nVision Reference Recorder **+** **CRYSTAL CONTROL**

nVision Introduction

Thank you for choosing the nVision Reference Pressure Recorder from Crystal Engineering Corporation. Your nVision is a combination of leading edge technology and rugged industrial design. nVision, coupled with CrystalControl Software, allows you to make nVision exactly what you need it to be.

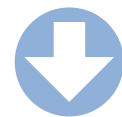### CrystalControl Configuration Software

CrystalControl enables you to custom configure your nVision to tailor it suit your needs. With only a mini USB B cable and a computer running Microsoft Windows* the CrystalControl Configuration Software allows you to customize your nVision to suit your specific needs and applications.

Installation

CrystalControl is distributed as a self-extracting Setup application. Insert the enclosed CD and launch CrystalControlSetup.exe. Follow the on-screen prompts for installation.

Software is also available from the Crystal Engineering website: www.crystalengineering.net/downloads.

Microsoft Windows XP [SP3] or Windows Vista [SP1]. Microsoft, Windows, XP and Vista is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

1b — CrystalControl **DataViewer** Screen

View stored recorded data in "DataViewer"

Download only checked runs

Hover cursor over graph to see date & time summary (Show Point Values)
> Left-click & drag to zoom
> Right-click for additional options:

- Copy
- Save Image As
- Show Point Values
- Un-zoom
- Undo all Zoom/Pan
- Set Scale to Default

Select data run for graphing

Export and Save in .xls format

Reset graphing to default zoom view

1a — CrystalControl **Configuration** Screen

Customize Settings with the "Config" tab

Connect or Disconnect your nVision

Chassis or Module Configuration Settings

Commit Changes with "Update Gauge"

32 Character Message Store

Enable only the units you need

CRYSTAL engineering corporation

We hope your nVision meets your expectations, and we're interested in any comments or suggestions you may have. You can send us a note at sales@crystalengineering.net.

Many features in this and our other products are a direct result of your comments!

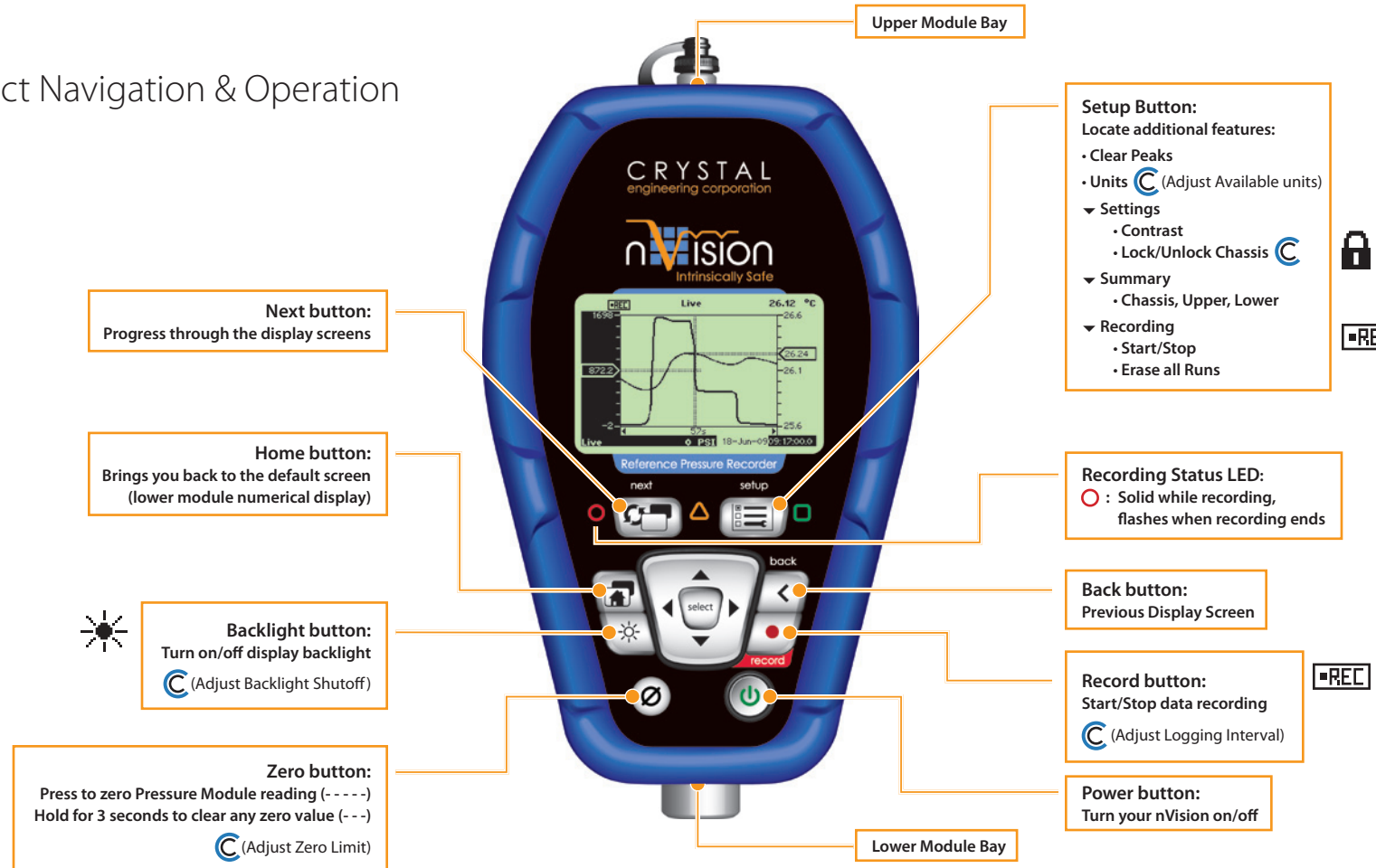Visit us on the web at **www.crystalengineering.net**

