

### Main Features

- ▶ 8 inputs and 8 combined I/O channels, available as input, output or in mixed I/O mode
- ▶ Support for redundant output configurations without back-powering
- ▶ Configuration of I/O channels as PWM output, frequency or event counter input
- ▶ MVB interface (EMD or ESD+)
- ▶ Easy-to-configure MVB bus administrator (optional)
- ▶ Full-featured message data stack
- ▶ Full range of 4096 process data ports
- ▶ -40 to +70°C operating temperature

## Overview

The DXIO0808M is a remote I/O with 8 digital inputs and 8 combined input/outputs that is controlled via an MVB interface. The combined inputs and outputs are software configured and may be used as I/O read-back. All I/O channels can be configured as PWM (output) or frequency or event counter (input). They are galvanically isolated from the internal logic and the MVB interface.

Additionally, the I/O module offers 6 CODE inputs, used to generate an index, which enables geographical addressing by the application.

The DXIO0808M provides one line redundant galvanically isolated interface with lines A and B. EMD or ESD+ can be chosen as physical layers.

duagon's MVB controller is implemented in an FPGA and supports all 4096 process data ports. An additional 32-bit soft processor handles the complete message data stack with an easy-to-use interface. The optional bus administrator manages the complete MVB network and

can be configured using duagon's proprietary network tool.

The application running on the DXIO0808M is generally developed by the customer. duagon provides a build environment including the development library required to implement any customer-specific application. The development library is accompanied by a simple demo application. On request duagon offers the application development as an engineering service. Please contact duagon for more information about the possibilities.

The DXIO0808M can be powered directly from battery, supporting voltage ranges of 24 Vdc to 110 Vdc. It is designed for harsh rolling stock environment and complies with the EN 50155 standard by:

- -40 to +70°C operating temperature
- coating against humidity
- enhanced EMI and vibration robustness

## Technical Specification

### PHYSICAL DATA

<b>MVB connector</b>	2x 9-pin SUB-D connectors (male/female)
<b>I/O connector</b>	2x WAGO X-COM series connectors (15-pole)
<b>Maintenance port connector</b>	Header, 10-pin

<b>Visual indicators (LEDs)</b>	MVB: Activity A & B I/O channel: status
<b>Power supply voltage range</b>	24 Vdc to 110 Vdc
<b>Power consumption</b>	<7 W
<b>Overall dimensions</b>	127 × 100 × 51 mm (without grounding bolt)

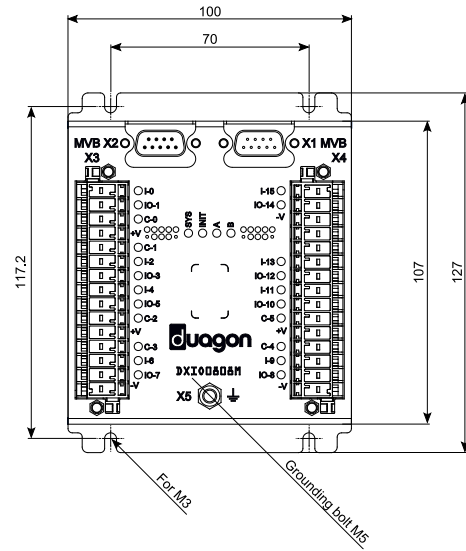
<b>Weight</b>	405 g
<b>Operating temperature</b>	-40 to +70°C, according to EN 50155; Class TX
<b>Storage temperature</b>	-40°C to +70°C
<b>Relative humidity</b>	yearly average ≤75%, 95% for 30 consecutive days max. (EN 50155)
<b>Useful life</b>	20 years, according to EN 50155 Class L4

## COMPLIANCE

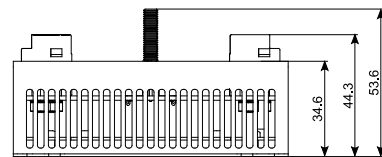
<b>EN 50155</b>	Railway Applications (Electronic equipment used on rolling stock)
<b>EN 50121-3-2</b>	Electromagnetic compatibility rolling stock apparatus
<b>EN 61373</b>	Shock & Vibration
<b>EN 45545-2</b>	Fire protection, HL3
<b>IEC 61375-3-1</b>	Multifunction Vehicle Bus (MVB)
<b>RoHS</b>	Restriction of the Use of Certain Hazardous Substances
<b>REACH</b>	Registration, Evaluation, Authorisation and Restriction of Chemicals

## Dimensions

Dimensions only for reference



Top view



Side view

(max. height with grounding bolt)

## Ordering Information

Product: **DXIO0808M** - **F** **T** - **LV** - **G**

Example: **DXIO0808M-FT-LV-G<sup>1)</sup>**

<b>MVB Bus Administrator</b> Enabled   <b>F</b> Disabled	<b>MVB Type</b> EMD   <b>T</b> ESD+   <b>D</b>	<b>Power Supply</b> 24V, 36V   <b>LV</b> 48V, 72V, 96V, 110V   <b>HV</b>	<b>MVB Transmitter</b> Enabled   <b>S</b> Disabled <sup>2)</sup>   <b>S</b>	<b>Grounding Bolt</b> None   <b>G</b> M5 Grounding Bolt   <b>G</b>
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<sup>1)</sup> Default ordering options

<sup>2)</sup> The DXIO0808M can be ordered as a pure listening device (-S), where the MVB transmitter is completely disabled. For a standard MVB communication device (transmitter enabled) this option can be left blank. Note that pure listening devices cannot act as bus administrator (option '-F' not available)