Automation Products
LineMinder™ Touch Screen Panels for Wireline Units

ASEP™ · Elmar™ · DynaWinch™ · Artex™
Automation Products

Touch Screen Panels for Wireline Units

Our LineMinder product range for hydraulic drive slickline or e-line logging winches is designed to enable safe and efficient operation, through simple to use and rugged displays and controls.

The LineMinder Slickline provides depth, speed and tension, with a safety shutdown function on tension. The LineMinder Logging also features a full screen trend display and safety action functions triggered by differential tension limits. Optionally, the LineMinder Logging version can be extended with Serial or Ethernet Data forwarding and a Configurable Well Pressure display. These options require additional hardware. The LineMinder Winch Control offers all the features of the LineMinder Logging with the addition of constant speed control thus enabling smooth logging operations.

LineMinder products are state of the art, rugged, high brightness capacitive touch panel screens. They are available in either 7” or 10” versions for ATEX Zone 2 Areas (with USB connections for data export) or in 10” for safe area operations. The ATEX versions are rated for operation between -20°C (-4°F) to 50°C (122°F) and can be stored between -40°C (-40°F) to 60°C (140°F).

The LineMinder Slickline provides depth, speed and tension, with a safety shutdown function on tension. The product has been designed for use in harsh environments and outdoor applications. Robust glass touch screen with anti-reflective (AR) glass surface treatment providing superior performance.

Slickline Software Features

• Tension sound and action alarm
• Depth surface sound and action alarm
• Total depth sound and action alarm
• Automatic recording of depth, speed, tension and differential tension
• Set depth after confirmation
• Reset tension after confirmation
• Reset differential tension
• Test sounder/shutdown output
• Override alarms
• Wheel slip correction
• Depth and tension deviation alarms
• Depth correction by skin factor
• Tension correction by 10-step calibration
• Imperial and metric display selection
• Speed alarm
• Download via USB: recordings, events and parameters
• English, Chinese and Russian language supported

Configurations

<table>
<thead>
<tr>
<th>Description</th>
<th>Size</th>
<th>Hazard Area Classification</th>
<th>Connections</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigsafe ATEX</td>
<td>10”</td>
<td>Zone 2</td>
<td>USB Data Forwarding, Well Pressures</td>
<td></td>
</tr>
</tbody>
</table>
The LineMinder Logging provides depth, speed, and tension, with a safety shutdown function on tension, and features a full-screen trend display. Optionally, the LineMinder Logging version can be extended with Serial or Ethernet Data forwarding and a Configurable Well Pressure display. These options require additional hardware.

The product has been designed for use in harsh environments and outdoor applications. Robust glass touch screen with anti-reflective (AR) glass surface treatment providing superior performance.

Logging Software Features:
- Trend chart displaying up to 3 curves from depth, speed, tension or well pressures
- Well pressure monitoring
- Data forwarding capability
- Diff tension sound and/or action alarm

Additional depth & tension trend screens for logging

Digital depth with high resolution

Event bar on main screen with actual alarm status

Diff tension (magnifier on the tension dial)

Large tension dial

Digital depth with high resolution

Main screen example

Pull down for quick settings

Diff tension sound and/or action alarm

LineMinder Logging Panelmount 10”

Description | Size | Hazardous Area Classification | Connections | Options (requires additional hardware)
--- | --- | --- | --- | ---
LineMinder Logging Panelmount 10” | M1 | Zone 2 | Measuring, Head, USB | Data Forwarding, Well Pressures

Note: The LineMinder Winch Control requires PLC controlled Elmar Winch unit.

The LineMinder Winch Control provides, besides all features of the LineMinder logging, Constant Speed Control, Speed Limitation, Pay Out function and Joystick Control with sensitivity adjustment. Like the LineMinder Logging it can be optionally extended with Data forwarding and a Configurable Well Pressure display. These options require additional hardware.

The product has been designed for use in harsh environments and outdoor applications. Robust glass touch screen with anti-reflective (AR) glass surface treatment providing superior performance.

Slickline Software Features:
- Tension sound and action alarm
- Depth sound and action alarm
- Depth total sound and action alarm
- Automatic recording of depth, speed, tension and differential tension
- Set depth after confirmation
- Reset tension after confirmation
- Reset differential tension
- Test sounder/shutdown output
- Wheel slip correction
- Depth and tension deviation alarms
- Depth correction by shim factor
- Tension correction by 10-step calibration
- Imperial and metric display selection
- Speed alarm
- Download via USB: recordings, events and parameters
- English, Chinese and Russian language supported

Winch Control Software Features:
- Magnetic Mark Detection depth correction
- Constant speed control
- Speed limitation
- Joystick control mode with sensitivity adjustment
- Pay out function

Note: The LineMinder Winch Control requires PLC controlled Elmar Winch unit.

Main screen example

Alarms

Wire pay-out

Brake status

Constant speed

Mode and gear selection

Constant speed setpoint

Joystick sensitivity

Pull-up settings

Pull-up for quick settings

Additional depth & tension trend screens for logging

Digital depth with high resolution

Speed warning value

Main screen example

Press up/down

Speed setpoint increase/decrease

Settings for easy set-up

Help screen

Diagnostics screen

Alarm history screen

Settings screen for easy set-up

LineMinder Winch Control 10”

Description | Size | Hazardous Area Classification | Connections | Options (requires additional hardware)
--- | --- | --- | --- | ---
LineMinder Winch Control 10” | M1 | Zone 2 | Measuring, Head, USB | Data Forwarding, Well Pressures

Note: The LineMinder Winch Control requires PLC controlled Elmar Winch unit.