Button Functions

Depending on your particular configuration your nVision may physically look different than the model shown, and all descriptions are intended for general representation only. Some settings can be enabled and disabled using the **CrystalControl** software, and may not be visible on your model. For an in-depth look at all functionality and options for the nVision, please refer to the nVision Operation Manual located on your nVision CD (also available at www.crystalengineering.net/downloads).

Display Options

nVision has several screen options depending upon how the recorder is populated with modules. A summary of the available screen types is shown below. You may view the data in single or dual mode (upper and lower modules simultaneously). Additionally, you may view the data numerically or graphically to suit your needs.

C This icon represents a component that can be modified with **CrystalControl** software

Upper Module Bay

CRYSTAL
engineering corporation

nVision
Intrinsically Safe

Reference Pressure Recorder

next △ setup □

back ‹ select ›

Next button:
Progress through the display screens

Home button:
Brings you back to the default screen (lower module numerical display)

Backlight button:
Turn on/off display backlight
C (Adjust Backlight Shutoff)

Zero button:
Press to zero Pressure Module reading (- - - - -)
Hold for 3 seconds to clear any zero value (- - -)
C (Adjust Zero Limit)

Lower Module Bay

Setup Button:
Locate additional features:
- Clear Peaks
- Units **C** (Adjust Available units)
- Settings
  - Contrast
  - Lock/Unlock Chassis **C**
- Summary
  - Chassis, Upper, Lower
- Recording
  - Start/Stop
  - Erase all Runs

Recording Status LED:
◯ : Solid while recording, flashes when recording ends

Back button:
Previous Display Screen

Record button:
Start/Stop data recording
C (Adjust Logging Interval)

Power button:
Turn your nVision on/off

Module Interfaces

Pressure Modules (PM)
Crystal Pressure Fittings (CPF) System: Medium Pressure Female (MPF) 1/4" medium pressure tube system with 7/16-20 threads
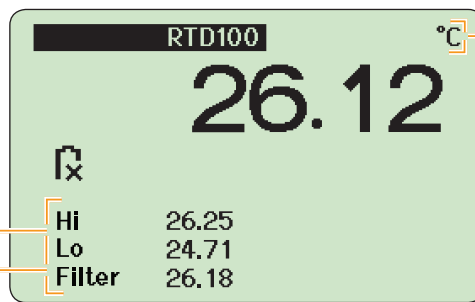
Temperature Module (RTD100)
IP67 rated M8 connector (P/N: 3953) with terminal block for 2-, 3-, 4-wire support

Battery Icon Key

- External (USB) Power
- 100% Power Remaining
- 75% Power Remaining
- 50% Power Remaining
- 25% Power Remaining
- 0% Power Remaining (Replace Batteries or Connect to USB Power)
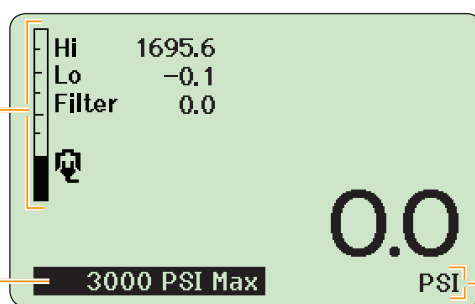
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nVision Numerical Display

