

DISPLAY PANEL
ALS6A603 – AC/DC Power – Non Certified
ALS6A606 – DC Power – Zone 2 Certified

DEPTH - SPEED - TENSION
DATA ACQUISITION - WATERPROOF

Operations and Maintenance Manual



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***NOTE**

Any information describing AC power pertains only to the ALSA6A603.

Any information describing Zone 2 working environment pertains only to the ALS6A606.

1.0 GENERAL DESCRIPTION

The BenchMark Wireline Compact Hoistman's Display Panel is designed to be an independent depth, tension and line speed measurement display panel. The display panel is designed to be mounted inside or outside of a wireline unit and connect to a measuring head. It will work with all the BenchMark AM5K, AM3K and Slickline measuring heads. The panel can be used as a secondary (backup) display for these devices.

Depth input comes from either an optical encoder or a BenchMark backup sensor.

Tension input comes from either an electronic load pin or a pressure transducer connected to a hydraulic gauge.

The panel provides encoder and tension outputs. It also provides an output to connect to an 0-1ma electrical tension meter.

The unit is powered by three internal rechargeable batteries. The 603 model can also be connected to an external AC power source.

The panel has a built-in data recorder that stores depth and line speed data in ascii text format. The panel also has a built-in internal clock that runs continuously whether powered up or not. This clock is used to provide a time and date stamp for every data record.

A USB port is provided as a means to upgrade the internal software and to retrieve data stored internally.



1.1 BACK PANEL CONNECTIONS AMSLA603



1.2 BACK PANEL CONNECTIONS AMSLA606



2.0 OPERATING PROCEDURES

2.1 Turn the unit on by pressing the power button.

2.2 The ALS6A603 has 2 modes of operation. When the panel is turned on the board is initialized, the flash card is started and read, and the USB connections are initiated.

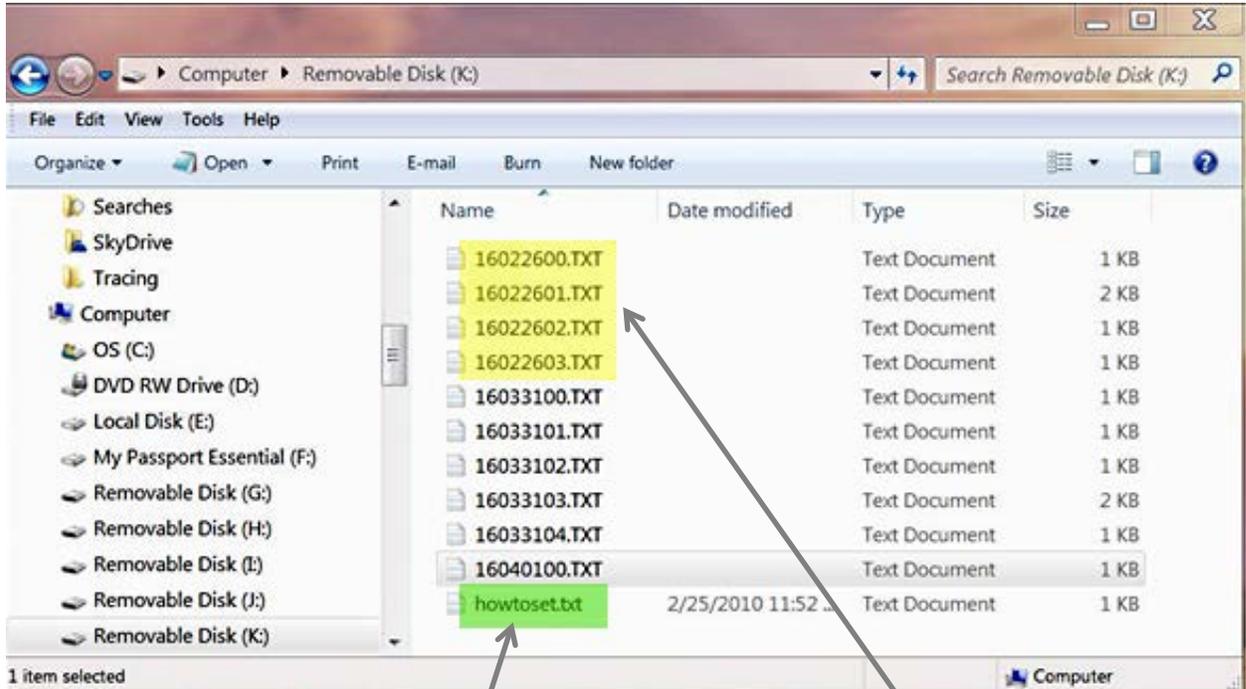
Data Retrieval

In this mode, the data files can be transferred or deleted using the USB interface.

Turn the 603/606 panel power off. Connect a USB cable from the panel to a laptop or desktop computer. Turn the power back on to the panel. The panel will come on and appear like an additional disk drive on a laptop or desktop computer and your files should be listed as below:



Select 'Open folder to view files'.



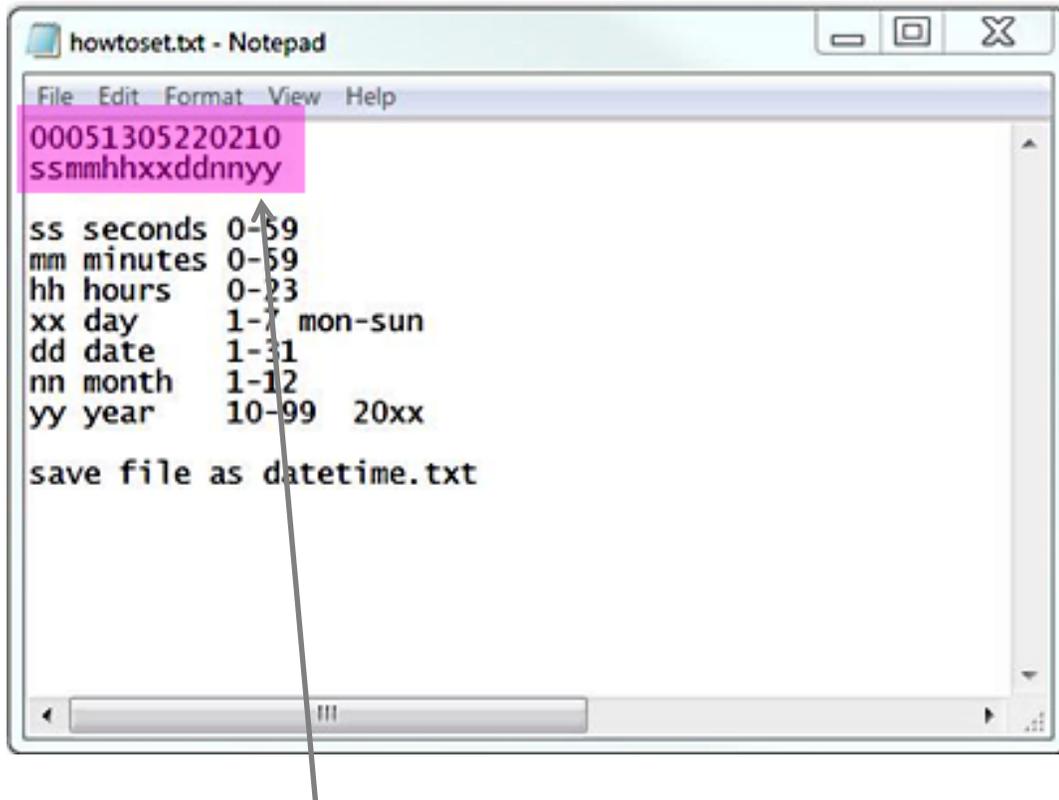
The file name is the date of the file. For example, file name '16022600.TXT' is February 26, 2016, Log file 0. 16022601.TXT is February 26, 2016, Log file 1 of that day. So in the sample image above, there were 4 logs run that day.

The files can then be copied or deleted from the 603/606 internal storage device.

The time can be reset by editing howtaset.txt and saving it as datetime.txt.

