



# Technical Data

## 1. Measurement system

Nominal torque $M_N$	Nm	100
Nominal axial force $F_N$	N	500
Deviation of the actual output signal at the nominal torque from the nominal value including linearity deviation and hysteresis	%	$\geq \pm 0.2$
Deviation of the actual output signal at the nominal axial force from the nominal value including linearity deviation and hysteresis	%	$\geq \pm 0.3$
Temperature effect per 10 °C on the zero signal, related to the nominal torque	%	$\geq \pm 0.1$
Temperature effect per 10 °C on the zero signal, related to the nominal axial force	%	$\geq \pm 0.1$
Amplitude ripple (0 ... 500 Hz)	dB	$\geq \pm 0.1$
Sample rate	kSample	5
Nominal supply voltage	V (DC)	12 ... 30
Power consumption	W	$\geq 5$
<b>Rotation speed measuring system</b>		
Max. rotation speed of the rotor	rpm	3 000
Limits of error in the range from 30 up to 3 000 rpm.	%	$\geq \pm 0.1$
Pulses per revolution		1

## 2. Resistance to environment and mechanical exposures

Nominal temperature range	°C	0 ... + 60
Humidity	%	$\geq 95$ (+ 35 °C)
Atmospheric pressure	kPa	84 ... 106.7 (630 ... 800 mm Hg)
Storage temperature range	°C	- 10 ... + 70
Storage humidity	%	$\geq 95$ (+ 30 °C)
Vibration resistance:		
Frequency range	Hz	10 ... 55
Duration	h	1
Acceleration	m/s <sup>2</sup>	40
Impact resistance:		
Number of impacts	n	1 000
Duration	ms	10
Acceleration	m/s <sup>2</sup>	400
Degree of protection		IP40

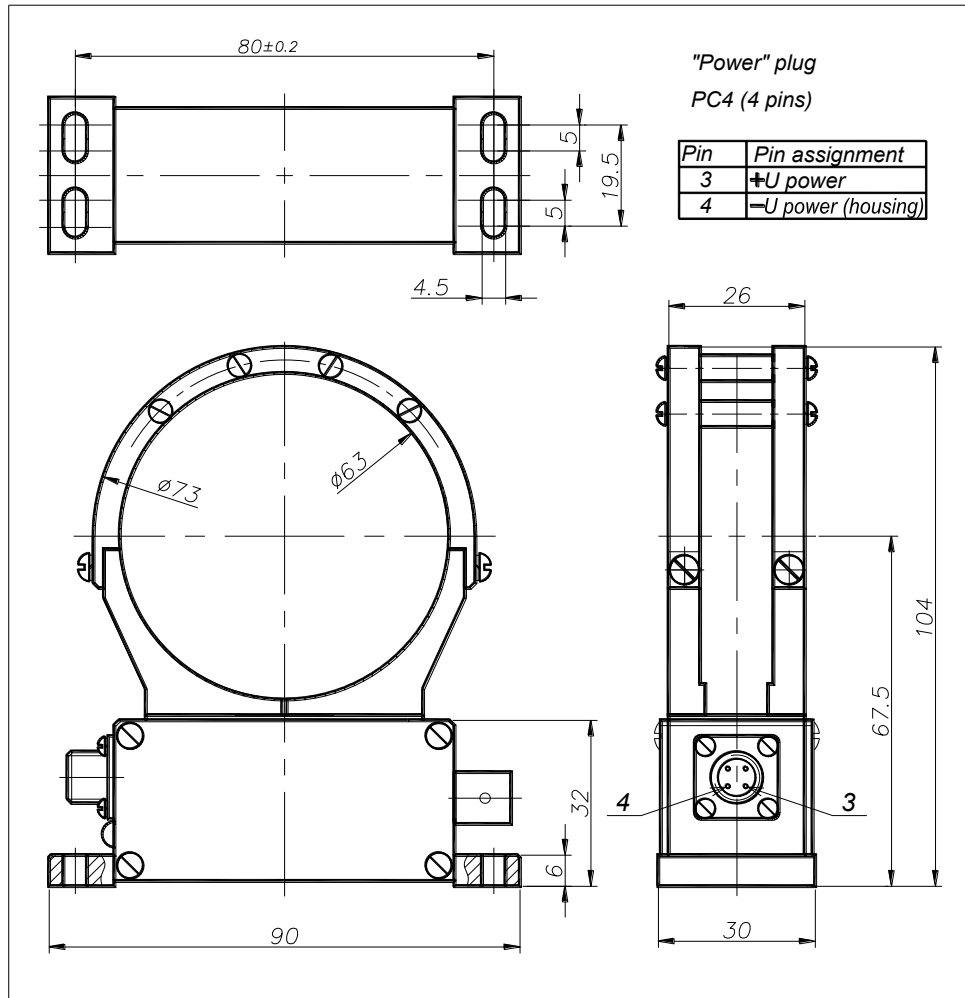
## 3. Permissible load limits and mechanical values

