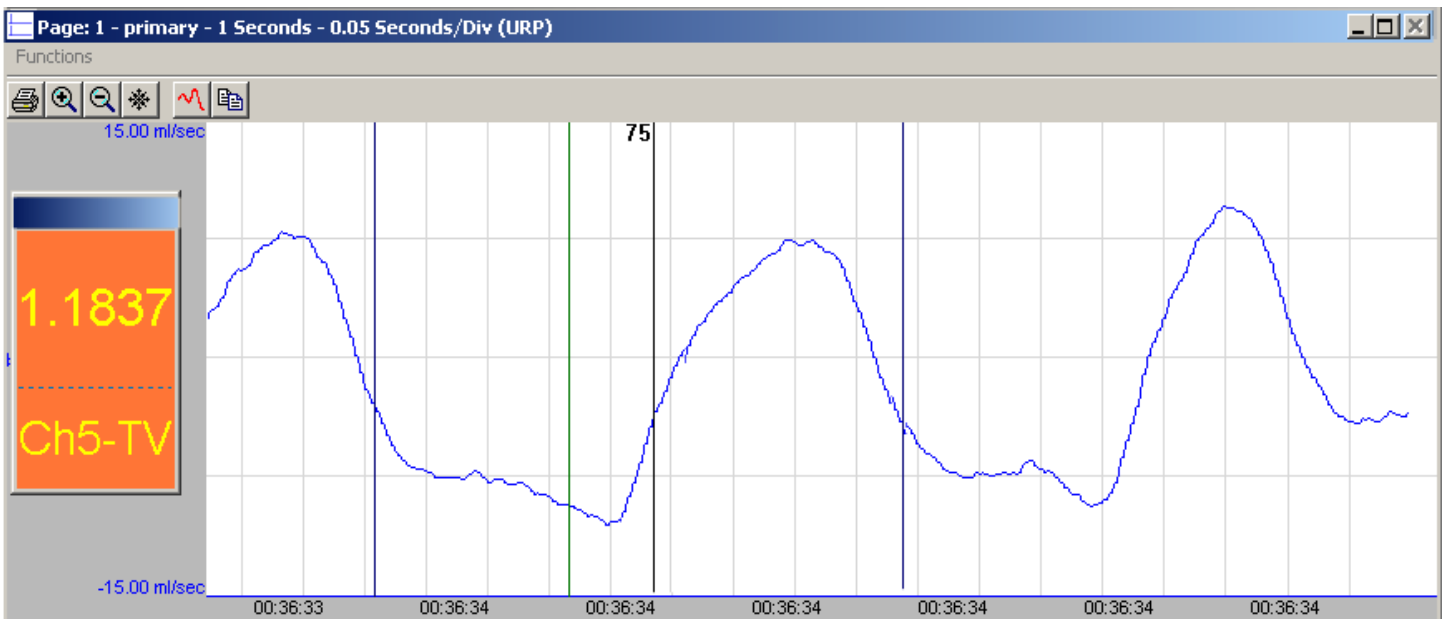




# Unrestrained Plethysmography

The Unrestrained Plethysmography (URP) Analysis Module collects and analyzes signals obtained from “free roaming chambers”. Adjustable “Attribute Settings” such as Minimum Flow, Baseline Shift and Volume Match are available to ensure proper cycle detection. Peak Inspiratory/Expiratory Flow, Tidal Volume and Penh are examples of derived output

available on a beat-to-beat basis or in a time average mode. Automated validation marks for Start Inspiration, Start Expiration and Percent Relaxation can be displayed. The validation marks provide visual, on-line verification of the accuracy of the system.



# Technical Data Sheet

## Model PNM-URP100W

### Unrestrained Plethysmography Analysis Module

Name	Definition
Num	The number of the cycle.
PIF	The Peak Inspiratory Flow is the highest value measured from the baseline. The baseline is formed by connecting the start inspiration mark and the start expiration mark.
PEF	The Peak Expiratory Flow is the lowest value measured from the baseline.
TV	Tidal Volume is the integral of the difference between the inspiration signal and the baseline expressed in flow units-seconds. The baseline is formed by connecting the start inspiration mark and the start expiration mark.
MV	Minute Volume is the product of TV and BPM. When running in a multiple epoch logging rate or second logging rate, the averaged value will be calculated off of the averaged TV and averaged BPM values.
BPM	Breaths Per Minute is the reciprocal of the period, in seconds, associated with a breath, multiplied by 60.
IT	Inspiration Time is the time, in milliseconds, from the start of inspiration to the end of inspiration. The start of inspiration is marked at the point where the respiration signal crosses the baseline with a positive slope. The end of inspiration signal is marked at the point where the respiration signal crosses the baseline with a negative slope.
ET	Expiration Time is the time, in milliseconds, from the end of inspiration to the end of expiration.
TT	Total Time is the sum of inspiration and expiration times: IT + ET.
AT	Apnea Time is not currently used.
Pause	Pause provides a timing comparison of early and late expiration.
PEnh	Enhanced Pause is the product of the ratio of PEF to PIF and Pause.
TVadj	The adjusted Tidal Volume is calculated by multiplying the reported TV by an adjustment factor as specified in Adv Attrib2.
MVadj	The Minute Volume adj is the product of TVadj and BPM.

*DSI products are not intended for the purposes of diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, or used as a life support device. Use of DSI products are solely for the purposes of conducting life science research.*