Example of 'howtaset.txt' file:

Notice the file name in the list files. With the mouse, double click the file and it will open as shown below:

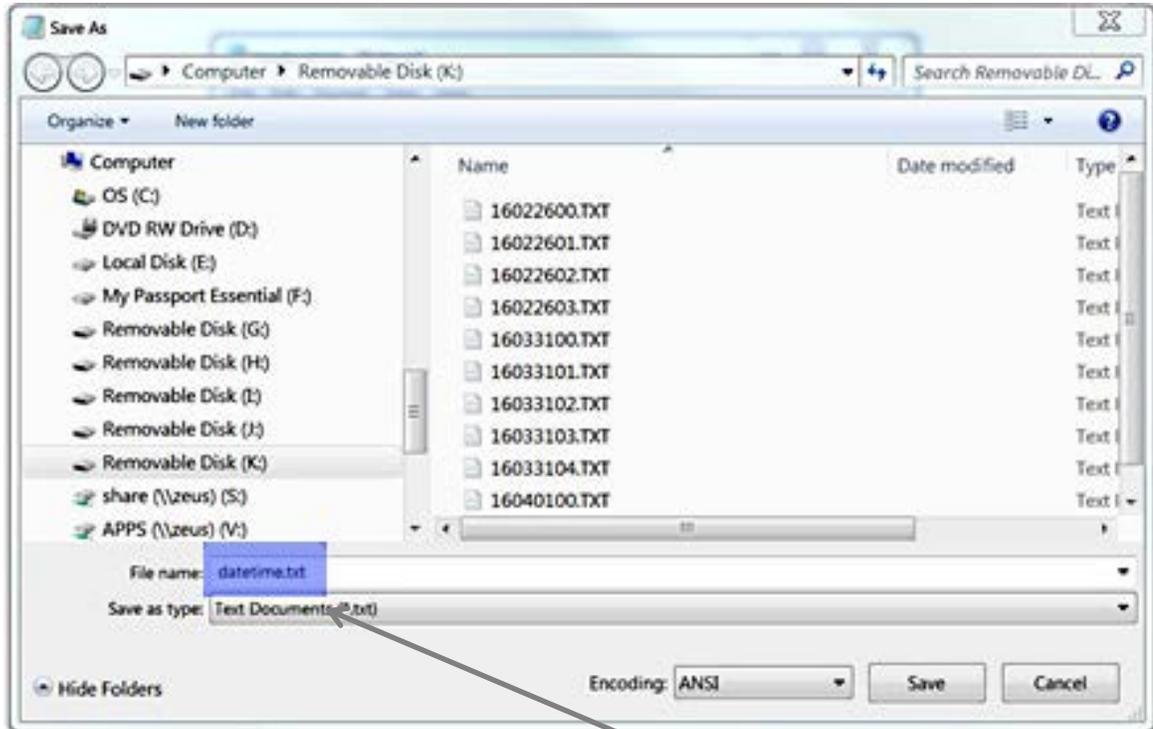


Example of 'datetime.txt' file:
 Fill in the numbers for the correct time and date across the top of the file.

The example in the image above...

00051305220210
ssmmhhxxddnny

...would read 13:05:00 hours, Friday, 22nd February 2010



After the time and date are filled in, save the file as **datetime.txt**
Do Not save it as howto.txt. When the panel is turned on, it looks for this
file as it sets the time inside the panel.

Program Update

You will first need to download a new hex file containing the update software.

The panel can then be programmed by copying the new hex file to a USB flash drive and renaming it '**programe.hex**'.



Plug the USB flash drive into the USB port on the rear of the 603/606 panel. When the '+' button is pushed, the controller looks for this file on the flash drive and if found reprograms the panel.

The controller then deletes these files and enters the logging mode. Select the appropriate settings from the menu (see section 4.0)

The logging mode lets you select head type, line size, encoder PPR, etc. There is also a head 'OTHER' that lets you enter mV/V tension sensitivity, full scale tension, and wheel circumference.

2.3 Set the depth to the proper value by using the menu +/- button or to 0 by pressing the zero switch.

2.4 The system is now ready to measure depth and/or tension.

3.0 DESCRIPTION OF FEATURES

3.1 POWER BUTTON

Use this button to turn on the panel. The panel can be turned off by selecting shutdown in the menu or by pushing menu, +, and - button simultaneously.

3.2 MENU SWITCH

This button is used to change the internal settings of the panel. These settings include Measuring Head type, Line Size settings, Load Cell Angles, English/Metric units, Depth adjust (auto add/subtract), etc. Refer to section 4 for detailed description of these features.

3.3 + BUTTON

Use this button in the menu to add or modify parameters

3.4 - BUTTON

Use this button in the menu to subtract or modify parameters

4.0 MENU SELECTIONS

SETUP – AMSLA603 & AMSLA606

The internal settings of the panel can be set by pressing the menu button.

To change a setting, press and release the menu button until the desired setting is displayed. Use the +/- switch to change the setting.

There are 6 major menu selections:

- 4.1 Zero Depth
- 4.2 Zero Tension
- 4.3 Set Depth
- 4.4 Setup
- 4.5 Alarm
- 4.6 Installation

By pressing the MENU button, you cycle through the menu selections. On the last 3 menu selection there are submenus requiring additional inputs. These are accessed by using the +/- buttons on the panel.

4.1 ZERO DEPTH

Pressing the '+' button zeroes the depth.

4.2 ZERO TENSION

Pressing the + button to zero tension.

4.3 SET DEPTH

Use the +/- buttons to set the depth

4.4 SETUP

4.4.1 LINE SIZE Select the size of the cable you will be using. This setting will adjust the wheel size to account for the size of cable.

The available sizes are:

3-16	=	3/16" cable	} Shallow Groove Wheels
7-32	=	7/32" cable	
1-4	=	1/4" cable	
9-32	=	9/32" cable	
5-16	=	5/16" cable	
3-8	=	3/8" cable	
7-16	=	7/16" cable	
15-32	=	15/32" cable	} Deep Groove Wheels
472-ht	=	.472" cable	
484-ht	=	.484" cable	
492-ht	=	.492" cable	

The wheel size settings for each are:

3/16" cable - 2.014 ft.
 7/32" cable - 2.017 ft.
 1/4" cable - 2.020 ft.
 9/32" cable - 2.023 ft.
 5/16" cable - 2.026 ft.
 3/8" cable - 2.031 ft.

SHARK: 092, 108, 125, 140, 150, 160, 3/16

MMOUTH_DOLPHIN: 092, 108, 125, 3/16, 7/32, 1/4

MAKO/ORCA: 092, 108, 125, 140, 150, 160, 3/16, 7/32, 1/4, 5/16

AM3K: 3/16, 7/32, 1/4, 9/32, 5/16, 3/8

AM5K: 3/16, 7/32, 1/4, 9/32, 5/16, 3/8, 7/16, 15/32, 472HT, 484HT, 492HT

4.4.2 TENSION SHUNTCAL tension shunt cal: This shunts the load cell by pulling the shunt cal pin to ground. This menu selection will not time out. You must advance or go backwards in the menu.

4.4.3 DIFF TN SCALE DiffTn Sca: The differential tension scale determines the meter scale and the diff tension display. For instance, if the differential scale is set to 1000#, each '>' displayed would be 100# increase and each '<' would indicate a 100# decrease from the reference, and the meter full deflection would indicate 1000# change from the reference. The reference is zeroed by pushing the '+' button.

4.4.4 DEPTH SHIM shim: Enter the ft/mt per 1000 ft/mt you want added or subtracted from the measured depth. -.2 would subtract 2 feet at 10000ft.

4.4.5 TEN SHIM tn shim: This value is multiplied by the tension measured for tension display. The range is .5 to 1.5. If 1.5 is selected 1000# measured by the panel would be displayed as 1500#.

4.5 ALARM

4.5.1 MAX TEN ALARM – Maximum Tension Alarm – after menu is selected, use the +/- buttons to set the proper value in either pounds or kilograms. Note the system has a maximum and minimum tension value preprogrammed into the panel.

4.5.2 SURFACE ALARM – Maximum Surface Alarm – after menu is selected, use the +/- buttons to set the proper value in either feet or meters. Note the system has a maximum and minimum depth value preprogrammed into the panel.

4.5.2 DIFF TEN ALARM – Differential Tension Alarm – after menu is selected, use the +/- buttons to set the proper value in either pounds or kilograms. Note the system has a maximum and minimum depth value preprogrammed into the panel.

4.5.3 TENSION SHUT DN – Tension Shut Down Alarm – after menu is selected, use the +/- buttons to set the proper value in either pounds or kilograms. Note the system has a maximum and minimum depth value preprogrammed into the panel.

4.5.4 MAX DEPTH ALARM – Maximum Depth Alarm – after menu is selected, use the +/- buttons to set the proper value in either feet or meters. Note the system has a maximum and minimum depth value preprogrammed into the panel.

4.5.5 ZERO BASED TIME - Zero Based Time is a stopwatch that can be used to synchronize log file applications. Pressing zero sets the timer back to zero.

4.6 INSTALLATION

4.6.1 HEAD TYPE – Head Type - Use the plus and minus buttons to cycle through the selections and choose the correct head. The choices are:

SHARK

MMOUTH/DOL/TIGER

MAKO/ORCA/THRESH

AM3K

AM5K

AM5KA_BU

OTHER

MP_16

4.6.2 ENCODER PPR – Encoder Pulses Per Revolution - Hold the +/- button to enlarge or reduce the number. The preprogrammed high/low limits are 4 to 5,000

4.6.3 ENCODER DIR – Encoder Direction - The default value is 'Normal' and the other option is 'Reversed'.

4.6.4 DISPLAYED DEPTH – Displayed Depth - Stretch Depth Standard (raw) Depth or Stretch Correction Depth

4.6.5 DEPTH UNIT – Depth Units – Choose between Feet (Ft) or Meters (M). Will be applied to all calculations and settings in the panel.

