

L LABORATORY

P PROCESS

S SOFTWARE

A AUTOMATION



**SCHMIDT
HAENSCH**
innovators by tradition since 1864

Polartronic M

Polarimeter
High resolution
with continuous
measurement



SPECIFICATIONS

POLARTRONIC M KEYBOARD

POLARTRONIC M TOUCH

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	± 360° / ± 259°Z	
Resolution	0.001° / 0.01°Z	
Precision	± 0.005° / ± 0.015°Z *	
Reproducibility	± 0.005° / ± 0.015°Z	
Sensitivity	Up to OD 5	
Wavelength	1 or 2 wavelengths fixed: 405, 435, 546, 578, 589, 633, 882 nm (others on request)	
Response time	≤ 4 sec. over the entire measuring range	
Measuring tubes	Different models, 10 to 200 mm length, normal- and microvolume Material: glass, stainless steel, acid-proof stainless steel, stainless steel tubes with integrated temperature sensor*** T-Cell Polarimeter tubes (temperature control via Peltier elements)****	
Temperature regulation	Temperature regulation with external water bath (specification vary by model) or with T-Cell Polarimeter tubes	
T-Cell range	+ 18° to + 40°C	
T-Cell resolution	0.01°C	
T-Cell precision	± 0.1°C	
Light source	LED, interference filter	
Display	Graphics LCD, 16 x 16 characters	7" touchscreen, 800 x 480 pixel, 16 bit colors
Operation	Alpha numerical keyboard	Touchscreen (keyboard, mouse, barcode reader, remote via PC**)
Interface / Communication	RS232 (2x), parallel (1x), USB**	RS232 (1x), USB A (4x), USB B (1x), Ethernet (1x), W-LAN/LAN**
Standard models	Polartronic M 100; M 100 P****: 589 nm Polartronic M 101; M 101 P****: 882 nm Polartronic M 202; M 202 P****: 589 + 882 nm	Polartronic M 100 TOUCH; M 100 P****TOUCH: 589 nm Polartronic M 101 TOUCH; M 101 P****TOUCH: 882 nm Polartronic M 202 TOUCH; M 202 P****TOUCH: 589 + 882 nm
Conformity	International Pharmacopoea, OIML, ASTM, ICUMSA, Australian Standard K157	
Highlights	High performance circle Polarimeter for common applications; high resolution 7" TFT touchscreen; documentation GLP/GMP conform; CFR part 11 ready; energy saving LED light source All models designed for the use of T-Cell Polarimeter tubes****	



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 model

- Raw-, intermediate and final products of sugar cane and beet processing
- Food (sugar, starch, milk and dairy products)
- Pharmaceuticals (alkaloids, amino acids, vitamins, essential oils, antibiotics, serums)
- Chemicals (organic fluids, biopolymers, synthetic and organic polymers, benzene, 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)

- * Standard conditions (589 nm, 20°C)
- ** Optional
- *** Certificate on request
- ****P-version for T-Cell tubes

