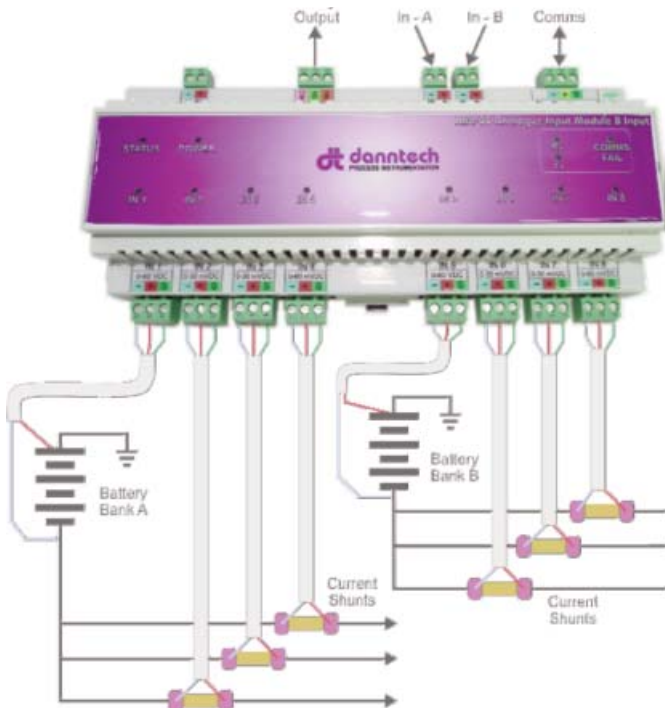


Analogue Input Module (AIM-08)



- Analogue to Modbus, RS485 and USB.
- Eight individually galvanically isolated analogue inputs.
- Each input can be configured differently - they need not all be the same.
- Digital counter/timer input for period or frequency measurement.
- Modbus RTU and Danntech RMF ASCII protocols.
- Isolated RS485 and USB interfaces.
- Configuration LED indication of each analogue input status.
- Communications activity LEDs.
- Hardware communications watchdog with relay output for response monitoring.
- Dual isolated power supplies for backup operation from separate power inputs.
- Compact industrial enclosure with high quality plug-in screw terminal connections.



Options:

Input Supply: 9-36 VDC (24 VDC nominal), 18-75 VDC (48 VDC nominal), single or dual input power supplies.

Input Ranges: 0-30 mV, 0-50 mV, 0-100 mV, 0-1 V, 0-10 V, 0-30 V, 0-60 V, 0-100V, 0-20 mA, 4-20 mA, loop powered 4-20 mA.

(Please see part numbering document for details)

This product was designed to provide a cost-effective way to add eight, individually isolated, analogue inputs to an existing data acquisition system. Modbus RTU and Danntech RMF serial protocols are supported with isolated RS485 and USB interfaces.

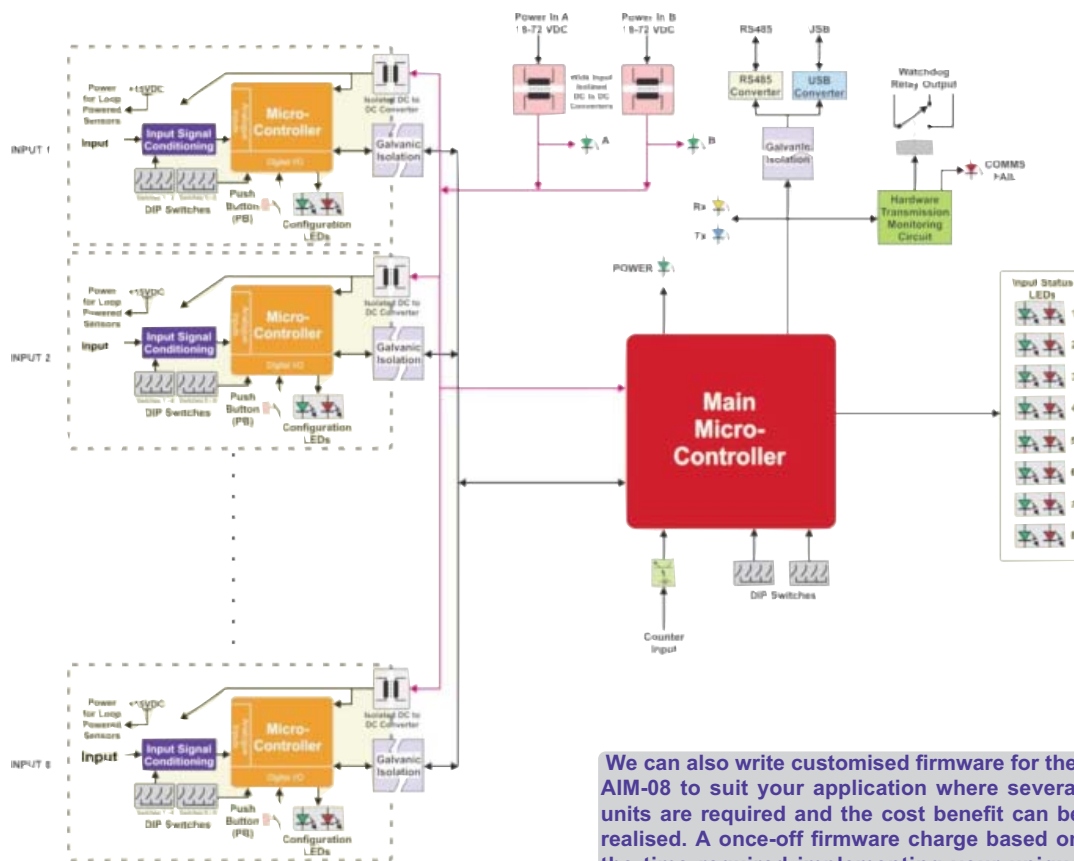
The individual input isolation is vital in many applications especially in the original application of DC battery bank monitoring in a telecom system where the inputs are a combination of mV current shunt inputs (measuring battery currents) and DC voltage (measuring battery voltage).