Elmar | NOY Completion & Production Solutions

elmar@nov.com

nov.com/lineminder
The LineMinder Logging system is able to display well pressures where suitable sensors are connected. These signals are input into the system through the well pressure interface box*, which is connected to the LineMinder Logging system through a serial bus. The box is available in Rigsafe and ATEX Zone 2 versions.

Through the Well Pressures Interface Box up to four well pressures can be displayed on the LineMinder Logging main screen (not available with the LineMinder Slickline).

Well Pressure signals, with a maximum of three, can be displayed on the Trend Display of the LineMinder Logging, giving the operator direct visible feedback on the main job parameters.

The pressures are recorded together with Depth Speed and Tension signals which makes job analysis and reporting easy.

Each Well pressure can be assigned with a specific name. This name is used as reference in each of the display locations: Main Screen, Recording files and Trend chart.

Eclips (Serial):
When using the Eclips system, the Data Forwarding Box receives depth, speed and tension data from the Eclips system via serial communication. The Eclips data is displayed on the LineMinder. Commands (e.g. set depth) given on LineMinder will be send through the Data Forwarding Box to the Eclips system. The physical connection type is serial RS-232 with full handshake.

Warrior (Ethernet):
When using the Warrior system the Data Forwarding Box send depth, speed and tension data to the Warrior system via Ethernet. Commands (e.g. set depth) given by the Warrior system, are processed by the LineMinder system. On the Warrior system, SmartOffice needs to be installed. This program is responsible for the Ethernet communication with the Warrior system.

Data Forwarding
The LineMinder data forwarding box is required to interface with logging systems. Eclipse and Warrior systems are supported as standard, please contact us for details of other systems.

<table>
<thead>
<tr>
<th>Configurations</th>
<th>Description</th>
<th>Hazardous Area Classification</th>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Pressures</td>
<td>LineMinder Well Pressure Box ATEX</td>
<td>Zone 2</td>
<td>(L) 17.60cm, 6.92in</td>
<td>2kg, 4.41lbs</td>
</tr>
<tr>
<td></td>
<td>LineMinder Well Pressure Box Rigsafe</td>
<td></td>
<td>(L) 30.00cm, 11.81in</td>
<td>2kg, 4.41lbs</td>
</tr>
<tr>
<td>Data Forwarding Box</td>
<td>LineMinder Data Forwarding Box ATEX</td>
<td>Zone 2</td>
<td>(L) 17.60cm, 6.92in</td>
<td>4.3kg, 9.48lbs</td>
</tr>
</tbody>
</table>

Eclips (Serial):
When using the Eclips system, the Data Forwarding Box receives depth, speed and tension data from the Eclips system via serial communication. The Eclips data is displayed on the LineMinder. Commands (e.g. set depth) given on LineMinder will be send through the Data Forwarding Box to the Eclips system. The physical connection type is serial RS-232 with full handshake.

Warrior (Ethernet):
When using the Warrior system the Data Forwarding Box send depth, speed and tension data to the Warrior system via Ethernet. Commands (e.g. set depth) given by the Warrior system, are processed by the LineMinder system. On the Warrior system, SmartOffice needs to be installed. This program is responsible for the Ethernet communication with the Warrior system.

Configurations

<table>
<thead>
<tr>
<th>Description</th>
<th>Hazardous Area Classification</th>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>LineMinder Backup</td>
<td></td>
<td>7”</td>
<td></td>
</tr>
</tbody>
</table>

* The Rig Safe data forwarding system is installed in the client’s dashboard or electrical cabinet, or can be supplied in an optional electrical box.

= included feature
= unavailable

elmar@nov.com
nov.com/lineminder
Manufacturing Locations:

**Elmar - Canada**
(TynaWinch Products)
6771 - 84 Street SE
Calgary, Alberta
T2C 4T6
Canada
T +1 403 319 2333
elmar-canada@nov.com

**Elmar - Singapore**
7 Loyang Way
Singapore 508721
Singapore
T +65 6546 0928
elmar-singapore@nov.com

**Elmar - USA**
8017 Breen Road
Houston, TX 77064
United States of America
T +1 346 223 5000
elmar-americas@nov.com

Regional Sales, Rental & Service Locations:

**Al-Khobar, Saudi Arabia**
T +966 13 835 3061
is-sau-aftermarket@nov.com

**Perth, Australia**
T +61 8 6279 5799
t-aus-perth@nov.com

**Stavanger, Norway**
T +47 51 81 81 81
elmar-norwaysales@nov.com

**Groot-Ammers, Netherlands**
T +44 1224 740261
elmar-nl@nov.com

**Louisiana, USA**
T +1 337 839 0024 ext 201

Representative Offices:

**Beijing, China**
T +86 10 5707 0900

**Moscow, Russia**
T +7 495 287 2691

**Port Harcourt, Nigeria**
T +234 908 781 0461

---

National Oilwell Varco has produced this brochure for general information only, and it is not intended for design purposes. Although every effort has been made to maintain the accuracy and reliability of its contents, National Oilwell Varco in no way assumes responsibility for liability for any loss, damage or injury resulting from the use of information and data herein. All applications for the material described are at the user’s risk and are the user’s responsibility.

© 2019 National Oilwell Varco - All rights reserved
10938_ENG_v04