

The Line Monitor

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LCI Software has power to spare

And room for custom features too

When Measurement Technology NW developed the LCI family of winch displays, we knew a "one-size-fits-all" approach would be a mistake. Ask anyone who builds, installs, operates, or relies on winches to do a job and you'll soon learn there are very few "standard" winch applications.

"The hardware alone is impressive, but it's the internal software that makes the LCI line truly unique."

To successfully interface any single display with the industry's full range of input and output variables would require a device of tremendous power and flexibility - and to be accepted in a cost-sensitive market it would have to be delivered at a truly competitive price. MTNW's LCI displays win big on both counts.

Built-in features include AC or DC power capability, a crisp and bright electroluminescent display, full user programmability, up to eight analog sensor input channels, up to four analog output channels, and up to two serial communication output channels for driving remote displays or data logging - all of it compactly housed behind a bombproof 316 stainless steel front panel.

The hardware alone is impressive, but it's the internal software that makes the LCI line truly unique. Written and refined by MTNW, the software driving both the LCI-90 and LCI-100 displays can be customized for virtually any non-standard application.

Need to display more than line speed, tension, and payout? Sure thing. Need the LCI unit to control winch or levelwind speed? We can do that.

What if you prefer RF capabilities? Done. Want the LCI to communicate to older displays or onboard computer installations? We got you covered. Can the LCI display be used to power external gauges? No problem at all.

In fact, our LCI software is so powerful that we have yet to discover its limits - and when you consider how rapidly the winch industry is evolving to meet ever more demanding client specifications, it's nice to know there's a winch display available that's already up to the task. Even if that task hasn't been thought of yet.

For more details, please call MTNW at 206-634-1308, send an email to lcimtnw-usa.com, or visit our website at www.mtnw-usa.com. We'll be happy to walk you through all the features of our LCI winch display line.



IN THIS ISSUE:

- LCI Software Rocks!
- New LCI "Quad" display
- Naval Surface Warfare selects WinchDAC
- MTNW to exhibit at the Oceans 2005 and SNAME trade shows

New! LCI "Quad" Display



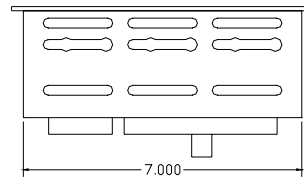
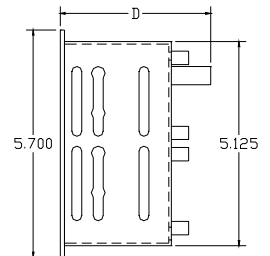
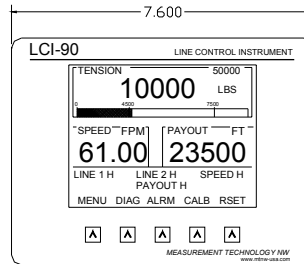
The new LCI "Quad" display combines the features of our Standard and Dual Tension models. Originally developed for downhole wireline truck and winch spooling applications, the LCI "Quad" is used to monitor speed, payout, and **two** independently calibrated lines of tension in a variety of winch and wire or synthetic rope ventures.

The compact LCI-90 and full-featured LCI-100 displays are both available in the 4-parameter "Quad" configuration.

LCI displays will accept analog signals from force transducers and count signals from either a pair of proximity sensors or quadrature encoder. Force transducers can be any number of devices including load pins installed on overboarding sheaves, tension links or instrumented clevis pins.

The bright electroluminescent viewing screen can be user-configured to set unit scale and parameter positions. Calibration requires only the push of a few stainless steel front panel buttons, and a security code feature keeps all field configuration settings - including I/O channel, alarm, and network serial settings - from being accidentally changed.

Analog and digital I/O plus serial networking capabilities provide flexibility in line monitoring, weighing, data logging, or SCADA applications, and the LCI "Quad" can also link with LCI-90R remote displays or PC's (via WinchDAC) for offsite viewing.

