



Analogue Output Module (AOM)

MODULE FUNCTIONS

The Trainnet® Analogue Output Module (AOM) provides standard interface for analogue output signals. The Trainnet® AOM receives instructions from the train computer's CPU Module and sends analogue signals to sub-systems accordingly.

The Trainnet® AOM can be used as a part of a Trainnet® TCMS, VCU or Event Recorder. Alternatively, the Trainnet® AOM can be fitted into the Trainnet® Remote I/O Module (RIOM).

KEY FEATURES

The module has 4 individually isolated analogue output groups. All groups are identical and have 4 analogue output channels. Each group has two PWM outputs.

By default, 2 channels are configured as current loop transmitters with integrated loop supply (current mode) and 2 channels as bipolar voltage output and two digital pulse width modulation outputs (voltage mode). The channel configurations can easily be changed from current mode to voltage mode and vice-versa, depending on your needs. The Trainnet®

AOM is able to provide current loop supply voltage internally: there is no need for an external power supply. Configurable ranges are from 4 to 20 mA for current and from -10 to +10 V for voltage.

Each output channel has parameters for calibration (factory set), and diagnostics to detect short or open in current loop and short in voltage output. Outputs are factory calibrated. The module has its own 32-bit embedded processor to manage serial communication with the train computer's CPU module. The embedded processor also implements diagnostic functions and reports to the train computer's CPU module if it suspects that the output values cannot be trusted.

The module has an RS-485 serial bus interface for connecting to the train computer.

SIL-2 CERTIFIED

The development of module AOM3371A is based on railway standards EN 50126, EN 50128 and EN 50129 that are in accordance with safety integrity level SIL 2. A non-SIL certified module version AO-

M2610A is also available. For SIL-2, please contact EKE-Sales.

SIL-2

- EN 50126
- EN 50128
- EN 50129
- EN 50155
- EN 45545



TECHNICAL SPECIFICATIONS

Dimensions (W x H x D)

4 TE x 3 U x 160 mm

Weight

165 g

Input Power

5 V DC ± 5 % (1 A typ., 3A max.)

Temperature Range (operational)

-40 °C...+70 °C

MTBF (40 °C ambient temperature)

910 000 h (AOM2610A)

I/O Connector

DIN41612-F48 (at front)

Host Interface

RS-485

Current Output Mode

4...20 mA

1 µA resolution

Voltage Output Mode

-10...+10 V

1 mV resolution

Analogue Output Channels

16 (in 4 groups of 4 isolated channels)

PWM Outputs

8 (2 in each of the 4 groups)

Selectable base frequency 10 Hz to 10 kHz

Pulse width adjustable with 0.1% resolution

Output level 15 V