



# ADP400 Series Polarimeters

HIGH PRECISION, SINGLE WAVELENGTH INSTRUMENTS WITH OR WITHOUT PELTIER TEMPERATURE CONTROL FOR APPLICATIONS WITHIN FLAVOURS, FRAGRANCE, PHARMACEUTICAL, CHEMICAL, ACADEMIA & RESEARCH



- Patented XPC Technology
- Up to 3.0 OD measurement
- Tube lengths up to 200mm
- High definition 4" full colour display
- US/EP/BP/JP compliant
- Supports FDA regulation 21 CFR Part 11
- PHR-MEAN Method with continuous or single-shot measurement modes

Capable of measuring up to 3.0 OD at 589nm over a maximum tube length of 200mm, ADP400 Series polarimeters offer three decimal place precision to an accuracy of  $\pm 0.01^\circ$  Angular, making them ideal for general purpose use in food, flavours, fragrance, pharmaceutical and chemical industries as well as within academia and research.

The ADP400 Series comprises two models: (1) the ADP450 polarimeter with XPC Technology - Xylem's patented on-board Peltier temperature control system for measuring optically active samples at stable temperatures and (2) the ADP430 polarimeter for use where temperature control is not required or where a waterbath or mathematical compensation is preferred.

Both models incorporate an easy-to-use Methods system that gives convenient access to popular measurement types including continual measurement of Optical Rotation, Specific Rotation, Concentration or Inversion. The "single-shot" measurement feature provides a snapshot result at any given time.

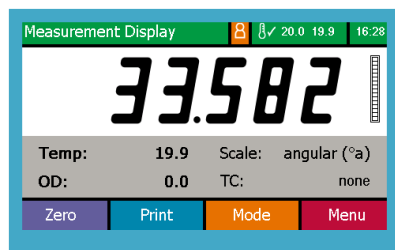
The ADP400 Series polarimeters come equipped with a new full colour 4" high definition display meaning results are clearly visible to the operator. The expanded memory means that over 8000 measurements and recorded logs of instrument configuration can be saved and viewed or output to LIMS or Secure PDF.

Calibration and configuration of the ADP400 can be password protected, accessible by keypad entry or, for convenience, using a fully configurable RFID tag. This, together with the audit trail, facilitates operation in environments conforming to FDA regulation 21 CFR Part 11 or GLP.

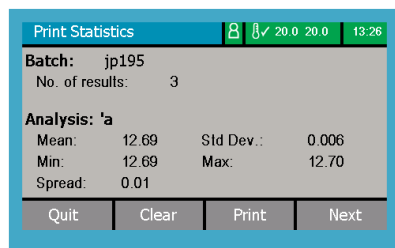


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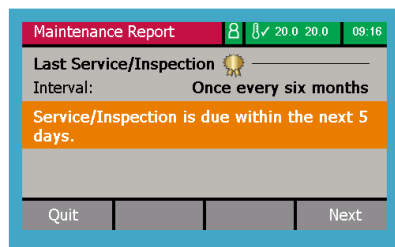
# ADP400 Series Polarimeters for temperature controlled applications



ADP400 displaying reading parameters at 20°C



PHR-MEAN Method provides full statistical analysis of a multi-point experiment



Intelligent software shows real-time validation and maintenance information

## Latest Software Features

- Save over 8000 readings
- Reading audit trail
- User audit trail
- Configuration audit trail
- Print to secure PDF
- Simple USB "Back-up & Clone"
- User maintenance prompts

## General Specifications

<b>Scales</b>	
Angular Degrees (°A)	-355 to +355
International Sugar Scale (°Z)	-225 to +225
User Scales/Methods	100
<b>Resolution</b>	
Angular Degrees (°A)	0.01/0.001 (selectable)
International Sugar Scale (°Z)	
<b>Accuracy</b>	
Angular Degrees (°A)	± 0.010
International Sugar Scale (°Z)	± 0.030
<b>Precision (Reproducibility)*</b>	
Angular Degrees (°A)	± 0.002
International Sugar Scale (°Z)	± 0.005
<b>User Scales &amp; Methods Library</b>	
PHR-MEAN statistical, Specific Rotation, Concentration, Inversion (A-B), Invert Sugar and User Defined	
<b>Reading Time</b>	Continuous measurement and display of single shot (selectable)
<b>Tube Length</b>	10 to 200mm
<b>Sample Illumination</b>	Sodium (589nm) Light Emitting Diode (100,000+ hours)
<b>Beam Diameter</b>	4mm
<b>Optical Density</b>	0.0 to 3.0 OD
<b>Instrument Housing</b>	Polyurethane foam with aluminium base
<b>Interfaces</b>	1 x USB (A), 1 x USB (B), 1 x Ethernet
<b>Power</b>	Instrument: 24 V DC, ±5%, <2A External PSU: 100-240V, 50-60Hz (supplied)
<b>Humidity Range</b>	<90% RH (non condensing)

Temperature Specifications	ADP430	ADP450 (Peltier)
<b>Control</b>	None or external waterbath	Patented XPC Technology
<b>Compensation</b>	None, ICUMSA, Quartz or User Defined	
<b>Measuring Range</b>	5-40 °C	15-35 °C
<b>Sensor Accuracy</b>	± 0.1 °C	± 0.1 °C
<b>Stability</b>	Waterbath dependent	± 0.2 °C
<b>Stability Checks</b>	None/delay on single-shot	None/delay or SMART

## Order Codes

Code	Description
37-30	ADP430 digital polarimeter for use with or without an external waterbath or ATC. Supplied with a standard ICUMSA specification 200mm glass centre fill polarimeter tube, pack of three RFID tags, instruction manual and certificate of conformity.
37-50	ADP450 digital polarimeter with patented XPC Technology for constant temperature applications using Peltier devices. Supplied with a standard ICUMSA 200mm stainless steel polarimeter tube and XPC-200 tube adaptor, pack of three RFID tags, instruction manual and certificate of conformity.
35-90	Standard ICUMSA stainless steel polarimeter tube - 100mm
35-91	Standard ICUMSA stainless steel polarimeter tube - 200mm
35-95	XPC-100 tube adaptor for use with 100mm standard polarimeter tube
35-96	XPC-200 tube adaptor for use with 200mm standard polarimeter tube



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