4.6.6 TENSION UNIT – Tension Unit - Choose Pounds (lb) or Kilogram (kg). Will be applied to all calculations and settings in the panel.

4.6.7 SPEED UNIT – Speed Unit - Choose speed measured in feet per minute / feet per hour or meters per minute / meters per hour.

4.6.8 RECORDER SETTING – Recorder Settings – Recordings are made of Depth, Tension, Line Speed, Units and Zero Base Time. These measurements are time stamped in a log file. **RECORD ALL** records all activity. **RECORD NEW** begins recording when either Tension or Depth has changed.

If the HEAD TYPE selected in 4.6.1 is listed in 4.6.9 or 4.6.10 or 4.6.11 additional inputs are required. See below. If these were not selected the menu will skip to 4.6.12 **SIGNAL OUT**.

Additional inputs are required for SHARK-MMOUTH/DOL/TIGER, OTHER AND MP16.

4.6.9 This menu will only appear if you selected these heads in 4.6.1 - **SHARK-MMOUTH/DOL/TIGER** select **wheel circ grv** from the list below: .092 grv - .108 grv - .125 grv in English or Metric.

4.6.10 This menu will only appear if you selected these heads in 4.6.1 - **OTHER**. Enter **hd circ** value from .2 to 10.0 using the +/- button. Enter other **mv/v** value from .5 to 5.0 using the +/- button. Enter other **lcfs** value from 1000 to 50000 using the +/- button.

4.6.11 This menu will only appear if you selected this head in 4.6.1 - **MP_16** select **wheel circ** value 4 Ft – 1.25 M

4.6.12 SIGNAL OUT – Signal Out – The signal out port on the back of the panel is a DAC Digital to Analog Converter. This allows output to an analog meter or analog tension values to Warrior. There is also an alarm setting so the DAC can be used to turn an external alarm on and off.

4.6.13 SHUTDOWN – At this point the panel can either continue to the next menu or be shut down. Pressing the ‘+’ button will shut down the panel and this is considered a software reset. Pressing the ‘-’ will put the panel into Idle mode.

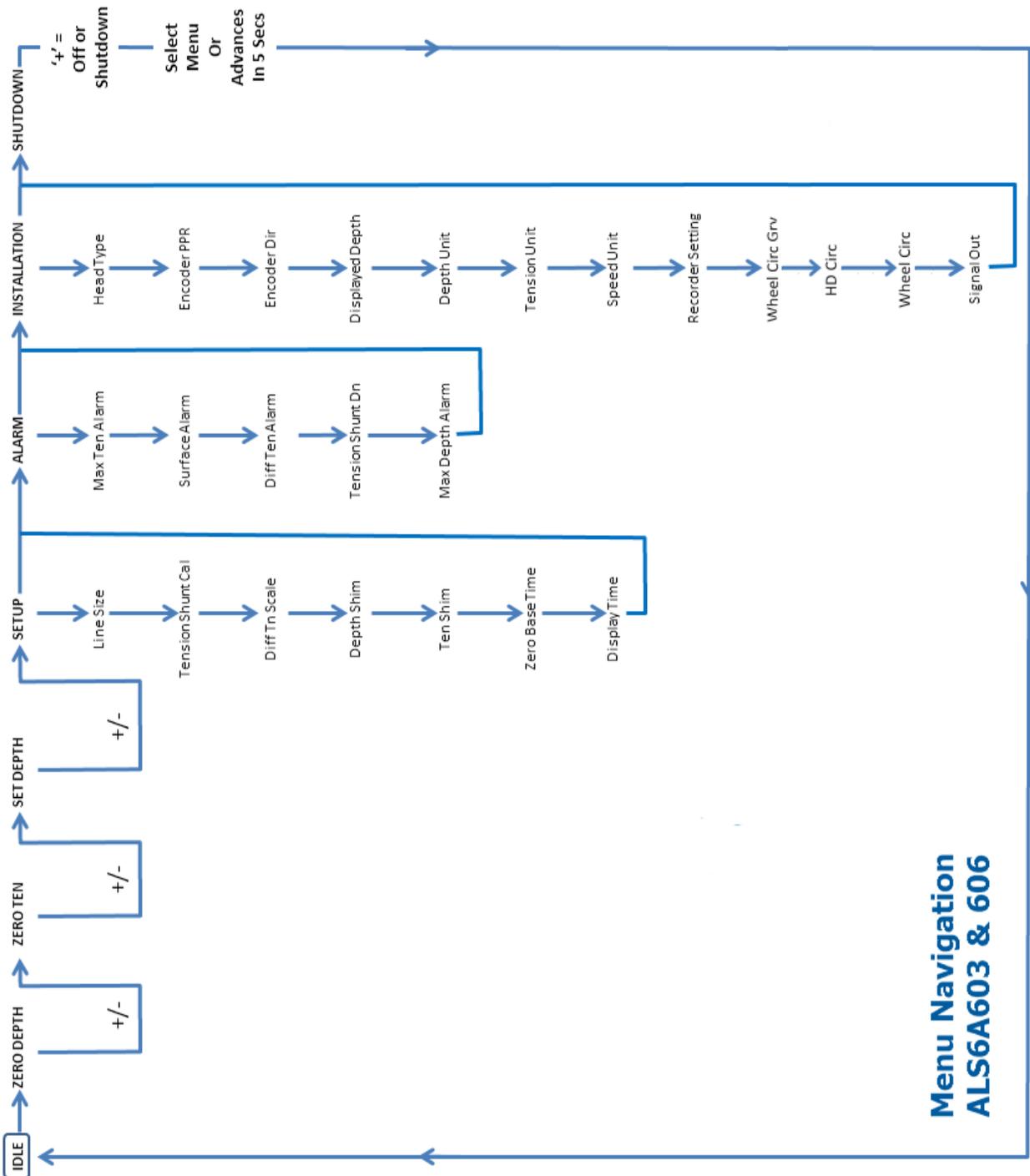
4.6.14 SDS WARRIOR INTERACE

You will need to have the load pin connected to calibrate Warrior.

1. Zero tension (main menu)
2. Acquire reading in warrior for zero
3. In setup menu the second item is “Tension shunt cal” when you initiate the shunt it will give you a value on the screen
4. Enter value into warrior as the high reading and acquire the voltage

To test the interface, when you initiate “shunt cal” the warrior will show tension to match the 603/606 compact hoistman panel

4.7 MENU NAVIGATION



5.0 INSTALLATION AND MOUNTING

5.1 INSTALLATION PROCEDURE

5.1.1 Prepare an appropriate panel cut-out with four fixing holes (refer to drawing in section 6.1) or use one of the two mounting brackets shown below (section 5.2).

5.1.2 Connect the magnetic pickup cable to the rear of the unit.

5.1.3 Ensure that power is off. Connect the unit to a 12vdc or 120/240 vac power supply.

5.1.4 Insert the display unit into the panel and secure it at the four corners.

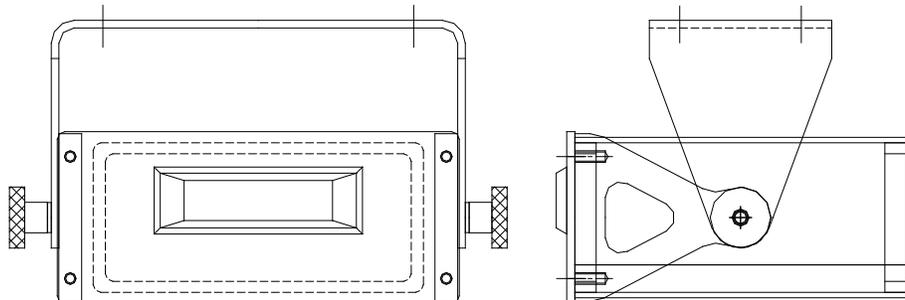
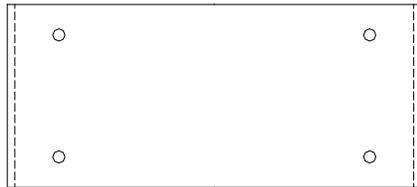
5.1.5 Check that the magnetic pickup signal has the correct polarity. Move the measuring wheel in the direction of positive depth (down). If the display shows a negative value, it can be corrected by rotating the magnetic pickup on the measuring head by 180 degrees or changing the direction using from the menu.

5.1.6 Ensure that the unit is setup for the desired measurement units (feet or meters).

Before you start to use the display unit, leave it connected to the external power for 4 hours to ensure that the batteries are fully charged.