Nominal torque, $M_N$	Nm	100
Nominal axial force, $F_N$	N	500
Limit torque, related to $M_N$	%	150
Limit axial force, related to $F_N$	%	150
Lateral limit force on the rotor	N	120
Bending limit moment on the rotor	Nm	10
Torsional stiffness	kNm/rad	31.0
Weight: rotor	kg	0.9
stator		0.3

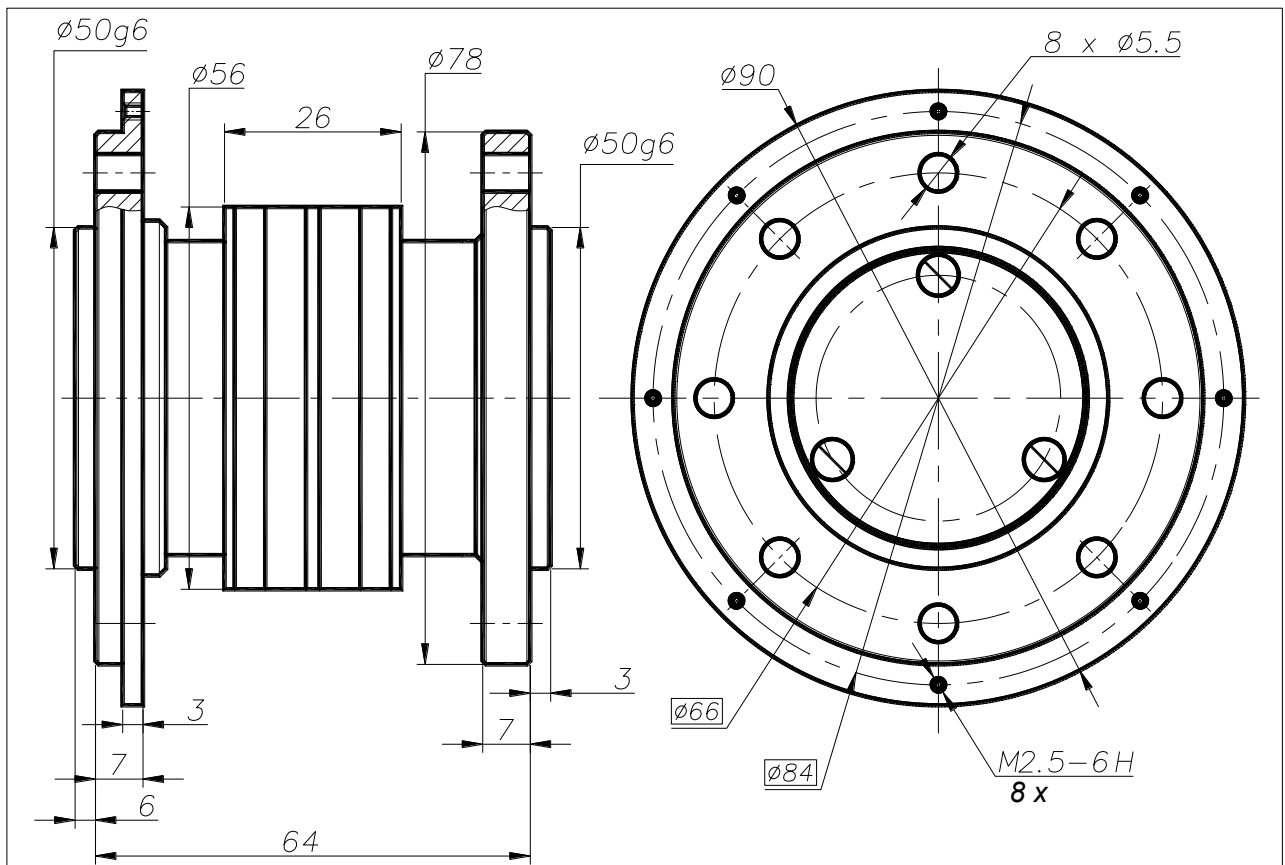
