

## AT5 Measuring Amplifier



The AT5 amplifies and transmits the SG signals from the machine parts to a measuring unit. The amplifier helps to measure relative deformations, vibrations, torque and bending moments, forces, weights, pressures and other parameters everywhere where the SG transducers are used.

There are two amplifier versions:

The AT5 version has a voltage as an output.

The second version (AT5 / 1) has a current as an output.

The amplifier operates from an on-board DC network with a voltage from 10 up to 30 V.

### Technical Data

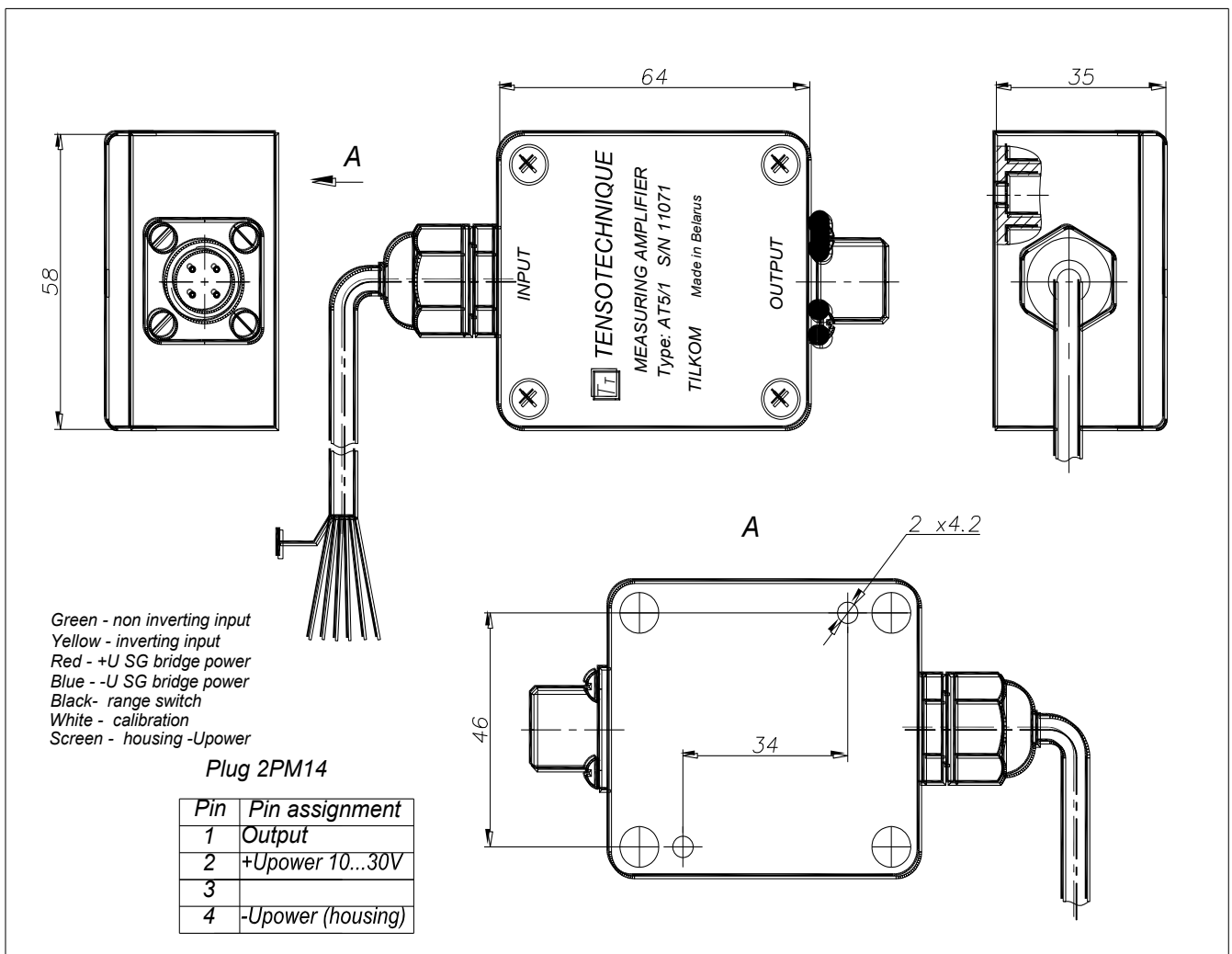
Number of channels	1	
Connectable transducers	S.G. full or half bridges	
Strain gauge impedance	$\Omega$	$\geq 100$
Measuring range	mV/V	- 0.5 ... + 0.5 - 1.5 ... + 1.5 - 4 ... + 4
Zero drift adjustment	mV/V	$\pm 2$
Linearity deviation	%	$\geq 0,1$
Temperature zero drift	mV/V °C	$\geq 1 \times 10^{-5}$
Common-mode rejection (CMR)	dB	$\leq 60$
Voltage noise density	mV/V	$1 \times 10^{-3}$
S.G. excitation voltage	V	$5 \pm 0.5$
Nominal output(AT5) when load resistance $\leq 2 \text{ k}\Omega$	V	0.1 ... 2.5 ... 4.9
Nominal output current (AT5/1) when load resistance $\leq 100 \Omega$	mA	4 ... 12 ... 20
Supply voltage DC	V	10 ... 30
Power consumption	mA	$\geq 60$
Nominal temperature range	°C	- 40 ... + 50
Dimensions	mm	64 x 58 x 35
Weight	kg	$\geq 0.18$
Vibration resistance: - Displacement at frequency range 10 ... 60 Hz - Acceleration at frequency range 60 ... 500 Hz	mm m/s <sup>2</sup>	$\leq 0.35$ $\leq 49$
Impact resistance: Number of impacts Duration Acceleration	n ms m/s <sup>2</sup>	1000 2 ... 10 $\leq 150$

## Scope of supply

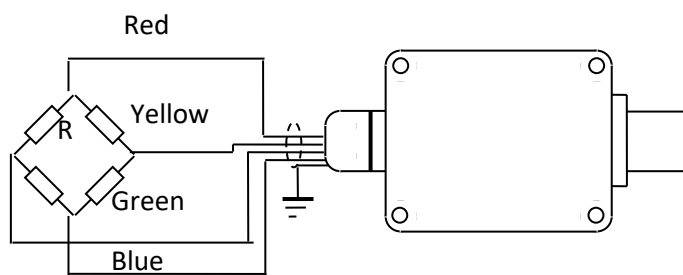
AT5 measuring amplifier	1
Power / signal cable, 10 m long	1
Operating manual	1

## Dimensions in mm

The AT5 is in a sealed housing made of light alloy. The plug for SG bridges connecting is on the one side (with stranded conductor). At the other side, you see the two in one the power supply plug and the output signal plug. In addition, there is system LED, indicating if there is a power supply and that the amplifier is on.



## AT5 Connection Block Diagram



2PM14

CN	Connection
1	Output
2	+ 10 ... 30 V
3	
4	- 10 ... 30 V COM

### Input pin color code:

Blue wire – “-“ of the power supply,

Yellow wire – inverting amplifier input,

Green wire – non-inverting amplifier input,

Red wire – “+” of the power supply,

Black wire – input range switch,

White wire – calibration,

Screen – the amplifier housing is connected to the “-“ wire.