5.2 MOUNTING KITS

5.2.1 AMS4A161 PIVOTING MOUNT



5.2.2 AMS4M110 PLATE MOUNT

TOP VIEW



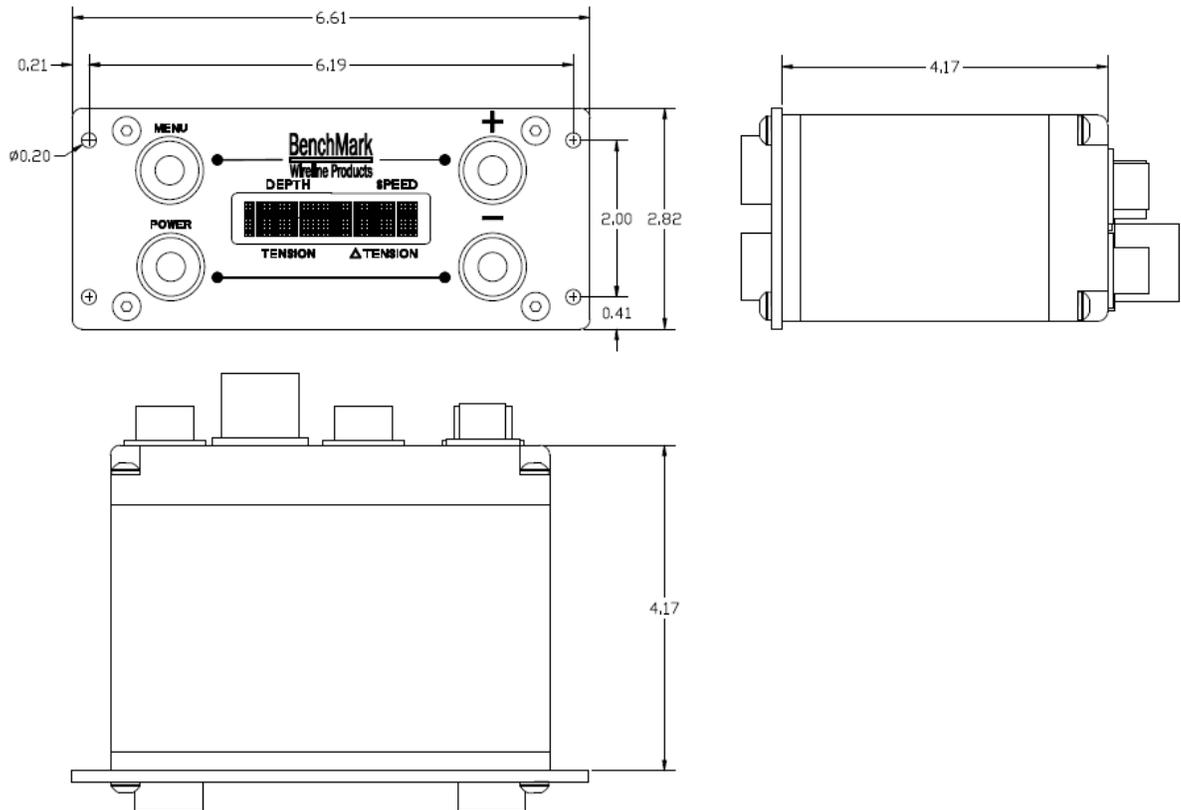
FRONT VIEW



SIDE VIEW

6.0 SPECIFICATIONS

6.1 MECHANICAL



Material	Aluminum, anodized
Weight	1.5 lbs (.68 kg)
Mounting	4 × .019 holes fixing centers: 6.19" (19.05 cm) from side, 2" (5.08 cm) from top/bottom.

6.2 ENVIRONMENTAL

IP Rating	54
Temperature	0 to + 50 ° Centigrade
Humidity	10% - 80% RH non-condensing.

6.3 ELECTRICAL

Input power voltage	100 – 0240 VAC or 12 – 24 VDC
Input power frequency	50 – 60 Hz, DC
Input power current	0.4 A

6.4 BATTERIES

Battery	2100 mAh
Voltage	1.2 V NIMH
Lifetime	Approx. 5 years (depending on usage)

The batteries are trickle charged when external power is connected to the unit. The batteries are fully charged after 3 hours. The batteries discharge if the unit is left unpowered for a few weeks.

6.5 POWER CONSUMPTION AND OPERATING TIME

Operating	10 mA (typical)
Magnetic pickup assembly	20 mA (remainder powers the display)
Tension transducer	0.50 mA (maximum)

6.6 AC POWER INPUT

Power+	Brown	White
Neutral	Blue	Black
Earth	Green/Yellow	Green

6.7 DC POWER-INPUT

Power+	Pin 1
GND	Pin 2

DC connector spec: AM5KP063 -CONN KPT06E8-33S 3 SOCKET

6.8 DEPTH MEASUREMENT

Quadrature counts/revolution	4	
Measurement resolution	0.048 m	0.1573 ft
Display resolution	0.1 m	0.1 ft

6.9 LINE SPEED

Minimum Line Speed	0 ft/min
Maximum Line Speed	1200 ft/min

6.10 POWER MANAGEMENT

Power time-out with idle magnetic pickup	60 min
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The battery voltage and charge current can be displayed by pressing enable and menu at the same time.

The voltage will be displayed as:

E 8180

8180 would be a battery voltage of 8.18 volts. When the battery reaches 8.4v the charge will stop.

The charge current will be displayed as:

A 310

310 would be a battery charge current of 310 ma.

The display will cycle between the voltage and current display as long as the buttons are being depressed.

The charge current is limited to between 250 ma and 350 ma.

7.0 PARTS LISTS

7.1 PARTS LISTS COMBINED ALS6A603 & ALS6A606

LINE	P/N	DESCRIPTION	QTY	REF
1	ALS6M601	PANEL FRONT DEPTH/SPD/TENS	1	
2	ALS6M642	PANEL REAR DEPTH/SPD/TENS	1	
3	ALS6M603	CHASSIS DEPTH/SPD/TENS	1	
4	AMS4P935	MEMORY CARD 2GB SD	1	
5	C276P605	CABLE USB A(M) TO USB A(M) 6FT	1	603 ONLY
6	40126	DIODE SMAJ30CA TRANSIENT	1	603 ONLY
7	SW-60X00H6	SOFTWARE FOR 60X DEPTH PANEL	1	603 ONLY
8	SW-60XB0H1	SOFTWARE FOR 60X DEPTH PANEL	1	603 ONLY
9	ALS4P063	DISPLAY 2X16 NHD-0216B3Z-FL-GB	1	
10	ALS6A620B	PCB ASSY DEPTH TENSION BU	1	606 ONLY
10	ALS6A620E	PCB ASSY DEPTH TENSION BU	1	603 ONLY
10	ALS6F620	PCB ASSY DEPTH TENS TESTED	1	603 ONLY
11	ALS6P619	GLASS 3/16" X 1-3/8" X 3-1/8"	1	
13	ALS6M623	CLAMP LENS DEPTH/SPD/TENS	1	
14	AMS4P621	POWER SUPPLY 12V 7W 85-264ACIN	1	603 ONLY
18	AMS4P618	BATTERY 1.2V NIMH AA 2100MAH	6	
19	ALS8P041	HOLDER BATT 6AA W 9V SNAP CON	1	
20	AMS4P714	STRAP BATTERY 9V SNAP ON 6"LD	1	
21	ALS8M037	CLAMP BATTERY 6XAA BKUP TENSN	1	
27	ALS6P616	SWITCH PUSHBUTTON WATER PROOF	4	
31	AMS4P659	CONN TERMINAL RECPTACLE .25TAB	3	
35	AMS7P021	CONN 102398-4 AMP 12 POS PCB	1	
36	AMS7P023	CONN 102536-4 AMP 12 POS BACK	1	
37	AMS7P024	CONN 102681-1 AMP 12 POS FRONT	1	
40	AMS5P064	DUST CAP KPT8108C RECEPT	1	
41	AM5KP034	DUST CAP KPT8110C RECEPT	1	
42	AMS4P188	DUST CAP KPT8112C RECEPT	3	

