



# TECHNICAL INFORMATION

KONGSBERG

## 1007D ALTIMETER - 11000M

Document part number: 974-72117902  
Specifications subject to change without notice.  
KONGSBERG MESOTECH LTD. 1598 Kebet Way, Port Coquitlam, B.C. Canada V3C 5M5  
TEL: (604) 464 8144 Fax: (604) 941 5423

## **KONGSBERG MESOTECH LTD.**

### **WARRANTY STATEMENT**

Effective January 1, 2006

Kongsberg Mesotech Ltd. warrants that its products are free from defective materials and/or workmanship for a period of 24 months from the date of receipt of goods by the end user, or 30 months from date of product shipment from the manufacturing facility (whichever occurs first). Kongsberg Mesotech Ltd. will - at no charge - repair or replace (at its option) any part(s) determined to be defective of workmanship or materials, provided the warranty claim is made to either the manufacturing facility or its authorized repair centres within the warranty period.

The purchaser is responsible for the examination of the product upon receipt. The purchaser is required to report any irregularity to received Kongsberg Mesotech Ltd. goods to either the manufacturer, its Sister companies or its Agents, within 15 days of receipt of goods. Proof of date received may be required.

The warranty is void if warranty labels are broken; Kongsberg Mesotech Ltd. will not warrant any product which is physically damaged, abused, altered, subjected to accident or negligence or misuse, or is incorrectly installed or used by the purchaser - or purchaser's representative.

Consumable items (including lamps, fuses, and worn O rings or shaft-seals) are excluded by the warranty.

All Product/Equipment being returned for warranty, repair/replacement shall have freight costs "prepaid". All warranty Product/Equipment being returned to the customer will be freight charges "prepaid" by Kongsberg Mesotech Ltd.

NOTE: Shipping method and carrier for warranty returned items will be at the discretion of Kongsberg Mesotech Ltd.

A Kongsberg Mesotech Ltd. Warranty Claim form must be completed and submitted to KML Service Department prior to warranty claim acceptance.

Kongsberg Mesotech Ltd. cannot warrant that its products are suitable for any particular or intended purpose. No other warranty is expressed or implied; Kongsberg Mesotech Ltd. accepts no liability on consequential damages – these include, but are not limited to: loss of profit, property damage and personal injury.

The maximum liability shall not, in any case, exceed the price of the product claimed to be defective.

# 1007D Series Altimeter



**P/N 974-71530000-78F1**

**KONGSBERG**

This version of the 1007D digital altimeters is designed for deep ocean applications, where dimensions, weight and safety are key equipment selection factors. To minimize the risk of implosion at extreme depths, as required for installation on manned submersible vehicles, the pressure housing containing the altimeter electronics is 90% filled with Flourinert®.

Operating Frequency: 675 kHz  
 Beam Width: 2.7° nominal  
 Minimum Range: <sup>2</sup> Adjustable, limited by pulse length **[0.75m]**  
 Maximum Range: <sup>2</sup> Adjustable, up to 110 m **[50m]**  
 Output Resolution: <sup>2</sup> Adjustable, > 2.4mm **[3.13mm]**  
 Transmit Pulse Widths: <sup>2</sup> Adjustable, 20 to 1000 µS **[250µS]**  
 Repetition Rate: <sup>2</sup> Adjustable, limited by range and resolution  
 Assumed speed of sound: <sup>2</sup> Adjustable, 1400 to 1600 M/S **[1475 M/S]**

Receive Bandwidth: 28 kHz max  
 Operating Mode:<sup>1</sup> Configurable, (809, or MS1000) **[809]**  
 Telemetry Interface:<sup>3,4</sup> Configurable, (RS232C, or RS485) **[RS232]**  
 Downlink Baud Rate: 9600 bps  
 Uplink Baud Rate: 9600 bps, adjustable in MS1000 mode  
 Hold-off Synchronization: Via serial command

Power Requirement: +22 to +26 Vdc @ 1.0A startup, 250 mA continuous

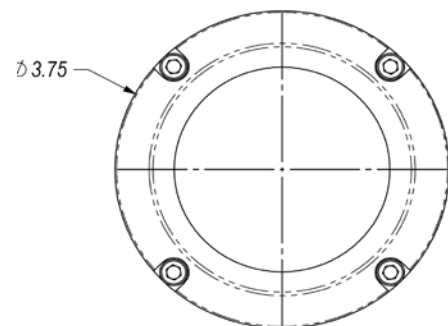
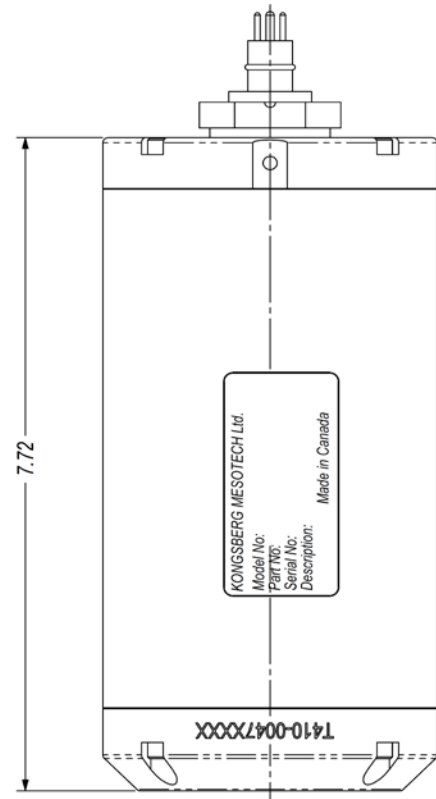
Temperature Range: -10 to +50°C operating  
 -30 to +50°C storage

Operating Depth: 11,000m  
 Connector: Seacon XSG-4-BCL  
 Materials: Titanium , Urethane  
 Dimensions: (3000m) Length 7.9"/200mm (excludes connector)  
 Diameter 3.75"/95.3mm

Weight: Air 9.9 lbs./4.5 kg  
 Water 7.7 lbs/3.5 kg

Factory Defaults shown in **[1]**

- <sup>1</sup> Configurable
- <sup>2</sup> Fully adjustable in 809, MS1000 modes
- <sup>3</sup> Configurable in 809 mode
- <sup>4</sup> Auto-detect in MS1000 mode



Specifications subject to change without notice  
 974-71537901 Iss 1.1

**KONGSBERG MESOTECH LTD. 1598 Kebet Way, Port Coquitlam B.C. Canada V3C 5M5**  
 Tel: (604) 464 8144 Fax: (604) 941 5423

## 1007D ALTIMETER

### 1.1 SCOPE

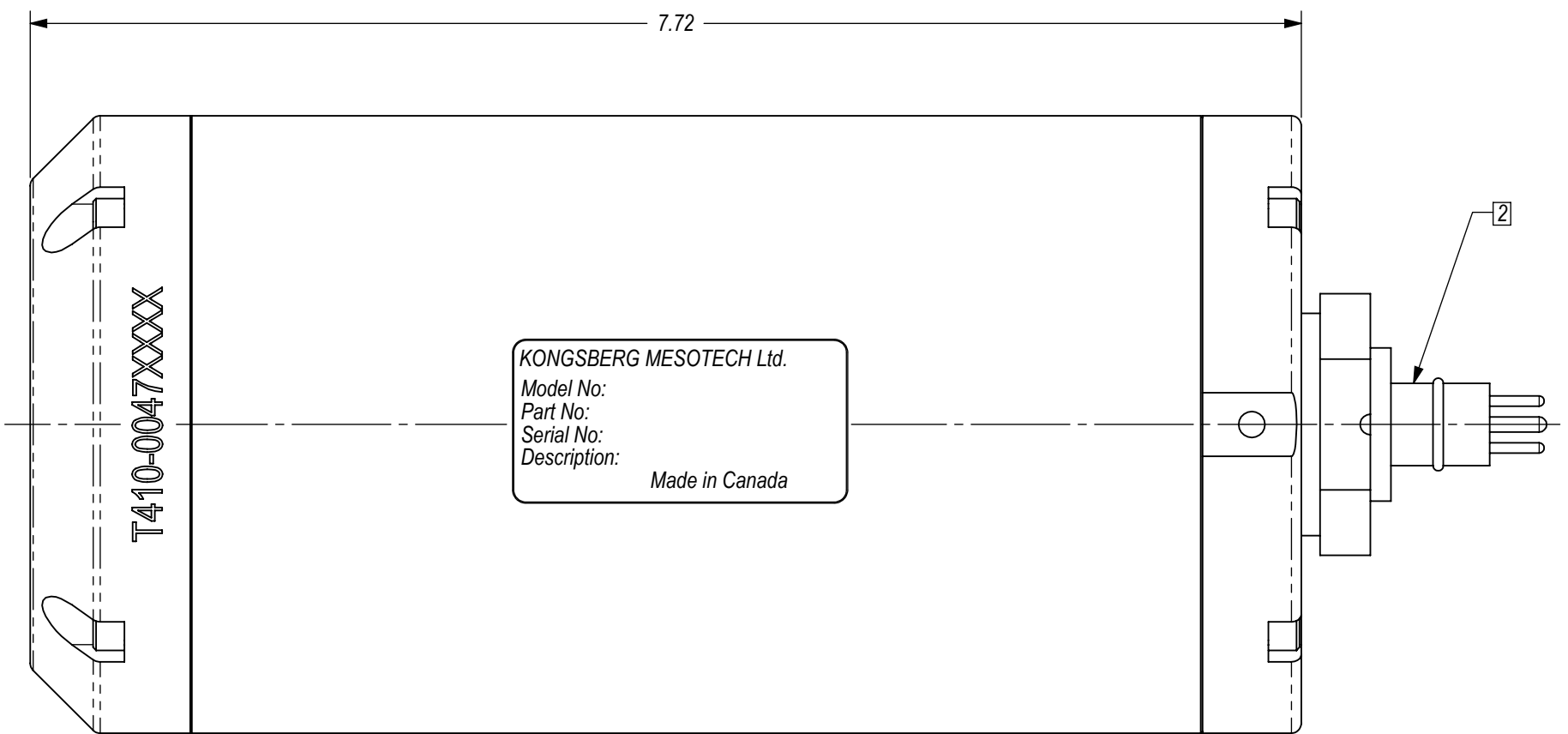
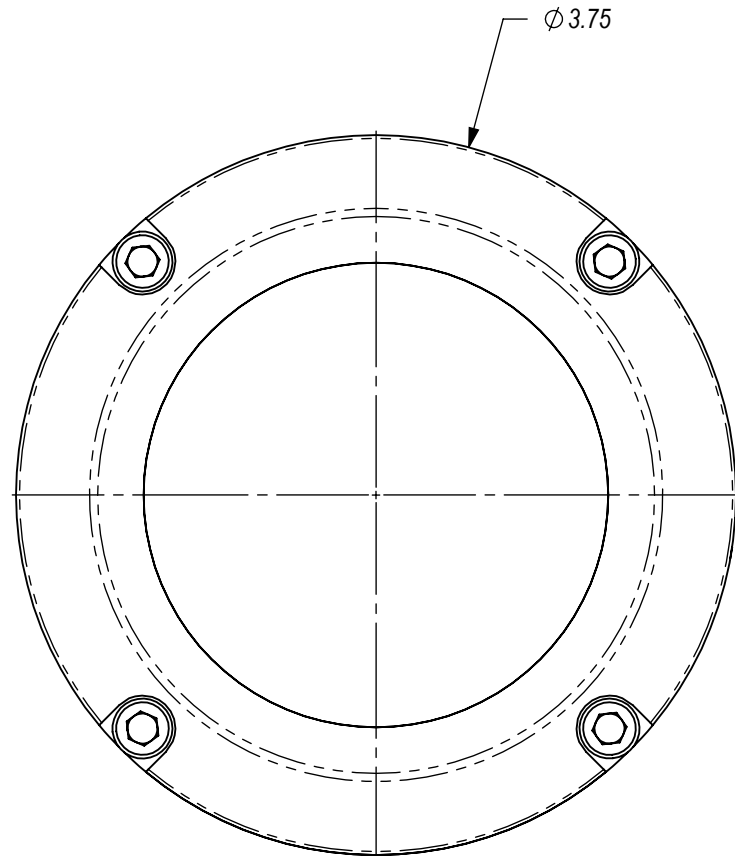
This document presents the information specific to the Model 1007D Altimeter P/N: 974-71530000. Refer to the "Model 1007D Operators Manual" for general information related to product installation and usage.

### 1.2 SUMMARY

Two sets of specification sheets are attached to this document. The Specifications Sheet lists the unit's overall specifications. The Power-Up Configuration Sheet provides both a summary of the settings assumed on power-up for various parameters and detailed internal parameter information. The latter is for factory use only. Drawings describing the pin-out arrangement and suggested telemetry cabling are included.

### 1.3 ELECTRICAL CONNECTIONS

Name	Description
-V	<i>Power supply common</i> Also provides a ground reference for RS232C telemetry.
+V	<i>Power supply input</i> Connect this to a +22...28VDC power supply capable of delivering 300mA continuous (2 amp peak), such as the MS1000 Power Supply Box.
RS485+ (232 DWN)	<i>Telemetry RS232C RX input / RS485 active HI balanced I/O signal</i> For RS232 connect to the RS232 TX signal of the host computer. For RS485 connect to the RS485 active HI balanced bi-directional signal of the host computer or MS1000 Power Supply Box.
RS485- (232 UP)	<i>Telemetry RS232C TX output / RS485 active LO balanced I/O signal</i> For RS232 connect to the RS232 RX signal of the host computer. For RS485 connect to the RS485 active LO balanced bi-directional signal of the host computer or MS1000 Power Supply Box.



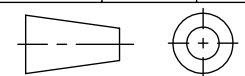
KONGSBERG MESOTECH Ltd.  
 Model No:  
 Part No:  
 Serial No:  
 Description:  
 Made in Canada

- NOTES:
1. MAXIMUM OPERATING DEPTH: 11000msw / 36089ftsw.
  2. SEACON RMG/XSG CONNECTOR SHOWN.
  3. WEIGHT IN AIR: 9.3 LBS / 4.2 KG  
WEIGHT IN SEAWATER: 6.1 LBS / 2.8 KG
  4. DIMENSIONS ARE IN INCHES AND ARE NOMINAL.
  5. DO NOT SCALE.