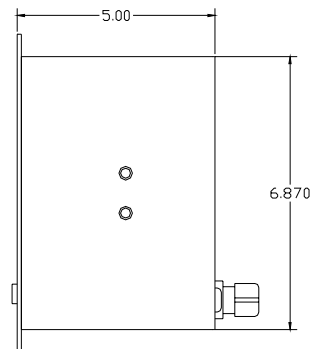
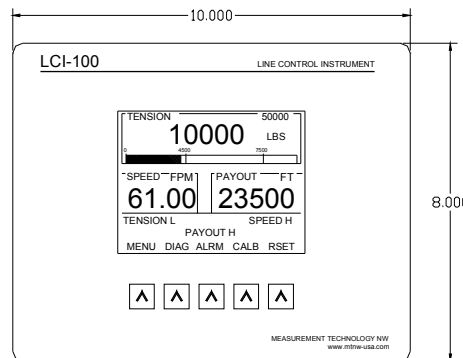


LCI-90

Depth measurement "D" varies from 3.78" to 4.73" depending on I/O configuration

LCI-90 unit fits into 7.15" x 5.25" cutout

LCI-90 shown with standard NEMA 1 rear enclosure (both the LCI-90 and LCI-100 models are supplied in this standard panel mount configuration)

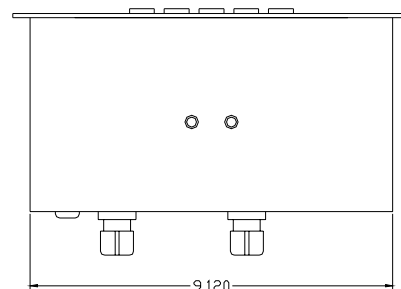


LCI-100

Depth measurement with standard panel mount NEMA 1 rear enclosure is 5.45"

LCI-100 unit fits into 9.25" x 7.00" cutout

LCI-100 shown with optional NEMA 4 stainless steel rear enclosure (enclosure available with gimbal bracket mount for both the LCI-100 and LCI-90 models)



NSWC/SEAFAC site using custom WinchDAC software

Measurement Technology NW was recently asked to develop a custom multi-winch version of our WinchDAC software for the Navy's Southeast Alaska Acoustic Measurement Facility (SEAFAC). Naval Surface Warfare Center (NSWC) project engineer Todd Kjormoe explains the SEAFAC system.

"We have two permanently moored barges, one on each side of the

Tension, Speed, and Payout values for all four of our winch stations."

3-sheave running line tensiometers (with count and force sensors) installed at each winch provide line tension and payout signals. These signals are processed by dedicated LCI-100 local displays, allowing parameter data to be viewed both at the winches and (via isolated RS-485

serial output) at the Master and Remote PC computer stations running WinchDAC/SEAFAC software. Data logging can be set up at both Master and Remote stations for maximum data integrity. Data is saved in a .csv file format, easily imported into Excel for post-analysis.

The Southeast Alaska Acoustic Measurement Facility (SEAFAC) is the Navy's only West Coast asset for making high fidelity passive acoustic signature measurements.

SEAFAC conducts RDT&E evaluations to determine the sources of radiated acoustic noise, to assess vulnerability, and to develop quieting measures.

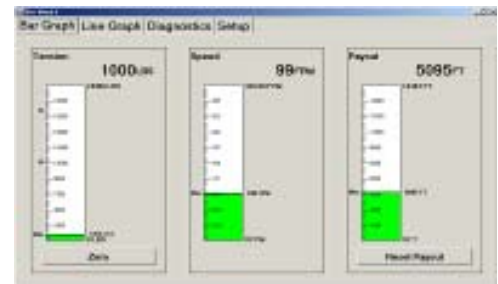
submarine to be tested. Each barge has two winch stations, one forward and one aft. Prior to testing, cables from these winch stations are secured to the submarine. Each winch station contains a winch, running line tensiometer and LCI-100 local display from MTNW. All four of the LCI-100's are interconnected over an RS-485 network."