7.1 PARTS LISTS ALS6A603 & ALS6A606 continued

LINE	P/N	DESCRIPTION	QTY	REF
43	AMS4P924	DUST CAP USB CONN MS TYPE	1	
44	AMS4P257	CONN KPT02E8-33P RECEPTACLE	1	
45	AMS4P170	CONN KPSE02E12-10P RECEPTACLE	1	
46	AM5KP056	CONN KPT02E10-6S RECEPTACLE	1	
47	AMS4P169	CONN KPSE02E12-3P RECEPT	1	603 ONLY
48	AMS4P990	CONN USB MS TYPE PNL MNT PCB	1	
49	AMS4P171	CONN KPSE02E12-10S RECEPTACLE	1	
50	ALS6P085	SCREW 4-40 X 1/4 FH PHIL SST	14	
51	AMS8P091	SCREW 4-40 X 1/4 PHIL PAN SST	12	
52	AMS8P036	WASHER #4 LOCK SST	13	
54	AMS4P626	WASHER #4 FLAT NYLON	1	
55	C276P158	NUT 4-40 MACHINE SST	1	
56	C276P046	WASHER #6 LOCK SS	6	
57	ALS8P043	SCREW 6-32 X 2 PHIL PAN SST	2	
58	ALS6P036	SCREW 10-32 X 3/4 BTN HD SST	8	
59	C276P035	WASHER #10 LOCK SS	8	
60	AMS1P040	SCREW 6-32 X 3/8 PHIL PAN SST	4	
61	AMS4P879	SCREW 2-56 X 1/4 PHIL PAN SST	4	
62	ALS8P042	SPACER ROUND PHENLC #6 X 1-1/2	2	
63	ALS6P015	STANDOFF 6-32 X 7/16 M/F BRS	4	
65	C276P331	SCREW 6-32 X 1/2 PHIL PAN SST	4	
66	AMS1P028	CONN MS3106F-18-1S ENCODER	4	603 ONLY
67	ALS1P027	WASHER #2 FLAT SST	4	
71	AM5KP123	O-RING 2-033 BUNA N	1	
72	AM5KP072	O-RING 2-046 BUNA N MMD COVER	2	
73	ALS6P037	O-RING 2-037 BUNA N 70D	1	
74	AM5KP219	O-RING 2-019 BUNA N 70D	3	
75	ALS6P013	O-RING 2-013 BUNA N 70D	1	
76	C276P041	O-RING 2-017 BUNA N	5	
77	AMS4P921	O-RING 2-021 BUNA N 70D	1	

8.0 ACCESSORIES

WinchView - DISPLAY PANEL EXPANDED DIGITAL INTERFACE

WinchView is a computer interface that allows the operator to view and monitor wireline operations in real time using an MSWindows based pc. The pc can display on one screen all the pressure, depth, tension and line speed data simultaneously. It is especially useful when used with 40, 50 and 60 series analog panels as well as the 603/606 compact panels and pressure monitors.

WinchView is loaded on a pc which is connected to the panels. Connections can be made using a USB cable or a Bluetooth wireless connection. The wireless configuration allows the laptop to be connected remotely from the panels. This allows operators to monitor, view log files in real-time. The WinchView laptop can communicate with 2 panels at once and plot and print data.

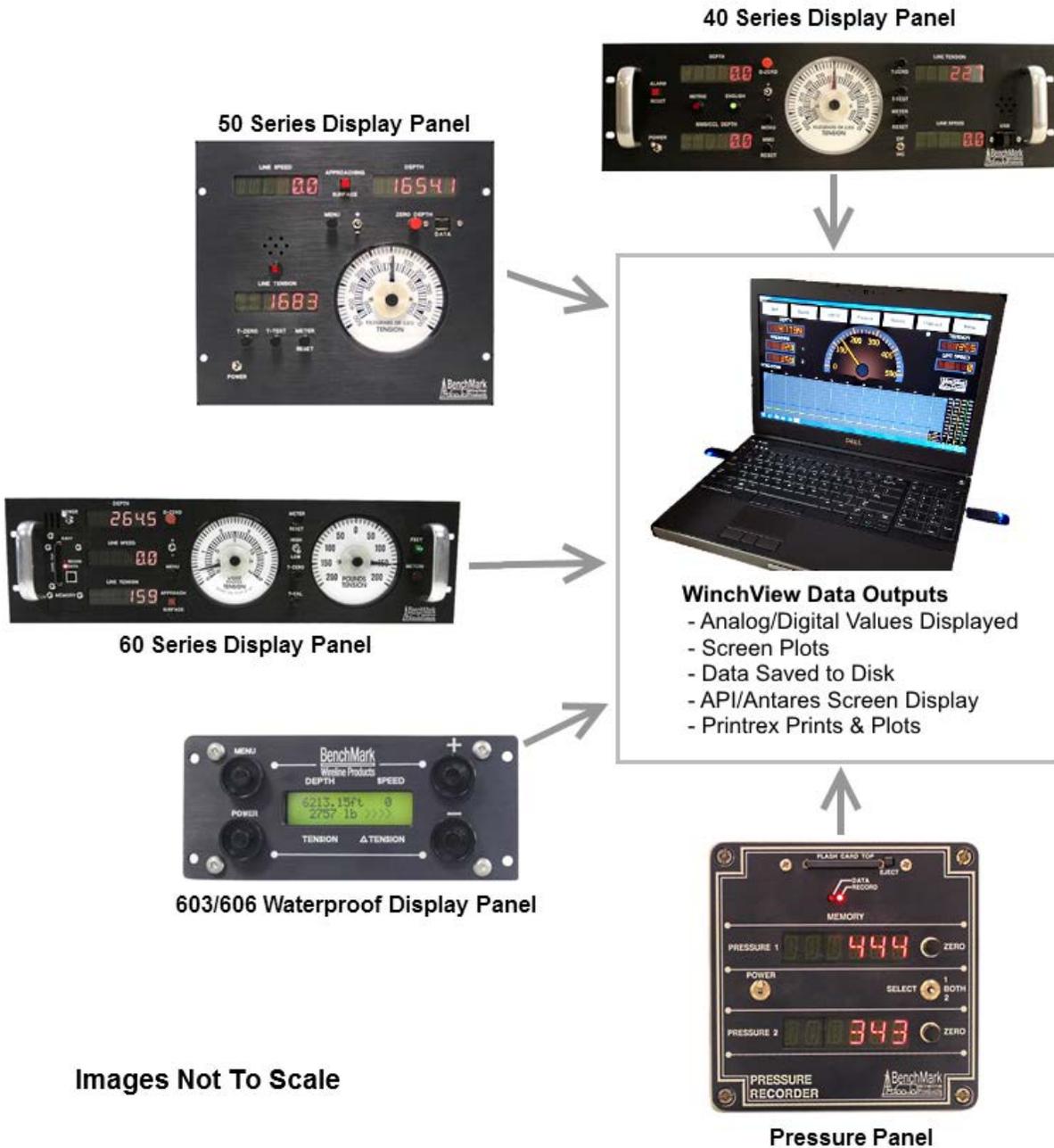
The wired version of the panels uses a serial to USB converter cable. The wireless version uses a serial to Bluetooth dongle transmitters with receivers in the two USB ports on the laptop. No special settings or preparation are necessary in order to connect WinchView with the chosen displays.

The data can be shown on a plot in real-time. Scale for graph on bottom and the gauge are user adjustable. Log plots are available for sharing on Antares logging software. Log files can be named and saved in the pc for future reference.



WinchView – DISPLAYS DATA FROM THESE DEVICES

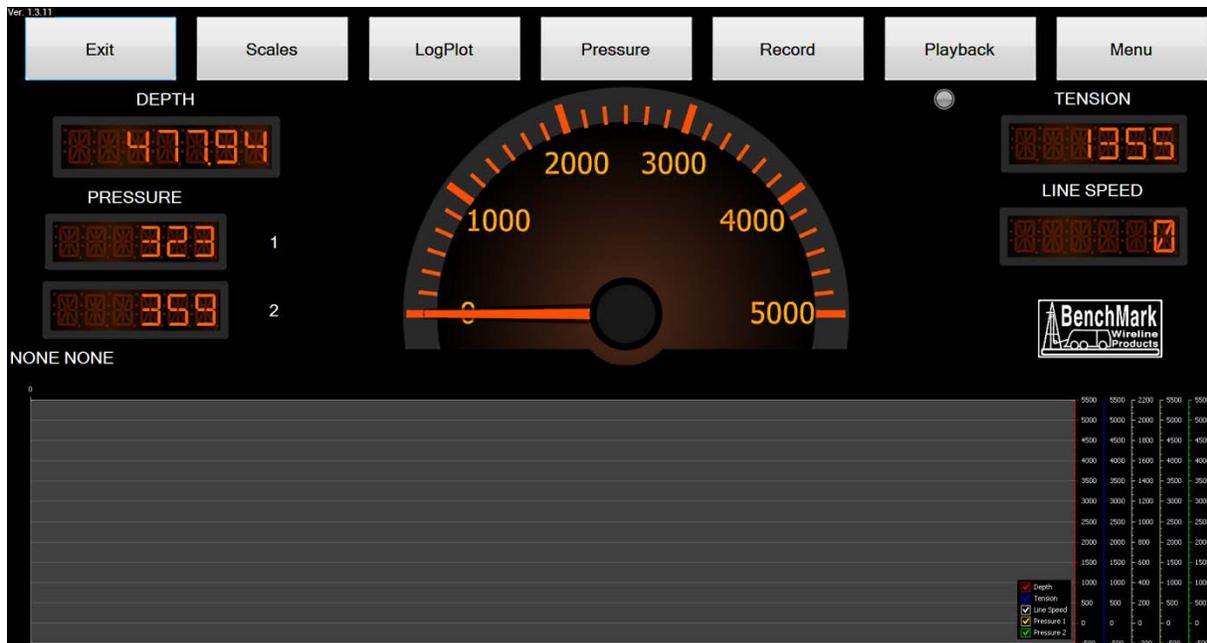
Wired and/or Wireless connections – Connects with up 2 devices at once



