

L LABORATORY

P PROCESS

S SOFTWARE

A AUTOMATION



**SCHMIDT
HAENSCH**
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Polartronic® V

High Performance Polarimeter

Our fully automatic circle polarimeter provides continuous measurements with high accuracy and is designed for various applications



SPECIFICATIONS

POLARTRONIC® V

Measurement scales	°Optical rotation, °Specific rotation, °Z International Sugar Scale, % Concentration (g/mL, g/100mL, g/L) up to 1000 scales freely definable
Measuring range	$\pm 360^\circ / \pm 259^\circ\text{Z}$
Resolution	0.001° / 0,01°Z
Precision	$\pm 0.005^\circ / \pm 0,015^\circ\text{Z} *$
Reproducibility	$\pm 0.001^\circ / \pm 0,01^\circ\text{Z}$
Sensitivity	Up to OD 5
Wavelength	1 or 2 wavelengths fixed: 405, 435, 546, 578, 589, 633, 882 nm (others upon request)
Response time	≤ 4 sec. over the entire measuring range
Measuring tubes	Different Models, 10 to 200 mm length Material: glass, stainless steel, acid-proof stainless steel, stainless steel tubes with integrated temperature sensor***
Temperature measurement	NTC sensor for measurement of sample temperature
Range	0 - 99°C
Resolution	0.01°C
Precision	$\pm 0.1^\circ\text{C}$
Light source	LED, interference filter
Display	7" Touchscreen, 800 x 480 Pixel, 16 Bit colors
Operation	Touchscreen, keyboard**, mouse**, barcode-reader**, remote via PC**
Interface / Communication	RS232 (1x), USB A (4x), USB B (1x), Ethernet (1x), W-LAN/LAN**
Conformity	International Pharmacopoea, OIML, ASTM, ICUMSA, Australian Standard K157
Highlights	New improved hardware for faster operation; 7" conductive touch display as standard; ready to implement "Aquisys 3" operating system offering: intuitive operation, control via smartphone, connection to third party instruments, industrial standard interfaces, internal data base function, internal 21 CFR Part 11 software
Weight / dimensions	18.3 kg; 730 x 370 x 160 mm (width x depth x height)

* Standard conditions
** Optional
*** Certificate on request

Polarimeter applications

Polarimetry is an instrumental analytical method using the optical activity by inorganic and organic compounds as a non-destructive measure of their concentration in a solution.

Applications often used

- Determination of concentration
- Purity analysis
- Quality control
- Scientific analysis

Typical applications of the models

- Raw-, intermediate and final products of sugar cane and beet processing
- Food (sugar, starch, milk and dairy products)
- Pharmaceuticals (alkaloids, amino acids, organic compounds, vitamins, essential oils etc.)
- Chemicals (organic fluids, biopolymers, synthetic and organic polymers, benzene, acids etc.)
- Research (analysis of molecular structure, investigation of kinetic reactions as function of time, distinction of optical isomers, monitoring changes in concentration of an optically active component in a reaction mixture as in enzymatic scission)



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