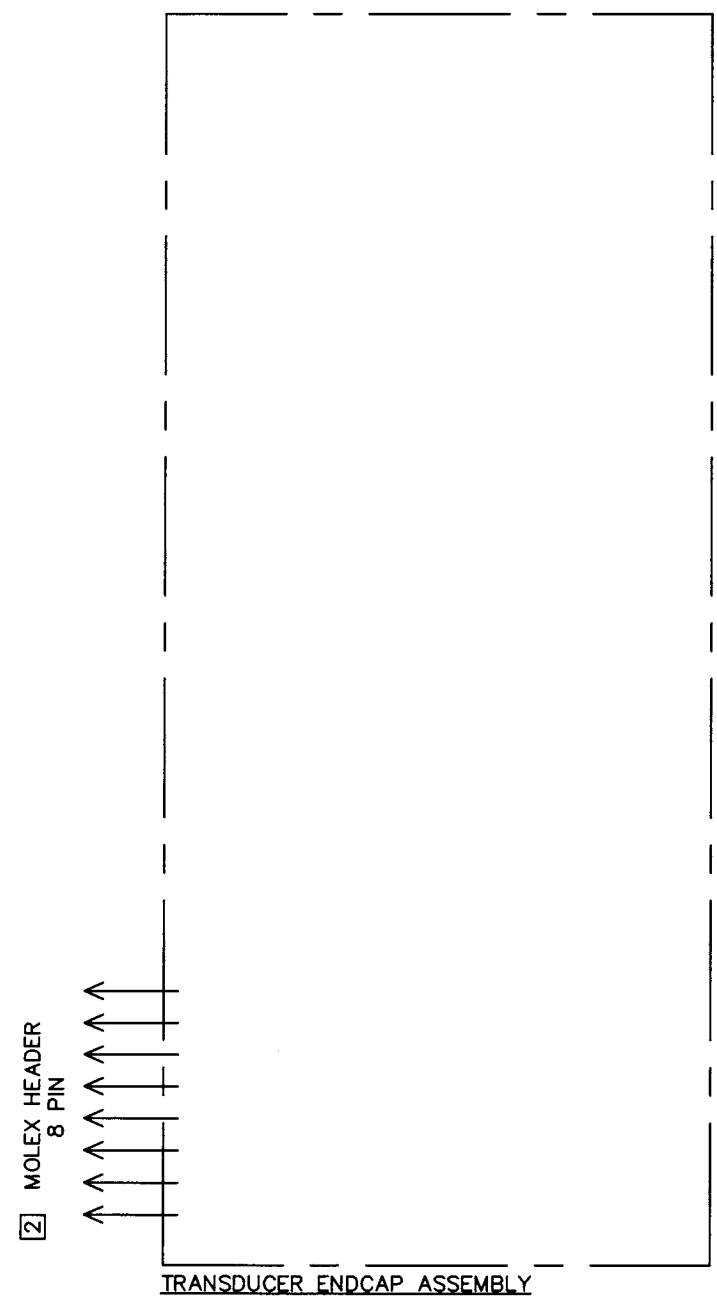
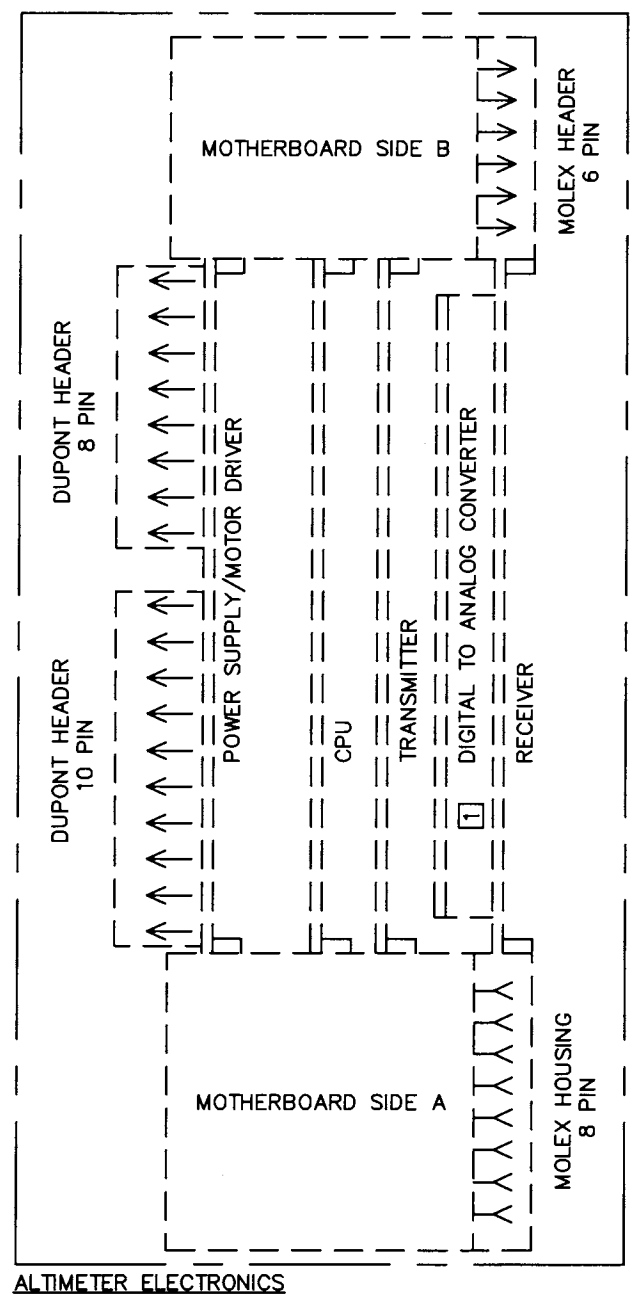
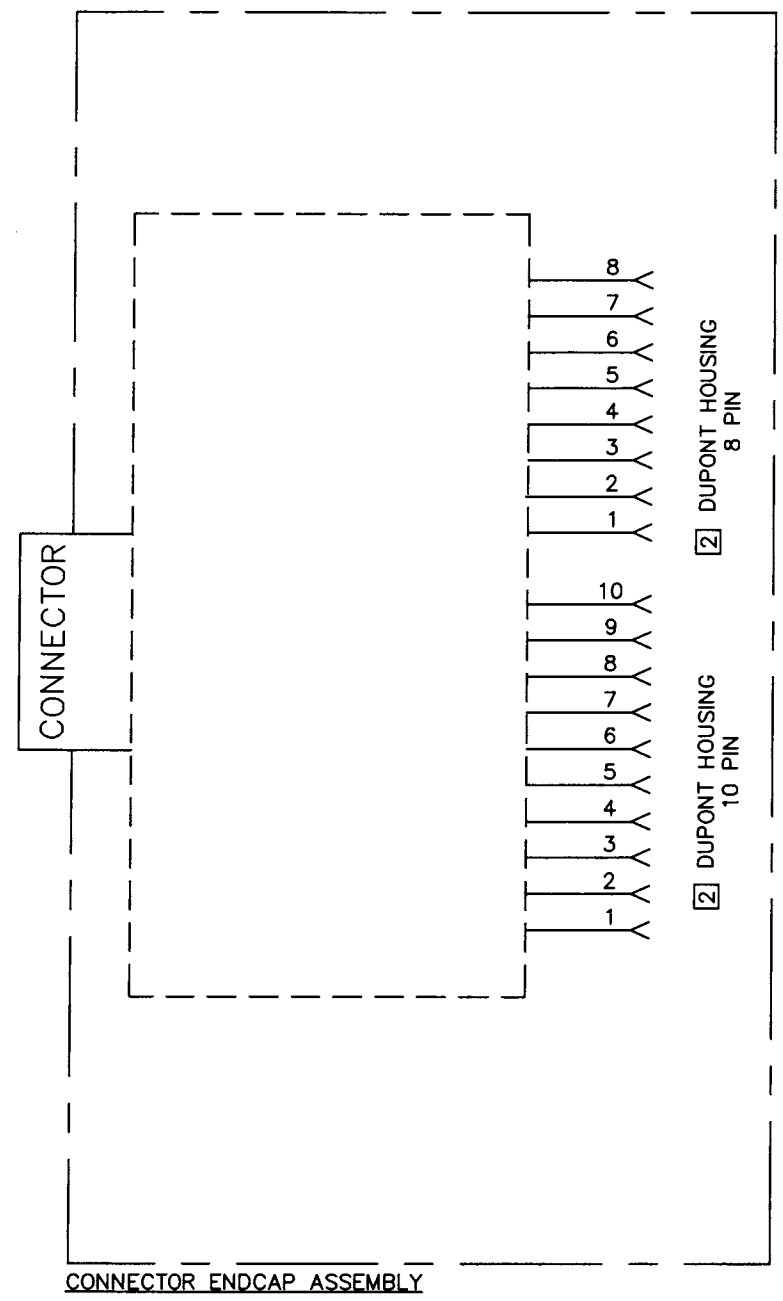
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APPROVALS	NAME	DATE
DRAWN	DL	11/08/31
REVISED	--	--
CHECKED		
ENGR		
ISSUED		



ISS	DESCRIPTION	DATE
	REVISIONS	
	<b>Kongsberg Mesotech Ltd.</b>	
	<b>OUTLINE AND INSTALLATION DRAWING</b>	
	<b>11000m ALTIMETER, MODEL 1007D</b>	
SIZE	NSCM NO	TYPE
B	1C965	MD
DWG. NO.	ISS	
974-71531001	1.0	
SCALE: 1:1	W.O. NO.	SHEET 1 OF 1



- NOTES:
- 1 FOR ANALOG OUTPUT.
  - 2 CONNECTOR CRIMP SOCKETS ARE INSTALLED AS REQUIRED ONLY

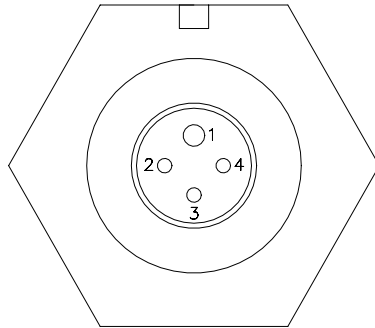
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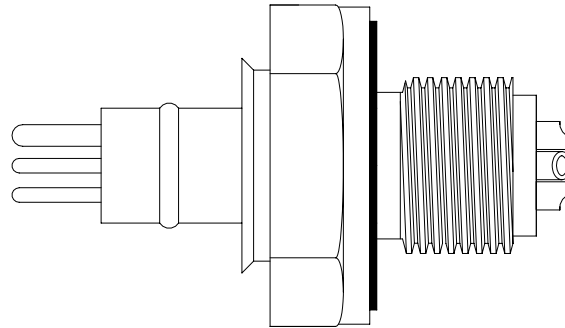
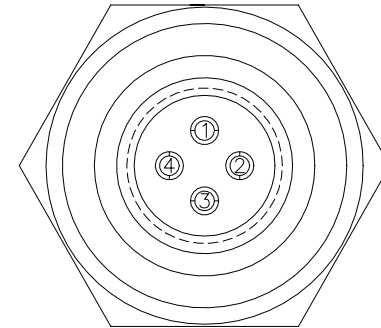
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REVISED	
CHECKED <i>DM</i>	Nov 24/2014
ENGR <i>JH.</i>	Nov 26/2014
ISSUED <i>RCH</i>	2014/12/2
CONFIDENTIAL DO NOT COPY	

ISS	DESCRIPTION	DATE
REVISIONS		
	Kongsberg Mesotech Ltd.	
	BLOCK DIAGRAM MODEL 1007D ALTIMETER	
SIZE	NSCM NO	TYPE
B	1C965	MD
DWG NO.	974-71001002	
ISS	1.0	
SCALE: NTS	W.O. NO.	SHEET 1 OF 1

PIN VIEW



SOLDER CUP VIEW

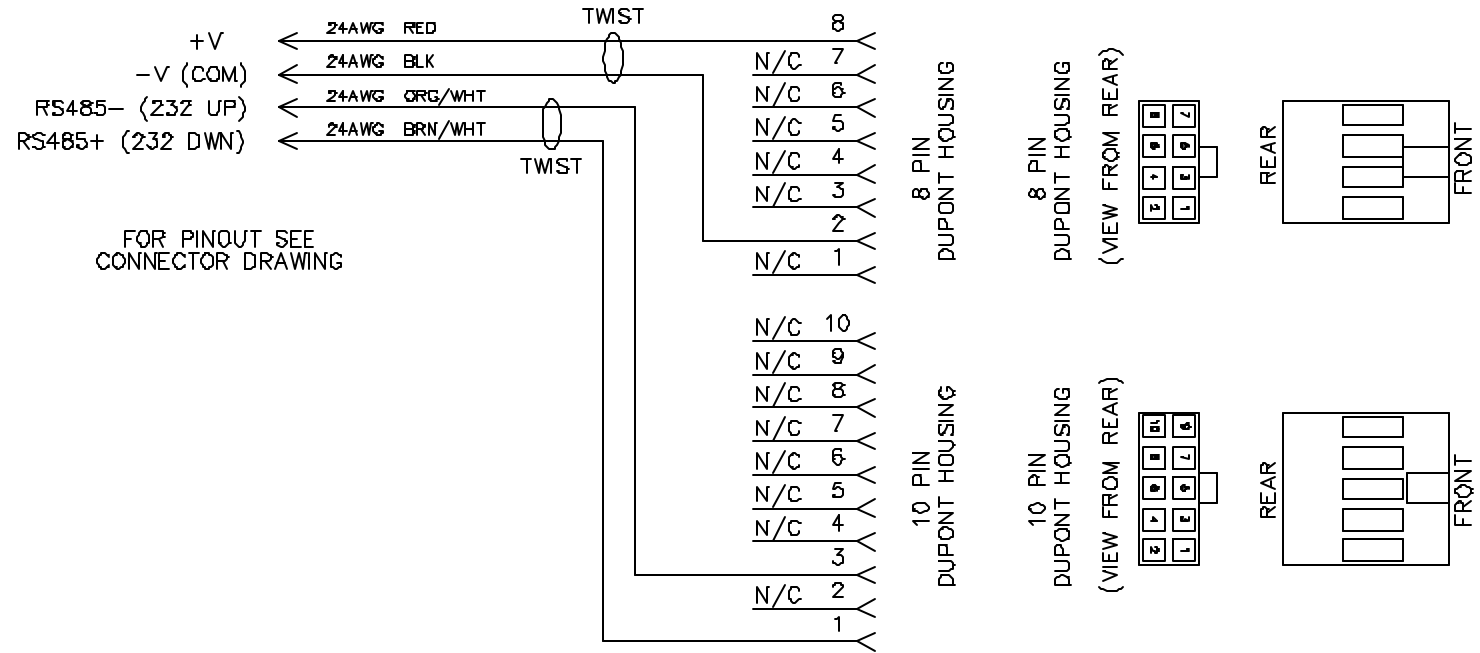


- 1: -V (COM)
- 2: RS485- (232 UP)
- 3: +V
- 4: RS485+ (232 DWN)

ZONE	ISS	DESCRIPTION	DATE	APPROVED
REVISIONS				

<p><u>PROPRIETARY NOTICE</u> THIS DOCUMENT CONTAINS INFORMATION WHICH IS THE SOLE PROPERTY OF KONGSBERG MESOTECH Ltd. AND IS RECEIVED IN CONFIDENCE. ITS CONTENTS MAY NOT BE DISCLOSED OR REPRODUCED IN ANY WAY WITHOUT THE WRITTEN CONSENT OF KONGSBERG MESOTECH Ltd.</p>	<u>APPROVALS</u>		<u>DATE</u>		Kongsberg Mesotech Ltd.				
	DRAWN J.BANSER		11MAY00						
	CHECKED				CONNECTOR 4PIN, RMG/XSG SERIES RS485/232 DIGITAL TELEMTRY				
	ENGR								
	ISSUED				SIZE	NSCM NO	TYPE	DWG NO.	ISS
NEXT ASSY		MODEL		A	1C965	MD	442-00001208	1.0	
ZONE				SCALE: 2:1		W.O. NO.		SHEET 1 OF 1	



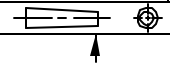


ZONE	ISS	DESCRIPTION	DATE	APPROVED
	1.1	ECO-3001	26 OCT 00	M.M.