Images Not To Scale

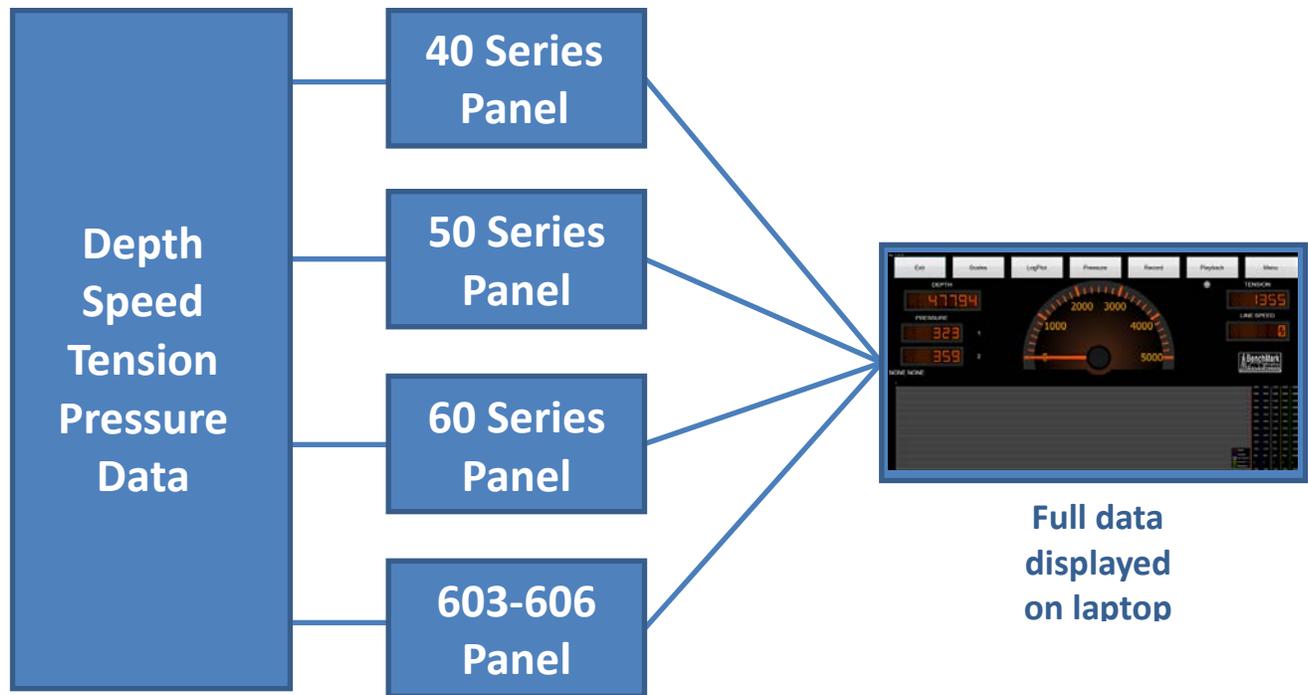
WinchView – ADDITIONAL DETAILS

- WinchView will work on PC computers running Windows 7 or higher.
- Wired connections use a serial to USB converter.
- Wireless connections use a serial to Bluetooth dongle transmitters with USB receivers on the PC allowing it to communicate with 2 panels simultaneously.
- Wireless communications have a maximum distance of 50 feet.
- User definable tension settings - differential, incremental and total tension.
- User definable correlation of tension at certain depths with pressure 1 and 2 at those depths and pressures too.
- User definable scale for the graph on bottom plus the gauge.
- API Log plots are generated for Antares/logging software and be plotted on a Printrex plotter.
- Records data for 603/606 panels.
- Creates a history file so the operator can review plots on the graph and/or the readouts on the dials at a given time.
- Log files can be named and saved.
- Log files can be read and played back with plots. The values will also be displayed on the digital and analog gauge readouts.
- Combined 603/606 data plus pressure values can be put in the same log file.
- No special settings or preparation are necessary for the panels, only the connecting of the cables.



WinchView – CONNECTIVITY

**Wireline Hoistman's Panel data
displayed real-time on Laptop Screen.
Logplots can be viewed on screen.
Logfiles can be named and saved.**



**Full data
displayed
on laptop**

**Connection via USB wired and/or
Bluetooth wireless.
WinchView can connect with 2 devices at once.**

9.0 CERTIFICATES & SAFETY

9.1 SAFETY WARNINGS

This apparatus is suitable for use in ATEX Zone 2 Locations.

This apparatus is suitable for use in Class I, Division 2, Groups A, B, C, & D Hazardous (Classified) or Unclassified Locations.

WARNING – DO NOT OPEN WHEN ENERGIZED.

WARNING – DO NOT SEPARATE CONNECTIONS WHEN ENERGIZED.

WARNING – EXPLOSION HAZARD – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR ATEX Zone 2 LOCATIONS.

AVERTISSEMENT – RISQUE D’EXPLOSION – LA SUBSTITUTION DE COMPOSANT PEUT RENDRE CE MATERIEL INACCEPTABLE POUR LES ATEX Zone 2 LOCALES.

WARNING - EXPLOSION HAZARD – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2;

AVERTISSEMENT - RISQUE D'EXPLOSION – LA SUBSTITUTION DE COMPOSANTS PEUT RENDRE CE MATERIEL INACCEPTABLE POUR LES EMPLACEMENTS DE CLASSE I, DIVISION 2

WARNING – EXPLOSION HAZARD – DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NON-HAZARDOUS;

AVERTISSEMENT – RISQUE D’EXPLOSION – AVANT DE DECONNECTER L’EQUIPMENT, COUPER LE COURANT OU S’ASSURER QUE L’EMPLACEMENT EST DESIGNÉ NON DANGEREUX.

WARNING – EXPLOSION HAZARD – BATTERIES MUST ONLY BE CHANGED IN AN AREA KNOWN TO BE NON-HAZARDOUS;

AVERTISSEMENT – RISQUE D’EXPLOSION – AFIN D’ÉVITER TOUT RISQUE D’EXPLOSION, S’ASSURER QUE L’EMPLACEMENT EST DESIGNÉ NON DANGEREUX AVANT DE CHANGER LA BATTERIE.

WARNING – EXPOSURE TO SOME CHEMICALS MAY DEGRADE THE SEALING PROPERTIES FO THE MATERIALS USED IN THE FOLLOWING DEVICES: P8-9000062.

AVERTISSEMENT - L'EXPOSITION A CERTAINS PRODUITS CHIMIQUES PEUVENT DEGRADER LES PROPRIETES D'ÉTANCHÉITÉ DES MATÉRIAUX UTILISÉS DANS LES DISPOSITIFS SUIVANTS : P8-9000062.

WARNING - PROTECTION MAY BE IMPAIRED IF THIS DEVICE IS USED IN AN APPLICATION OR MANNER NOT SPECIFIED IN THE MANUAL

9.2 CERTIFICATES

9.2.1 ATEX STANDARDS & REQUIREMENTS

PRODUCT CERTIFICATION & CODING

**EN 60079-0: 2012, 6th Edition
EN 60079-15: 2010, 4th Edition
ITS14ATEX47947X
CEo359 Ex II 3 G
Ex nA nC IIC T6 Gc
-20C<= Tamb <= +40C, IP54
Intertek ITS14ATEX47947X**

INSTALLATION INSTRUCTIONS

WARNINGS:

Must be installed per manufacturer's instructions and National Installation Regulations (i.e. EN 60079-15:2010 and EN 60079-17)

- The apparatus is ATEX CAT3, only to be installed in Hazardous Area Zones 2.
- The installer is to ensure that the equipment is located in areas that are known not to have an adverse effect on the housing material.
- Do not modify the enclosure as this will compromise the apparatus certificate.

