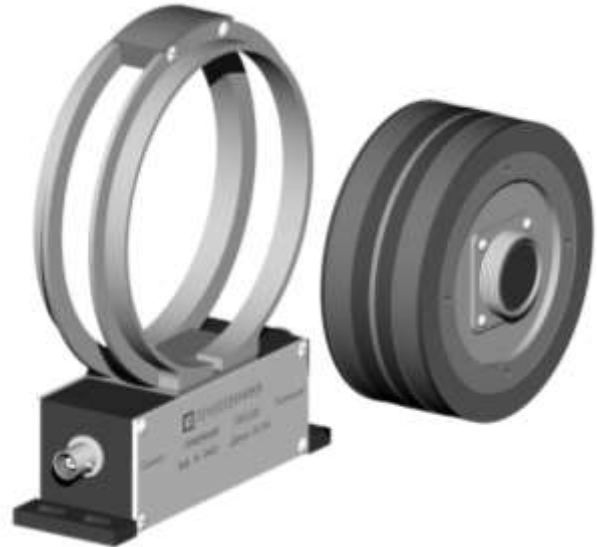


TT03 Telemetry

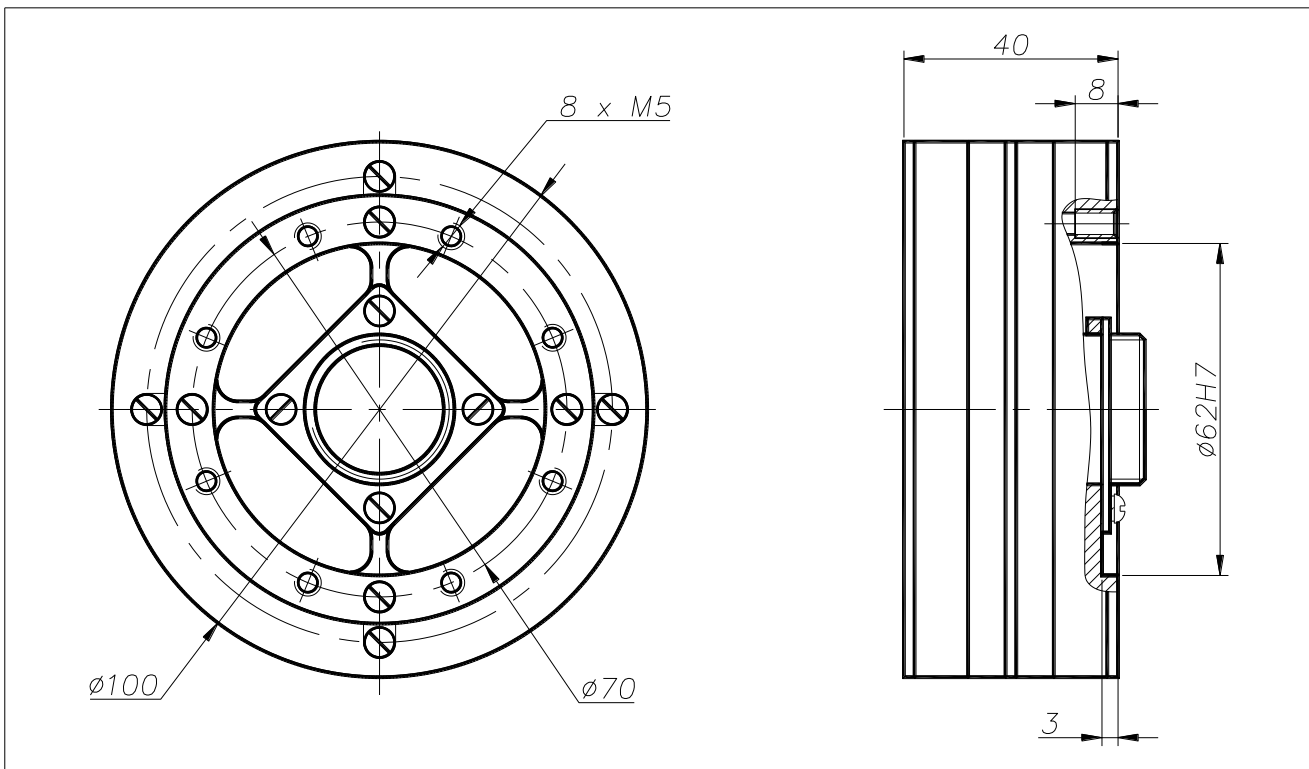
The TT03 is the 23-channel telemetry system for amplifying and contactless transmission of signals from the strain gauges mounted on the rotating machine parts to the stationary measuring unit or data acquisition system. It is the 12-bit digital system with 15 fast channels (2 kHz bandwidth) and 8 slow channels (120 Hz bandwidth). Transmitter and strain gauges are fed with power inductively.