## 4. Scope of Supply

Rotor M42	1
Stator M42	1
Ring gear	1
USB-adaptor AT1.3	1
Signal cable AT1.4	1
Cable socket PC-4TB	1
USB AT1.5 cable	1
"Transducer" software for MS® Windows XP, 7, 8, 10	1
Operating manual for transducer	1
"Transducer" user manual (on the CD)	1

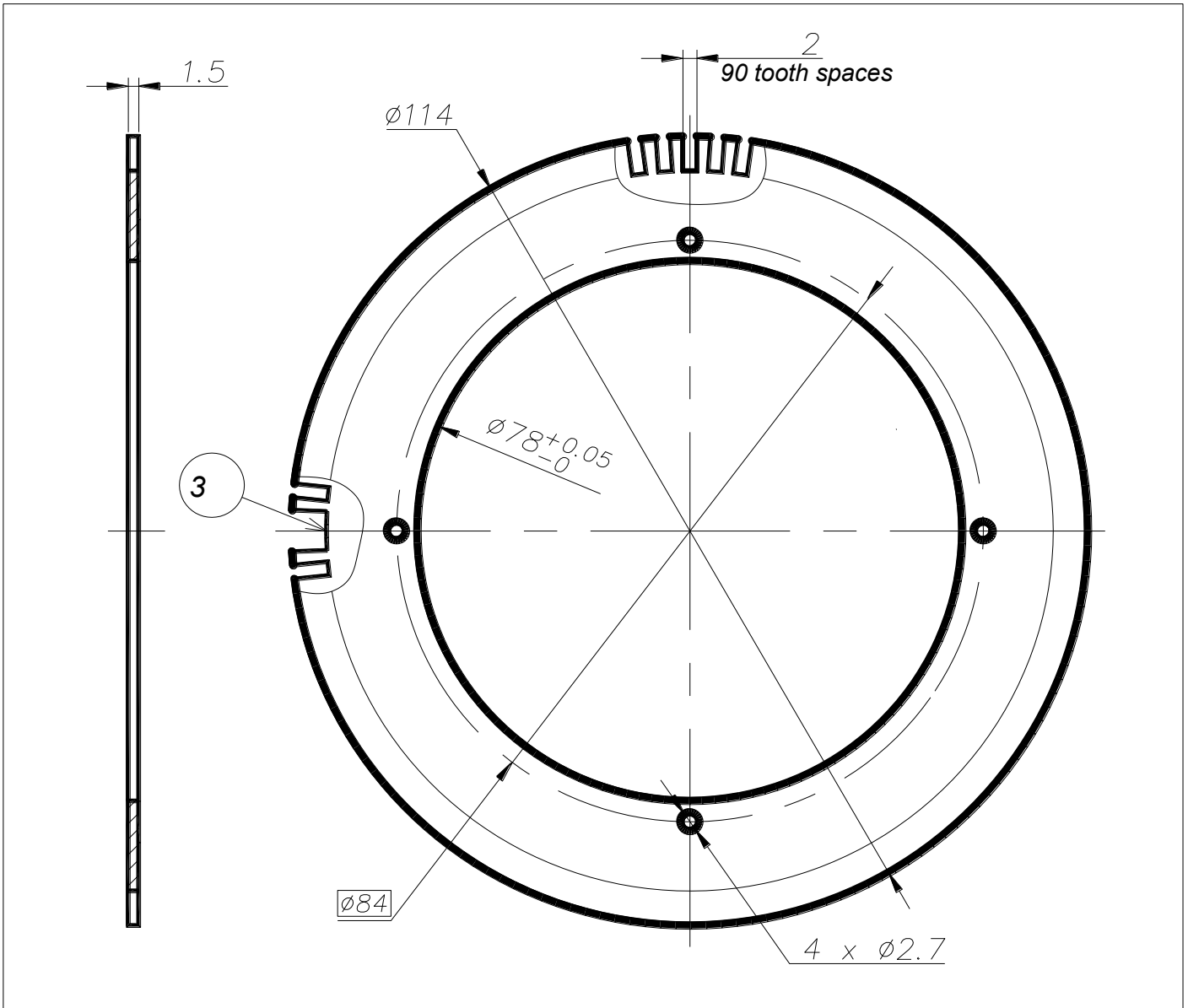
### Stator. Dimensions in mm.