Hazardous Area Installation Standards & Requirements:

The installer should refer to the latest edition of the following standards before operating in a Hazardous Area:

CONFORMS TO:

ANSI/UL 61010-1-2012

ANSI/UL 50-2012

ANSI/UL 50E-2012

ANSI/ISA 12.12.01-2012

Certified to:

CAN/CSA C22.2 No. 61010-1-12

CAN/CSA C22.2 No. 94.1-12

CAN/CSA C22.2 No. 94.2-12

CAN/CSA C22.2 No. 213-M1987 (R2013)

9.2.2 ATEX and North American Listing Certification Label Details

and Information

Made in the USA



Benchmark
 Wireline Products
 36220 FM 1093
 Simonton, TX 77476
 Phone: 281/346-4300
 Fax: 281/346-4301
 benchmarkwireline.com
 DATE: MO/YR

Ex nA nC IIC T6 Gc
 -20°C ≤ T_{amb} ≤ +40°C, IP54
 Intertek ITS14ATEX47947X
HOISTMAN PANEL ASSY
 Part Number: ALS6A606
 Serial Number: YRXXX

WARNING - DO NOT OPEN WHEN ENERGIZED 

WARNING - EXPLOSION HAZARD - DO NOT SEPARATE WHEN ENERGIZED OR IF THE AREA IS KNOWN TO BE NON-HAZARDOUS

ADVERTISSEMENT - RISQUE D'EXPLOSION - AVANT DE CONNECTER, COUPER LE COURANT OU S'ASSURER QUE L'EMPLACEMENT EST DESIGNE NON DANGEREUX.

T6, T_{amb} -20°C to +40°C
 VOLTS: 12-24 VDC AMPS: 0.4A
 CLASS I DIV 2, GROUPS A THRU D
 ENCLOSURE TYPE : 3R


 Intertek
 4005218
Benchmark
 Wireline Products
 Simonton, TX USA

HOISTMAN PANEL ASSY
 Part Number: ALS6A606
 Serial Number: YRXXX

RECHARGEABLE BATTERY
 MODEL : ENERGIZER NH16 TYPE : NiMH
 SIZE : AA VOLTAGE : 1.2V 

PANASONIC COIN CELL BATTERY
 MODEL: CR1632 TYPE: LiMnO₂
 VOLTAGE: 3V

WARNING - EXPLOSION HAZARD - BATTERIES MUST ONLY BE CHANGED IN AN AREA KNOWN TO BE NON-HAZARDOUS

ADVERTISSEMENT - RISQUE 'EXPLOSION - AFIN D'EVITER TOUT RISQUE D'EXPLOSION, S'ASSURER QUE L'EMPLACEMENT EST DESIGNE NON DANGEREUX AVANT DE CHANGER LA BATTERIE.

CONFORMS TO:
 ANS/UL 61010-1-2012
 ANS/UL 50-2012
 ANS/UL 50E-2012
 ANS/UL 12.12.01-2012


 Intertek
 4005218
Benchmark
 Wireline Products
 Simonton, TX USA

CERTIFIED TO:
 CAN/CSA C22.2 No. 61010-1-12
 CAN/CSA C22.2 No. 94.1-12
 CAN/CSA C22.2 No. 94.2-12
 CAN/CSA C22.2 No. 213-M1987 (R2013)

WARNING - EXPOSURE TO SOME CHEMICALS MAY DEGRADE THE SEALING PROPERTIES OF MATERIALS USED IN THE FOLLOWING DEVICES : P8-9000062. 

ADVERTISSEMENT - L'EXPOSITION A CERTAINS PRODUITS CHIMIQUES PEUVENT DEGRADER LES PROPRIETES D'ETANCHEITE DES MATERIAUX UTILISES DANS LES DISPOSITIFS SUIVANTS : P8-9000062.

9.2.3 SAFETY & CLASS 1 DIVISION 2 CERTIFICATE



AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant:	BenchMark Wireline Products Inc	Manufacturer:	BenchMark Wireline Products Inc
	36220 FM 1093		36220 FM 1093
Address:	PO Box 850	Address:	PO Box 850
	Simonton, TX 77476		Simonton, TX 77476
Country:	USA	Country:	USA
Contact:	Mr. Kenneth Dusek	Contact:	Mr. Kenneth Dusek
Phone:	(281) 346-4300	Phone:	(281) 346-4300
FAX:	(281) 346-4301	FAX:	(281) 346-4301
Email:	kdusek@benchmarkwireline.com	Email:	kdusek@benchmarkwireline.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Dallas, TX

Catherine Dwyer

Control Number: 4005218 **Authorized by:** _____
 for Thomas J. Patterson, Certification Manager



This document supersedes all previous Authorizations to Mark for the noted Report Number.

This Authorization to Mark is for the exclusive use of Intertek's Client and is provided pursuant to the Certification agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Authorization to Mark. Only the Client is authorized to permit copying or distribution of this Authorization to Mark and then only in its entirety. Use of Intertek's Certification mark is restricted to the conditions laid out in the agreement and in this Authorization to Mark. Any further use of the Intertek name for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. Initial Factory Assessments and Follow up Services are for the purpose of assuring appropriate usage of the Certification mark in accordance with the agreement, they are not for the purposes of production quality control and do not relieve the Client of their obligations in this respect.

Intertek Testing Services NA Inc.
 545 East Algonquin Road, Arlington Heights, IL 60005
 Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

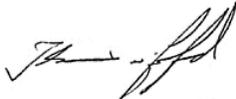
9.2.3 SAFETY & CLASS 1 DIVISION 2 CERTIFICATE continued



AUTHORIZATION TO MARK

	<p>Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements, ANSI/UL 61010-1-2012 and CAN/CSA C22.2 No. 61010-1-12, Third Edition, Issued: May 11, 2012</p> <p>Standard for Safety for Enclosures for Electrical Equipment, Non-Environmental Considerations, ANSI/UL 50-2007 (R2012), Twelfth Edition, Issued: September 4, 2007, Revised: April 27, 2012</p> <p>Standard for Safety for Enclosures for Electrical Equipment, Environmental Considerations, ANSI/UL 50E-2007 (R2012), First Edition, Issued: September 4, 2007, Revised: April 27, 2012</p>
Standard(s):	<p>Enclosures for Electrical Equipment, Non-Environmental Considerations, CAN/CSA C22.2 No. 94.1-07 (R2012), First Edition, Issued: September 4, 2007, Revised: April 27, 2012</p> <p>Enclosures for Electrical Equipment, Environmental Considerations, CAN/CSA C22.2 No. 94.2-07 (R2012), First Edition, Issued: September 4, 2007, Revised: April 27, 2012</p> <p>Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations, ANSI/ISA 12.12.01-2012, Approved: July 9, 2012</p> <p>Non-incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations, CAN/CSA C22.2 No. 213-M1987, March 01, 1987, Reaffirmed 2013</p>
Product:	<p>Hoistman Display Panel for Ordinary and Hazardous Locations: Class I, Division 2, Groups A, B, C, and D, T6 Ambient Temperature: -20°C < Ta < 40°C</p>
Brand Name:	BenchMark
Models:	ALS6A606

9.2.4 ATEX ZONE 2 CERTIFICATE

		
1.	TYPE EXAMINATION CERTIFICATE	
2.	Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC	
3.	Type Examination Certificate Number:	ITS14ATEX47947X
4.	Equipment or Protective System:	Hoistman Display Panel, Model ALS6A606
5.	Manufacturer:	BenchMark Wireline Products, Inc.
6.	Address:	36220 FM 1093, Simonton, TX 77476, USA
7.	This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.	
8.	Intertek Testing and Certification Limited certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive 94/9/EC of 23 March 1994	
	The examination and test results are recorded in confidential Intertek Report 100912419DAL-002, dated October 15, 2014.	
9.	Compliance with the Essential Health and Safety Requirements has been assured by compliance with standards EN 60079-0:2012 and EN 60079-15:2010 except in respect of those requirements referred to at item 16 of the Schedule.	
10.	If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.	
11.	This Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.	
12.	The marking of the equipment or protective system shall include the following:-	
	 II 3 G Ex nA nC IIC T6 Gc -20°C ≤ Ta ≤ 40°C, IP54	
	<p>Intertek Testing & Certification Limited Intertek House, Cleeve Road, Leatherhead, Surrey, KT22 7SB Tel: +44 (0)1372 370900 Fax: +44 (0)1372 370977 www.intertek.com Registered No 3272281 Registered Office: Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ.</p>	 Thomas a. Crawford Certification Officer 20 October 2014
	This certificate may only be reproduced in its entirety and without any change, schedule included and is subject to Intertek Testing and Certification's Conditions for Granting Certification.	
	Sheet 1 of 3	
	ExF-301 - Type examination certificate	Template Revision 4
		RFT-EIJ-NB-OP-2311 5-23-14

9.2.4 ATEX ZONE 2 CERTIFICATE continued



SCHEDULE

TYPE EXAMINATION CERTIFICATE NUMBER ITS14ATEX47947X

13. Description of Equipment or Protective System

ALS6A606 Hoistman Display Panel covered by this certificate is permanently mounted data acquisition unit (depth, tension and line speed measurement) suitable for indoor and outdoor locations. The product is provided with plug-in connectors which ratings are noted below, and with end product user interface consisting of display and four accessible push button switches for control purposes.

