114,5 x 99 x 12,5 | | | |
| Weight | g | approx. 100 | | | |
| Installation | | Snap-in installation on DIN-EN mounting rails | | | |

¹ of final value

Explanation of grammalogue:

 $\begin{array}{ll} G_{nom} & \Rightarrow \text{Nominal gain} \\ U_{sig} & \Rightarrow \text{Input voltage} \end{array}$

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