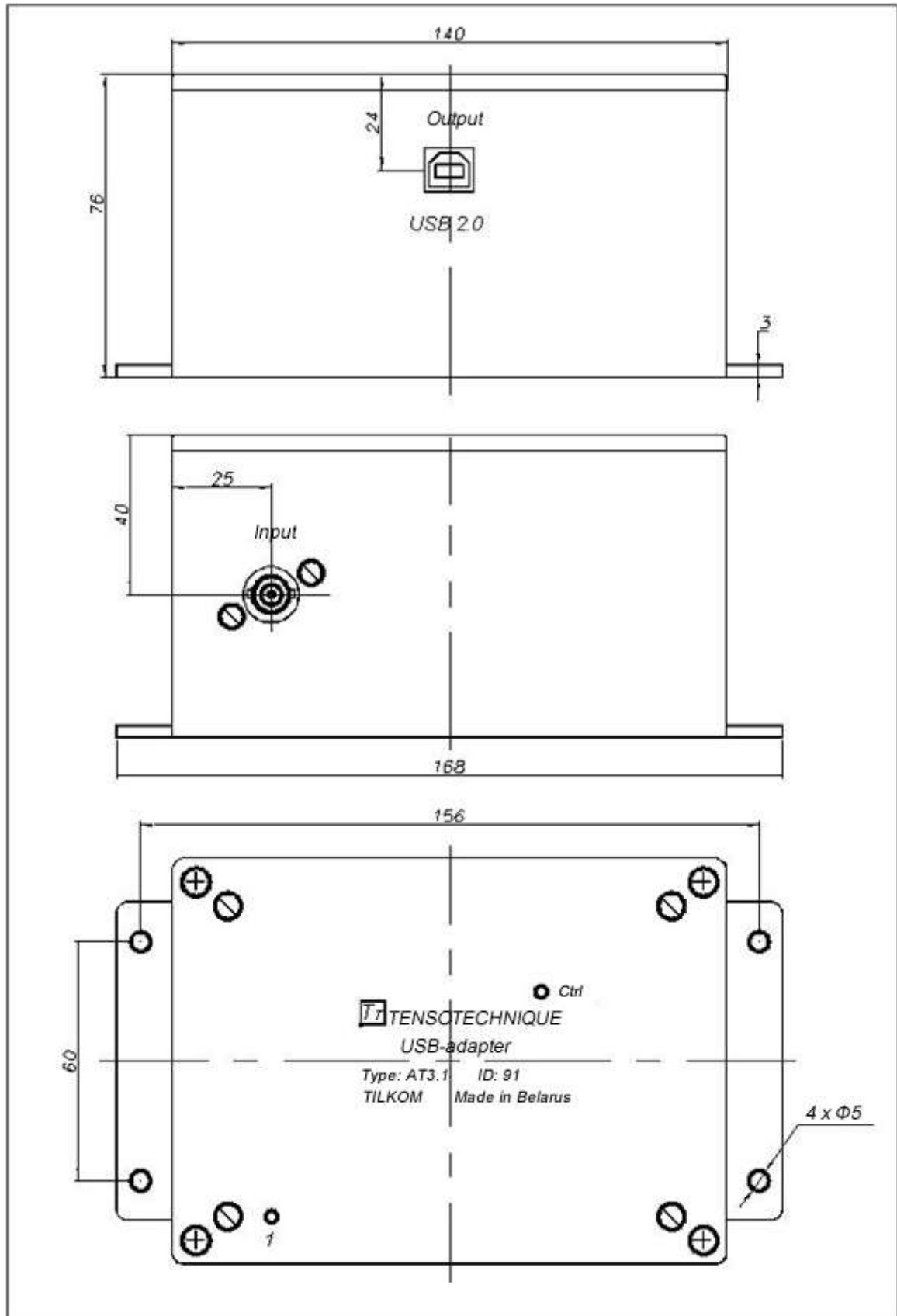
### Rotor. Dimensions in mm.