- 12-24V DC, 0.4A (receptacle with 3 pin connector for main input power)
- 5V USB Connector (receptacle with USB connector used for data download purposes; to be used in non-hazardous areas only)
- Encoder (receptacle with 6 socket connector for input data coming from the encoder)
- Tension (receptacle with 10 socket connector for input data coming from the tension sensor)
- Sig Out (receptacle with 10 pin connector for output data going to the processing unit)

Product can be powered via two different options:

- 12-24V DC, 0.4A
- Battery Pack 6 x 1.2V NiMH, 2300mAh, AA rechargeable batteries (Energizer NH15)

14. Report Number

Intertek Report Ref: 100912419DAL-002, dated October 15, 2014.

15. Conditions of Certification

(a). Special Conditions for safe use

- To maintain the safety during installation of the Hoistman Display Panel (ALS6A606), the metal enclosure must be properly earthed or bonded to other earthed metal parts in order to reduce the risk of ignition. Unearthed metal parts could be susceptible to electrostatic charges that could become a source of ignition.
- USB port is not intended for use in hazardous locations. This port is provided as a means to upgrade the internal software and to retrieve data stored internally when the area is known to be non-hazardous only.
- The following WARNINGS shall be noted and adhered to:
 WARNING – DO NOT OPEN WHEN ENERGIZED
 WARNING – DO NOT SEPARATE WHEN ENERGIZED

(b). Conditions of Manufacture

- Electric Strength Test in accordance with 23.2.1 of EN 60079-15

A dielectric strength test shall be carried out in accordance with 6.5.1 of EN 60079-15: 2010. Alternatively, the test shall be carried out at 1,2 times the test voltage, but shall be maintained for at least 100 ms. All products covered by this Report with test potential applied between input circuits and the metal enclosure.

Intertek Testing & Certification Limited
Intertek House, Cleeve Road, Leatherhead, Surrey, KT22 7SB
Tel: + 44 (0)1372 370900 Fax: +44 (0)1372 370977

www.intertek.com

Registered No 3272281 Registered Office: Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ.

This Certificate is the property of Intertek Testing and Certification Ltd and is subject to Intertek Testing and Certification's Conditions for Granting Certification.

Sheet 2 of 3

ExF-301 - Type examination certificate

Template Revision 4

RFT-EU-NB-OP-2311 5-23-14

9.2.4 ATEX ZONE 2 CERTIFICATE continued



SCHEDULE

TYPE EXAMINATION CERTIFICATE NUMBER ITS14ATEX47947X

16. Essential Health and Safety Requirements (EHSR's)

The relevant EHSR's have been identified and assessed in Intertek Report Ref: 100912419DAL-002E, Issue: 01, Dated: August 26, 2014

17. Drawings and Documents

Title	Drawing No.:	Rev. Level:	Date:
LABELING HOIST PNL BATT BKUP ATEX ZONE 2 / C1D2	ALS6M696	B	26-Aug-2014
PCB ASSY DEPTH SPEED BKUP ZII BENCHMARK WIRELINE PRODUCTS	ALS6A620	E	9-Apr-2014
Bill of Material	Parent: ALS6A620E	--	11-Apr-2014
PANEL AMS BATTERY BACKUP Z2 DEPTH/SPD/TENS WATERPROOF	ALS6A606	A	22-Jan-2014
Bill of Material	Parent: ALS6A606	--	11-Apr-2014
PANEL FRONT DEPTH/SPEED/TENSION BACKUP	ALS6M601	A	22-Jan-2014
CHASSIS DEPTH/SPEED/TENSION BACKUP	ALS6M603	A	22-Jan-2014
CLAMP LENS DEPTH/SPEED/TENSION BACKUP	ALS6M623	A	22-Jan-2014
PANEL REAR DEPTH/SPD/TEN WP DC ONLY BACKUP	ALS6M662	A	22-Jan-2014
CLAMP BATTERY 6 X AA BACKUP TENSION	ALS8M037	A	26-Jan-2009
Operations and Maintenance Manual	ALS6A606 PANEL	--	Aug-2014

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

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Sheet 3 of 3

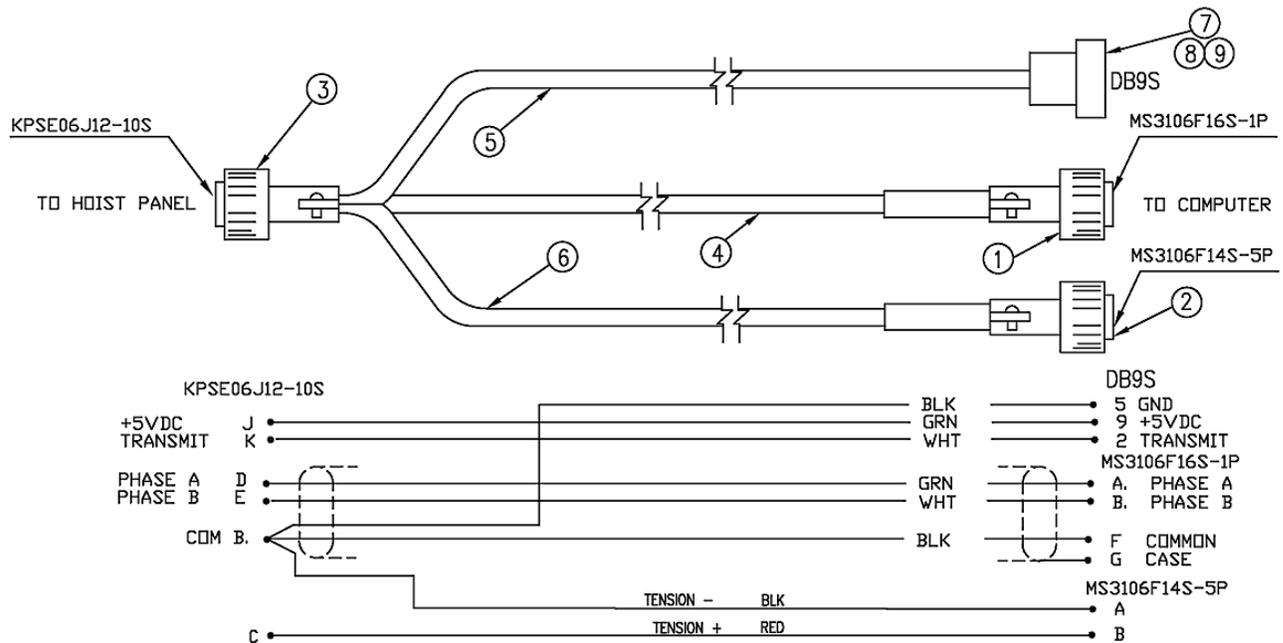
ExF-301 - Type examination certificate

Template Revision 4

RFT-EU-NB-OP-2311 5-23-14

10 CABLES

10.1 ALS6A012B SIG OUT CABLE

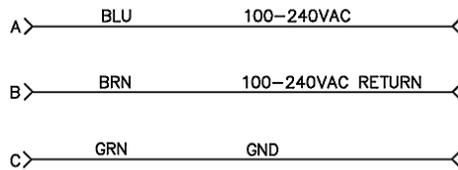
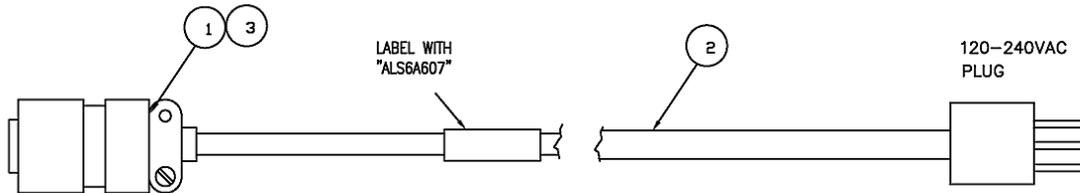


The SIGNAL OUT cable has a single connector on the panel end and 3 separate connectors on the other end. The signal out port on the back of the panel is a DAC Digital to Analog Converter. This allows output to an analog meter or analog tension values, to the logging system. Encoder quadrature is also outputted to the logging system from this cable.

Serial communications for WinchView, SW or others are also provided. The cable links to an external PC, to a USB adapter or a Bluetooth adapter.

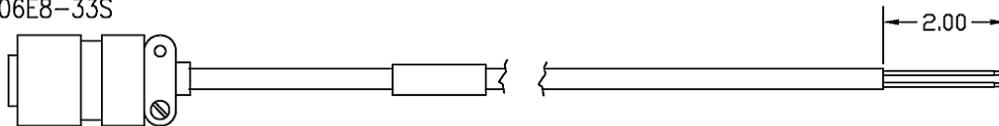
There is also an alarm setting so the DAC can be used to turn an external alarm on and off.

10.2 ALS6A607B AC POWER CABLE – 603 PANEL ONLY



10.3 AM5KA036 POWER IN 3 SOCKET SMALL – 603 & 606 PANEL

KPT06E8-33S



PIN A: CONTACT + WHT

PIN B: CONTACT - BLK

11 PINOUT DIAGRAMS

