



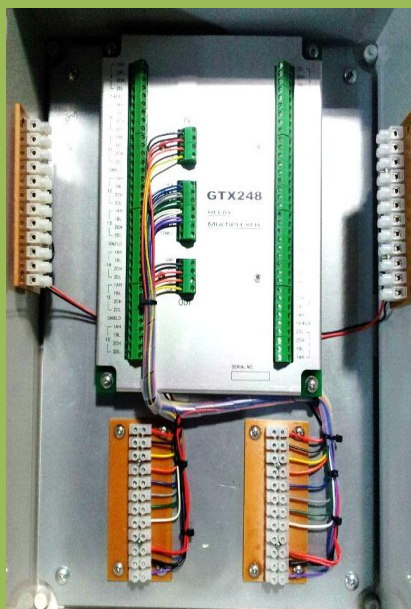
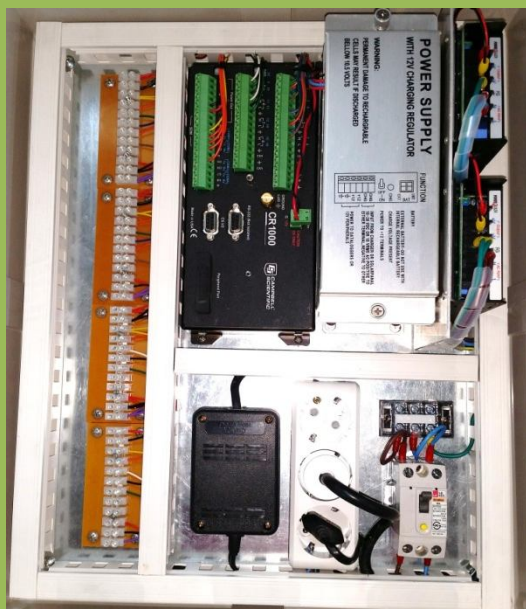
ADHAR INSTRUMENTS & SERVICES

Automatic Data Acquisition System AIS-2000

The data acquisition system serves to monitor and record various instruments data required for monitoring various parameters.

Data loggers are at the centre of our rugged, reliable data acquisition systems. They are known for their flexibility, precision measurements, and dependability—even in harsh, remote environments. As for functionality, all of our data loggers:

Measure sensors Process data onboard Initiate measurement and control functions based on time or event Control external devices. PC support software to program the data logger Consume minimal power from a 12 Vdc source Interface with on-site and telemetry devices perform reliably under adverse conditions.



Data Acquisitions System with Multiplexers

2017

Advantages:

- ◆ Accurate, robust, high resolution and good long term stability.
- ◆ Capable of withstanding thermal shock without defeating performance.

Specification:

Main Module	CR-1000X or equivalent
Analogue Resolution	0.33 microvolt to 333 micro volt
Input channels	16 analogue channels and 08 differential channels
Memory	Operating system 2MB, SRAM 4MB
Input Power	12V DC
Multiplexers	Any multiplexers for channel expansion
Operating Temperature	-25°C to 55°C
Interface	Supports interface for VW Sensors
Multiplexers	16 channels for double ended and 32 channels for single ended

Technical Specification of Data Logger AIS-2000

External Display	External display LCD/LED display with real time clock (200 micro sec resolutions). Resolution: 18 bit or better
Analog Inputs Channels	16 single-ended or 8 differential (individually configured), 16 nos. analog channels to connect all the VWs , Voltage, Current, Pt100, MEMS ,thermistors counters and digital output/input sensors.
Data acquisitions	Channel Expansion using expansion module (Multiplexers) Up to 1000 channels (2 wire common reference) & up to 450 Nos. of channels (3 or 4 wire) isolated input scheme.
Storage	Capacity of 128MB (capable of collecting 1,00,00,000 of data points) , expandable using Flash card/Pen drive
Communications Ports	Provision of RS232, RS422, RS485, SCADA, Ethernet & GSM/GPRS connectivity. 4 SDI inputs, shared with digital Channels 4 high speed encoders for digital Channels.
Logging Schedule	Schedule rate of 10 ms to days.
Digital I/O	Certain digital ports can be used to count switch closures. 8 I/Os or 4 RS-232 COM I/O ports can be paired as transmit and receive for measuring smart serial sensors.
Input Limits	±5 Vdc
Analog Voltage Accuracy	±(0.06% of reading + offset) at 0° to 40°C
ADC	24-bit
Power Requirements	10 to 18 Vdc
Real-Time Clock Accuracy	±3 min. per year (Correction via GPS optional.)
Internet Protocols	FTP, HTTP, XML, POP3, SMTP, Telnet, NTCIP, NTP
Communication Protocols	PakBus, Modbus, DNP3, SDI-12, SDM
Power Backup and Telemetry	Internal/external battery & provision for cellular modem for remote data transfer facility.
Software	Provision for setting up to 4 alarms. Facility to use Arithmetic, Trigonometric, Relational, Logical and Statistical functions to feed into formula option. Facility to load program file to logger via USB stick or direct connectivity with PC.
Voltage Input	· Maximum analog input voltage rang should be ± 30V, Voltage range should be programmable.
Operating Temperature Range	-45 to +70°C Standard

Technical Specifications of Multiplexer (Channel Expansion module) AIS-2010:

Power	Unregulated 9.6 to 16 Vdc
Channels	One Multiplexer (Channel expansion Module) is enough for 32 analog sensors.
Minimum Clock Pulse Width	1 ms
Maximum Actuation Time for Relay	20 ms
Relay Operation	Break before make
Initial Relay Resistance, Closed	0.1 ohm
Maximum Switching Voltage	50 Vdc ,A voltage divider such as the VDIV10:1 may be needed between the AM16/32B and the data logger to stay within the input limits of the data logger channel.
Minimum Contact Life	5 x 10 ⁷ operations
Maximum Contact Voltage Rating	70 V
Maximum Voltage	8 Vdc (clock level)
CE Compliance	EN 61326:1998 EN 55022:1998 Class B
Sampling Rate	12Hz
Operating Temperature Range	-45° to +70°C (standard)
Suitability	Compatible with data logger and has provision of Connecting vibrating wire, geotechnical & metrological sensors