



KONGSBERG

***EA440SP Splashproof  
Single beam hydrographic echo sounder  
Quick installation guide***

418799/A

October 2016 © Kongsberg Maritime AS

## Document information

- **Product:** Kongsberg EA440SP
- **Document:** Quick installation guide
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## Warning

*The equipment to which this manual applies must only be used for the purpose for which it was designed. Improper use or maintenance may cause damage to the equipment and/or injury to personnel. The user must be familiar with the contents of the appropriate manuals before attempting to operate or work on the equipment.*

*Kongsberg Maritime disclaims any responsibility for damage or injury caused by improper installation, use or maintenance of the equipment.*

## Comments

To assist us in making improvements to the product and to this manual, we welcome comments and constructive criticism.

e-mail: [km.documentation@km.kongsberg.com](mailto:km.documentation@km.kongsberg.com)

For technical support issues, please contact [km.support@km.kongsberg.com](mailto:km.support@km.kongsberg.com).

## Support information

If you require maintenance or repair, contact your local dealer. You can also contact us using the following address: [km.hydrographic.support@kongsberg.com](mailto:km.hydrographic.support@kongsberg.com). If you need information about our other products, visit <http://www.km.kongsberg.com>

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# Cable layout and interconnections

## Topics

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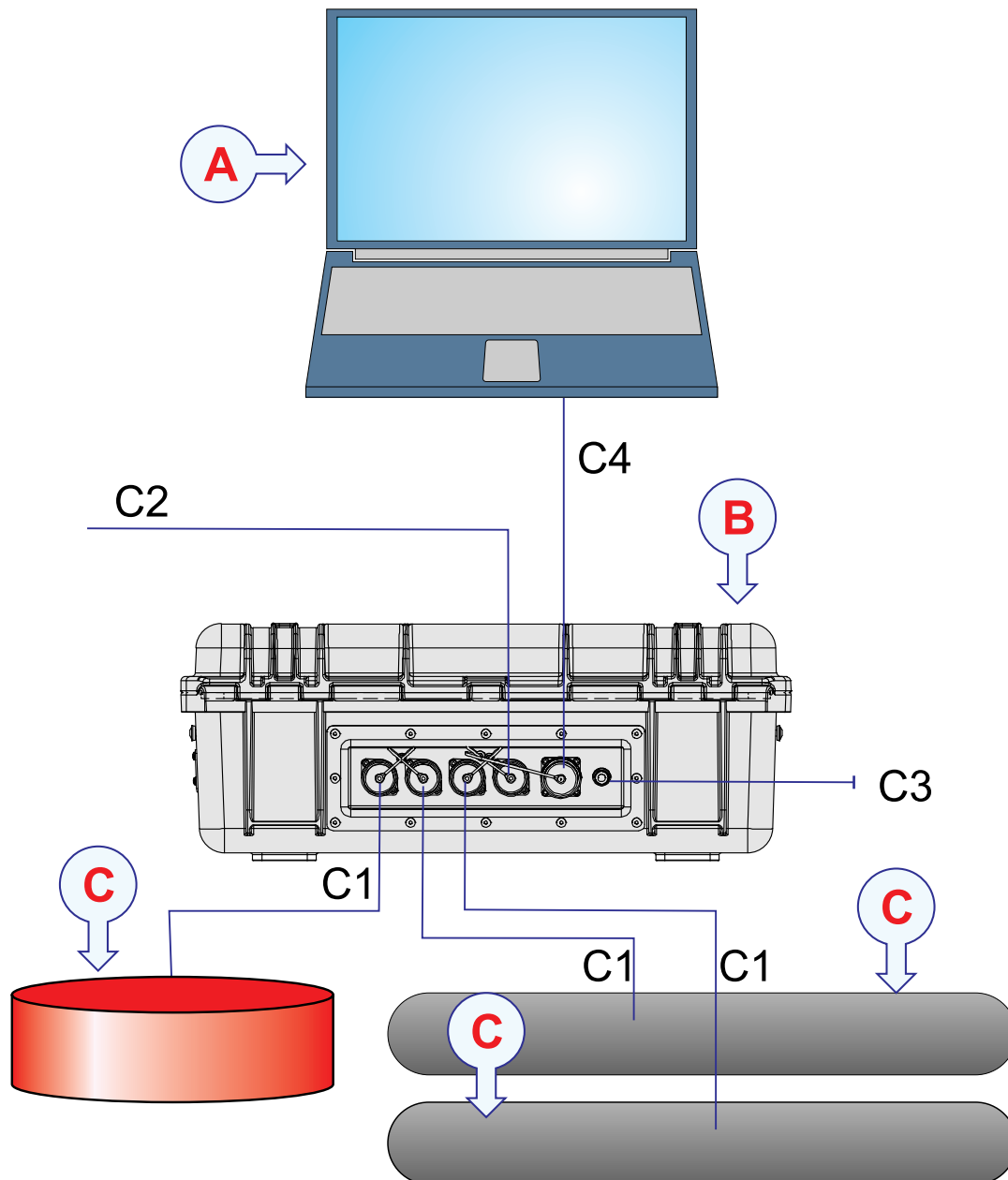
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[EA440SP Channel 3 transducer cable, page 12](#)

