Brantz Drive/Prop Shaft Sensor BRH2

Special sensors for generic detection of rotating shafts to provide bigger distance sensing for the Brantz range of odometers.

The Drive/Prop Shaft Sensor (BRH2) Sensor is a fall-back fitment to be utilised when the more easily implemented standard types are not appropriate. They require some level of interpretation for each individual situation. Select this sensor options only if you are able to provide some amount of engineering expertise and originality.

Wiring:
The BRH2 is wired using only two of the three Grey Sensor Cable wires from the Tripmeter/Odometer, as follows:
GREEN/YELLOW (from the Meter) is to the BRH2 sensor's White wire.
BLUE (from the Meter) is to the BRH2 sensor's Brown wire.
BROWN (from the meter) is not used.

Before fitting to the vehicle is attempted, demonstrate the functionality of the sensor IN THE HAND by wiring to the Brantz odometer (on a low calibration figure e.g. 009) and pass the active side of the magnet across the sensing point of the sensor several times. See the odometer increment.
Do not proceed to the fitting stage without this test.

Fitting:
The Magnets have a 5mm hole on one side which must pass the gold end of the sensor at about 5mm to 15mm distance. These magnets must be attached to the rotating shaft so that this 5mm hole is pointing radially out from the shaft. Two worm-thread bands (Jubilee Clips) should be wrapped around the shaft and magnet(s), and a holding compound such as sanitary silicone sealant could be used to prevent looseness. Attach clips and magnets evenly around the shaft so that the shaft remains in dynamic balance. Once the clamps are in place, snap off any protruding banding from the jubilee clips.
The Sensor itself fits as shown in the left of the photograph at the top of the page. Use a non magnetic bracket to hold the sensor in place (Such as Coated Steel, Brass or Aluminium), as this would prevent the sensor from 'seeing' the magnetic field; similarly don't use steel washers around the sensor. Ensure the sensor bracket is rigid. Additional braces may be necessary to achieve this. Ideally the bracket should allow the sensor to sense the magnets horizontally so that the gaps are not varying unduly if the shaft moves up and down. Pick a place where the shaft has minimum movement (typically near the gearbox).The bracket should be made up to give a gap of about 5mm to 15mm between the end of the gold-coloured sensor and the magnet face(s).

Using just one magnet for shafts rotating faster than the road wheels may be necessary, if the meter shows that it needs a calibration figure which exceeds the number available on the meter's calibration switches.
Two (minimum) or more magnets should be used on shafts rotating at road-wheel speed to give accuracy.

Check the output on the blue wire with a voltmeter when everything is connected up to show that a voltage change occurs (0volts to 5volts and back etc) as the magnet passes the sensor.

N.B. When the sensor is correctly connected to the Brantz and the Brantz is turned on, a voltmeter connected between the two wires will change from 5 volts to about zero volts alternately as the shaft is rotated and the sensor detects the magnets.