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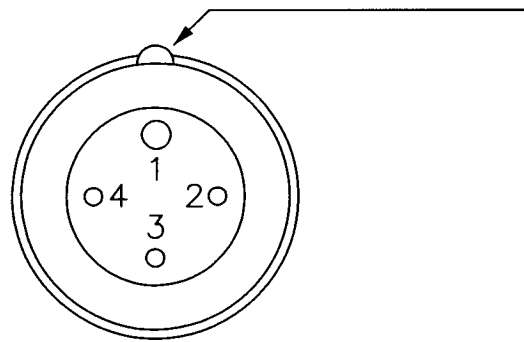
APPROVALS		DATE
DRAWN	J.BANSER	11MAY00
CHECKED		
ENGR		
ISSUED		
NEXT ASSY		MODEL
ZONE		

Kongsberg Simrad Mesotech Ltd.				
ENDCAP WIRING DIGITAL TELEMETRY RS485/232				
SIZE	NCSM NO	TYPE	DWG NO.	ISS
A	1C965	MD	442-00001301	1.1
SCALE: -	W.O. NO.	SHEET 1 OF 1		





SOCKET VIEW



THE 'VISUAL INDEX' SEEN ON THE WHIP'S BODY DENOTES THE POSITION OF PIN 1

- 1: -V (COM)
- 2: RS485- (232 UP)
- 3: +V
- 4: RS485+ (232 DWN)

1.1	ECO 5452	2015-MAR-12
ISS	DESCRIPTION	DATE

REVISIONS

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	DRAWN JB	2000-MAY-15
	REVISED BH	2015-MAR-12
	CHECKED SC	2015-MAR-24
	ENGR IB	3/24/2015
	ISSUED R.C.H.	2015/03/25
CONFIDENTIAL DO NOT COPY		
DO NOT SCALE DRAWING		

Kongsberg Mesotech Ltd.

CONNECTOR - PLUG  
4 PIN, RMG SERIES  
RS485/232 DIGITAL TELEMETRY

SIZE A	NSCM NO 1C965	TYPE MD	DWG NO. 442-00001408	ISS 1.1
SCALE: NTS		W.O. NO.	SHEET 1 OF 1	

# 1007D Series Altimeter

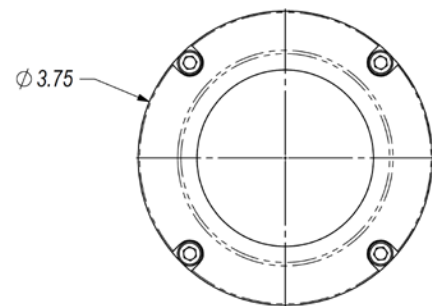
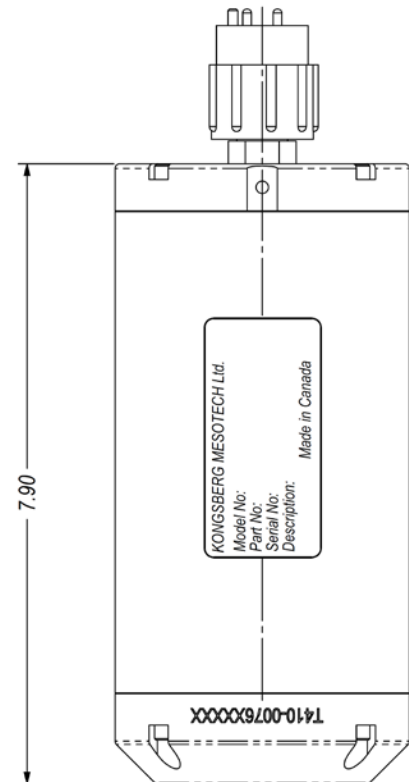


**P/N 974-71540000-78F1**

**KONGSBERG**

This version of the 1007D digital altimeters is designed for deep ocean applications, where dimensions, weight and safety are key equipment selection factors. To minimize the risk of implosion at extreme depths, as required for installation on manned submersible vehicles, the pressure housing containing the altimeter electronics is 90% filled with Flourinert®. This unit is designed to operate with the MS1000 Software Processor.

Operating Frequency:	200 kHz						
Beam Width:	10° nominal						
Operating Mode:	MS1000						
Range Selection:	Adjustable Up to 300 m (selectable in MS1000 SW)						
Output Resolution:	Adjustable, down to 2.4 mm (range dependent)						
Transmit Pulse Widths:	Adjustable, 20 to 500 µS						
Receive Bandwidth:	20 kHz max						
Telemetry:	RS232C or RS485, auto detect						
Telemetry configurations:	<table border="0"> <tr> <td>Legacy mode</td> <td> <i>Downlink:</i> 9600 bps fixed  <i>Uplink :</i> 9600 bps to 460 kbps (auto set to highest rate allowed by the quality of the telemetry link)                 </td> </tr> <tr> <td>Fixed</td> <td> <i>Downlink:</i> 9600 bps to 460 kbps (user selected for compatibility with other serial communication equipment)   <i>Uplink:</i> same speed as downlink                 </td> </tr> <tr> <td>Optimized</td> <td> <i>Downlink:</i> 9600 bps to 460 kbps (auto set to highest rate allowed by the quality of the telemetry link)   <i>Uplink:</i> same speed as downlink                 </td> </tr> </table>	Legacy mode	<i>Downlink:</i> 9600 bps fixed <i>Uplink :</i> 9600 bps to 460 kbps (auto set to highest rate allowed by the quality of the telemetry link)	Fixed	<i>Downlink:</i> 9600 bps to 460 kbps (user selected for compatibility with other serial communication equipment)  <i>Uplink:</i> same speed as downlink	Optimized	<i>Downlink:</i> 9600 bps to 460 kbps (auto set to highest rate allowed by the quality of the telemetry link)  <i>Uplink:</i> same speed as downlink
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Optimized	<i>Downlink:</i> 9600 bps to 460 kbps (auto set to highest rate allowed by the quality of the telemetry link)  <i>Uplink:</i> same speed as downlink						
Power Requirement:	+22 to +26 Vdc @ 1.0 A startup, 250 mA continuous						
Temperature Range:	-10 to +40 °C operating -30 to +50 °C storage						
Operating Depth:	11000 m						
Connector:	Subconn BH4MT1						
Materials:	Titanium, Urethane						
Dimensions:	Length: 7.9"/200 mm (excludes connector) Diameter: 3.75"/95.3 mm						
Weight:	Air: 11.1 lbs./5.0 kg Water: 7.9 lbs/3.6 kg						



Specifications subject to change without notice  
974-71547901 Iss 1.1

**KONGSBERG MESOTECH LTD. 1598 Kebet Way, Port Coquitlam B.C. Canada V3C 5M5**  
Tel: (604) 464 8144 Fax: (604) 941 5423

## 1007D ALTIMETER

### 1.1 SCOPE

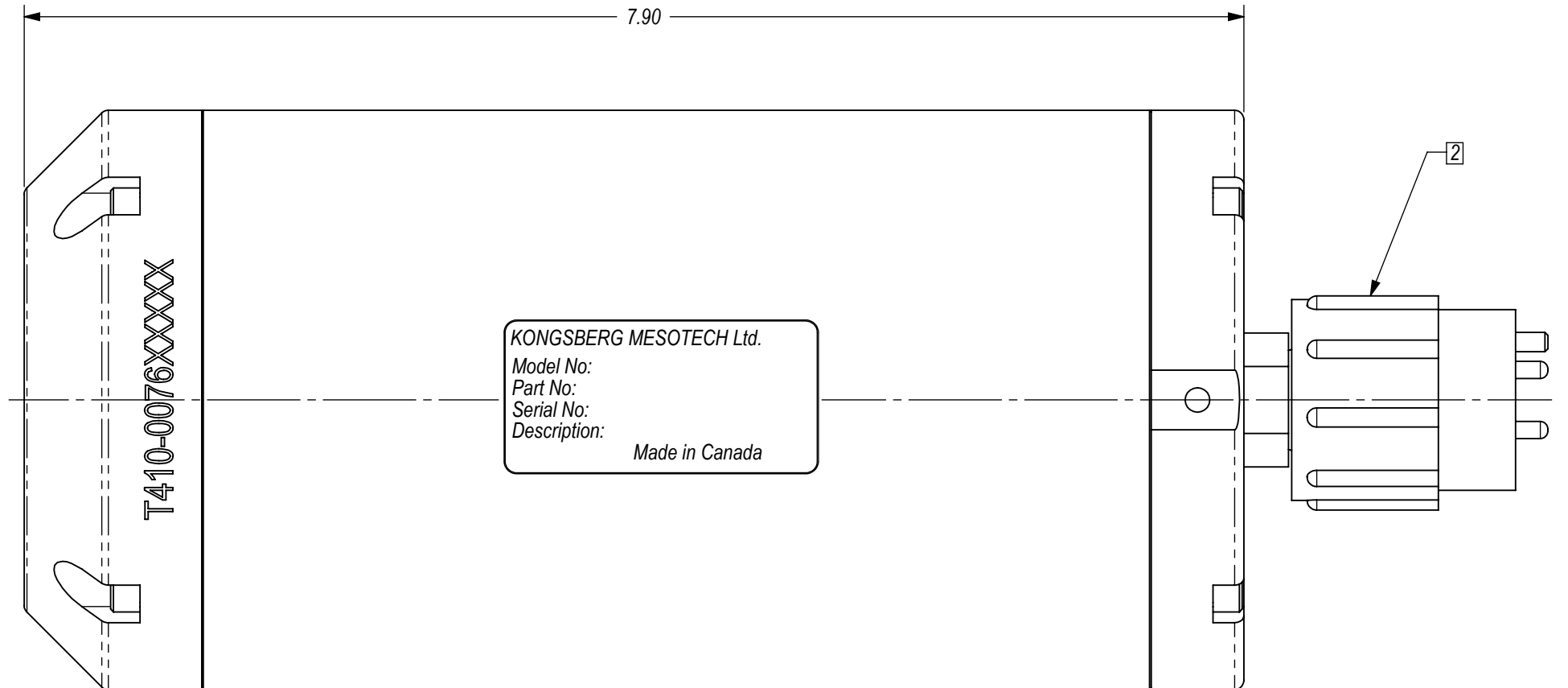
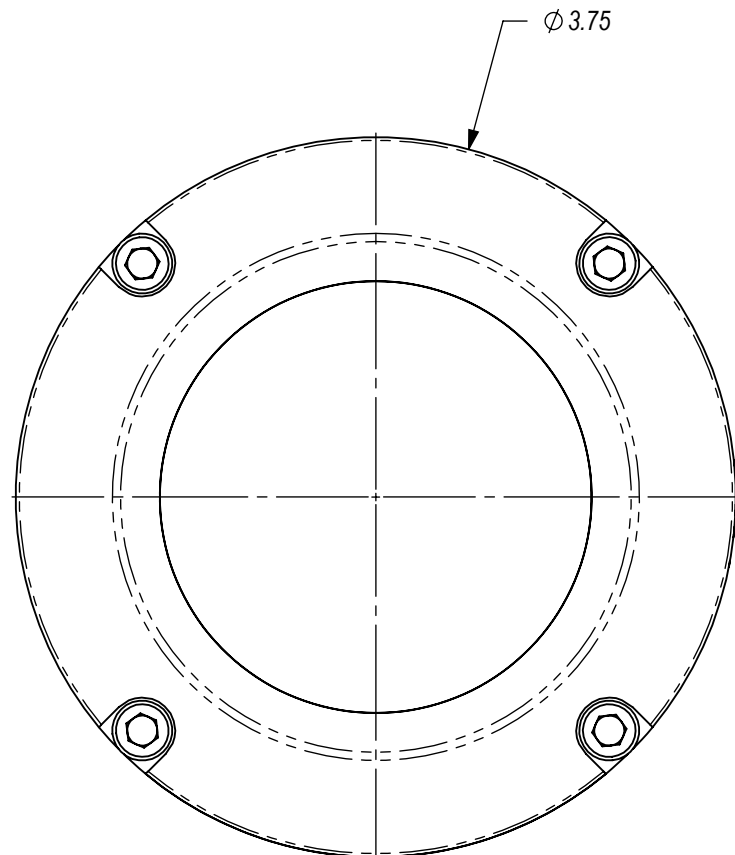
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### 1.3 ELECTRICAL CONNECTIONS

Name	Description
-V	<i>Power supply common</i> Also provides a ground reference for RS232C telemetry.
+V	<i>Power supply input</i> Connect this to a +22...28VDC power supply capable of delivering 300mA continuous (2 amp peak), such as the MS1000 Power Supply Box.
RS485+ (232 DWN)	<i>Telemetry RS232C RX input / RS485 active HI balanced I/O signal</i> For RS232 connect to the RS232 TX signal of the host computer. For RS485 connect to the RS485 active HI balanced bi-directional signal of the host computer or MS1000 Power Supply Box.
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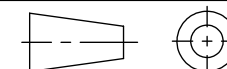
**NOTES:**

1. MAXIMUM OPERATING DEPTH: 11000msw / 36089ftsw.
2. SUBCONN BH4M CONNECTOR SHOWN.
3. WEIGHT IN AIR: 11.1 LBS / 5.0 KG  
WEIGHT IN SEAWATER: 7.9 LBS / 3.6 KG
4. DIMENSIONS ARE IN INCHES AND ARE NOMINAL.
5. DO NOT SCALE.

