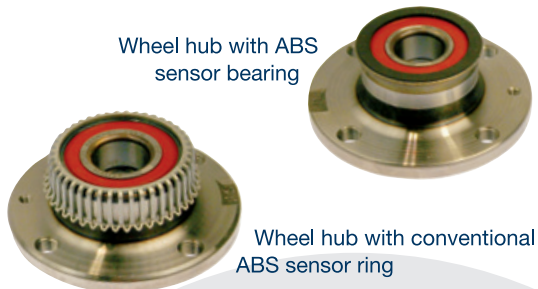


Wheel bearing with integrated ABS pulse generator ring

Technical Info No. 1607

For some time now, automotive engineering has been making increasing use of wheel bearings with a magnetic ABS pulse generator.

This affects both double-row cylindrical wheel bearings with preset backlash and also wheel hubs with integrated bearings. The magnetic pulse generator ring assumes the function of the ABS sensor crown otherwise fitted to wheel hubs or drive shaft joints.

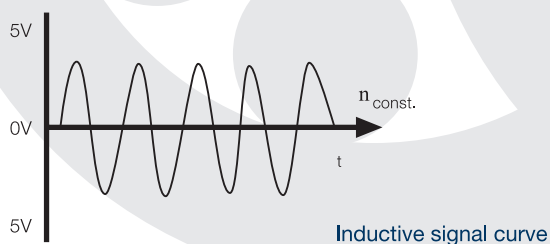


In double-row cylindrical wheel bearings, the magnetic ring is integrated in the radial seal. In wheel hubs with integrated bearing, it can also be fitted on the outside.

The pulse generator ring consists of a ferro-magnetic sintered material with alternating polarity.



The signals are processed by an inductive generator (2-pin) or a "Hall generator" (3-pin). In both cases, a signal is generated with a frequency proportional to the wheel revs: this constitutes an input signal for the EBS/ESP/ASR control units.



Important:

When replacing a double-row cylindrical wheel bearing with a sensor ring integrated in the radial seal, **always note the direction in which the bearing is installed.** Failure to comply with the direction in which the bearing is installed disables the function of vehicle dynamics systems such as ABS, ESP, etc.

Please therefore always comply with the installation instructions on the leaflets provided with the corresponding wheel bearing kits. If in any doubt, the **RUVILLE detector card** can be used to ascertain the correct direction for installing the bearing. This card clearly shows the sensor ring integrated in the bearing so that the correct direction for installing the bearing can be ascertained without any doubt.



Using the detector card on an FAG sensor bearing, showing the pulse generator ring in the bottom picture.

In addition, no test voltage must be applied to the connections of the generator because this could damage the electronic module contained in the generator.