

## Introduction

AI8M is an analog module with 8 configurable inputs designed for mounting on a standard DIN-Rail with proprietary MTBus.

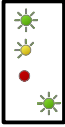
Each input can be set up via software in five different typologies: potentiometric, voltage input 0..10V or -10..+10V, current input 0..20mA or PT100.

The module indicates its state via four diagnostic leds.

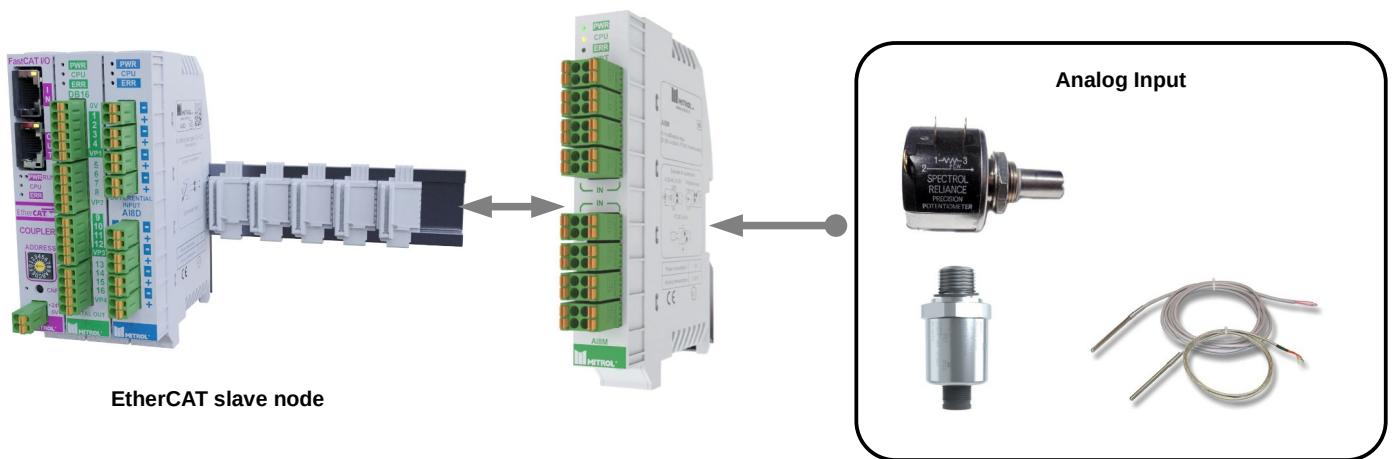


## Hardware Specification

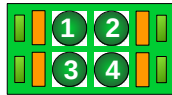
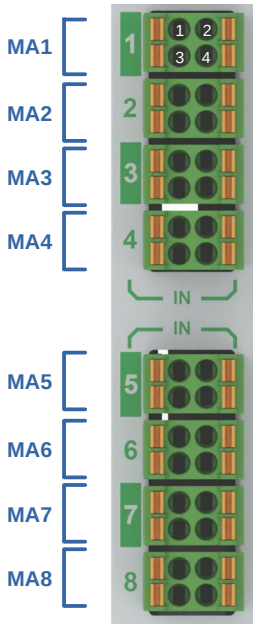
| <b>Analog Input</b>                                |  |
|--|--|
| Channels   | 8  |
| Each Input configurable independently via software | Potentiometer; 0..10V; -10..+10V; 0..20mA; PT100 |
| Resolution   | 12bit  |
| Conversion time                                    | 1ms for all inputs                               |
| Digital filter                                     | Configurable                                     |
| <b>Potentiometer</b>                               |  |
| Potentiometer reference voltage VPT                | 4,5V with short circuit protection.              |
| R potentiometer                                    | ≥1KΩ for each channel                            |
| <b>Voltage Input</b>                               |  |
| Input type   | Single ended                                     |
| Voltage range                                      | 0..10V or -10..+10V                              |
| Input resistance                                   | 10KΩ   |
| <b>Current Input</b>                               |  |
| Input resistance                                   | 500Ω   |
| <b>PT100 Input</b>                                 |  |
| Temperature range                                  | -40..+250°C                                      |
| Temperature resolution                             | 0,5°C  |
| With unplugged PT100                               | Full scale                                       |

| Electrical  |   |
|---|---|
| Electrical isolation  | 500Vrms   |
| Power consumption   | 2,5W  |
| Interface   | Proprietary MTBus   |
| Stripping length  | 8-9mm   |
| Specification   | EN 61131-2  |
| Diagnostic leds   | Power → ON Green<br>CPU → Blink Yellow<br>Error → OFF Red<br>VPT → ON Green |
|  |   |
| Mechanical  |   |
| Dimensions [W x H x D]  | 19x120x93mm   |
| Installation  | On 35mm DIN-Rail  |
| Enviroment  |   |
| Operating/storage temperature   | 0..55°C / -20..+85°C  |
| Relative humidity   | Max 95% without condensation  |
| Degree of protection  | IP20  |

## Application

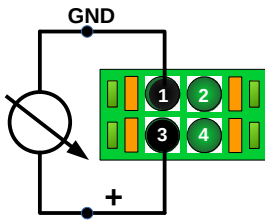


### Pin Assignments

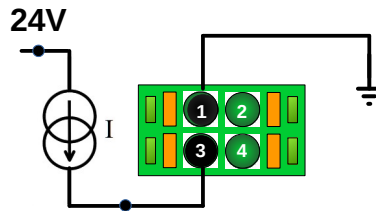
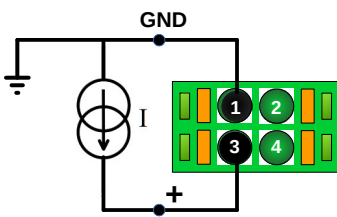


| Input connections |                                |                    |       |       |
|-------------------|--------------------------------|--------------------|-------|-------|
| PIN               | VOLTAGE<br>0..10V<br>-10..+10V | CURRENT<br>0..20mA | POT   | PT100 |
| 1                 | GND                            | GND                | GND   | GND   |
| 2                 | VPT                            | VPT                | VPT   | VPT   |
| 3                 | Vin(+)                         | Iin(+)             | Wiper | PT(+) |
| 4                 | N.C.                           | N.C.               | N.C.  | N.C.  |

### Wire Connections

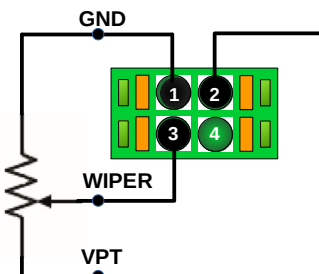


VOLTAGE INPUT

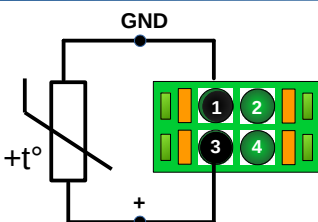


Two wires current sensor

CURRENT INPUT



POTENTIOMETRIC INPUT



PT100 INPUT

**Dimensions (Units: mm)**