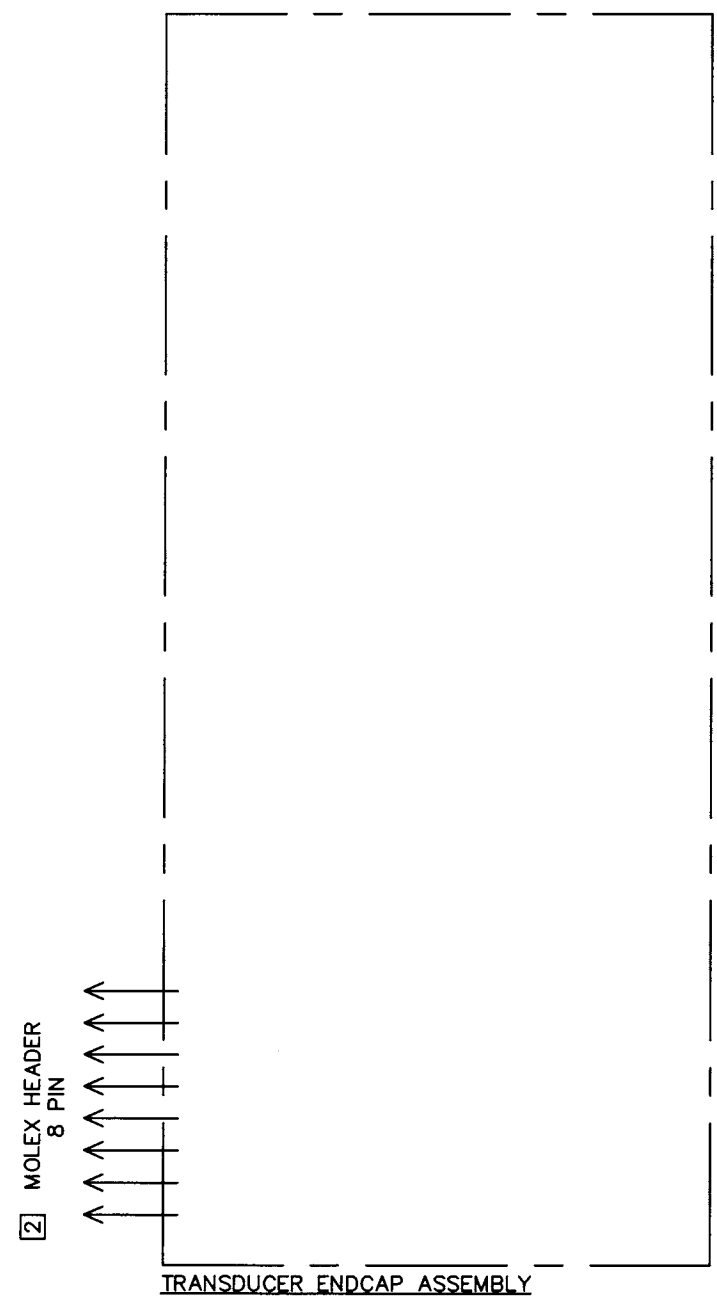
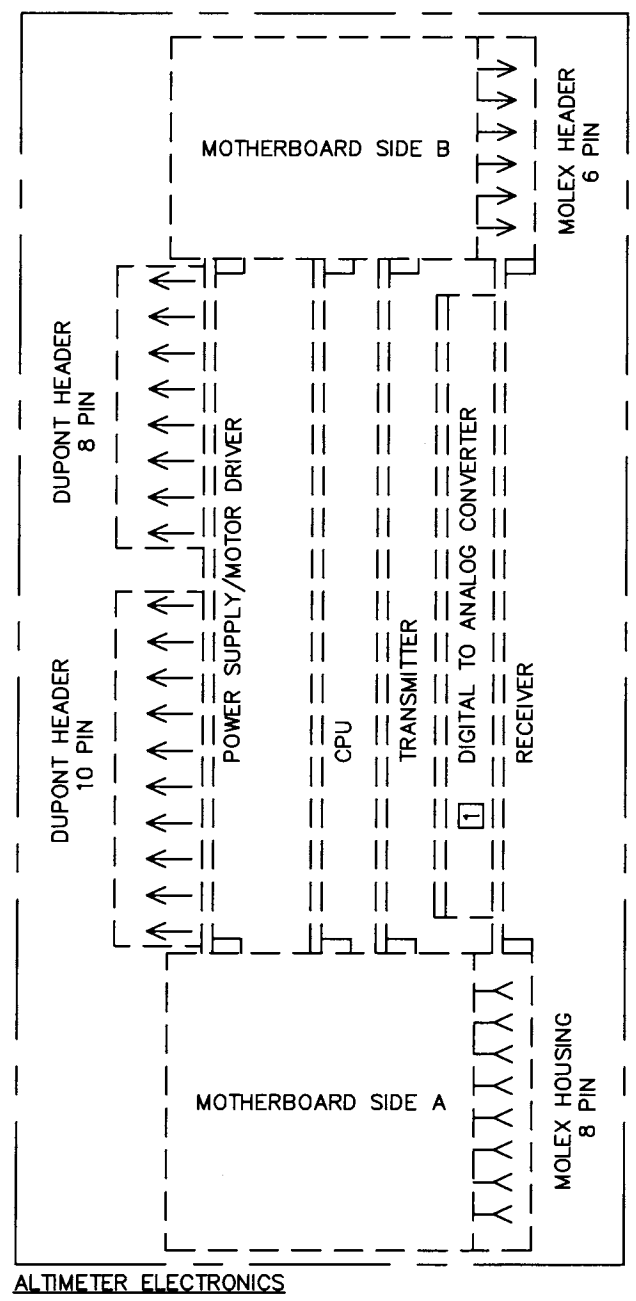
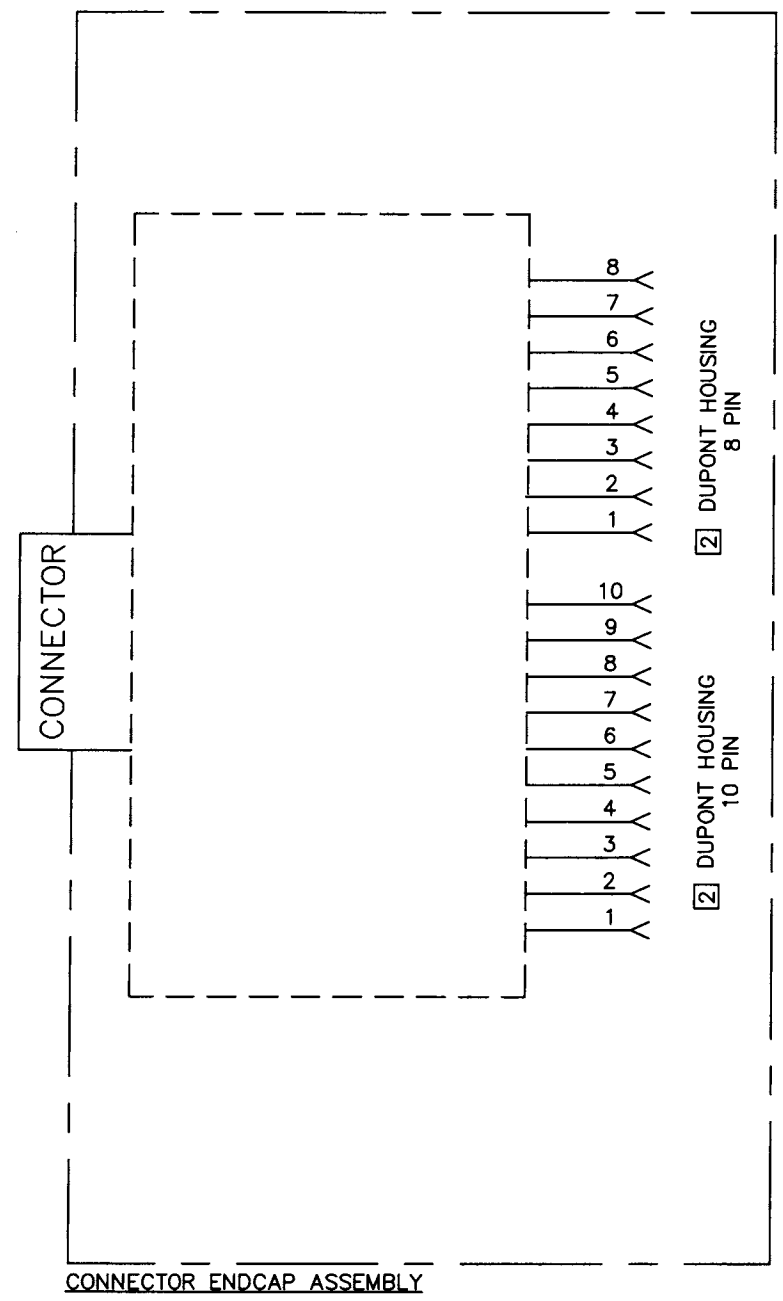
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APPROVALS	NAME	DATE
DRAWN	DL	11/10/05
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ENGR		
ISSUED		



ISS	DESCRIPTION	DATE
REVISIONS		
	<b>Kongsberg Mesotech Ltd.</b>	
	<b>OUTLINE AND INSTALLATION DRAWING</b>	
	<b>11000m ALTIMETER,</b>	
	<b>MODEL 1007D</b>	
SIZE	NSCM NO	TYPE
B	1C965	MD
DWG. NO.	974-71541001	
ISS	1.0	
SCALE: 1:1	W.O. NO.	SHEET 1 OF 1



- NOTES:
- 1 FOR ANALOG OUTPUT.
  - 2 CONNECTOR CRIMP SOCKETS ARE INSTALLED AS REQUIRED ONLY

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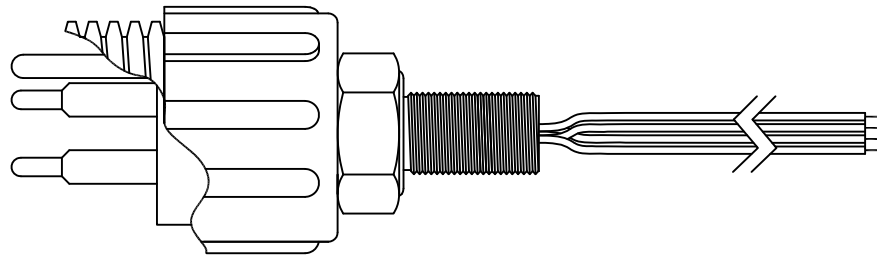
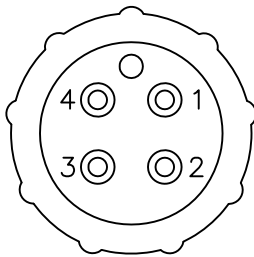
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APPROVALS	DATE
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REVISED	
CHECKED DM	Nov 24/2014
ENGR JH.	Nov 26/2014
ISSUED RCH	2014/12/2
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ISS	DESCRIPTION	DATE
REVISIONS		
Kongsberg Mesotech Ltd.		
BLOCK DIAGRAM MODEL 1007D ALTIMETER		
SIZE B	NSCM NO 1C965	TYPE MD
DWG NO. 974-71001002	ISS 1.0	
SCALE: NTS	W.O. NO.	SHEET 1 OF 1

- 1: -V (COM)
- 2: RS485- (232 UP)
- 3: +V
- 4: RS485+ (232 DWN)

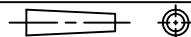
PIN VIEW

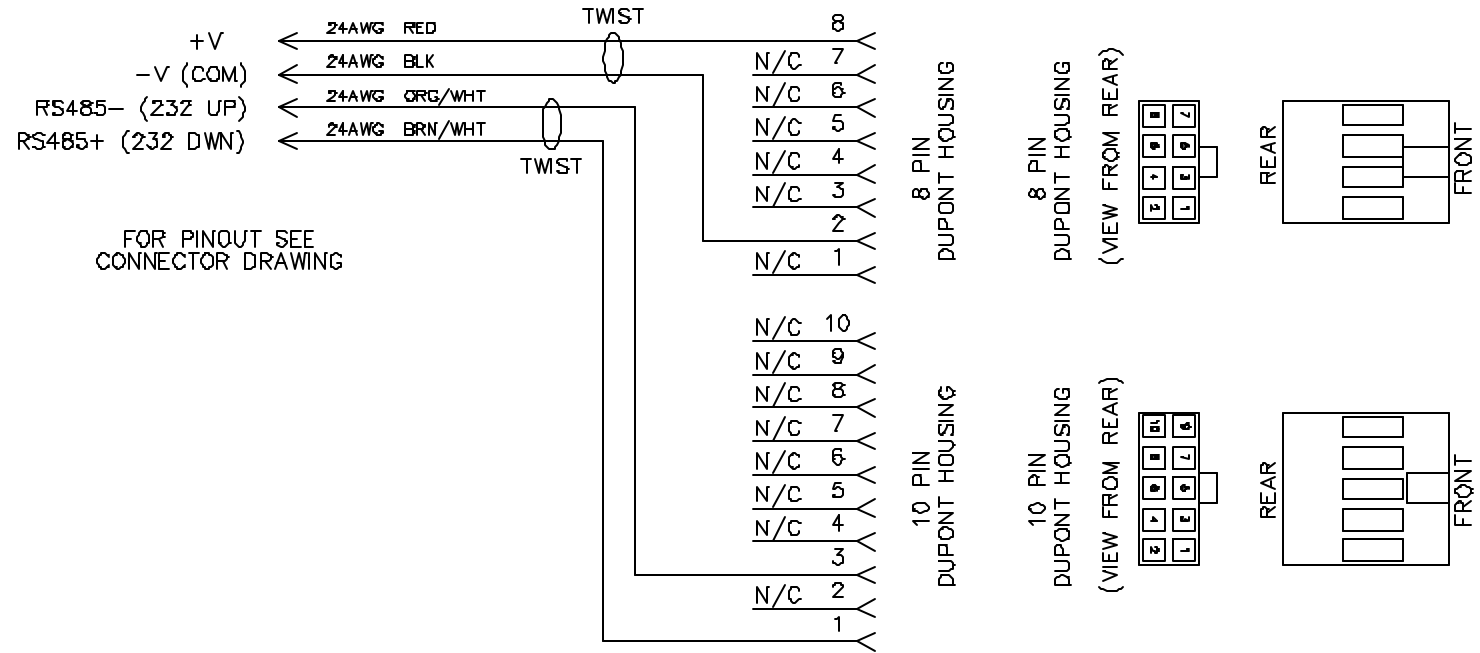


1.1	SEE ECO 4842	2011/08/19
ISS	DESCRIPTION	DATE

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	DRAWN J.BANSER	03/01/27					
	REVISED B.H.	11/08/19	CONNECTOR 4PIN, BH4M SERIES RS485/232				
	CHECKED						
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ISSUED		SCALE: 1:1		W.O. NO.		SHEET 1 OF 1	
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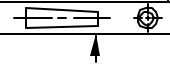
FOR PINOUT SEE CONNECTOR DRAWING

ZONE	ISS	DESCRIPTION	DATE	APPROVED
	1.1	ECO-3001	26 OCT 00	M.M.

