Sensor PLL005

INSTRUCTION MANUAL

01. General information

Sensor edge finder is manufactured for making measures before mechanical milling, position determination of a fixed workpiece and dimension control of completed parts at CNC machine. With the help of the sensor it is possible to make centre search of a loop or a workpiece of any dimensions and make contact scanning.

PLL005 has high accuracy. It is able to work with wood, plastics and other electrically non-conductive materials, easy to use (doesn't need installation, recalibration can be easily done without assistance), has light indication and actuation of indicating lamp. It is compatible with all CNC systems (Mach3, LinuxCNC and others.

02. Delivery set.

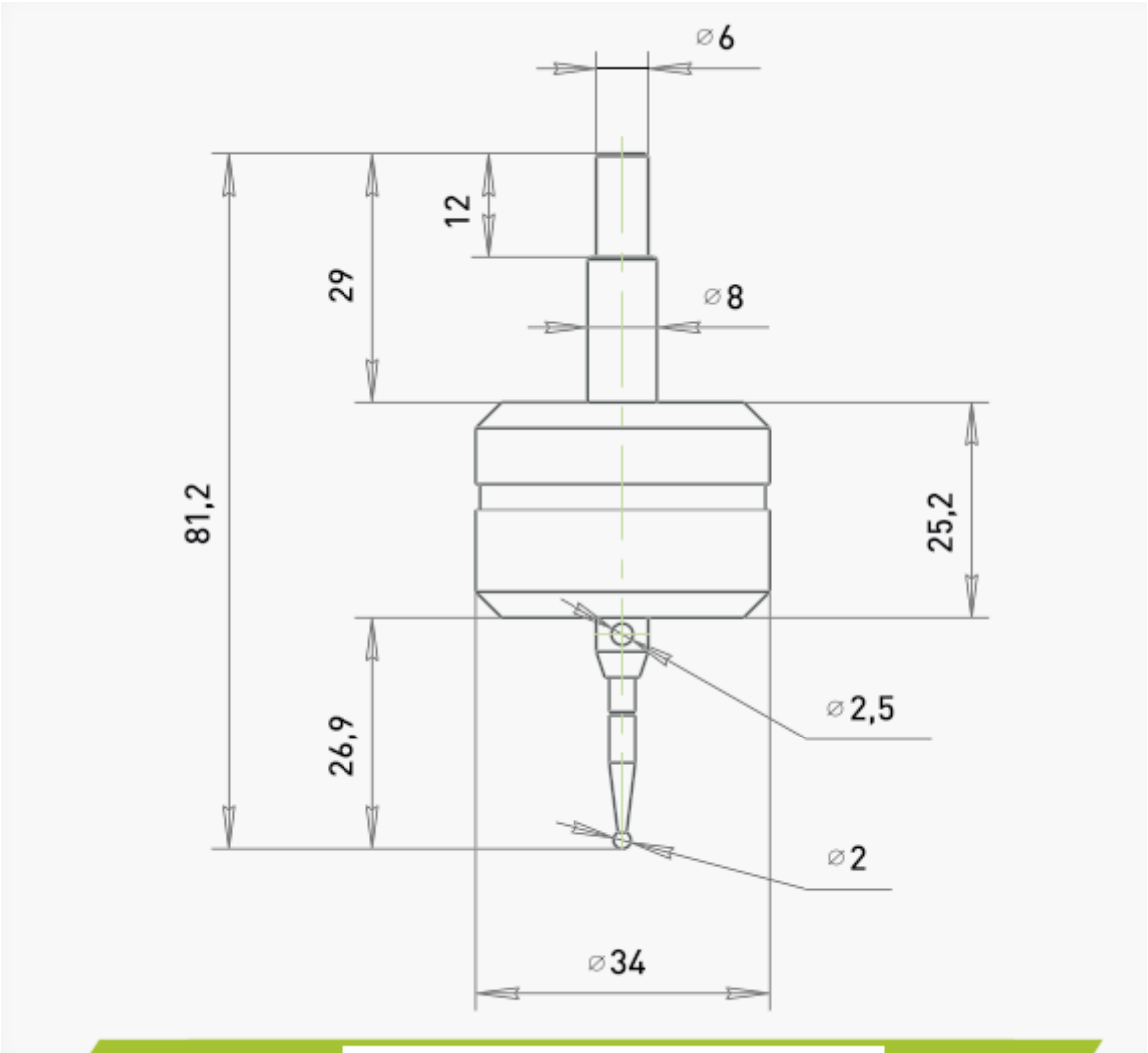
- Sensor PLL005 (centralized) – 1 piece,
- Instruction manual — 1 piece.

