

## Digital Polarimeters



Bellingham and Stanley ADP400 Series polarimeters not only offer three decimal place measurement, they are also packed full of features normally only expected from high-end instrumentation.

A METHODS system allows rapid instrument configuration. Setting the scale (optical rotation, sugar, Specific Rotation, concentration, etc.), selecting the reading type (continuous or single-shot) and limit checking against pre-defined product specifications is simple.

High security software fulfils the operational requirements of FDA regulation 21 CFR Part 11, electronic signatures. User access is configurable and protected with password entry via keypad or RFID tag. Audit trails of readings and configuration are easily viewed on the 4" (10cm) full colour display or downloaded via USB or LAN/Ethernet.

There are two models available in the range; both instruments conform to the minimum requirement of USP/EP/BP for sodium (589nm) measurement.

- ADP430 for use where no temperature control is required or for operation with automatic temperature compensation (ATC) or a water-bath.
- ADP450 with patented XPC technology that uses Peltier to control sample temperature.

Common features:

- LED/Interference filter
- Standard ICUMSA tubes
- High Definition colour display
- Multiple scales
- Temperature display
- Optical Density display
- Temperature compensation
- Conform to USP/EP/BP/JP (@589nm)

### Technical Specifications

#### Scales:

Angular degrees (°A)	-355 to +355
International sugar scale (°Z)	-225 to +225
User Scales/Methods	100

#### Resolution:

Angular degrees (°A)	0.01/ 0.001 (selectable)
International sugar scale (°Z)	

#### Accuracy:

Angular degrees (°A)	±0.010
International sugar scale (°Z)	±0.030

#### Precision (Reproducibility):

Angular degrees (°A)	±0.002
International sugar scale (°Z)	±0.005
User scales & methods library	PHR-MEAN statistical, Specific Rotation, Concentration, Inversion (A-B), Invert Sugar, user defined
Reading time (selectable)	Continuous measurement and display or single shot

Tube length	100 to 200mm
Sample illumination	Sodium (589nm) Light emitting diode (100,000+ hours)
Beam diameter	4mm
Optical density	0.0 to 3.0 OD
Instrument housing	Polyurethane foam with aluminium base
Interfaces	1 x USB (A), 1 x USB (B), 1 x Ethernet

#### Power:

Instrument housing	24V DC, ±5%, <2A
External PSU	100 - 240V, 50-60Hz (supplied)
Humidity range	<90% RH (non-condensing)

#### Temperature specification:

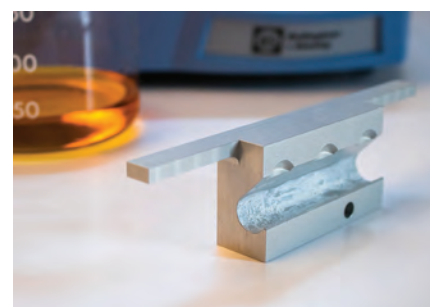
Model	ADP430	ADP450
Control	None or external water-bath	Patented XPC Technology
Compensation	None, ICUMSA, Quartz or user defined	
Measuring range	5 - 40°C	15 - 35°C
Sensor accuracy	±0.1°C	
Stability	Water-bath dependent	±0.2°C
Stability checks	None/delay on single-shot	None/delay or SMART



PO/45028



PO/45032



PO/45036

Cat. No.	Code	Description
PO/45028	37-30	Polarimeter, digital model ADP430, water-bath controlled
PO/45030	37-50	Polarimeter, digital model ADP450, Peltier controlled
PO/45032	35-90	Polarimeter tube, Standard ICUMSA, stainless steel, 100mm
PO/45034	35-91	Polarimeter tube, Standard ICUMSA, stainless steel, 200mm
PO/45036	35-95	Adapter XPC-100 for use with 100mm standard polarimeter tubes
PO/45038	35-96	Adapter XPC-200 for use with 200mm standard polarimeter tubes