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APPROVALS		DATE
DRAWN	J.BANSER	11MAY00
CHECKED		
ENGR		
ISSUED		
NEXT ASSY	MODEL	
ZONE		

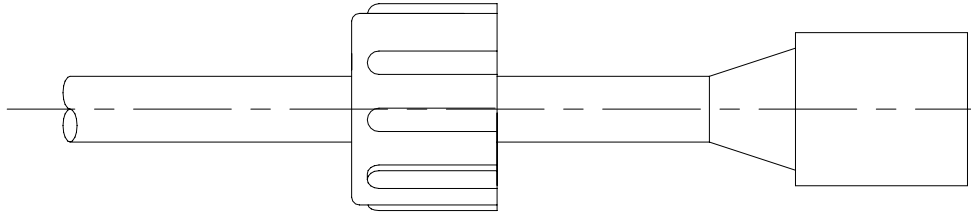
Kongsberg Simrad Mesotech Ltd.				
ENDCAP WIRING				
DIGITAL TELEMETRY				
RS485/232				
SIZE	NCSM NO	TYPE	DWG NO.	ISS
A	1C965	MD	442-00001301	1.1
SCALE: -	W.O. NO.	SHEET 1 OF 1		



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- 1: -V (COM)
- 2: RS485- (232 UP)
- 3: +V
- 4: RS485+ (232 DWN)

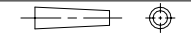
SOCKET VIEW



ZONE	ISS	DESCRIPTION	DATE	APPROVED
REVISIONS				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: DECIMALS   FRACTIONS   ANGLES .XX ±0.006   ±1/32   ±30° .XXX±0.003   SURFACE FINISH 125 BREAK SHARP EDGES 0.010 DE-BURR HOLES	APPROVALS		DATE		Kongsberg Simrad Mesotech Ltd.			
	DRAWN J.BANSER		27JAN03					
	CHECKED				CONNECTOR - PLUG 4PIN, IL4F SERIES RS485/232 DIGITAL TELEMTRY			
	ENGR							
	ISSUED				SIZE	NCSM NO	TYPE	DWG NO.
NEXT ASSY		MODEL		A	1C965	MD	442-00001444	1.0
CONFIDENTIAL DO NOT COPY				SCALE: 1:1		W.O. NO.		SHEET 1 OF 1

DO NOT SCALE DRAWING





# TECHNICAL INFORMATION

## 1007D ALTIMETER

P/N 974-71560000

Specifications subject to change without notice  
974-71567902

**KONGSBERG MESOTECH LTD. 1598 Kebet Way, Port Coquitlam B.C. Canada V3C 5M5**  
**Tel: (604) 464 8144 Fax: (604) 941 5423**

# 1007D Series Altimeter

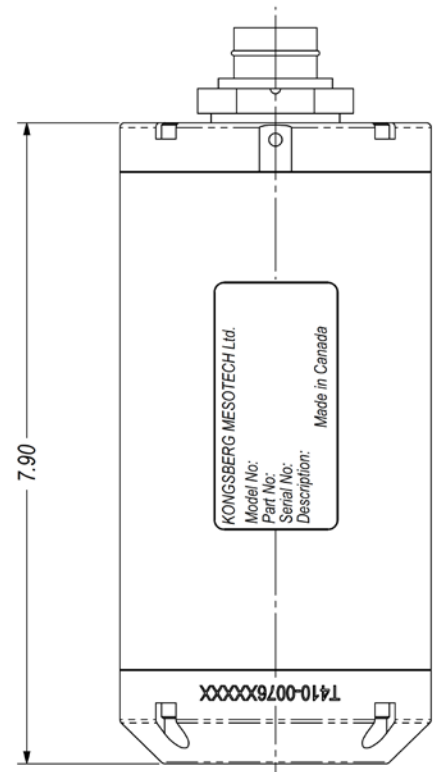
P/N 974-71560000-78F1



KONGSBERG

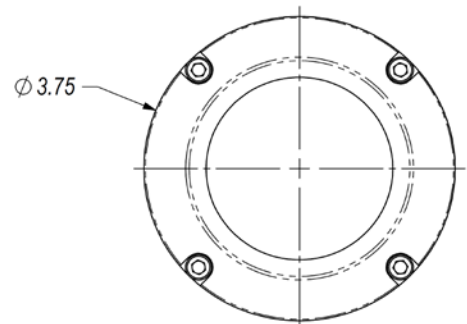
This version of the 1007D digital altimeters is designed for deep ocean applications, where dimensions, weight and safety are key equipment selection factors. To minimize the risk of implosion at extreme depths, as required for installation on manned submersible vehicles, the pressure housing containing the altimeter electronics is 90% filled with Flourinert®.

Operating Frequency:	200 kHz
Beam Width:	10° nominal
Minimum Range: <sup>2</sup>	Adjustable, limited by pulse length <b>[0.75m]</b>
Maximum Range: <sup>2</sup>	Adjustable, up to 305 m <b>[200m]</b>
Output Resolution: <sup>2</sup>	Adjustable, > 2.4mm <b>[12.5mm]</b>
Transmit Pulse Widths: <sup>2</sup>	Adjustable, 20 to 1000 µS <b>[100µS]</b>
Repetition Rate: <sup>2</sup>	Adjustable, limited by range and resolution
Assumed speed of sound: <sup>2</sup>	Adjustable, 1400 to 1600 M/S <b>[1475 M/S]</b>
Receive Bandwidth:	20 kHz max
Operating Mode: <sup>1</sup>	Configurable, (809, or MS1000) <b>[809]</b>
Telemetry Interface: <sup>3,4</sup>	Configurable, (RS232C, or RS485) <b>[RS232]</b>
Downlink Baud Rate:	9600 bps
Uplink Baud Rate:	9600 bps, adjustable in MS1000 mode
Hold-off Synchronization:	Via serial command or TTL input
Power Requirement:	+22 to +26 Vdc @ 1.0A startup, 250 mA continuous
Temperature Range:	-10 to +50°C operating -30 to +50°C storage
Operating Depth:	11000m
Connector:	Seacon VSK-6-BCL
Materials:	Titanium, Urethane
Dimensions: (3000m)	Length 7.9"/200mm (excludes connector) Diameter 3.75"/95.3mm
(Est.) Weight:	Air: 11.1 lbs./5.1 kg Water: 6.2 lbs/2.8 kg



Factory Defaults shown in **[ 1 ]**

- 1 Configurable
- 2 Fully adjustable in 809, MS1000 modes
- 3 Configurable in 809 mode
- 4 Auto-detect in MS1000 mode



Specifications subject to change without notice  
974-71567901 Iss 1.3

KONGSBERG MESOTECH LTD. 1598 Kebet Way, Port Coquitlam B.C. Canada V3C 5M5  
Tel: (604) 464 8144 Fax: (604) 941 5423

# TECHNICAL INFORMATION

## 1007D ALTIMETER

P/N 974-71560000

Specifications subject to change without notice  
974-71567902

**KONGSBERG MESOTECH LTD. 1598 Kebet Way, Port Coquitlam B.C. Canada V3C 5M5**  
**Tel: (604) 464 8144 Fax: (604) 941 5423**

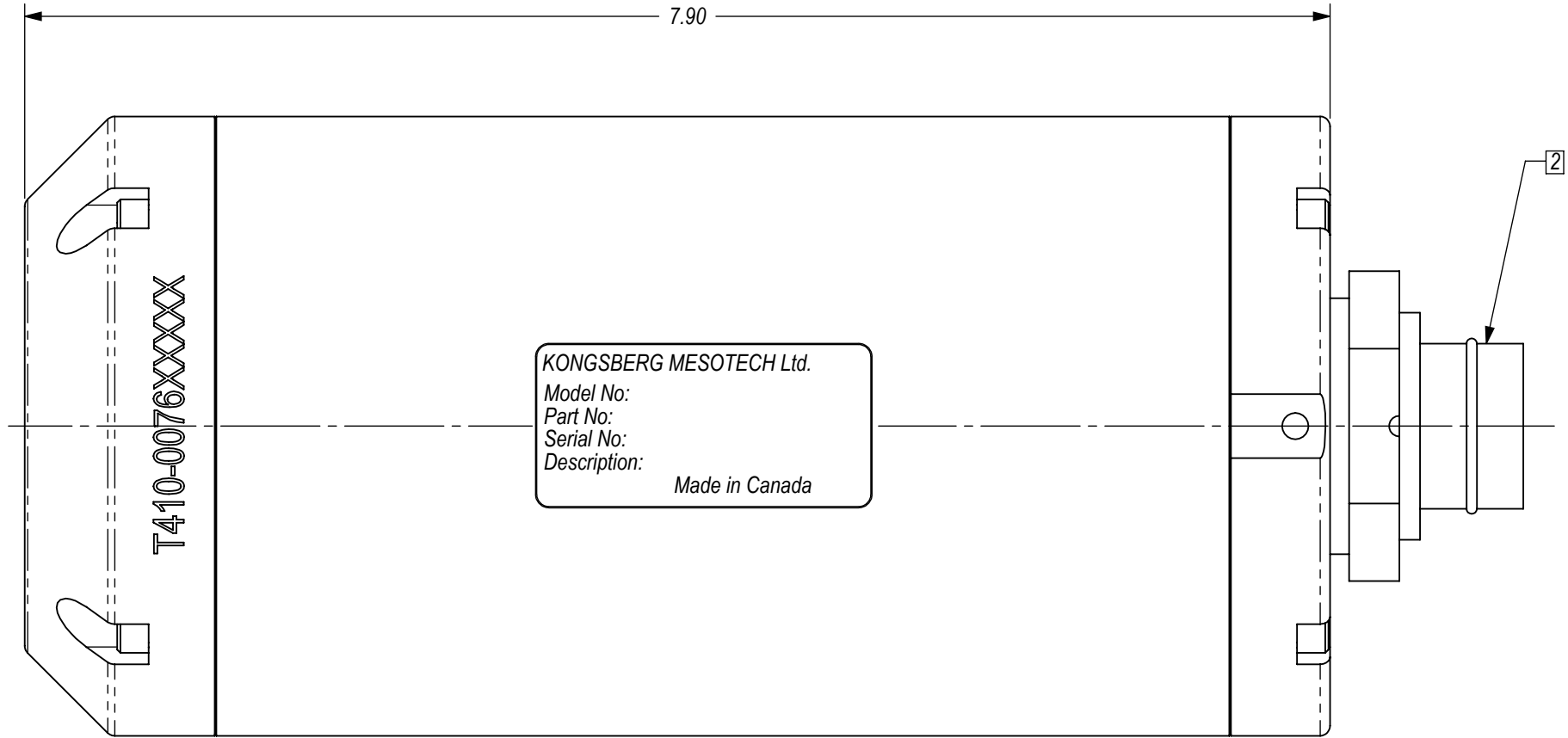
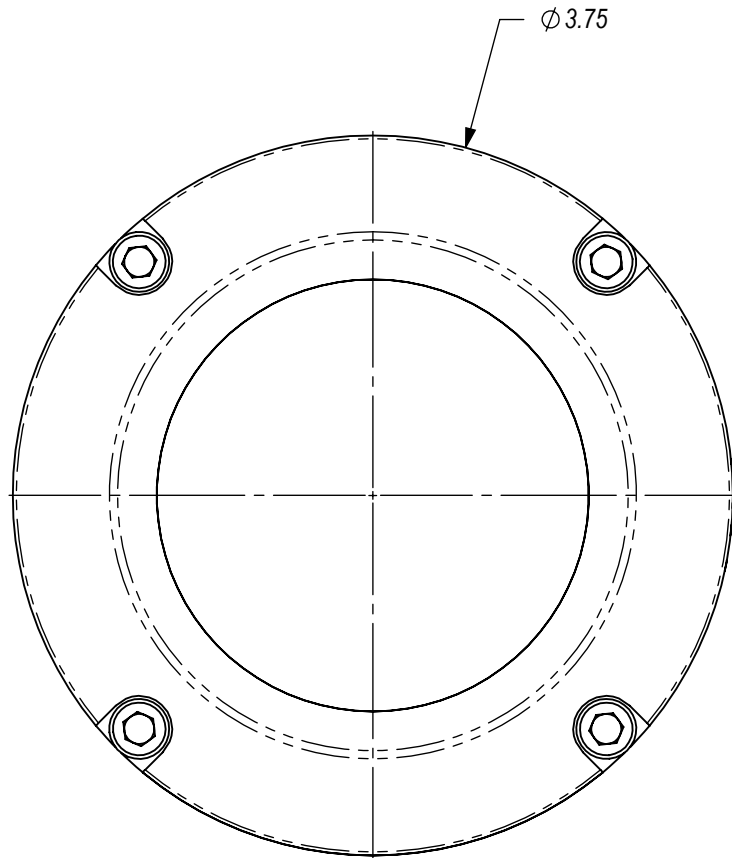
## 1007D ALTIMETER

### 1.1 SCOPE

This document presents the information specific to the Model 1007D Altimeter P/N: 974-71560000. Refer to the “Model 1007D Operators Manual” for general information related to product installation and usage.

### 1.2 ELECTRICAL CONNECTIONS

Name	Description
-V	<i>Power supply common</i>
+V	<i>Power supply input</i> Connect this to a +22...28VDC power supply capable of delivering 300mA continuous (2 amp peak), such as the MS1000 Power Supply Box.
HOLDOFF	<i>External Holdoff input</i> Active LOW TTL-compatible input signal. If altimeter is operating as a standalone unit, connect this to -V (COM) to halt pinging. Connect this input to +5V (or leave floating) to resume pinging.
DIGITAL COM	<i>Digital signal common</i> Ground reference for telemetry and HOLDOFF.
RS485+ (232 DWN)	<i>Telemetry RS232C RX input / RS485 active HI balanced I/O signal</i> For RS232 connect to the RS232 TX signal of the host computer. For RS485 connect to the RS485 active HI balanced bi-directional signal of the host computer or MS1000 Power Supply Box.
RS485- (232 UP)	<i>Telemetry RS232C TX output / RS485 active LO balanced I/O signal</i> For RS232 connect to the RS232 RX signal of the host computer. For RS485 connect to the RS485 active LO balanced bi-directional signal of the host computer or MS1000 Power Supply Box.



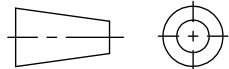
KONGSBERG MESOTECH Ltd.  
 Model No:  
 Part No:  
 Serial No:  
 Description:  
 Made in Canada

- NOTES:
1. MAXIMUM OPERATING DEPTH: 11000msw / 36089ftsw.
  2. SEACON VSK-BCL SERIES CONNECTOR SHOWN.
  3. WEIGHT IN AIR: 9.5 LBS / 4.3KG  
WEIGHT IN SEAWATER: 6.6 LBS / 3.0 KG
  4. DIMENSIONS ARE IN INCHES AND ARE NOMINAL.
  5. DO NOT SCALE.