03. Technical features

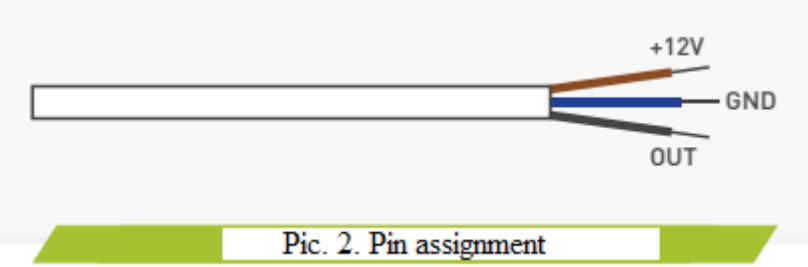
Accuracy	0,01mm
Axes search	X, Y, Z
Disconnection efforts of axes XY	from 0,5N to 1,2N
Disconnection efforts of axe Z	from 4N to 6N
Maximal deviation of axes XY	4mm
Maximal deviation of axe Z	1mm
Contact point diameter	2mm
Stylus length	20mm
Common length	82mm
Sensor weight	0,06kg
Power supply voltage	+12V
Input current	<5 mA

4. Connection.

The sensor is made for installation into the tool holder (diameter 6mm or 8mm).
Wires are soldered according to picture 2.
Indication: red led – normal condition, green led - touching.
Attention! Using the sensor at automatic mode, you're to be sure that operation program wouldn't turn on the spindle while measuring,