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## Cable plan

The cables are part of the delivery with the main units.



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- A Computer
- B Suitcase
- C Transducer

## List of EA440SP cables

A set of cables is required to connect the EA440SP units to each other, to the relevant power source(s), and to peripheral devices.

Cable	Signal	From / To	Min. requirements
C1		Suitcase / Transducer	See comment 1
C2	DC power	Power supply / Suitcase	See comment 2
C3	Ground	Suitcase / Vessel ground	See comment 2
C4	Ethernet	Suitcase / Transducer	See comment 2

### Comments

- 1 The transducer cable is provided with the transducer.
- 2 This cable is provided with the EA440SP delivery.

### Identifying EA440SP cables on a project cable drawing

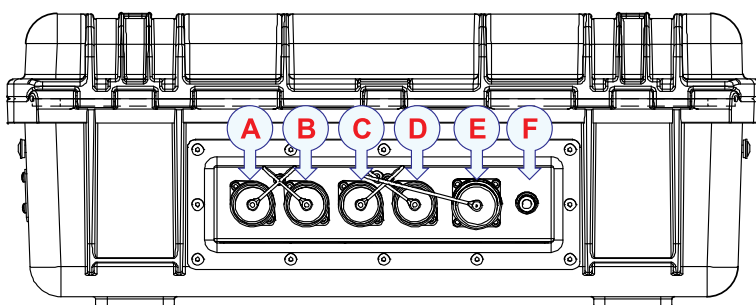
The EA440SP is often a part of a project delivery. For such deliveries, project cable drawings are established to show all the main cables, and how the various products interconnect. In such project cable drawings, the EA440SP cables are identified as **EA440SP/Cx**.

## Connecting one or more transducers to the EA440SP

Depending on your operational requirements for the EA440SP, one or more transducers must be connected to the Suitcase.

### Context

The transducer is connected to a 7-pin connector on the rear of the suitcase. The connectors are part of the EA440SP delivery.



- A** Transducer: Channel 1 - 2
- B** Transducer: Channel 3
- C** Transducer: Channel 4
- D** Power
- E** Ethernet
- F** Ground

Check the license information to see which transducer to install where.

See the cable drawings for the pin out of the transducers and connectors.



**Procedure:**

- Follow the instructions from the connector producer, soldering the internal cables to the connector.

**Mounting Instruction, straight cable connector**

Stripping Lengths	Measure a <sup>1)</sup>	Measure b
Screw contacts		
with internal cable retention	18 <sup>-1</sup>	7 <sup>-1 2)</sup>
without internal cable retention	25 <sup>-1</sup>	7 <sup>-1 2)</sup>
Solder contacts		
with internal cable retention	14 <sup>-1</sup>	4 <sup>-1</sup>
without internal cable retention	22 <sup>-1</sup>	4 <sup>-1</sup>
Crimp contacts		
0,14 – 0,50 mm <sup>2</sup>		3 <sup>-0,5</sup>
0,50 – 1,5 mm <sup>2</sup>		3,5 <sup>-1</sup>
with internal cable retention	14 <sup>-1</sup>	
without internal cable retention	22 <sup>-1</sup>	