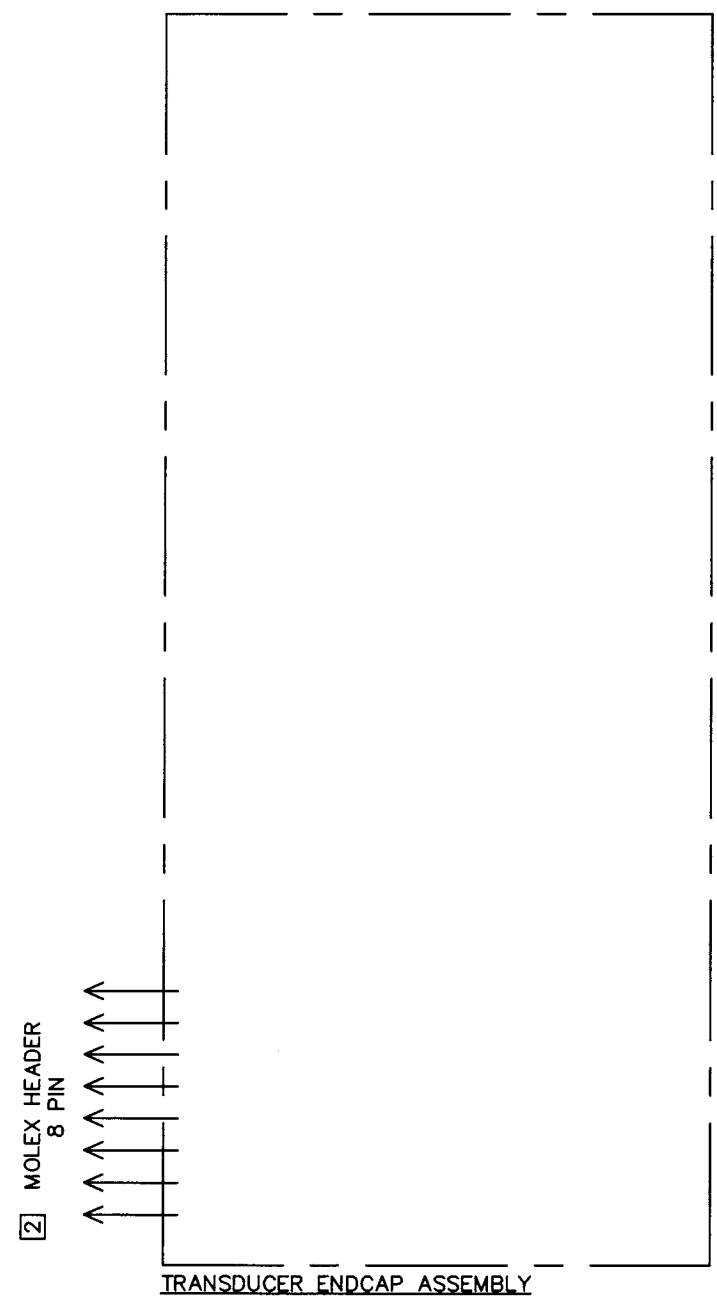
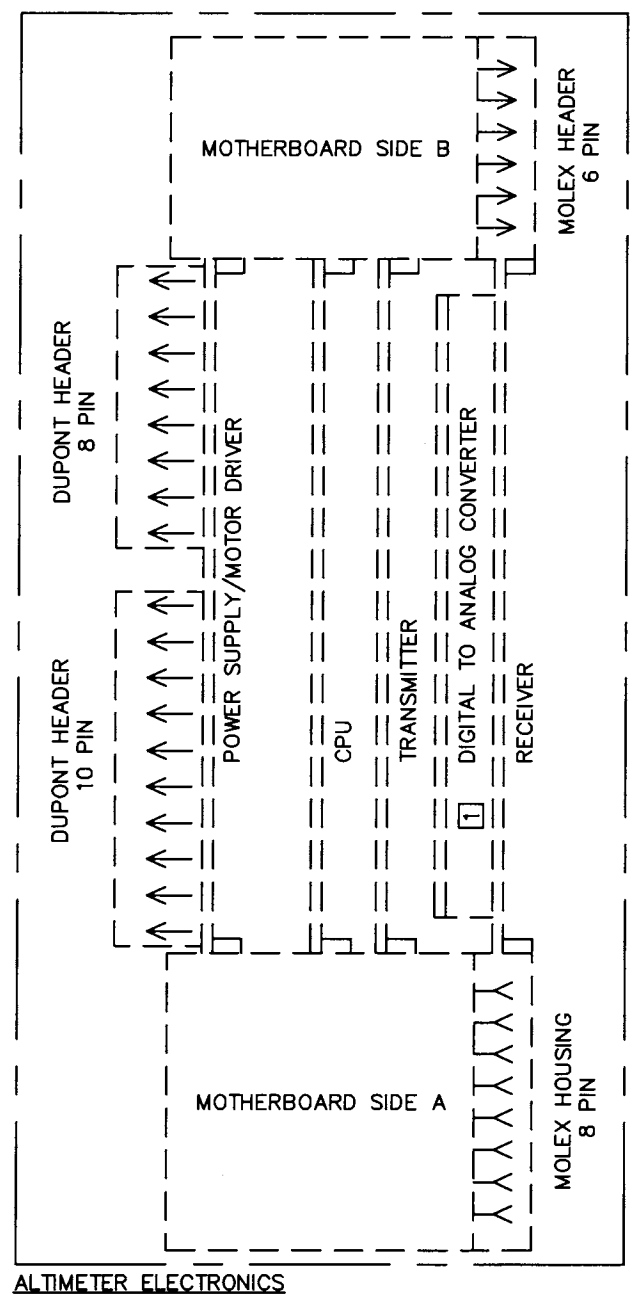
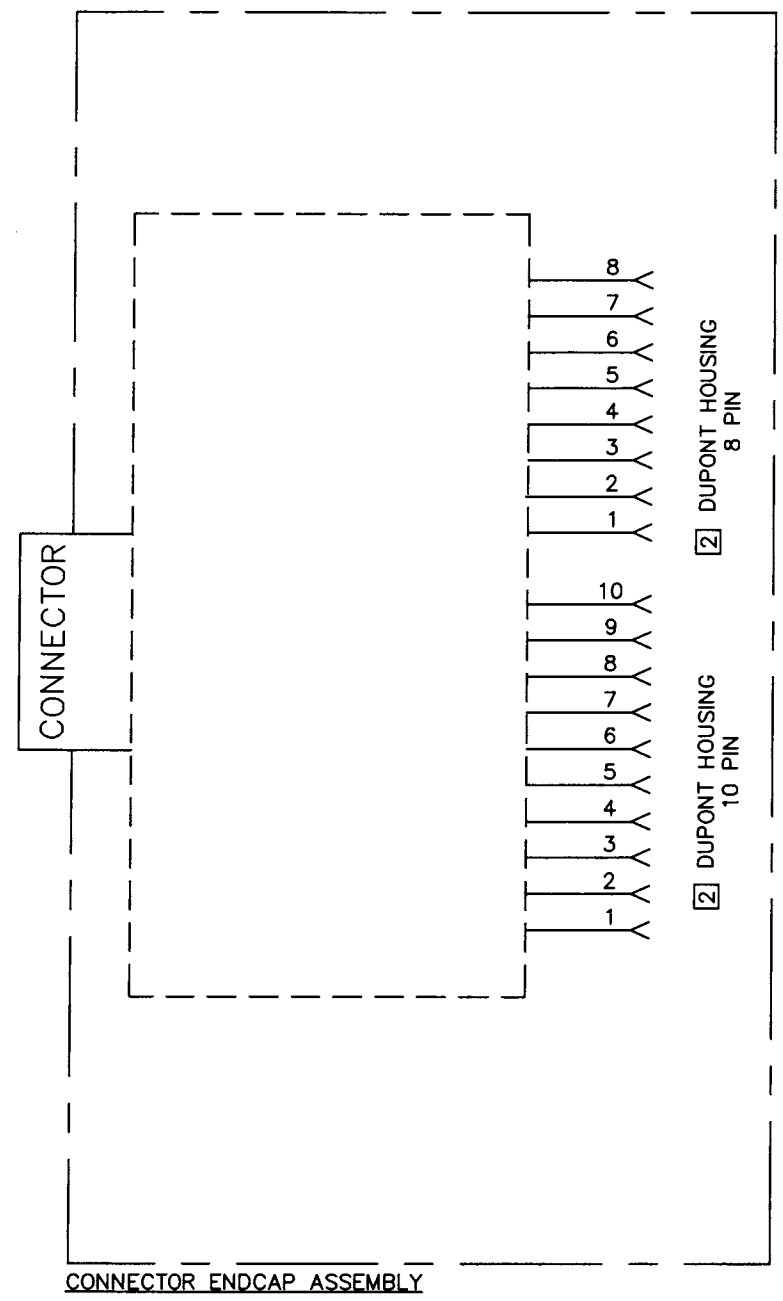
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DO NOT SCALE DRAWING.  
 CONFIDENTIAL. DO NOT COPY.

APPROVALS	NAME	DATE
DRAWN	DL	12/09/13
REVISED	--	--
CHECKED		
ENGR		
ISSUED		



ISS	DESCRIPTION	DATE
REVISIONS		
	<b>Kongsberg Mesotech Ltd.</b>	
	<b>OUTLINE AND INSTALLATION DRAWING 11000m ALTIMETER, MODEL 1007D</b>	
SIZE	NSCM NO	TYPE
B	1C965	MD
DWG. NO.	ISS	
974-71561001	1.0	
SCALE: 1:1	W.O. NO.	SHEET 1 OF 1



- NOTES:
- 1 FOR ANALOG OUTPUT.
  - 2 CONNECTOR CRIMP SOCKETS ARE INSTALLED AS REQUIRED ONLY

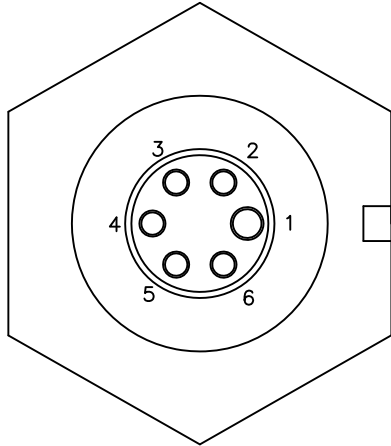
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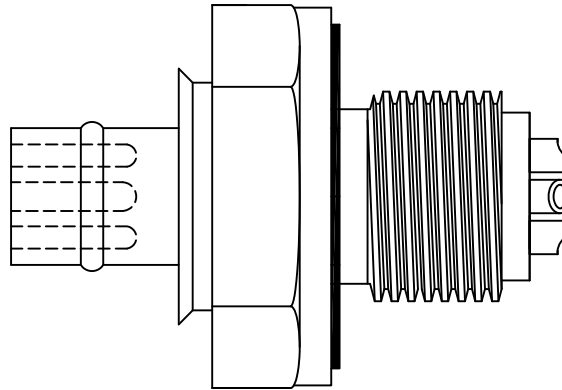
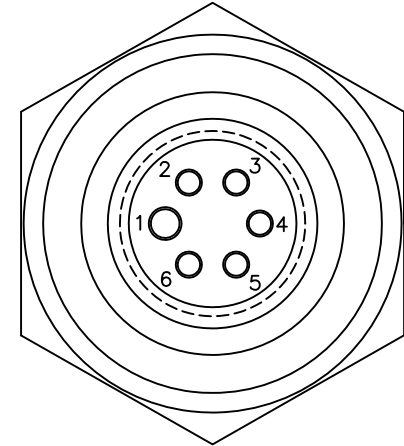
APPROVALS	DATE
DRAWN BD	2014 NOV 21
REVISED	
CHECKED <i>DM</i>	Nov 24/2014
ENGR <i>JH.</i>	Nov 26/2014
ISSUED <i>RCH</i>	2014/12/2
CONFIDENTIAL DO NOT COPY	

ISS	DESCRIPTION	DATE
REVISIONS		
	Kongsberg Mesotech Ltd.	
	BLOCK DIAGRAM MODEL 1007D ALTIMETER	
SIZE	NSCM NO	TYPE
B	1C965	MD
DWG NO.	974-71001002	
ISS	1.0	
SCALE: NTS	W.O. NO.	SHEET 1 OF 1

PIN VIEW



SOLDER CUP VIEW

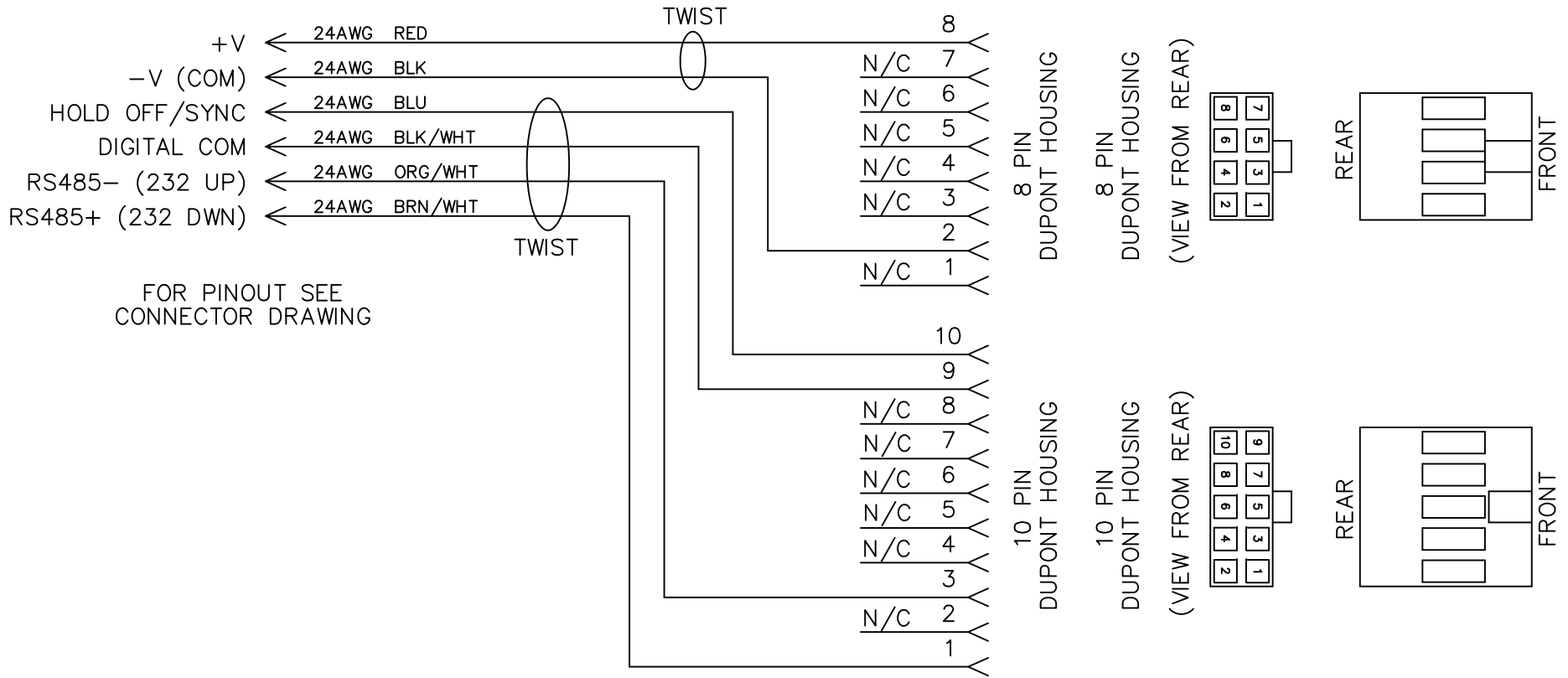


- 1: -V (COM)
- 2: +V
- 3: HOLDOFF/SYNC
- 4: DIGITAL COM
- 5: RS485- (232 UP)
- 6: RS485+ (232 DWN)

ISS	DESCRIPTION	DATE
REVISIONS		
Kongsberg Mesotech Ltd.		
CONNECTOR 6PIN, VMK/VSK SERIES		
SIZE	NSCM NO	TYPE
A	1C965	MD
DWG NO.		ISS
442-00001287		1.0
SCALE: NTS		W.O. NO.
		SHEET 1 OF 1

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	DRAWN DL	12/06/12
	REVISED	
	CHECKED	
	ENGR	
	ISSUED	
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1.2	ECO 4689	2010SEP27
1.1	ECO 3188	2001JUN19
ISS	DESCRIPTION	DATE

REVISIONS

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APPROVALS	DATE
DRAWN J.BANSER	2001FEB16
CHECKED B.H.	2010SEP27
ENGR	
ISSUED	
NEXT ASSY	MODEL
ZONE	

Kongsberg Mesotech Ltd.

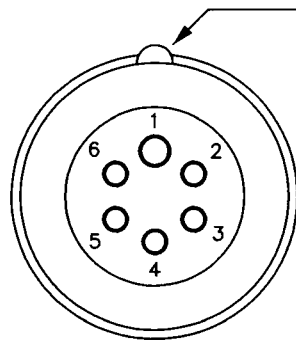
ENDCAP WIRING  
RS485/232 DIGITAL TELEMETRY  
HOLD OFF/SYNC

SIZE	NSCM NO	TYPE	DWG NO.	ISS
A	1C965	MD	442-00001316	1.2





SOCKET VIEW



THE 'VISUAL INDEX' SEEN ON THE WHIP'S BODY DENOTES THE POSITION OF PIN 1

- 1: -V (COM)
- 2: +V
- 3: HOLDOFF/SYNC
- 4: DIGITAL COM
- 5: RS485- (232 UP)
- 6: RS485+ (232 DWN)

1.1	ECO 5452	2015-MAR-12
ISS	DESCRIPTION	DATE
REVISIONS		

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APPROVALS	DATE
DRAWN DL	2012-JUN-12
REVISED BH	2015-MAR-12
CHECKED <i>SC</i>	2015-MAR-24
ENGR <i>IB</i>	3/24/2015
ISSUED <i>R.L.H.</i>	2015/03/25
CONFIDENTIAL DO NOT COPY	

Kongsberg Mesotech Ltd.

