



Refractive Index - Detector

The RI-Detector RefractoFlow 2030 Differential Refractive Index Detector series offers the **sensitivity, stability and reproducibility** required for optimal RI detection. The thermal isolated optic with a countercurrent heat exchanger and with its programmable temperature control results in an **extremely stable baseline** and an **optimal Signal/Noise ratio**. The RF 2030 series provide **autopurge** and **autozero** capabilities, as well as RS232 and LAN communication to acquire data directly without using any external signal interface. The detector can be programmed, controlled and used manually by keypad or together with the software Clarity® or ChromStar®.



TECHNICAL PARAMETERS

Measuring range refractive Index	1.00 - 1.75 RIU
Measuring range	+/- 1000 µRIU
Zero compensation optics	Full measuring range via adjustment screw
Zero compensation measuring signal	Full measuring range via AutoZero function
Drift	1 µRIU/hour (1 mV/hour) ¹ *
Noise	+/- 7 µRIU (+/- 7 µV)* (analog) +/- 3 µRIU (+/- 3 µV)* (digital)
Analog outputs	Integrator (not configurable) Recorder (configurable)
Integrator output	+/- 1200 mV
Recorder output	10 mV, 100 mV, 1000 mV or EXTN (+/- 1200 mV)
Recorder range	Selectable from 128, /64, /32, /16, /8, /4, /2/, 1 *2, *4, *8, *16, *32, *64, *128
Recorder offset	Selectable in the range of -50, -10, -5, -1, 0 +1, +5, +10, +50 [%] related to selected recorder scope
Recorder marker	Marker function ON/OFF
Data communication	
Digital interface	RS232, bidirectional
Digital input	TTL Purge, AutoZero, Start/Marker
Digital output	TTL Intensity alarm
Temperature control optics	35°C-55°C (1°C steps)
Thermal fuse	72°C
Self-heating	Approx. 7°C above ambient temperature
Flow cell (analytical)	45° - Flow cell with two chambers
Volume	9 µL / chamber
Pressure max.	6 bar (0.6 MPa)
Flow rate	0.1-3.0 mL / min.

TECHNICAL PARAMETERS (continued)

Purge valve	3 or 2 directional valve (12 volts)
Max. valve pressure	2 bar (0.2 MPa)
Material and wetted parts	Stainless steel 316, Teflon and quartz glass
Max. pH range	2.3-9.5
Eluent volumes	
Inlet → Cell	22 µL
Inlet → Cell → Outlet	Approx.. 600 µL
Total	Approx. 1300 µL
Physical specifications	
Power supply	100-120 V or 220 – 240 V; AC, 50/60 Hz
Power input	Max. 50 W
Dimensions (w x h x d)	280 x 135 x 498 mm
Weight	12 kg
Operating temperature	10-35 °C

^{1*} 1mV according 1 µRIU in case that calibration was performed with calibration solution 500 µRIU.