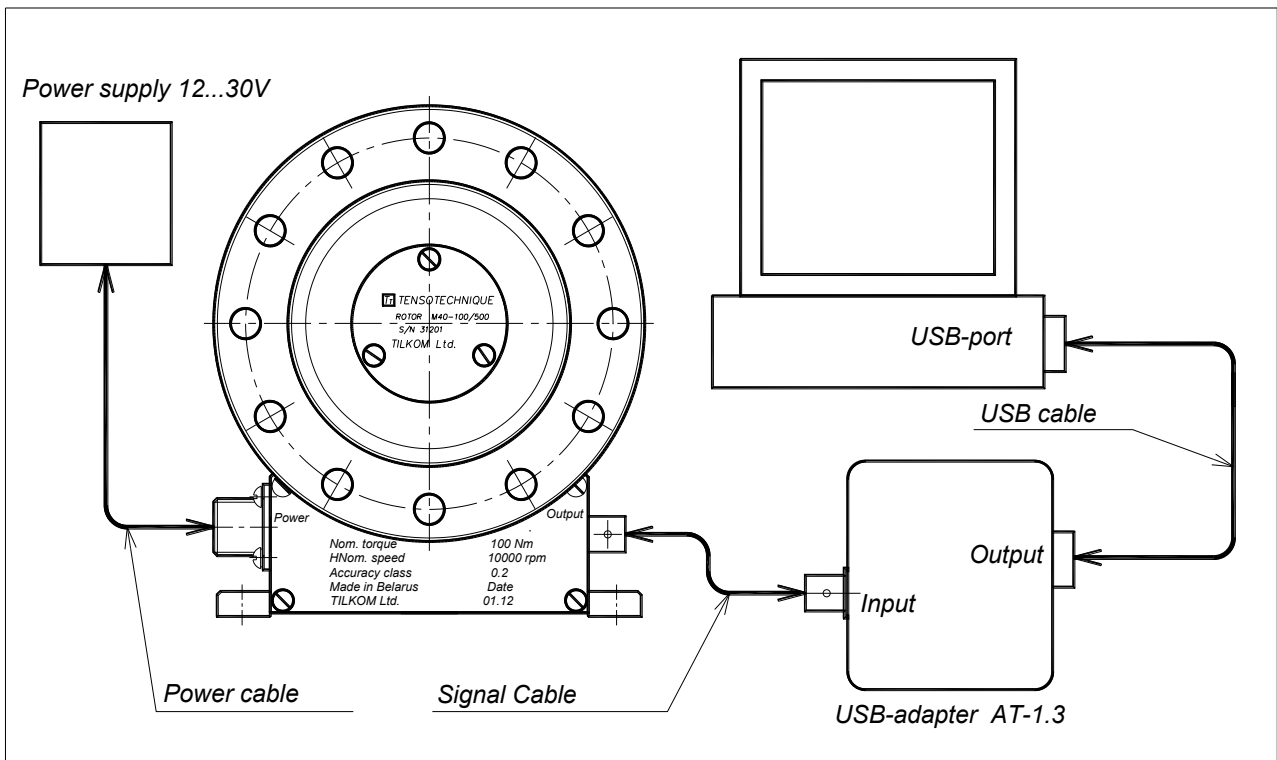
Ring gear. Dimensions in mm.



### USB-adapter AT1.3. Dimensions in mm.



## Connection to a PC



## Software

The supplied MS-Windows software enables the acquisition of measurement data and its storage in a file. The measurements can be visualized on-line with digital indicators and x/y displays. A text file is provided for storage so that the measurement data can be read and processed by other programs.

The software has the function to record data without the averaging with the max. information rate. This function allows to perform acquisition at frequency up to 2 500 Hz.

Features: mathematical computation of mechanical power, measurement signal filter, zero shift adjustment, fast records, slow records, scaling of x-axis and y-axis, digital indicator up to  $\pm 50\,000$  digits.

Specifications may change at any time without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

It is the customer's responsibility to ensure safe installation and operation of the product.

Detailed mounting drawings of all products are available on request.

We can develop and produce customized transducers for you that meet your specifications.