

# PN3140 RI Detector



High Performance  
Refractive Index Determination  
for HPLC, GPC and FFF

[www.postnova.com](http://www.postnova.com)

## Specifications

### Detection Principle:

Deflection type RI detector

### Refractive Index Range:

1,00 to 1,75

### Temperature Settings:

30°C to 50°C in 1°C steps

### Maximum Flow Rate:

10 mL/min

### Pressure Rating:

50 kPa

### Flow Cell Volume:

8 µL (analytical)

### Internal Volume:

Inlet Port to Flow Cell: ca. 60 µL

Flow Cell to Outlet Port: ca. 520 µL

Total Internal Volume: ca. 590 µL

### Wetted Materials:

SST316, Teflon, Quartz Glass

### Response Time:

0.1; 0.25; 0.5; 1.0; 1.5; 2; 3; 6s

### Range:

1/4 - 512 µRIU

### Linearity:

600 µRIU

### Noise Level:

2.5 nRIU (Response: 1.5 seconds)

### Integrator - Output:

0 - 1 Volt

### Recorder - Output:

0 - 10 mVolt

### External Communication:

RS232C

### External Outputs:

Purge On/Off, Autozero, Marker, Polarity

### External Inputs:

Ready, Solvent Leak, Error

(Overheating, Low Light Intensity, Null Glass

Home Position Error, Lost Parameters,

Optical Balance)

### EMC/Safety Standards:

EN61326-1/EN61010-1

### Weight:

ca. 13 kg

### Outer Dimensions:

ca. 260 x 200 x 400 mm

### Power Supply:

230/115 V; 50/60 Hz

### Power Consumption:

150VA (maximum)



### Postnova Analytics GmbH

Max-Planck-Str. 14

86899 Landsberg am Lech/Germany

Tel. : +49.8191.428-181

Fax : +49.8191.428-175

### Postnova Analytics Inc.

230 South, 500 East, Suite # 120

84102 Salt Lake City, UT/USA

Tel. : +1.801.521-2004

Fax : +1.801.521-2884

email : [info@postnova.com](mailto:info@postnova.com)

web : [www.postnova.com](http://www.postnova.com)

# PN3140 Refractive Index Detector

The PN3140 is the new high-end detector in our 3100 series of RI detection systems. This detector offers the highest sensitivity, baseline stability and reproducibility required for high performance applications with several enhancements and improvements that make this the easiest RI detector to use yet.

The unit features a full color LCD that allows the chromatographer to easily check the detector status as well as monitor the detector baseline in real time.

An innovative start-up sequence allows the user to purge, calculate noise + drift values and auto zero before a Ready Status is indicated. This procedure is completely automated and does not need to be supervised by the user.

Temperature can be set from 30 - 50°C in 1°C increments. Because of an especially fast temperature control provided by the thermally shielded optics with a counter current heat exchanger and the programmable temperature control, the detector offers a highly stable baseline and a very good signal/noise ratio in an extraordinary short time compared to other available systems.

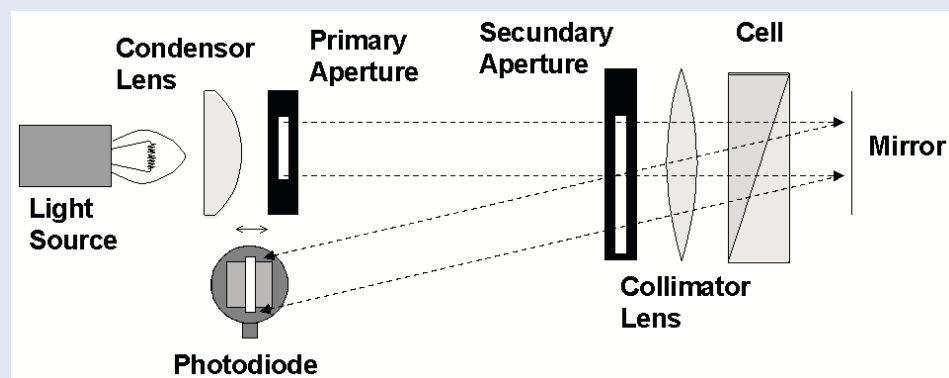
The PN3140 RI detector also has a solvent leak sensor that can generate an output signal that will shut down the pump in the unlikely event of a solvent leak inside the detector.

A complete series of input/output signal terminals and a RS-232 port allows easy integration with any HPLC/GPC/FFF system. Extensive help screens and error alert messages guide the user in the event of unusual operation. A validation screen displays temperature, lamp voltage, lamp life time, span, noise and drift values thus making a cumbersome task very easy.

The detector fits completely into the postnova product portfolio and can be combined with all other postnova systems as well as with any other chromatography system from a different manufacturer.

The detector is available for analytical, micro, preparative and analytical/preparative mode operation.

The working principle of this deflection type RI detector is as follows:



## Options:

### Flow Cells

Z-DET-3140-001

microbore (2.5 µL Cell Volume)

Z-DET-3140-002

analytical (8 µL Cell Volume)

Z-DET-3140-003

preparative (8 µL Cell Volume)