



FACTS & FIGURES

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20 years: digital tachograph

In 2006, Aumovio (formerly Continental) has introduced its first digital tachograph. Since May 2006, digital tachographs were demanded by EU regulation. "The digital tachograph has fundamentally changed freight transport. It ensures greater safety on the roads, creates fair competitive conditions, and today forms the basis for increasingly connected transport logistics," explained Dirk Gandras from Aumovio (Germany). The first products were produced under the VDO brand name. Today, the DTCO 4.1b digital tachograph not only provides the basis for regulatory compliance, but also for connected driver displays, fleet managements, and cloud-based services. The product features a mandated CAN interface (EU implementing regulation No. 165/2014) for diagnostic purposes. These J1939-compliant parameters and parameter groups (PG) are standardized in ISO 16844-7. By July 2026, the EU tachograph regulation applies also for light commercial vehicles. Currently, some parts of the ISO 16844 series are under revision. hz



DTCO 4.1.b digital tachograph (Source: Aumovio)

60 kW to 600 kW

Rehiko (U.S.A.) has extended its KD series of backup power generators, providing J1939 connectivity between the control unit and the diesel engine. The company already offers products with higher power outputs (up to 4 MW and beyond). The diesel generator sets are manufactured in France and Switzerland. They are used as backup power systems in data centers and hospitals, for example.

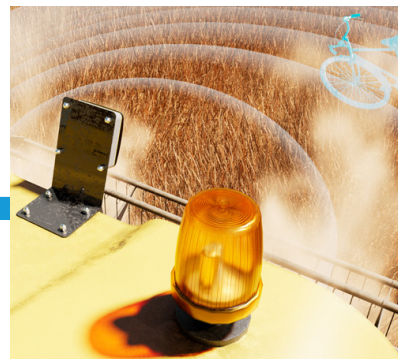
The integrated controllers provide a CAN-based interface compliant with the legacy SAE J1939-75 standard. This standard specified the set of parameters (SPs: suspected parameters) and messages (PGs: parameter group) for information associated with monitoring and controlling generators and driven equipment in electric power generation for industrial applications. The SPs and PGs are now published in the SAE J1939DA digital annex. The KD series uses also embedded CAN networks. hz

3D radar sensor

The MR15-Q80 radar scanner by Turck (Germany) can be used in mobile machines to detect objects, to avoid collisions. The product is available with a J1939-based interface, using proprietary PGs (parameter groups).

Usually, radar technology is associated either with speed checks in road traffic or with devices for flight monitoring. But since the 2000s, radar sensors have also been used for adaptive cruise control (ACC) systems in cars, to determine the distance to cars in front and their speed. Radars have also become popular in industrial automation in recent years. Especially in level and conventional distance measurement, the advantages over ultrasonic, optical sensor or media-contacting technologies pay off in many applications.

In 2020, Turck had already presented its first radar sensors for level measurement with the LRS series, followed by the DR-M30 radar sensors for distance measurement in 2021. Both device series operate in the 120-GHz range, which is particularly beneficial in terms of range and resolution, i.e., the accuracy of the signal. The company has launched the MR15-Q80 radar



(Source: Turck)

sensor. Unlike the cylindrical devices for distances and levels, the 3D radar sensor has a flat, cuboid design. The underlying technology is also different: A 60-GHz antenna operates inside of a IP69K-rated housing. Compared to the 120-GHz frequency band, the lower frequency provides a lower resolution, but the beam angle is wider. The device can detect objects with an opening angle of 120 degrees horizontally and 100 degrees vertically.

Mounted on agriculture vehicles, the sensor can detect animals, large stones, or objects lying in the field. Metals and also bodies reflect radar beams more intensively than wheat. The sensor recognizes this difference and issues a warning. Both opening angles can be set narrower by adjusting the parameters – asymmetrical angles are also possible. Up to six warning radii or three signal fields can be set and assigned to the two switching outputs. hz

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