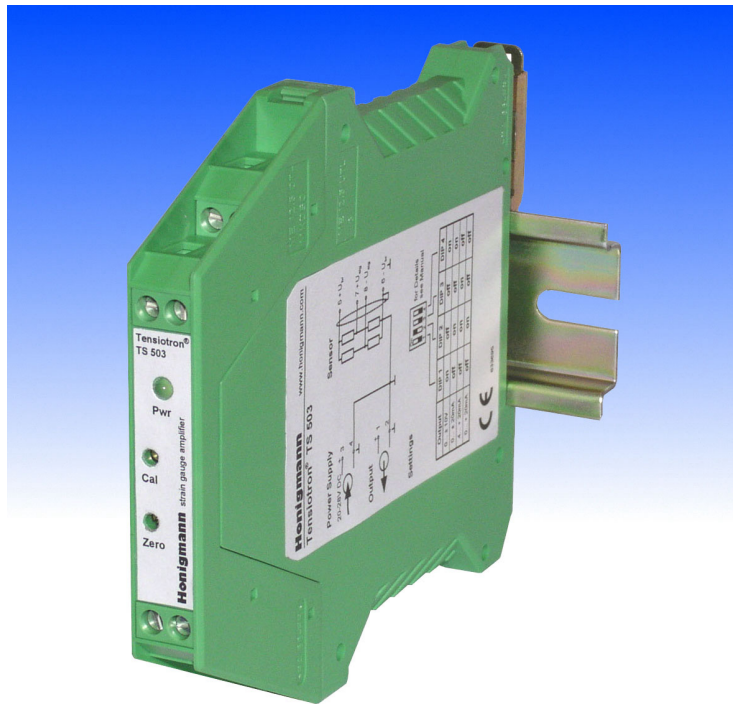


# TENSIOTRON<sup>®</sup> TS 503

## Strain Gauge Measuring Amplifier



The compact measuring amplifier **TENSIOTRON<sup>®</sup> 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  $\pm 10V$  or
  - current 0/4 to 20mA, unipolar or bipolar

## Technical Data TS 503

Designation		Tensiotron® TS 503
Design		DIN-rail housing for convenient snap-in installation
Accuracy class		<b>0,1</b>
Sensors to be connected: - strain gauge, full bridge	$\Omega$	admissible connection impedance $\geq 150$
Bridge excitation voltage	V DC	$10 \pm 0,5 \%$
Nominal gain $G_{nom}$		667
Nominal measuring range $U_{sig}$	mV	$\pm 15$
Calibration range referenced to $G_{nom}$	%	50 to 100 to 500
Adjustment range zero @ $G_{nom}$	% <sup>1</sup>	approx. $\pm 70$
Input impedance	$\Omega$	$10^{10}$
Cut-off frequency (- 3 dB)	Hz	approx. 55
Output signal (selectable by DIP-switch) - voltage output (factory setting) - current output bipolar - current output unipolar - current output unipolar	V mA mA mA	0 to $\pm 10$ , max. 10 mA 0 to $\pm 20$ , admissible load 0 to 500 $\Omega$ 0 to + 20, admissible load 0 to 500 $\Omega$ 4 to + 20, admissible load 0 to 500 $\Omega$
Nominal temperature range	$^{\circ}C$	0 to + 60
Operation temperature range	$^{\circ}C$	0 to + 60
Storage temperature range	$^{\circ}C$	- 25 to + 75
Temperature influence per 10 $^{\circ}C$ - on zero at amplifier output - on calibration	mV % <sup>1</sup>	< 10 (@ $G_{nom}$ ) < 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 <sup>2</sup>
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

<sup>1</sup> of final value

Explanation of grammalogue:

$G_{nom}$   $\Rightarrow$  Nominal gain

$U_{sig}$   $\Rightarrow$  Input voltage

*Technical execution subject to change without prior notice*

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