AZURA® Detector DAD 2.1L & MWD 2.1L

The AZURA® DAD 2.1L is a highly competitive diode array detector which combines high performance with easy handling at an affordable price.

A wide range of easily exchangeable cartridge flow cells make this device the right choice for fast, standard analytical, semi-preparative and preparative separations with bio-inert or stainless steel wetted parts.

State-of-the-art total reflection flow cells (LightGuide technology) are available for this device providing maximum light throughput (due to total internal reflection) with minimal peak dispersion (due to the small cell volume) to guarantee an optimized S/N ratio.

An optional fiber optics adapter offers the possibility to separate the flow cell spatially from the device and thus provides enhanced security for hazardous, explosive or toxic work processes, as well as protecting the device from leakages at high flow rates.

The newly developed optical unit and intelligent temperature management ensure for maximum sensitivity combined with minimal baseline drift.

Furthermore, easy frontal access and improved safety features enable effortless lamp replacement. This eases maintenance and guarantees short downtimes.

The DAD 2.1L comes installed with a deuterium lamp which covers a wavelength range from 190 to 700 nm.

Key features

- Wide application range
- Large choice of flow cells
- Fiber optics adapter available
- Leak management
- Made in Germany

KNAUER offers various software control options:
www.knauer.net/softwarecontrol

For detector accessories
see p. 42

Specifications

Detection

Detector type	Diode array detector
Number of diodes	256
Pixel pitch	2 nm/diode
Detection channels	8 (Digital)/4 (Analog)
Light source	Deuterium (D^2) lamp with integrated GLP chip
Wavelength range	190 - 700 nm
Spectral bandwidth	<10 nm at H_α line (FWHM) /Note: digital bandwidth 1 - 32 nm
Wavelength accuracy	± 1 nm
Noise	± 5 µAU at 254 nm (ASTM E1657-98)
Drift	400 µAU/h at 254 nm (ASTM E1657-98)
Linearity	> 2.0 AU at 274 nm (ASTM E1657-98)
Maximum data rate	100 Hz (LAN)/12.5 Hz (analog)
Flow cell	Not included (see Accessories / Spare parts)
Time constants	0.00 / 0.01 / 0.02 / 0.05 / 0.1 / 0.2 / 0.5 / 1.0 / 2.0 / 5.0 / 10.0 s
Integration time	Automatic
Wavelength verification	Internal holmium filter and deuterium lines
Leak sensor	Yes

Communication

Inputs	Error (IN), Start (IN), Autozero
Outputs	Events 1 - 2 (Relay and TTL compatible, respectively), Error (OUT), + 5 V, Valve + 24 V, Valve (OUT)
Analog outputs	4 x 0 - 5 V, 20 bit, offset adjustable
Control	Mobile Control, software, event control, analog, terminal protocol
Interfaces	LAN (RJ-45), USB (service only), multi-pin connector, analog (RCA cinch connector)

KNAUER

Technical parameters

GLP	Detailed report including lamp recognition, operating hours, lamp operating hours, number of lamp ignitions
Display	Mobile Control (optional)
Ambient conditions	Temperature range: 4 - 40 °C, 39.2 - 104 °F, Humidity: below 90 % noncondensing

General

Power supply	100 – 240 V, 50 – 60 Hz, 75 W
Dimensions	361 x 158 x 523 mm (W x H x D)
Weight	12.2 kg

Ordering details:

Device

ADC01	AZURA® Detector DAD 2.1L Diode array detector DAD 2.1L without flow cell 190 - 700 nm, incl. test cell
ADB01	AZURA® Detector MWD 2.1L Multiwavelength detector MWD 2.1L, without flow cell 190 - 700 nm, incl. test cell

Accessories

AMC19XA	10 mm path length, 2µl, 1/16", 50 bar, LightGuide Flow cell cartridge for AZURA® Detector DAD/MWD
AMD59XA	50 mm path length, 6µl, 1/16", 50 bar, High Sensitivity LightGuide Flow cell cartridge for AZURA® Detector DAD/MWD
AMC38	10 mm path length, 10µl, 1/16", 300 bar, PressureProof Flow cell cartridge for AZURA® Detector DAD/MWD
AMB18	3 mm path length, 2µl, 1/16", 300 bar, PressureProof Flow cell cartridge for AZURA® Detector DAD/MWD
A5193	Deuterium lamp, replacement, for S25 20, 10D, 40D, UVD 2.1S, UVD 2.1L, DAD 2.1L, MWD 2.1L
AMKX8KIT	Fiber optics adapter kit for AZURA® Detector DAD/MWD, with fiber optic cables (1x 400 mm and 1x 750 mm) and mounting bracket
AMLX8	Test cell for AZURA® Detector DAD/MWD