

Query the press-in depth of a component

A supplier presses a component into a vehicle component. During production, the correct press-in depth of the components must be checked in accordance with a defined tolerance range. From a cost perspective, the components with incorrectly pressed-in components should also be reworked. For the prevention of complex processing of analog measurement signals, the monitoring sensor technology should only supply switching signals.

To this end, a device of the **PT64** series is used with laser spot, which detects the distance of the pressed-in components from above. To compensate for installation inaccuracies, the sensor is taught in through the integrated butt on using a dimensionally stable reference part in the system. As a result, the reference dimension is effectively adopted for the press-in depth of the components in the current installation situation of the sensor. With the help of the configuration software, a tolerance band is subsequently placed around the taught reference value in accordance with the tolerance specifications. For evaluation purposes, the sensor has two digital switching outputs, whereby output 1 carries a signal if the detected measuring distance to the press-in component is within the defined tolerance range.

The second switching output (alarm output as factory default) has been set up with the software so that it carries a signal if the press-in depth is too short or if the tolerance range is not reached. This results in three possibilities for a simple quality message via the signal outputs.

- / Output 1, signal yes; output 2, no: Press-in depth dimensionally stable
- / Output 1, signal no; output 2, yes: Press-in depth not reached
- / Outputs 1 and 2, signal yes: Press-in depth too large

The supplier can now check the press-in depth of a component with just one device and also assess in terms of reworking whether or not the distance of a NOK component is above or below a defined tolerance band.

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