CONNECTOR - PLUG  
6 PIN, VMK/VSK SERIES  
----

SIZE A	NSCM NO 1C965	TYPE MD	DWG NO. 442-00001487	ISS 1.1
SCALE: NTS		W.O. NO.	SHEET 1 OF 1	



# 1007D Series Altimeter

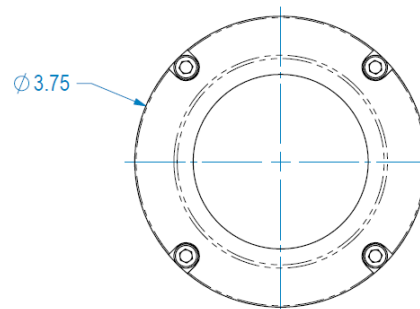
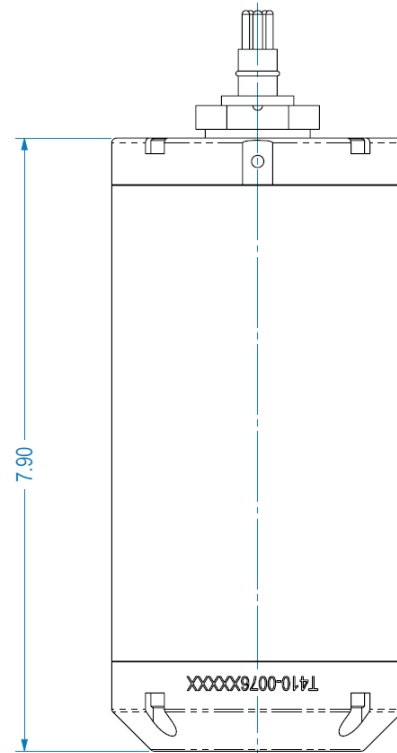
P/N 974-72110000-78F1



KONGSBERG

This version of the 1007D digital altimeters is designed for deep ocean applications, where dimensions, weight and safety are key equipment selection factors. To minimize the risk of implosion at extreme depths, as required for installation on manned submersible vehicles, the pressure housing containing the altimeter electronics is 90% filled with Flourinert®.

Operating Frequency:	200 kHz
Beam Width:	10° nominal
Minimum Range: <sup>2</sup>	Adjustable, limited by pulse length <b>[0.80m]</b>
Maximum Range: <sup>2</sup>	Adjustable, up to 305 m <b>[304.8m]</b>
Output Resolution: <sup>2</sup>	Adjustable, > 2.4 mm <b>[1.9cm]</b>
Transmit Pulse Widths: <sup>2</sup>	Adjustable, 20 to 1000 µs <b>[250 µS]</b>
Repetition Rate: <sup>2</sup>	Adjustable, limited by range and resolution
Assumed speed of sound: <sup>2</sup>	Adjustable, 1400 to 1600 m/s <b>[1475 m/s]</b>
Receive Bandwidth:	20 kHz max
Operating Mode: <sup>1,3</sup>	Configurable, 807,808, 809, MS1000 <b>[809]</b>
Serial Interface: <sup>1,2</sup>	RS232C or RS485 <b>[RS232C]</b>
Downlink Baud Rate:	9600 bps
Uplink Baud Rate:	9600 bps, adjustable in MS1000 mode
Aux. Analog Output:	0-5V or 0-10V <b>[10V]</b>
Power Requirement:	+22 to +26 VDC @ 1.0 A startup, 250 mA continuous
Temperature Range:	-10 to +40° C operating -30 to +50° C storage
Operating Depth:	11,000 m
Connector:	Seacon RMG-6-BCL
Materials:	Titanium, 300-series S.S., Urethane
Dimensions:	Length 7.9 in/200 mm (excludes connector) Housing Diameter 3.75 in/95.3 mm
Weight (est.):	Air 11.3 lbs./ 5.1 kg Water 8.2 lbs / 3.7 kg



## Factory Defaults Shown in [ ]

- <sup>1</sup> configurable
- <sup>2</sup> configurable in 809 mode
- <sup>3</sup> configurable in MS1000 mode
- \* configurable settings require ALTCONFIG software

Specifications subject to change without notice  
974-72117901 Iss. 1.1

KONGSBERG MESOTECH LTD. 1598 Kebet Way, Port Coquitlam B.C. Canada V3C 5M5  
Tel: (604) 464 8144 Fax: (604) 941 5423

## 1007D ALTIMETER

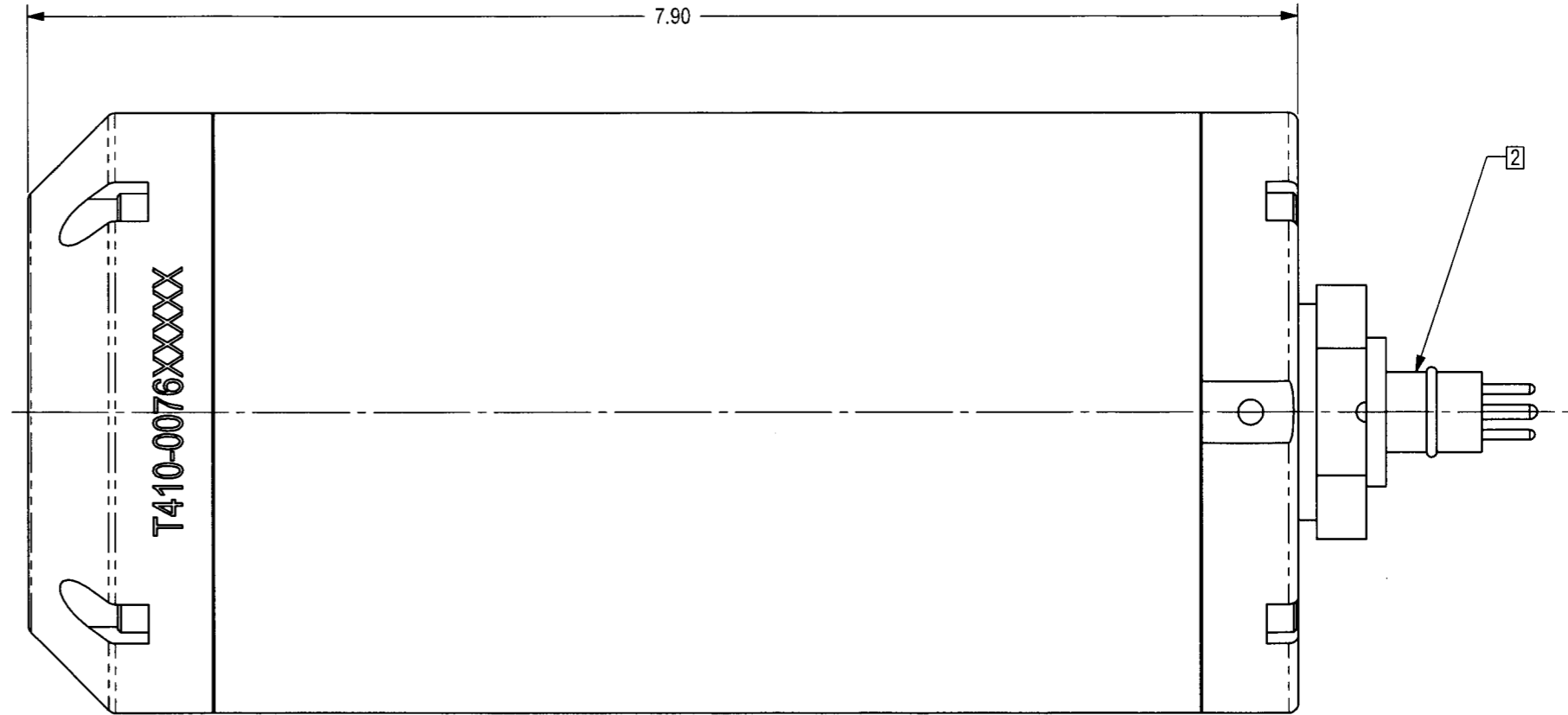
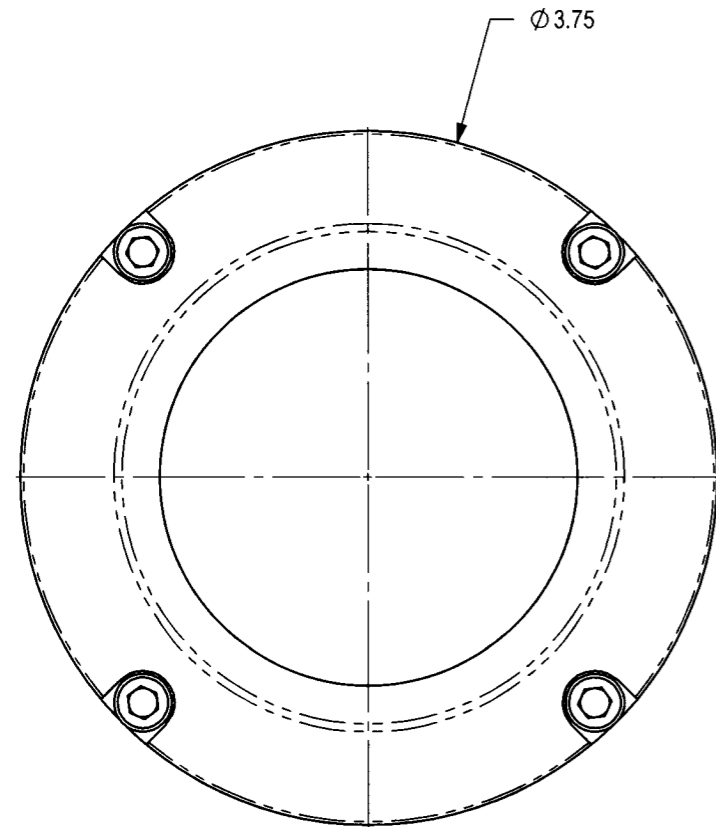
### 1.1 SCOPE

This document presents the information specific to the Model 1007D Altimeter P/N: 974-72110000. Refer to the “Model 1007D Operators Manual” for general information related to product installation and usage.

### 1.2 ELECTRICAL CONNECTIONS

Name	Description
-V	<i>Power supply common</i> Also provides a ground reference for RS232C telemetry.
+V	<i>Power supply input</i> Connect this to a +22...28VDC power supply capable of delivering 300mA continuous (2 amp peak), such as the MS1000 Power Supply Box.
ANALOG OUT	<i>Analog DC voltage output</i> For optional output of altitude as a non-negative DC voltage, linearly scaled between the minimum and maximum range voltage limits. These limits represent the altimeter's current minimum and maximum range settings. An overload voltage value is output when bottom/target is not found. Output voltage scaling and overrange are both configurable using the ALTCONFIG utility.
ANALOG COM	<i>Analog DC voltage common/reference</i>
RS485+ (232 DWN)	<i>Telemetry RS232C RX input / RS485 active HI balanced I/O signal</i> For RS232 connect to the RS232 TX signal of the host computer. For RS485 connect to the RS485 active HI balanced bi-directional signal of the host computer or MS1000 Power Supply Box.
RS485- (232 UP)	<i>Telemetry RS232C TX output / RS485 active LO balanced I/O signal</i> For RS232 connect to the RS232 RX signal of the host computer. For RS485 connect to the RS485 active LO balanced bi-directional signal of the host computer or MS1000 Power Supply Box.

DWG. NO.	SHT	ISS
974-72111001	1	1.0



**NOTES:**

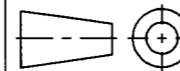
1. MAXIMUM OPERATING DEPTH: 11000msw / 36089ftsw.
2. SEACON RMG/XSG - BCL SERIES CONNECTOR SHOWN.
3. WEIGHT IN AIR: 9.7 LBS / 4.4KG  
WEIGHT IN SEAWATER: 6.6 LBS / 3.0 KG
4. DIMENSIONS ARE IN INCHES AND ARE NOMINAL.
5. DO NOT SCALE.

