

TSS Force Sensors



Measure tensile, compression or bending forces from 0 to 100 t.

Measure force as a component of safety devices and control systems for lifting applications. May be used in various industrial automatic monitoring, protection and control systems, weighing systems and road construction machinery.

Key features:

- force measurement up to 100 t
- high reading accuracy and stability through the integrated calibration and temperature compensation
- digital data transmission interface
- digital input for limit switch connection.

Model designation

TSS-10000 - P115 - 1

Product code

Measuring range (kgf)

Signal type:

P – digital

T – current

E – voltage

Interface:

Digital:

1 – RBus

2 – CANopen

3 – RS485

Current:

1 – 4 to 20 mA

2 – 0 to 20 mA

Voltage:

1 – 0,5 to 4,5 V

2 – 0 to 5 V

Electrical connection:

0 – without connector

1 – AMP Superseal 1.5 connector (4 pin)

2 – AMP Superseal 1.5 connector (2 pin)

Customer specification

For digital signal:

1 – address setting – 0x20, 0x21, 0x22

2 – digital input status transmission, address 0x20

3 – address setting – 0x04, 0x06, 0x09

Mounting:

1 – axial

2 – connecting rod – hole M12

3 – hole M20x1.5 – hole M20x1.5

4 – hole M12x1.75 – hole M12x1.75

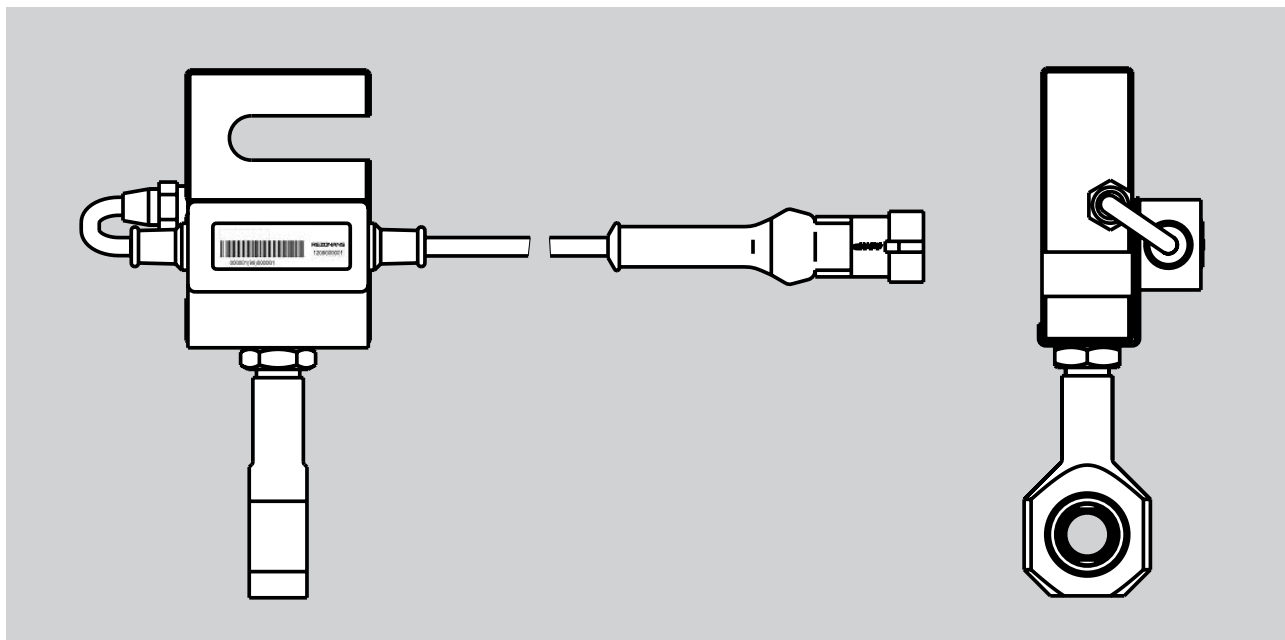
5 – hole M30x2 – hole M30x2

Main specifications

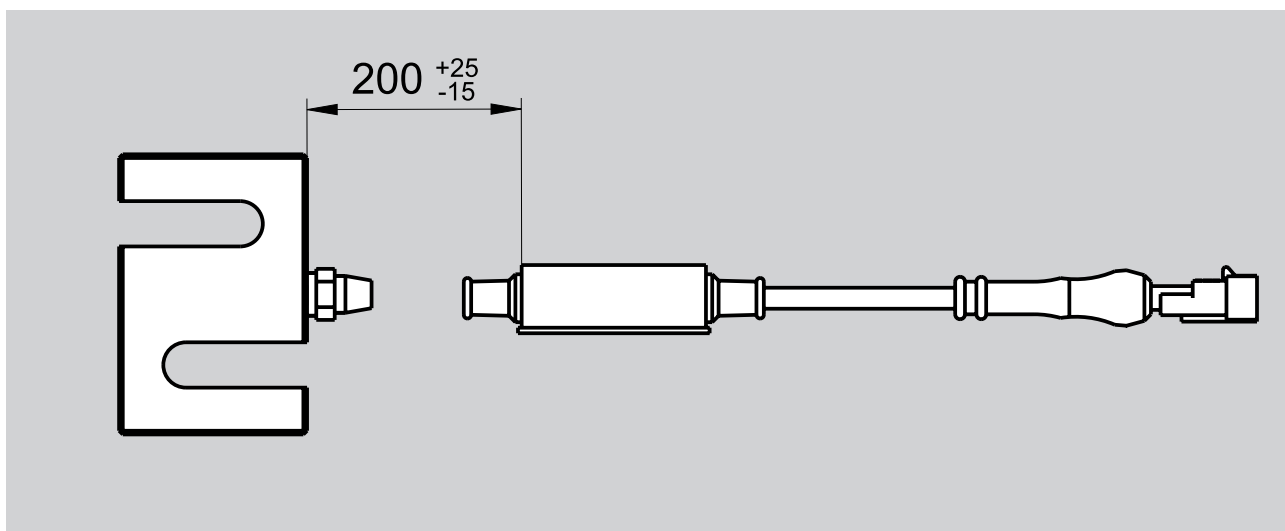
Parameter	Value
Power supply voltage	10...32 V
Maximum current consumption of sensors with digital output and voltage output	40 mA
Maximum current consumption of sensors with current output	22 mA
Maximum sensor load, of measuring range	150%
Operating temperature range, °C	- 40 ... +55
Storage temperature range, °C	- 50 ... +65
IP rating (as per GOST 14254-96)	IP67
Allowed impact loads, m/s ² , max.	up to 100 m/s ²
Allowed vibratory loads within the frequency range	50...200 Hz, m/s ² ,
Time to failure	10,000 h
Force measurement error in the entire range	max. 1%

Sensor designs

Connecting Rod – Hole



Hole – Hole



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