



*Telemetry
Module*

Telemetry

Control

SCADA

Alarm Monitoring



- Digital and Analog I/O*
- Pulse Counters*
- Serial Interfaces to 38.4Kb*
- Internal Radio to 4.8Kb*
- Ladder Diagram interface*
- Data-logging*
- Dial up modem connectivity*
- GSM connectivity*
- SMS Messaging*
- External Landline Interface*
- Protocol Conversion*
- Real Time Clock*
- Built in Radio Diagnostics*
- Win 95/98, NT software*

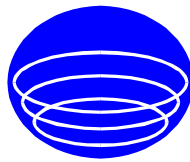
The OvalAD 2000 telemetry modules represent an extremely powerful and versatile state-of-the-art product which finds application in all data acquisition and control systems. The units are designed to operate over a wide temperature range and to function reliably in harsh industrial environments. The OvalAD 2000 modules are based on the 32 bit proven processing power of the Motorola 68000 series microprocessors.

The OvalAD 2000 combines many features in a single compact package offering physical I/O, serial interfaces and multiple communications facilities in the same unit. This enables the unit to be connected to discrete field I/O as well as provide a serial interface to third party devices at the same time. The I/O is designed to accommodate a wide range of input signals. The digital inputs can range from either 10-50 Volts or from 70-130 Volts AC or DC. Pulsed inputs are also accommodated. The digital outputs come in either relay or solid state form with the relay option providing 2 form A and 2 form C outputs handling 5 amps at 240VAC. Solid state outputs are configurable in either isolated or common emitter form. There are 8 analog channels in total which are configurable as all inputs or up to four output channels. The analog input range is on-board configurable.

The product supports a number of industrial standard communication protocols as well as providing the facility to incorporate custom requirements for special applications. This allows for the integration of different third party devices and protocols into the same communications network.

Communications networking is available via the built-in data radio. Alternatively, external radios, landlines, optical fibres, Ethernet, GSM or the PSTN can be used. The OvalAD 2000 has a built-in fast data radio which can provide radio networking at up to 4.8kb via an on-board FFSK modem. Various radio frequency options are available to accommodate different band plans. A Windows programming package and internal radio diagnostics are another feature of the OvalAD 2000. A dial-up facility is also available via an on-board PCMCIA modem or external dial up or GSM modems.. The OvalAD 2000 can act either as a master or slave unit. Each telemetry module also has the inherent ability to store and forward data.

On-board logic functions provide the facility for local control and data processing via a Ladder Diagram programming interface. Function blocks include Boolean logic, Timers, Counters, Data Move & Bit Shifting, Arithmetic and Maths (including floating point) and custom function blocks are also available for functions such as flow, linear scaling, rate calculations, averaging etc. The in-built 4Mbit Flash RAM also allows local data-logging of I/O and variables periodically or on event.



Telemetry Module

OVAL Communications

Internal Radio

- 450 - 460MHz band
- 471MHz band
- 800 - 900MHz band

Modulation is FFSK 2400 or 4800 baud.
Others frequency bands available on request.

External Radio

- 4 wire FFSK interface 2400 or 4800 baud
- or RS232 interface to 38.4 kb

RS232 Port

RS232 interface to 38.4kb via any supported protocol.

PCMCIA Port

- Supports : - Dial-up Modem
- Additional Serial Interface card
- Ethernet (UDP & TCP/IP)

Protocols

The AD 2000 supports many standard third party products and protocols including : -

- Allen Bradley AB5 & SLC500 (DF1)
- DNP3
- GE Fanuc CCM
- Greenspan Smart Sensor
- Koyo 205, 305, 405.
- Modbus
- SDI-12
- Simatic 305,405
- TI 305, 405, 505.
- TI Task Codes (545)

Custom requirements may be accommodated on request.

General

Power Supply

- 10.5 - 15 Volts DC (24VDC available)
- 200mA idling current (including data radio)
- 1.5A max. peak current on transmit.

Operating Temperature

- 10 to +70 degrees C.

Dimensions

- 202 x 178 x 60 mm
- (Mounting by custom plate supplied)

Weight

- 960 grams (including data radio)

16 Digital Inputs

There are two ranges of input voltage available : -

- 10 - 50 Volts AC/DC Impedance 10k
- 50 - 130 Volts AC/DC Impedance 47k

All inputs are optically isolated to 2.5kV

Pulse Inputs

All Digital Inputs can operate as pulse counters. The first input is referred to the supply common and acts as a fast pulse counter. Input #1 Counter to 5kHz. into 4k7
Inputs 2 - 16 Counter to 5hz.

8 Analog Inputs

The Analog Inputs are configurable as either : -
4 - 20mA / 1 - 5 Volts Resolution - 12 bits
0 - 20 mA / 0 - 5 Volts Accuracy - 0.1%
0 - 1 Volt Linearity - 0.1%

4 Digital Outputs

The Digital Outputs can be configured as either : -

- Isolated Relays 2 form A
- 2 form C
- 5 Amps @ 30VDC or 240VAC

Isolated or common ground transistors. Vcc max.- 35VDC
Current - 100mA
Isolation 2.5kV.

4 Analog Outputs

The last four analog channels can be configured as outputs in 4 - 20mA form : -

- Max. load resistance - 250 ohms
- Resolution - 16 bits
- Accuracy - 0.1%
- Linearity - 0.1%

Please note that the Analog Output facility is an optional extra and is not included in the standard model.