"Currently", added Todd, "we are using two networked computers with new WinchDAC/SEAFAC software, one located on the barge and the other at a shore facility. One or more of our computers can be connected at any time - the first computer that comes on-line is designated as the 'Master'. If another computer comes on-line it can either assume the role of 'Remote' or, with authorization, take over as the Master. If the Master computer goes off-line for any reason, the Remote computer automatically takes over as the new Master so that data logging and monitoring can continue uninterrupted. The software allows us to monitor in real-time the

Operators can quickly configure the winches and on-screen interface by adding or deleting active winches, images, or graphs per the specific test being run. Parameters for all winches are displayed at the same time on the main runtime screen, and additional winch details for each active LCI-100 can be viewed by simply clicking on the screen's winch image.

According to Todd, "Collaboration with MTNW during the development phase led to some particularly useful features, including the three separate windows available to show Tension, Speed and Payout respectively in a comparative bar-graph format - very much appreciated when equality in parameters is needed."

"Prior to operational use, I tested the system for a week straight and noted no drop-outs", Todd verified. "We have also had the opportunity to use the new system operationally. So far, the WinchDAC/SEAFAC software has proven robust and easy to use."



Minimum System:

- Windows 98 or NT
- Pentium processor
- SVGA color display, (1024 x 768)
- 32 MB of RAM
- 5 MB hard disk space (more required for data logging)
- 9 Pin serial port

Recommended System:

- Windows 2000 or XP
- Pentium III processor
- SVGA color display, (1024 x 768)
- 128 MB of RAM
- 5 MB of hard disk space (more required for data logging)
- 9 Pin serial port



Don't miss hearing what our customers have had to say about the LCI system and the after-the-sale service provided by Measurement Technology NW. As of this newsletter's publication date, six MTNW Project Profile stories have been posted for your review on our

website, under the section titled "Background". Use this direct link (<http://www.mtnw-usa.com/linesystems/casestudies.html>) to access all of them. New project profile stories are posted on a regular basis, so check in often for the latest MTNW customer feedback.

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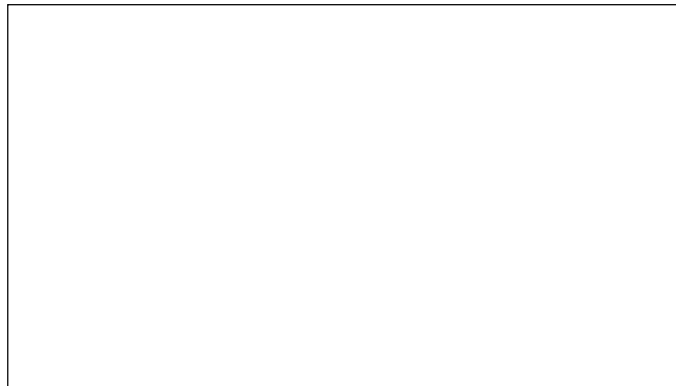
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Measurement Technology NW designs and manufactures rugged, multi-channel winch line control instruments used to monitor speed, payout, and tension (both cable and chain) in single or multi-winch systems used for ROV/equipment deployment, barge and platform positioning, fixed-place mooring, drawbridge controls, helicopter or ship towed arrays, mining and oilfield drilling, and wherever accurate and reliable line control is required.



MTNW to exhibit at the Oceans 2005 and SNAME shows

Measurement Technology NW has reserved an exhibitors booth at the OCEANS 2005 MTS/IEEE conference, September 19-23, in Washington, D.C., and also at the SNAME Maritime Technology Conference & Expo, October 19-21 in Houston, Texas.

The Marine Technology Society (MTS) and IEEE Oceanic Engineering Society (OES) organize the annual OCEANS Conference - the largest international meeting and exposition devoted to ocean sciences, technology, policy, engineering, and education.

The Society of Naval Architects and Marine Engineers (SNAME) hosts the Maritime Technology Conference and Expo, which focuses on new and innovative technologies, production, design, and system operations within the marine engineering community.

Both events are exciting forums and a perfect showcase for the LCI displays developed by MTNW. Look for us at booth #123 (Oceans 2005), or booth #208 (SMTC&E, 2005). If you plan on attending one of these shows, please stop by and introduce yourself.

We'll be happy to give you a hands-on demonstration showing how the easy to use LCI display is more accurate, versatile, reliable, and durable than any other winch indicator system.

Compare features, and you'll see why LCI displays are the industry's best.