Isolated dual power supply inputs allow either battery bank to power the AIM-08.



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We can also write customised firmware for the AIM-08 to suit your application where several units are required and the cost benefit can be realised. A once-off firmware charge based on the time required implementing your unique functions and then a standard cost thereafter.

Isolation - each analogue input is individually isolated from each other and from the power supplies and the communications (>500 VDC). This means thirteen way isolation in the “adspeak” of analogue input modules (almost all others offer three way isolation at most).

Earthing - the AIM-08 has flexible screening and signal grounding options allowing you to make the most accurate millivolt measurements in electrically noisy environments. We have included a screen connection for each input as well as a proper instrument grounding facility.

Input Levels - green, red flashing or red LEDs provide a fast way to diagnose fault/status conditions on each input which is a quick and easy way to see that all inputs are within the expected values.

Watchdog – a separate hardware communications monitoring watchdog is included to ensure that each unit sends a response within a certain time. A failsafe relay output is used to warn of communications failure – very useful for systems that need to run reliably and continuously.

Dual Power Supply - wide range isolated input power supplies can be used for parallel redundancy so that the unit can be powered from two separate sources – such as from either of two battery banks. This allows for continuous operation if either of the battery banks are switched off for any reason.

SPECIFICATIONS:

- Eight analogue inputs.
- One digital counter/timer input for period or frequency measurement.
- Communications protocols Modbus RTU and Danntech RMF.
- Separate hardware communications watchdog relay output.
- DC voltage inputs from 0-30 mV up to 0-100 V, current inputs 4-20 mA, 0-20 mA.
- Loop powered 4-20 mA input also available with +15 V, 22 mA loop supply.
- Different input types are link/jumper and mini-DIP switch selectable, each input can be different.
- 12 bit analogue input resolution. (accuracy better than $\pm 0.25\%$ of the range).
- Analogue response time fastest at less than 0.1 seconds.
- Bi-colour LED indication of each input status with configurable indication values.
- Input calibration using switches and push button to capture input values for zero and full scale.
- Standard Input Value settings for each input status LED display are set up using switches and push buttons to capture input values for minimum and maximum input values.
- Individual instrument earthing, selectable using links/jumpers for each input and the RS485 communications.
- Isolation >500 VDC between each input, main processor, communications, power in – A, power in – B, watchdog relay output and the digital input.
- Communications protocols Modbus RTU and Danntech RMF.
- Communications isolated RS485 and USB at up to 115.2 kbps.
- Address and communications speed DIP switch selectable.
- Plug-in screw terminals with each input to include screen.
- The input connectors are keyed so that analogue inputs cannot be inadvertently mixed and cause damage. Multi-strand wire connections – cross sectional area 2.5mm².
- Optional dual isolated power supplies 9-36 V and 18 – 72 V for redundancy purposes.
- Operating temperature range -10°C to +60°C.
- Test sheet supplied for each unit after burn-in with calibration and accuracy information shown for each input.
- Enclosure – plastic, IP20, DIN rail mounting.
- Product dimensions: 210 x 110 x 60 mm (L x W x H off rail) including connectors. Weight 0.4 kg.
- Packaged size: 435 x 330 x 275 mm (L x W x H). Weight 0.6 kg.