

#### advintec<sup>®</sup> TCP sensors

Available in three sizes  
(internal dimensions):

- 120 mm x 120 mm
- 240 mm x 240 mm
- 300 mm round

#### advintec<sup>®</sup> TCP precision laser sensors

Available in two sizes  
(internal dimensions):

- 120 mm x 120 mm
- 300 mm round

#### Advantages at a glance

- **Automatic absolute calculation of robotic tools and fixtures**
- **Auto-commissioning and ease of use**
- **Simplified Integration**  
in the production line due to small footprint
- **Robust sensor available in two sizes**
- **Multi-sensor-system**  
(connection of additional sensors possible)
- **Connection of the calibration system to the robot controller,**  
i.e. the calibration procedure takes place in an evaluation unit  
and transfers correction values to robot controller
  - High process reliability
  - No additional PC's required
  - Logging of calibration data
  - Data evaluation possible at any time
- **Automatic correction of the trajectory**  
due to wear and tear or tool-replacement  
and no failures caused by positioning factors.
  - 100 % quality assurance
- **Reduction of costs**
  - Prevents the production of defective parts
  - Reduces scrap and rework
  - Short setup times



Please scan  
for more information  
about LEONI tool data calculation

#### Factory Automation

[www.leoni-factory-automation.com](http://www.leoni-factory-automation.com)

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#### Business Unit Robotic Solutions

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## advintec<sup>®</sup> TCP

Calculation and calibration  
of robotic tools and fixtures  
in up to 6 dimensions

Applicable for all robot brands

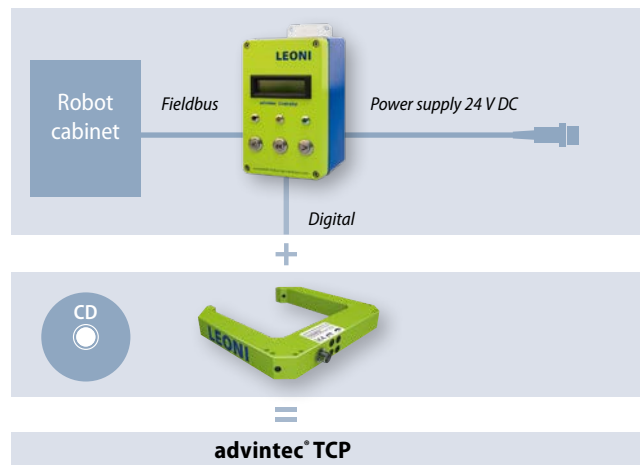
Fast and simple

The Quality Connection

03.2019/en\_400

# LEONI

**Our calibration system – everything from one source**



**The challenge**

Continually securing the correct operating position for robotic tools

**The solution**

The advintec TCP tool calibration system calibrates the tool and fixture in up to six dimensions in the ongoing production process

- Three translatory and three rotatory dimensions
- Electronic, precise and fast

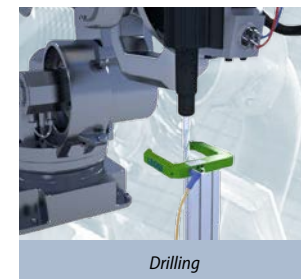
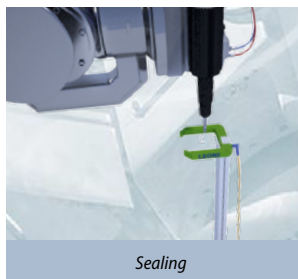
The trajectory is automatically corrected by the measured variations and ensures that the tool always operates at the correct position.

**Mobile calibration case for the initial calibration of unknown tools and fixtures (TCP & Base)**

Flexible, mobile calibration for unknown tools and fixtures is now also possible with our mobile calibration case. Ideal for use when setting up new production lines.



# At a glance advintec<sup>®</sup> TCP robotic tool and fixture calibration systems



	3D	5D	6D
Calibration time	3 sec. complete 2D calibration 6 sec. complete 3D calibration	9 sec. complete 5D calibration	15 sec. complete 6D calibration
Dimensions	2 or 3 translations	5 (3 translations, 2 rotations)	6 (3 translations, 3 rotations)
Fields of application (applicable for all robot brands)	Arc welding, stud welding, spot welding, laser welding, tig welding, gluing, milling		Gripper calibration, fixture calibration, power train applications, high precision applications

**Technical data at 20 °C / 24 V DC**

Sensor type	2 channel infrared 880 nm, pulsed at 2kHz
Interface	Serial or field bus (DeviceNet, Profibus, Profinet etc.)
Measuring accuracy	0.02 mm
Protection class	IP67
Dirty surroundings	Yes
Casing	Aluminium
Automatic correction of tool data	Yes
Operating voltage, Connections	10 – 34 V DC, IBS connector, 5 pin, PE advance conn.