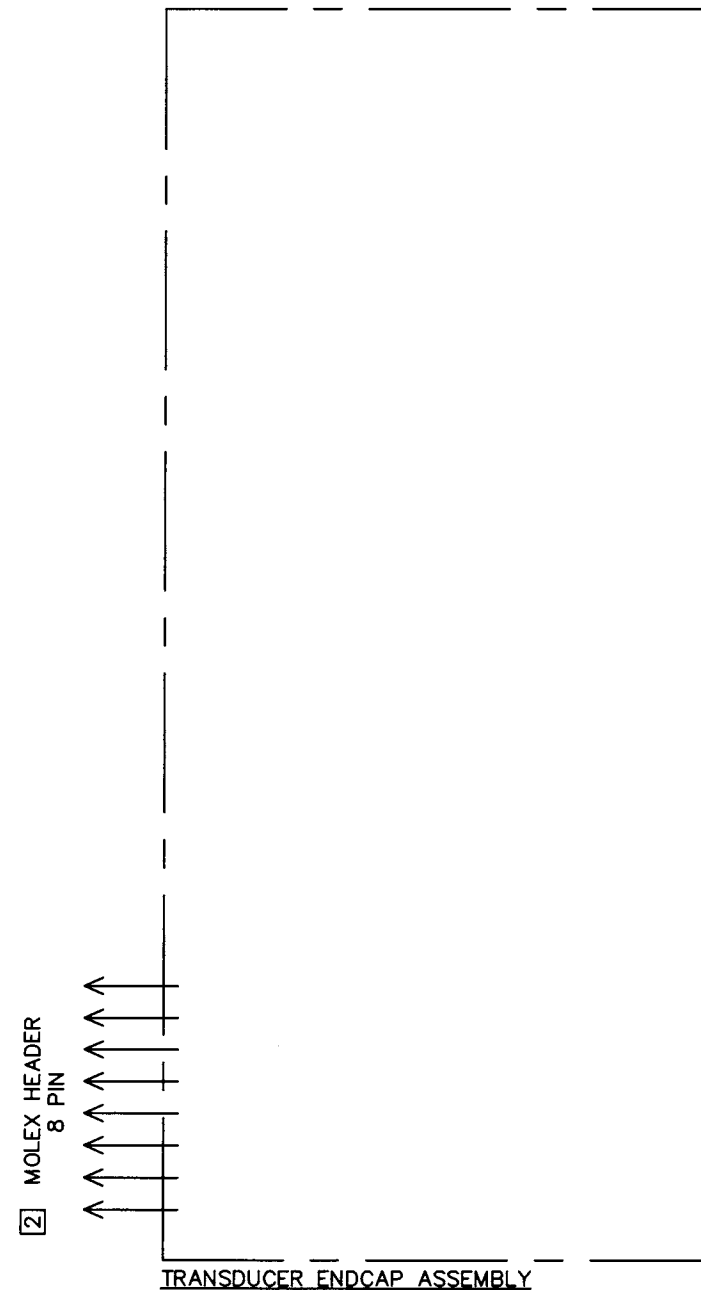
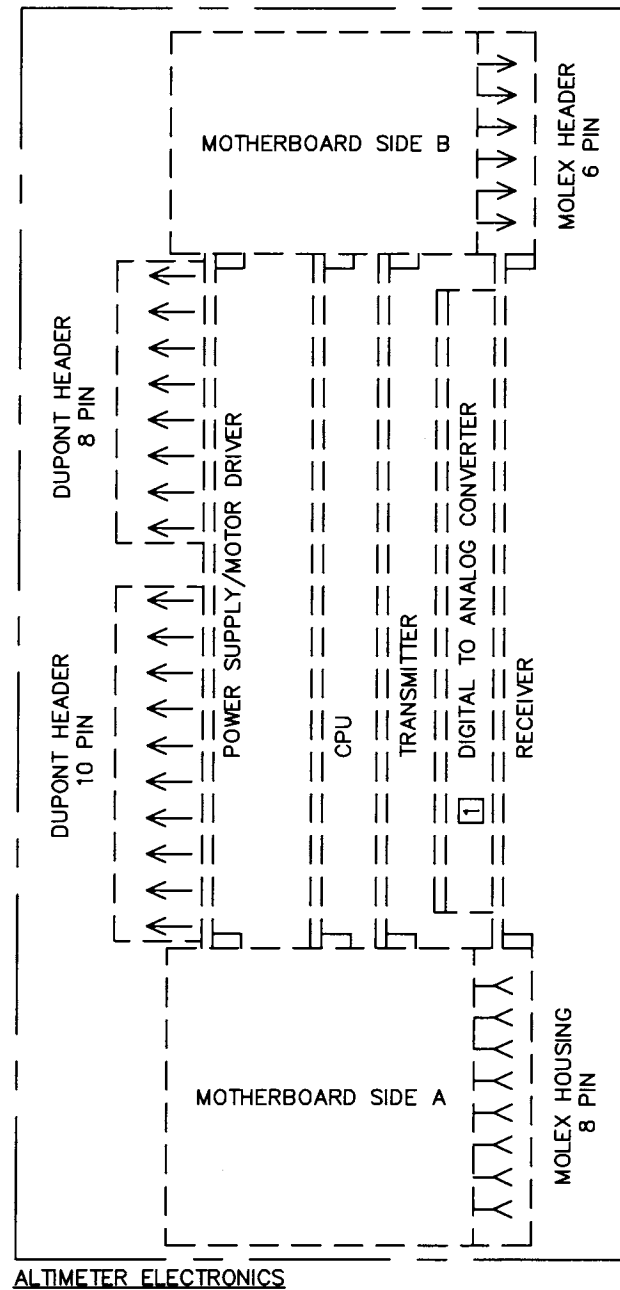
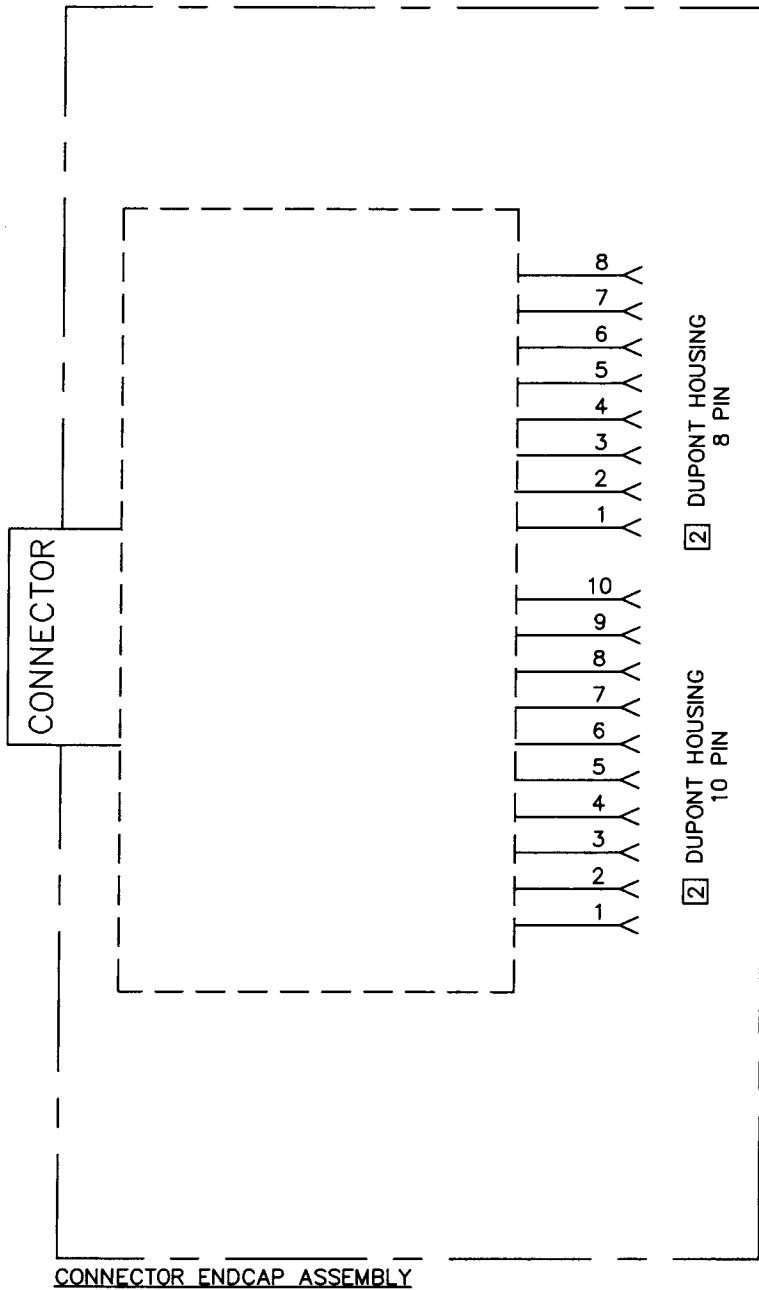
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APPROVALS	NAME	DATE
DRAWN	DL	2015/09/18
REVISED	--	--
ENGR	ES	15/11/19
CHECKED	DL	15/11/20
PROD	MC	15/11/20
QA	LA	20-NOV-15
ISSUED	P.H.	20 NOV 2015

ISS	DESCRIPTION	DATE
REVISIONS		
<b>Kongsberg Mesotech Ltd.</b>		
<b>OUTLINE AND INSTALLATION DRAWING</b>		
<b>11000m ALTIMETER,</b>		
<b>MODEL 1007D</b>		
SIZE	NSCM NO	TYPE
B	1C965	MD
DWG. NO.	ISS	
974-72111001	1.0	
SCALE: 1:1	W.O. NO.	SHEET 1 OF 1

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 DO NOT SCALE DRAWING.





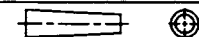
- NOTES:
- 1 FOR ANALOG OUTPUT.
  - 2 CONNECTOR CRIMP SOCKETS ARE INSTALLED AS REQUIRED ONLY

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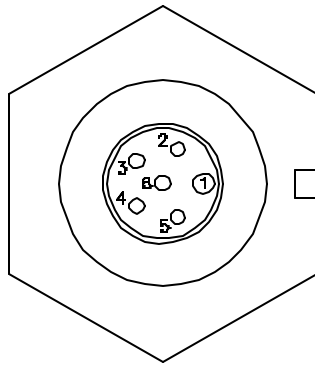
APPROVALS	DATE
DRAWN BD	2014 NOV 21
REVISED	
CHECKED DM	Nov 24/2014
ENGR JH.	Nov 26/2014
ISSUED RCH	2014/12/2
CONFIDENTIAL DO NOT COPY	

ISS	DESCRIPTION	DATE
REVISIONS		
Kongsberg Mesotech Ltd.		
BLOCK DIAGRAM MODEL 1007D ALTIMETER		
SIZE B	NSCM NO 1C965	TYPE MD
DWG NO. 974-71001002	ISS 1.0	
SCALE: NTS	W.O. NO.	SHEET 1 OF 1

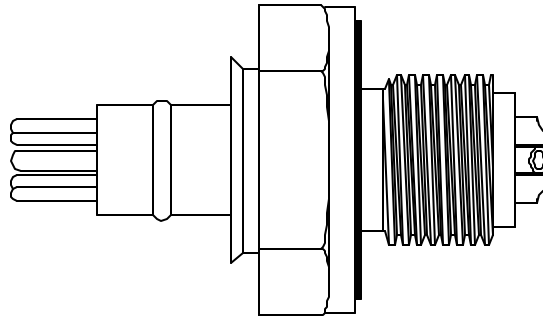
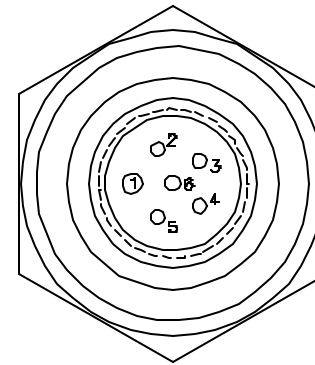
DO NOT SCALE DRAWING



PIN VIEW



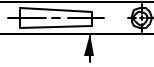
SOLDER CUP VIEW



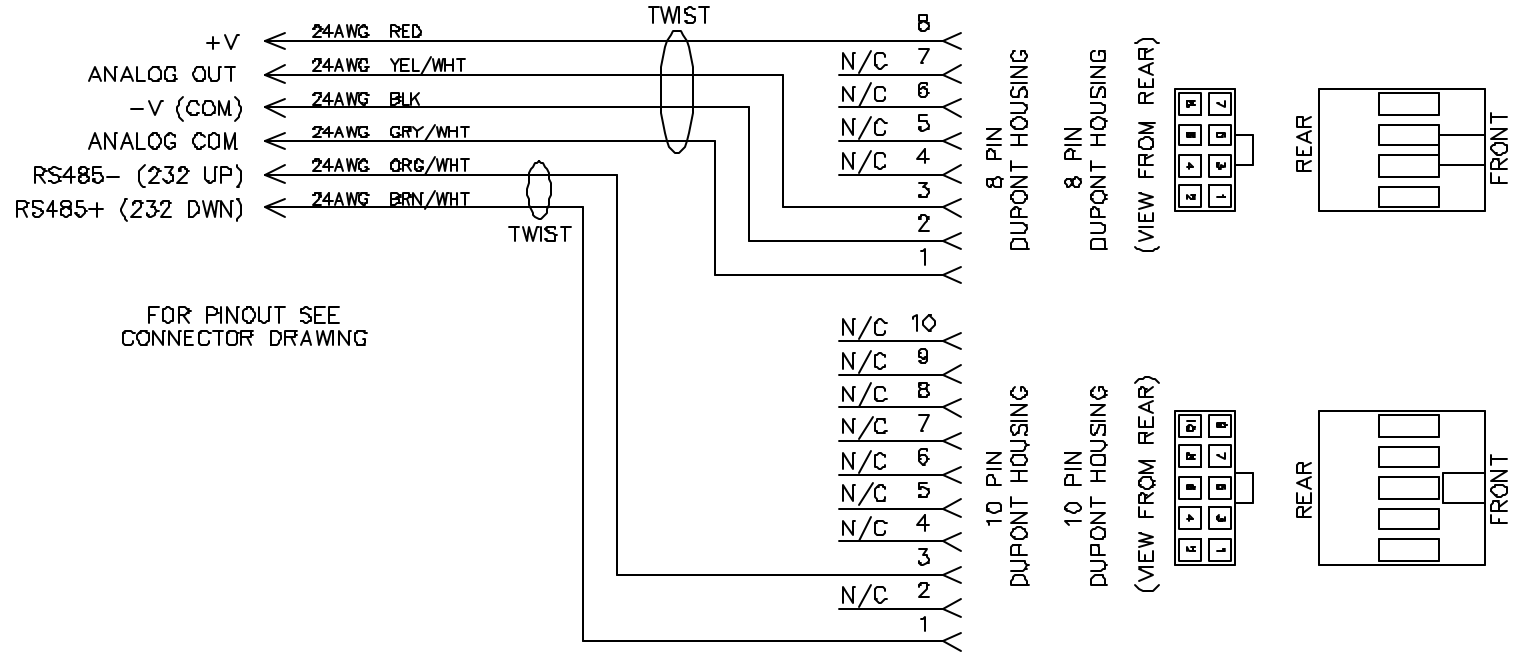
- 1: -V (COM)
- 2: +V
- 3: ANALOG OUT
- 4: ANALOG COM
- 5: RS485- (232 UP)
- 6: RS485+ (232 DWN)

ZONE	ISS	DESCRIPTION	DATE	APPROVED
REVISIONS				

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	DRAWN J.BANSER		18JUN01					
	CHECKED		ENGR		CONNECTOR 6PIN, RMG/XSG SERIES RS485/232 ANALOG O/P			
	ISSUED		NEXT ASSY					
	MODEL		SIZE A	NSCM NO 1C965	TYPE MD	DWG NO. 442-00001225	ISS 1.0	



SCALE: 2:1 W.O. NO. SHEET 1 OF 1



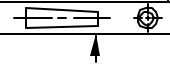
FOR PINOUT SEE CONNECTOR DRAWING

ZONE	ISS	DESCRIPTION	DATE	APPROVED
REVISIONS				

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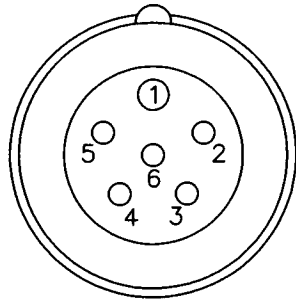
APPROVALS		DATE
DRAWN	J.BANSER	18JUN01
CHECKED		
ENGR		
ISSUED		
NEXT ASSY	MODEL	
ZONE		

Kongsberg Simrad Mesotech Ltd.				
ENDCAP WIRING RS485/232 DIGITAL TELEMETRY ANALOG O/P				
SIZE	NCSM NO	TYPE	DWG NO.	ISS
A	1C965	MD	442-00001318	1.0
SCALE: -		W.O. NO.	SHEET 1 OF 1	



SOCKET VIEW

THE 'VISUAL INDEX' SEEN ON THE WHIP'S BODY DENOTES THE POSITION OF PIN 1



- 1: -V (COM)
- 2: +V
- 3: ANALOG OUT
- 4: ANALOG COM
- 5: RS485- (232 UP)
- 6: RS485+ (232 DWN)

1.1	ECO 5452	2015-MAR-12
ISS	DESCRIPTION	DATE
REVISIONS		

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DO NOT SCALE DRAWING

APPROVALS		DATE
DRAWN	JB	2001-JUN-18
REVISED	BH	2015-MAR-12
CHECKED	SC	2015-MAR-24
ENGR	IB	3/24/2015
ISSUED	RCA	2015/03/25
CONFIDENTIAL DO NOT COPY		

Kongsberg Mesotech Ltd.

CONNECTOR - PLUG  
6 PIN, RMG/XSG SERIES  
RS485/232 ANALOG I/P

SIZE	NSCM NO	TYPE	DWG NO.	ISS
A	1C965	MD	442-00001425	1.1
SCALE: NTS		W.O. NO.	SHEET 1 OF 1	