Special Features:

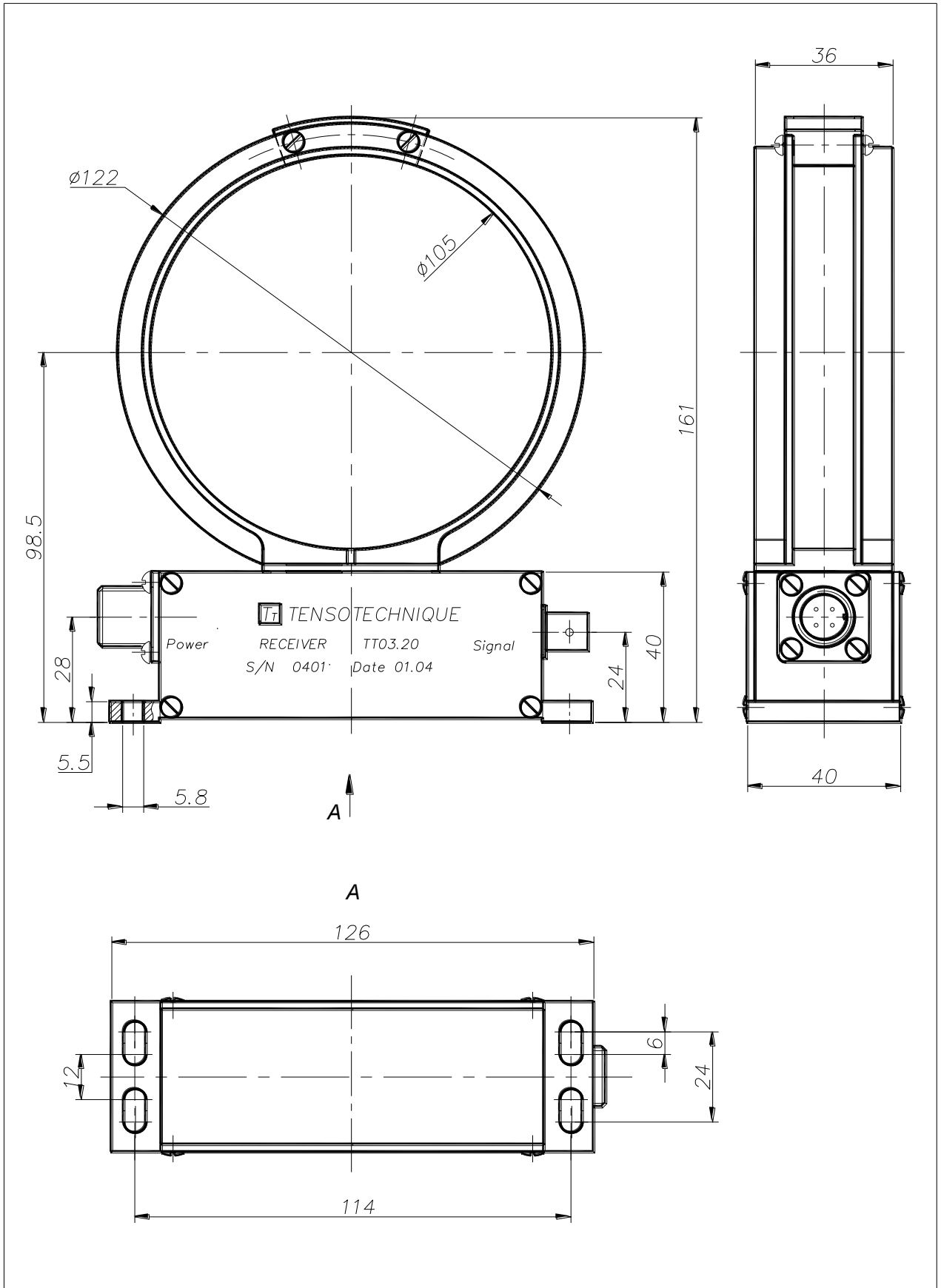
- non-contact signal transmission by means of the digital telemetry;
- power supply by the air transformer;
- 23 measuring channels;
- 15 high-speed measuring channels;
- transmitter rotation speed up to 20 000 rpm;



Transmitter. Dimensions in mm



Receiver. Dimensions in mm



Technical Data

Parameter	Unit	Value
Number of fast channels		15
Number of slow channels		8
Sampling rate of fast channels, Sampling rate of slow channels	Hz	4 000 500
Cut-off frequency of input amplifiers (- 3 dB)	Hz	0 ... 2000
Permissible strain gauge full bridge resistance	Ω	≥ 350
Nominal input signal	mV/V	± 2 (other on request)
Bridge excitation voltage	V	5
ADC resolution	Bit	12
ADC non-linearity	Bit	± 1
Temperature effect in the nominal temperature range on the zero point	mV/V/10°C	10^{-5}
Output signal: serial code parallel code serial code Ethernet	kbit/sec kbyte/sec Mbit/sec	833 128 10
Receiver excitation voltage	V	12 ± 0.6
Receiver current consumption	A	≤ 2
Transmission between the transmitter and receiver		contactless, electromagnetic
Nominal temperature range	°C	- 40 ... + 50
Humidity by the ambient temperature + 35 °C	%	≤ 95
Transmitter weight	g	750 ± 50
Receiver weight	g	500 ± 50
Vibration resistance: - by frequency range 10 ... 60 Hz displacement amplitude - for amplifier by frequency range 60 ... 500 Hz with acceleration	mm m/s ²	≥ 0.35 (up to 60 Hz) ≥ 4.9 (over 60 Hz)
Impact resistance: Number Duration Acceleration	n ms m/s ²	1 000 2 ≥ 150
Max transmitter rotation speed	min ⁻¹	20 000
Analogue output		
Nominal output signal with load resistance ≥ 10 k Ω	V	± 5
Measurement frequency range fast channels slow channels	Hz	0 ... 800(- 0.5 dB) 0 ... 50 (- 0.5 dB)
Noise density	dB	≤ -60
Isolation between channels	dB	≥ 52
Supply voltage 50Hz	V	220

Scope of Delivery

TT03.1 rotor (transmitter)	1
TT03.2 stator (receiver)	1
TT03.3 decoder (optionally)	1
Power cable (10 m long)	1
Signal cable (10 m long)	1
Operating manual	1

Technical data are subject to change without notice!
Customer device design and appropriate software are also available on request.

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