Numerical: Upper Module Screen

RTD100 °C
26.12
Hi 26.25
Lo 24.71
Filter 26.18

High / Low:
Peak always measured at 10 readings per second
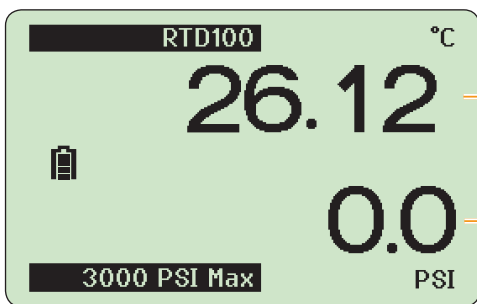**Filter:**
20-reading moving window (fixed)

Sensor Reading biased towards applicable module (Upper Module reads higher on the screen, Lower Module reads lower on the screen)

Selectable Units (via Setup button) **C**

Numerical: Lower Module Screen (Default)

Hi 1695.6
Lo −0.1
Filter 0.0

0.0
3000 PSI Max PSI

Vertical Scale:
Applied versus full-scale pressure

Maximum Working Pressure:
(Pressure Module Only)

Numerical: Dual Module Screen (Both Sensors)

RTD100 °C
26.12

0.0
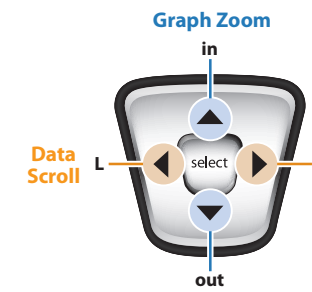3000 PSI Max PSI

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nVision Graphical Display

In the graphical modes the nVision navipad enables you to control how you view your data.
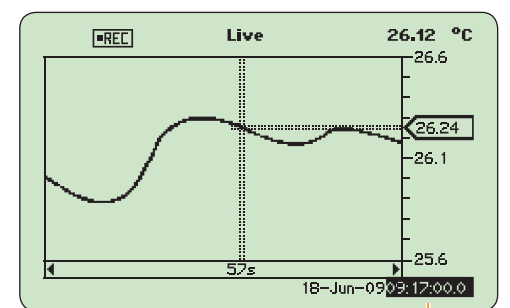
Data Scroll

Using the ◀ & ▶ keys allows you to navigate to specific points along your run, while displaying reading and time information.
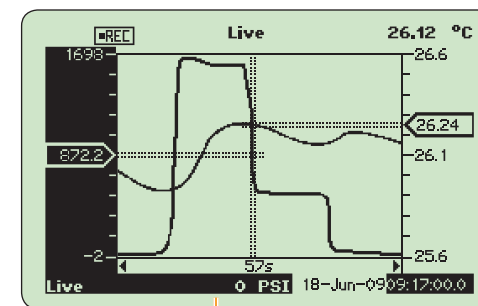
Graph Zoom

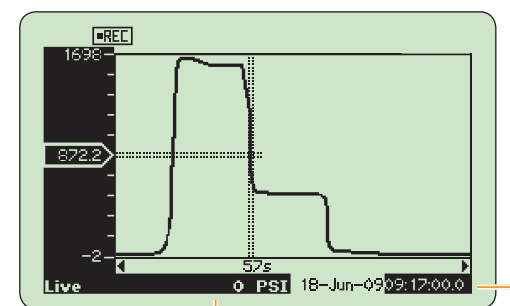Using the ▲ & ▼ keys allows you to zoom in and out of your recorded run to suit your needs.

Graph Zoom in
Data Scroll L select **R**
Graph Zoom out

Graphical: Upper Module Screen

REC Live 26.12 °C
26.6
26.24
26.1
25.6
57s 18-Jun-09 09:17:00.0

Date & Time stamping

Graphical: Dual Module Screen (Both Sensors)

REC Live 26.12 °C
1693
872.2
-2
57s
Live ◇ PSI 18-Jun-09 09:17:00.0

Test safely with live readings annunciated regardless of cursor location or zoom level

Graphical: Lower Module Screen

REC Live 26.12 °C
1698
872.2
-2
57s
Live ◇ PSI 18-Jun-09 09:17:00.0