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 232

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 output 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 available per module. The channels can be real (input or output), or fictive, in order to make mathematical, boolean 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/output 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**
  - Data acquisition system with 2 input / output board slots, without keyboard nor display

- **D2CO**
  - Data acquisition system with 2 input / output board slots, with keyboard and display*

- **D9AO**
  - Data acquisition system with 9 input / output board slots, without keyboard nor display

- **D9AB**
  - Data acquisition system with 9 input / output board slots, without keyboard nor display
  - With rechargeable battery

- **D9CO**
  - Data acquisition system with 9 input / output board slots, with keyboard and display*

- **D9CB**
  - Data acquisition system with 9 input / output board slots, with keyboard and display*
  - With rechargeable battery

- **D9CI**
  - Data acquisition system with 9 input / output board slots, with keyboard and display*
  - With internal printer

- **D14AO**
  - Data acquisition system with 14 input / output board slots, without keyboard nor display

- **D14AB**
  - Data acquisition system with 14 input / output board slots, without keyboard nor display
  - With rechargeable battery

- **D14CO**
  - Data acquisition system with 14 input / output board slots, with keyboard and display*

- **D14CB**
  - Data acquisition system with 14 input / output board slots, with keyboard and display*
  - With rechargeable battery

- **D14CI**
  - Data acquisition system with 14 input / output board slots, with keyboard and display*
  - 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:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>AN5885</td>
<td>10-channel - board universal inputs</td>
</tr>
<tr>
<td>AN5886</td>
<td>10-channel board - digital inputs</td>
</tr>
<tr>
<td>AN5887</td>
<td>10-channel board - dry relay output</td>
</tr>
<tr>
<td>AN5888</td>
<td>5-channel board - analogue output</td>
</tr>
<tr>
<td>AN3700</td>
<td>Strain gauge power supply board</td>
</tr>
<tr>
<td>AN5905</td>
<td>20-channel - 2 wires board analog inputs</td>
</tr>
<tr>
<td>AN5906</td>
<td>10-channel board - opto inputs</td>
</tr>
<tr>
<td>ATC017</td>
<td>10-channel - protected input board</td>
</tr>
</tbody>
</table>

**Accessories:**

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