

gearsensor.com

Makes Shifting Comfortable



AVAILABLE FOR

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Panasonic

Promovec
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Perfect shifting from the Czech Republic

We believe that every user of the electric bicycle powered by a mid drive unit should have as comfortable ride as possible. Therefore we developed a product called gearsensor.com in the beginning of 2013.

This device is the only one of its kind in the world and provides a perfect shifting for compatible mid drive units.

The gearsensor.com is completely developed and made in the Czech Republic.

Advantages of the gearsensor.com

- Solves problems of a mechanical shifting related to a mid drive unit (*gearsensor.com works similar as a clutch in the car. When the user starts with a shifting, the motor power is cut off or reduced for a necessary period of time which is required for a smooth shifting).
- Provides perfect shifting in any situation (for all standard rear/front derailleurs and internal gear hubs).
- Prolongs lifetime of the whole shifting system.
- Removes loud shifting and decreases chance to break a chain during the shifting.
- Provides easy and comfortable shifting as on a normal bicycle.

Highly recommended for rear derailleurs and internal gear hubs

Internal gear hubs

- Most of internal gear hubs cannot handle torque above 5 - 12Nm (power of the most mid drive units is up to 80 - 100Nm), therefore there is a necessity to use the gearsensor.com if the user would like to have a functional shifting system.

Standard rear derailleurs

- The standard rear derailleurs have a larger range for a functional shifting, nevertheless shifting itself is loud, uncomfortable, non-functional in some situations and the user can break the chain or damage the shifting system.

Therefore there is the gearsensor.com which reduces tension on the chain, provides a smooth and comfortable shifting and prolongs lifetime of the whole shifting system.

A list of selected brands using our sensor:

- Riese & Müller
- Batavus
- Sparta
- QWIC
- Cortina
- M1 Sporttechnik
- Amslod
- B'Twin (Decathlon)
- Sondors
- Fischer
- Winther
- Devinci
- Prophete
- Velectrix

The gearsensor.com is used by approximately 120 brands worldwide.

GS (GearSensor)



- The standard gearsensor.com provides comfortable shifting.
- The GS model provides a signal about the shifting activity directly to the controller of the mid drive unit. The result is temporary cut off/reduction of the current motor torque.
- It is a necessary part for internal gear hubs and highly recommended for rear derailleurs.
- Prolongs lifetime of the whole shifting system.

GSSS (GearSensor including the SpeedSensor)



- This model uses features of the standard gearsensor.com model "GS" and provides an additional speedsensor function in the same time. It means that the GSSS model has **2 functions in 1 device** (gearsensor and speedsensor).
- The GSSS model is delivered including magnet on (for) spoke.
- The GSSS has a strict installation position on a chainstay because of the speedsensor function.
- The GSSS provides two types of signal. The first one is for the shifting activity and the second one is for the speedsensor function.

GSGI (GearSensor with a Gear Indication)



- This new model uses features of the standard gearsensor.com model "GS" as well as constantly recognizes current gear position.
- The GSGI model must be learned how many levels of shifting (speeds) has rear derailleur or internal gear hub used on each electric bicycle. We call this process "the calibration" and it can be done within 1 minute.
- The GSGI has an automatic function "the recalibration" (this function is fully automatic and the user will not even notice it).
- The GSGI provides two signals. The first one is for the shifting activity and the second one is for the current shifted position.

Because of the GSGI (which provides information about the shifting activity and the current gear position directly to the controller) the mid drive unit:

- can show current shifted position on e-bike display or phone app.
- can recommend optimal gear position according to the user's riding style.
- has a specific time value for the motor reduction while shifting for each sprocket (bigger sprocket needs a longer period of time for a smooth shifting than a smaller one; *you can use only one time parameter for all sprockets with the standard "GS" model).
- can react on a current pedalling cadence and adjust time values necessary for a smooth shifting (higher cadence = shorter necessary time value for a smooth shifting and vice versa).
- allows to set required value of the motor power reduction while shifting.

The gearsensor.com is compatible with:

brose

BAFANG

Panasonic

FAZUA

**SPORT
DRIVE**

Promovec 
sustainable e-bikes

polini ^{motori}
trasforma il meglio in massimo

 **OLI**
eBike Systems

TQ

AEG

ANANDA

DAPU
bicycle drive systems

VINKA

MOTINOVA

 **MPF
DRIVE**

 **TTIUM** 天腾动力

TRUCKRUN

TSE
TONGSHENG ELECTRIC
SINCE 1994

 **SHENGYI**
E-bike Motor & System Manufacturer

 **Bofeili** e-bike

OKAWA

The gearsensor.com is produced in the Czech Republic, Europe.

www.gearsensor.com