

1 Introduction

AD-900 is an A/D converter for connecting an external instrument to the UNICORN™ control system in an ÄKTA™ design system.

The module has one high resolution analogue input for monitoring e.g. pressure, UV monitor signals or other signals available as voltage outputs.

AD-900 communicates with the UNICORN control system via UniNet 2.

A Mini-DIN signal cable to connect to the external device, and a UniNet cable are supplied with the module.

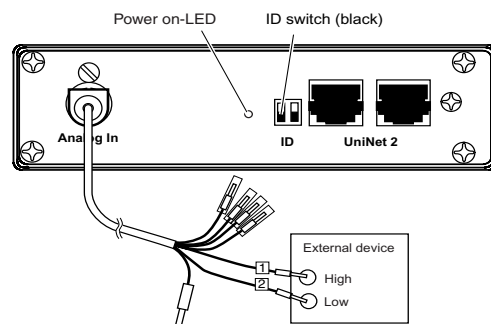
2 Installation

Unpacking

Unpack the module and check the items against the packing list. Inspect the items for obvious damage which may have occurred during transportation.

CAUTION! Before connecting the AD-900 make sure the power is switched OFF at the system pump or the complete system.

Installing AD-900



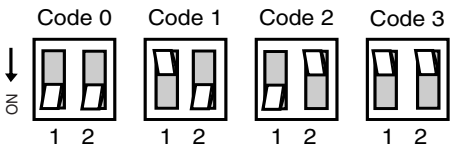
- 1 Connect the Mini-DIN cable connector to socket **Analog In** at AD-900.

Note: The length of the analog cable must not exceed 3 m.

- 2 Remove the protection cover from the wires marked 1 and 2 at the other end of the Mini-DIN cable.
- 3 Connect wire 1 (brown) to the external device high output.
- 4 Connect wire 2 (red) to the external device low output.
- 5 Connect the module with two UniNet cables as a part of the UniNet 2 chain. One UniNet cable is supplied with the module.

Note: The power on-LED on AD-900 flashes for a few seconds when connecting the UniNet cable. The light gets steady when the communication with UNICORN is established.

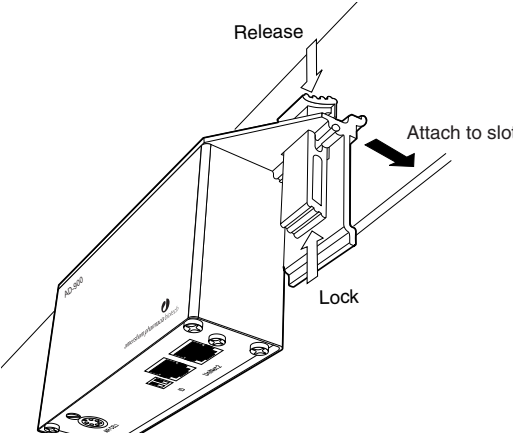
- 6 If more than one AD-900 module will be connected, set the ID switches as follows:



Code 0 shall be used if only one AD-900 is used.

UniNet 2 cables are used to interconnect the individual modules.

- 7 Attach the module to the mounting slot on the ÄKTAdesign system.



3 Operation

On/Off

AD-900 is on when connected to a UniNet 2 connector in a running ÄKTAdesign system.

All interaction with the module is made through the UNICORN control system. A steady light from the green power on-LED indicates that the communication is established.

4 Maintenance

No regular maintenance is required.

5 Trouble-shooting

If the suggested actions do not correct the fault, call Amersham Pharmacia Biotech.

Fault	Action
No response from AD-900 in UNICORN	Check that the cables and connectors are properly connected.
Noisy signal	<ol style="list-style-type: none"> 1 Remove the protection cover from the unmarked wire (the thickest one). 2 Connect the wire to ground, or to the low output (the same terminal as for wire 2), on the external device.
Other faults	Contact Amersham Pharmacia Biotech.

Reference information

Description

AD-900 is an A/D converter with one analogue input channel. The recommended input voltage range is ± 2 V DC.

The input channel is isolated from the UniNet 2 connection.

The Mini-DIN connector has the following pin configuration:

Pin	Signal name
1	Input signal (high)
2	Signal ground (low)
3–6	Not connected

Note: The length of the analog cable must not exceed 3 m.

AD-900 contains no user replaceable items.

Technical specifications

Operating data

Voltage range	± 2 V DC
Resolution	1 μ V, 20 bit
Input impedance	≥ 1 M Ω
Accuracy	Better than $\pm 0.5\%$ or ± 0.05 mV whichever is greater
Max. input voltage	± 5 V
Power requirement	18–36 V DC through the UniNet 2 connection
Power consumption	Max. 1.0 W

Physical data

Degree of protection	IP 21
Material, box enclosure	Aluminum
Dimensions, H x W x D	40 x 140 x 80 mm
incl. attachment	45 x 175 x 85 mm
Weight	0.4 kg
Environment	+4 to +40 °C 20–95% relative humidity 84–106 kPa (840–1060 mbar) atmospheric pressure

Accessories and spare parts

Item	Quantity per pack	Code no.
AD-900 including a UniNet cable 0.7 m, a Mini-DIN cable 1.5 m	1	18-1148-62
Cable UniNet, 0.3 m	1	18-1109-73
Cable UniNet, 0.7 m	1	18-1109-74
Cable UniNet, 1.5 m	1	18-1117-75
Cable UniNet, 3.0 m	1	18-1109-75
Cable Mini-DIN, 1.5 m, 6-pole	1	18-1110-64

Important user information

All users must read this entire manual to fully understand the safe use of AD-900.

Caution!

The Caution sign is used to call attention to instructions or conditions that must be followed to avoid damage to the product or other equipment in order to avoid personal injury. Be sure not to proceed until the instructions are clearly understood and all stated conditions are met.

Note

The Note sign is used to indicate information important for trouble-free and optimal use of the product.

Declaration of conformity

Safety standards

This product meets the requirements of the Low Voltage Directive 73/23/EEC through the harmonized standard EN 61 010-1:1993 + A2:1995.

EMC standards

This product meets the requirements of the EMC Directive 89/336/EEC through the harmonized standard EN 61 326-1:1997 + A1:1998.

The **CE** symbol and corresponding declaration of conformity, is valid for the instrument when it is:

- used as a stand-alone unit, or
- connected to other CE-marked Amersham Pharmacia Biotech instruments, or
- connected to other products recommended or described in this manual, and
- used in the same state as it was delivered from Amersham Pharmacia Biotech except for alterations described in this manual.

WARNING!

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

All goods and services are sold subject to the terms and conditions of sale of the company within the Amersham Pharmacia Biotech group which supplies them. A copy of these terms and conditions is available on request.

Should you have any comments on this product, we will be pleased to receive them at:

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