DATALOG 20 / 90 / 140

Modular data acquisition system with
2, 9 or 14 input / output boards

DATALOG series of data acquisition systems (2, 9 or 14 input / output boards) are aiming to measure, condition, process, monitor and record analogue and digital signals from all common types of physical sensors.

- DC and AC voltage, current, resistance, strain gauges
- Temperature: Thermocouples, resistive probes
- Dry contacts
- Communication: Modbus RS485, RS 233

Description

DATALOG series of data acquisition systems are aiming to measure, condition, process, monitor and record analogue and digital signals from all common types of physical sensors. 3 different models are available with 2 (DATALOG 20), 9 (DATALOG 90) or 14 (DATALOG 140) input / output boards.

The system can be supplied in various configurations with a choice of input and ouput boards as well as options such as built-in display and printer. DATALOG systems perform measurement, monitoring and recording of analogue and digital signals coming from sensors of physical or electrical values. These signals can be:

- DC and AC voltage: 0-100 V
- Current: 0-20 and 4-20 mA with external shunts
- Thermocouples: Type K/T/J/N/E/R/S/B... with or without cold junction compensation
- Resistance: 0-300 kΩ
- RTD: Temperature sensors (Pt100 / 500 / 1000...)
- Strain gauges
- Dry contacts

DATALOG is equipped with RS 232 or RS 485 interface, ASCII protocol and Modbus RTU (for communication by modem or radio, on request). Combined to VISULOG data management software, it makes an advanced real time supervision system.

4 thresholds can be programmed per channel. Every threshold can be associated to a specific relay output and eventually to a conditional handling.

2,000 channels are avaible per module. The channels can be real (input or output), or fictive, in order to make mathematical, bolean and statistical calculations. The calculation channels can be defined over a channel or between channels. 100 linearization tables of 40 pairs of points each are available (measured value associated to calculated value), allowing sensor corrections to be recorded and applied.

Data can be stored on 6 internal memories of 8,000 samples each (1 per task over the six first tasks). Every DATALOG with keyboard option is equipped with a PCMCIA slot allowing configurations and data to be stored.

Due their high metrological measurement quality and numerous internal functions, DATALOG

systems are well adapted to a large number of demanding applications:

- Autonomous acquisition system: no computer required
- High accurate sensor calibration system
- Test bench
- Validation of chambers or autoclaves
- Input / ouput interface for PC
- Acquisition system for automation or standard supervision

Specifications

Specifications and performances @23°C ±1°C

Uncertainty is given in % of reading + fixed value.

Analogue input boards: AN 5885 / AN 5906 / AN 5905 / ATC 017

These boards are for universal inputs. Each channel is configurable depending on the quantity to be measured. The connection is performed over a removable screw connector for 0.5 to 2.5 mm2 wires.

AN 5885:

10 input channels allow the following measurements to be performed: DC and AC Voltage, DC and AC Current, Resistance using 3- or 4- wire configuration, Platinum and Nickel RTDs, Thermocouples, Dry contacts, Strain gauges (Need the AN 3700 board).

AN 5906:

10 input channels. Same functions as for the AN 5885, except Strain gauges measurements. Voltage measurement is limited to 60 V.

ATC 017:

This board is to be used for energy source measurements. Resistors mounted in series on the inputs ensure protection against accidental switching short-circuits. It has 10 input channels for measuring as follows: DC and AC Voltage and DC and AC Current.

AN 5905:

20 input channels intended for measurements of: DC and AC Voltage, DC and AC Current, Thermocouples and Dry contacts.

Switching: It is performed over the AN 5885, AN 5900 and ATC 017 boards by using 3-wire dry contact relay.
Differential resistance £ 40 mΩ
Stray emf: ± 2.5 µV
Life: 108 operations
For the AN 5905, the switching is static and performed by means of optomos and the voltage between channels is limited to 60 VDC or AC.
For the other boards, the voltage between channels is limited to 150 VDC or AC.

DC voltage: Measurement

Calibre

Models and accessories

Instrument:

D2AO nor display	Data acquisition system with 2 input / output board slots, without keyboard
D2CO display*	Data acquisition system with 2 input / output board slots, with keyboard and
D9AO nor display	Data acquisition system with 9 input / output board slots, without keyboard
D9AB nor display	Data acquisition system with 9 input / output board slots, without keyboard
	With rechargeable battery
D9CO display*	Data acquisition system with 9 input / output board slots, with keyboard and
D9CB display*	Data acquisition system with 9 input / output board slots, with keyboard and
	With rechargeable battery
D9CI display*	Data acquisition system with 9 input / output board slots, with keyboard and
	With internal printer
D14AO nor display	Data acquisition system with 14 input / output board slots, without keyboard
D14AB nor display	Data acquisition system with 14 input / output board slots, without keyboard
	With rechargeable battery
D14CO display*	Data acquisition system with 14 input / output board slots, with keyboard and
D14CB display*	Data acquisition system with 14 input / output board slots, with keyboard and
	With rechargeable battery
D14CI display*	Data acquisition system with 14 input / output board slots, with keyboard and
	With internal printer

Delivered in standard with:

- User manual

- Power supply cable
- RS 232 cable
- Carrying handle
- Configuration and management software LOGIDAT
  * Interface for PCMCIA memory card in standard with all DATALOG with keyboard

Boards:

AN5885	10-channel - board universal inputs
AN5886	10-channel board - digital inputs
AN5887	10-channel board - dry relay output
AN5888	5-channel board - analogue output
AN3700	Strain gauge power supply board
AN5905	20-channel - 2 wires board analog inputs
AN5906	10-channel board - opto inputs
ATC017	10-channel - protected input board

Accessories:

ER48276-000	Disconnectable terminal block for 10 channel board
ER44007-024	Shunt for process current measuring
ATC012	Drive for PCMCIA memory card
ATC014	PCMCIA memory card PCMCIA 32 Mo
ATC023	Rack mounting kit for DATALOG 20
ATC024	Rack mounting kit for DATALOG 90
ATC025	Rack mounting kit for DATALOG 140
ATC030	Set of 10 paper rolls for DATALOG
ATC031	Voltmeter for DATALOG
ATC032	Supply for DATALOG
ATC052	Converter RS 485 / RS 232
ATC053	Converter RS 485 / USB
ATC054	Converter RS 485 / Ethernet
ATC061	Converter RS 232 / USB
ATC026	Protection back panel for DATALOG 20
ATC027	Protection back panel for DATALOG 90
ATC028	Protection back panel for DATALOG 140

Software:

VISULOG Monitoring & data processing software full version – 1 licence

VISULOG-ETAL Monitoring & data processing software full version – 1 licence
+ Calibration module

VISULOG-PHARMA Monitoring & data processing software full version – 1 licence
+ Module for advanced management of access rights, 21 CFR Part 11 compliant

VISULOG-ETAL-PHARMA Monitoring & data processing software full version – 1 licence
+ Calibration module
+ Module for advanced management of access rights, 21 CFR Part 11 compliant

LTC001 Driver for Labview (Available on download on www.aoip.com)

DAOPC OPC server for DATALOG

LTC003 DLL library

Software licences:

LIC VISU Additional license for VISULOG

LIC VISU ETAL Additional license for VISULOG with ETAL optional module

LIC VISU PHARMA Additional license for VISULOG with PHARMA optional module

LIC VISU ETAL PHARMA Additional license for VISULOG with ETAL and PHARMA optional module

LIC VISULOG WEB License for VISULOG WEB

Certification:

QMA11EN COFRAC certificate of calibration
With all relevant data points where the device has been tested

Packing information:

DATALOG 20 size 160 x 149 x 410 mm

DATALOG 90 size 160 x 291 x 410 mm

DATALOG 140 size 160 x 393 x 410 mm

Weight 3 to 9 kg according to the model and options