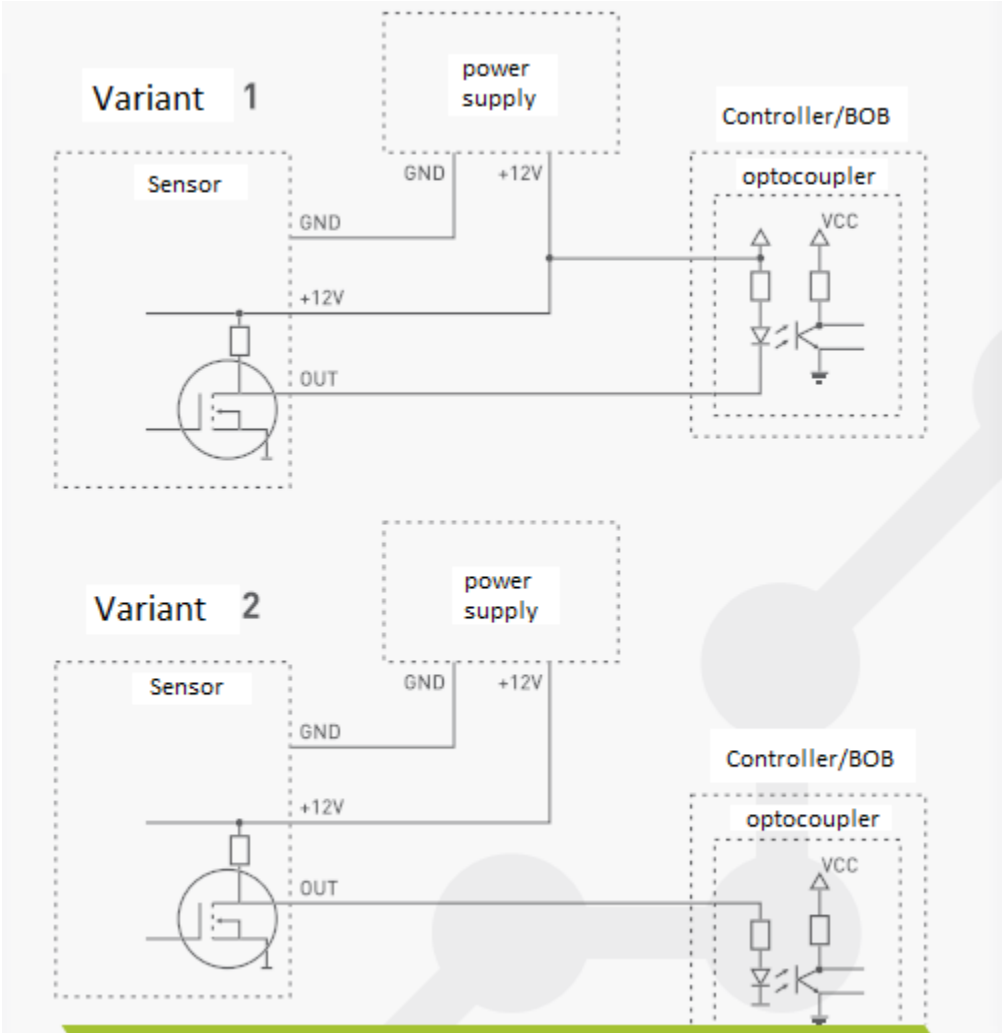


Pic. 1. Device dimensions



Pic. 2. Pin assignment

While OUT mode is actual, there is a consistent level of power supply (+12V), that is equal to zero at the moment of touching. At picture 3, variants of connections are shown.



Pic. 3. Variants of connection to optoisolator devices

05. Sensor alignment
After assembly, all sensors are calibrated and a user gets centralized probe, however, making a strong mechanical impact, or after prolonged use this procedure might be needed to be repeated. For alignment you need to hold the sensor in the spindle, and next fix a test indicator. During the rotation of the spindle at low speed, it is necessary to control the indicator of the stylus deflection amplitude from the axis of rotation. Deviation eliminated by turning the adjusting screws on the bottom sensor part with a hex wrench 1.5 mm. While adjusting, both tightening and loosening should be used.
Alignment process is shown at picture 4.
To adjust sensitivity straining force should be changed of the tension spring at the top of the sensor using hexagon 2.5 mm.

Pic. 4. Alignment process

10. Terms of Warranty
Guaranteed service life is 12 months from purchase date. Guarantee is valid only in case of observance of operational and preventive maintenance conditions.
1. General provisions
1.1. If Goods are purchased as components Seller guarantees operability of each component but is not responsible for quality of their joint operation (improper selection of components). If you have any questions, contact our technical specialists for technical assistance.
1.2. Seller is not guarantee compatibility of purchased Goods with Buyer components or Goods purchased from the third parties.
1.3. Article parameters and scope of delivery are subject to change by Manufacturer without notice due to constant technical improvement of products.
2. Guarantee service acceptance criteria
2.1. Goods are accepted for guarantee service in the same configuration as they have been purchased.
3. Guarantee service procedure

3.1. Guarantee service is provided by testing (checking) of Goods declared defects.
3.2. Guarantee repair is performed after defect confirmation.
4. Guarantee does not cover glass, electric lamps, starters and consumables and also:
4.1. Goods with damages due to improper transportation and storage conditions, misconnection, off-design operation or conditions that are not specified by Manufacturer (including excess temperature and humidity), damages due other conditions (power supply voltage surges, natural disasters etc) and having mechanical and thermal damages.
4.2. Goods with effects of impact and/or entry of foreign matters, objects (including dust), liquids, insects and having foreign signs.
4.3. Goods with signs of unauthorized access and/or repair (signs of opening, crude soldering, element replacement etc.)
4.4. Goods with self-diagnostics indicating improper operation conditions.
4.5. Technically complex Goods which erection, assembling and commissioning works are performed by other specialists but not specialists of Seller or companies recommended by Seller except cases directly specified by Goods documentation.
4.6. Goods that operation is performed under conditions when electric power supply does not correspond to Manufacturer requirements and in absence of equipment and network electric protection devices.
4.7. Goods that have been resold by initial Purchaser to the third persons.
4.8. Goods with defects occurred as result of use of poor quality or exhausted spare parts, consumables, accessories and in case of use of spare parts, consumables, accessories that are not recommended by Manufacturer.

This article is made and accepted in accordance with mandatory requirements of effective technical documentation and considered as suitable for operation

Batch No:

QCD: