



## POSITION MEASUREMENT BY CIPOS®

HELLAs "CIPOS®" (Contactless Inductive Position Sensor) technology offers precision with an easy-to-use position sensor. The measurement range for both rotating sensors (angles) and linear sensors (track) can be flexibly designed.

CIPOS® is easily assembled and is not sensitive to mechanical misalignment. These sensors are highly tolerant across a wide range of varying temperatures. Thus, for over ten years, HELLAs CIPOS® technology has been the first choice for sensing solutions in turbocharging applications which can reach extremely high temperature levels. CIPOS® offers single or dual channel solutions, as well as all commonly used interfaces for automotive sensors such as analog, PWM and SENT.

### ADVANTAGES

- Global development and production footprint
- Linear/rotary position measurement in various application and package spaces
- Contactless detection of linear and angular positions by using electromagnetic alternating fields
- Redundant contactless inductive sensors
- Adaptive for different applications passing all EMC requirements
- Replaces potentiometer and hall technology
- Production experience since 1999

Examples of applications with CIPOS® technology:

## VEHICLE LEVEL SENSOR

### Technical Data

Temperature Range	-40 °C ... 125 °C (130 °C for short time)
Interfaces	Analog, PWM, SENT, PSI 5 (available in 2016)
Accuracy	≤ +/-1 % versus full scale over service-life and temperature
Resolution	12 bit vs. full measurement range
Size	68 x 54 x 47 mm <sup>3</sup> (sensor housing)

## THROTTLE POSITION SENSOR

### Technical Data

Temperature Range	-40 °C ... 160 °C
Interfaces	Analog, PWM, SENT
Accuracy	≤ +/-1 % versus full scale over service-life and temperature
Resolution	12 bit vs. full measurement range
Size	20 x 34 mm <sup>2</sup> (PCB)

## EXHAUST GAS RECIRCULATION SENSOR

### Technical Data

Temperature Range	-40 °C ... 160 °C
Interfaces	Analog, PWM, SENT
Accuracy	≤ +/-1 % versus full scale over service-life and temperature
Resolution	12 bit vs. full measurement range
Size	20 x 29 mm <sup>2</sup> (PCB)

## TRANSMISSION RANGE SENSOR

### Technical Data

Temperature Range	-40 °C ... 150 °C
Interfaces	Analog, PWM, SENT
Accuracy	≤ +/-1 % versus full scale over service-life and temperature
Resolution	12 bit vs. full measurement range
Size	90 x 30 x 72 mm <sup>3</sup> (sensor housing)

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