



DISPLAYS: CAN-Converter

MOTOMETER

powered by solutions

The CAN-Converter is used to convert digital data delivered from the CAN bus into analogue signals.

The Electronic Control Units (ECU) of the different manufacturers of motors control not only the motor, but also make digital information available over the CAN bus with regard to operating values, such as oil pressure, temperature, speed, and operating hours. Usually the ECU are based on the protocol according to SAE J1939.

The CAN-Converter reads all information made available from the ECU according to J1939 and converts selected, defined values into analogue signals. To eliminate the need to replace conventional displaying instruments or entire cockpits when switching to motors with ECU, the CAN-Converter offers an affordable alternative for continued use of round instruments or instrument combinations (MFA10). Particularly if the change of the entire vehicle or machine programme is associated with the legally prescribed gradual phase-in of motors with ECU (based on performance classes), the existing instrumentation can still be used.

The CAN-Converter is connected with terminal 15 of the on-board power supply voltage.

Displaying Instruments

Conventional pointer instruments (always 12 V instruments, even with 24 V systems!), as well as multi-functional displays such as the MFA10 can be connected to the CAN-Converter. The instruments used must be coordinated with the characteristic curves stored in the CAN-Converter.

In the standard version, the characteristic curves for the following standard sensors are represented:

Motor oil pressure:	0 - 10 bar, such as MM-Sensor 675.004.xxxx for MM-display 644.001.1037
Coolant temperature:	40 - 120 °C, such as MM-Sensor 642.007.xxxx for MM-display 641.011.1048
Oil temperature:	50 - 150 °C, such as MM-Sensor 642.009.xxxx for MM-display 641.011.1050
Revolution counter:	aligned for a frequency with eight impulses per revolution

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In the standard version the following CAN data/addresses are read:

PGN	SPN	Description
PGN65263	SPN100	Motor oil pressure
PGN65262	SPN110	Coolant temperature
PGN65262	SPN175	Motor oil temperature
PGN61444	SPN190	Engine speed

Technical data

- Supply voltage range (Ub): 5 V to 32 V
- Protection against polarity reversal of voltage supply connections
- Interference voltage on Ub = 14 V to 28 V: 6 V ss, 50 Hz
- Voltage peak on Ub: 200 V, max. 2 ms
- Voltage input at 8 V to 24 V, terminal 15: 200 mA (might increase depending on in-/outputs of circuit)

- Outputs short-circuit resistant
- CAN bus interface: 250 kbit/s; CAN 2.0B, SAE J1939
- Protection type: IP67
- Operating temperature: -40 °C to +105 °C
- Storage temperature: -55 °C to +105 °C
- Resistance to climate conditions: 95 % up to 48 hours (following SAE J1378)
- Vibration resistance: 6 hours, 20 g at 10 - 80 Hz (following SAE J1378)
- Shock resistance: 55 g at 9 – 13 ms (following SAE J1378)
- Dimensions (length x width x height): 61 mm x 71 mm x 35 mm
- Connection: 8 x AMP positive lock

All information is subject to technical changes.

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