

## Sensors



### 333 Angle Encoder Set

The 333Angle Encoder Set is a sensor for angle-related measurements primarily for indicating purposes. This sensor is mainly used in conjunction with toothed gear wheels.

#### Areas of Usage

An angle encoder based on an inductive principle has been developed for applications where an optical angle encoder is not suitable. The 333 Encoder Set consists of two inductive pick-ups which are installed close to a toothed steel wheel (gear wheel) and a 3069A01 Pulse Conditioner. The pulse conditioner divides/multiplies the incoming pulses in such a way as to obtain the desired acquisition resolution (0.1...1 deg. CA). It also converts the inductive signals to TTL level. Typical applications are in-vehicle use where the 364C/X Set cannot be installed or in combination with the engine ECU which provides a certain number of pulses per revolution. No inductive pick-up is needed for the latter.

Compared with the 364C/X Set, the 333 Set is less accurate. Changes in speed between two operating points are limited to a relatively low dynamic rate. It is also not advisable to choose too high an input/output ratio (for instance 6 deg. input resolution [60 pulses] and 0.1 deg. output resolution [3600 pulses]). Using the 60-2 ECU pulses, for example, a crank degree resolution of 1.0 allows trouble-free operation over a wide range of speeds. The selectable number of output pulses is 360, 720, 1800 or 3600 depending on the engine speed and the number of incoming pulses (1 ... 900 possible).