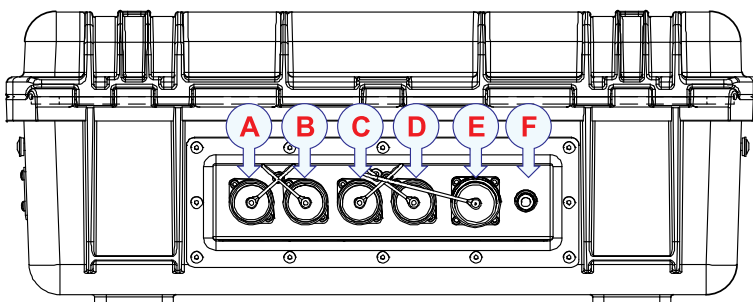
1) PE + 2mm 2) end splice recommended

## Connecting power and ground to the EA440SP

The Suitcase must be connected to a suitable power source and must be properly grounded.

**Context**

The EA440SP must be powered by a separate power supply or battery. A connector with crocodile clips for easy connection to a battery is provided.



- A** Transducer: Channel 1 - 2
- B** Transducer: Channel 3
- C** Transducer: Channel 4
- D** Power
- E** Ethernet
- F** Ground

**Procedure**

- 1 Connect the DC cable from the power supply to the +12 Vdc socket.
- 2 Connect the provided grounding cable from the nearest grounding point to the dedicated terminal on the EA440SP.

**Further requirements**

**Voltage requirement:** 12 to 15 VDC, 5A.

## Connecting the Ethernet cable from the EA440SP to the computer

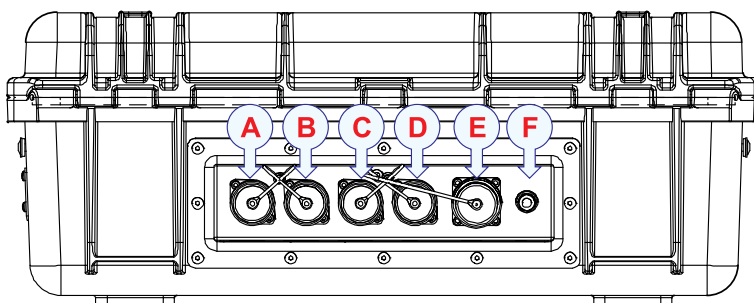
The Computer is connected to the Suitcase using a high speed Ethernet cable.

**Context**

**Note**

*It is very important that a high quality Ethernet cable is used. You must use CAT-5E STP (Shielded Twisted Pair) quality or better. Using cables with lower bandwidth capacity will reduce the EA440SP performance.*

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- A** Transducer: Channel 1 - 2
- B** Transducer: Channel 3
- C** Transducer: Channel 4

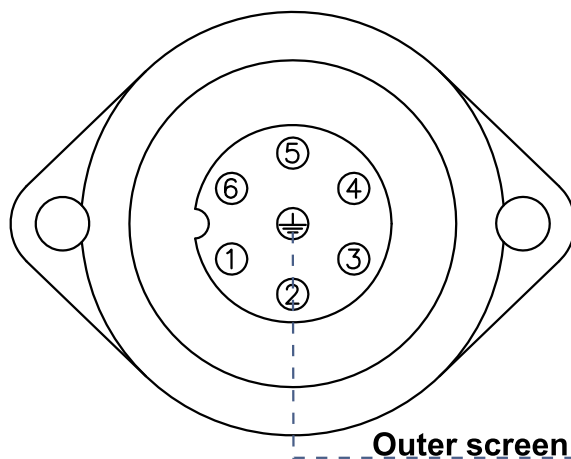
- D Power
- E Ethernet
- F Ground

**Procedure:**

- Connect the Ethernet cable from the Computer to the Ethernet socket on the Suitcase. (E)

## EA440SP Channel 1 and 2 transducer cable

Once the transducer cable has been installed, you can connect it to the Suitcase using the plug provided.



<b>Channel 1</b>	<b>1</b>
<b>Channel 1</b>	<b>2</b>
	<b>3</b>
<b>Channel 2</b>	<b>4</b>
<b>Channel 2</b>	<b>5</b>
	<b>6</b>

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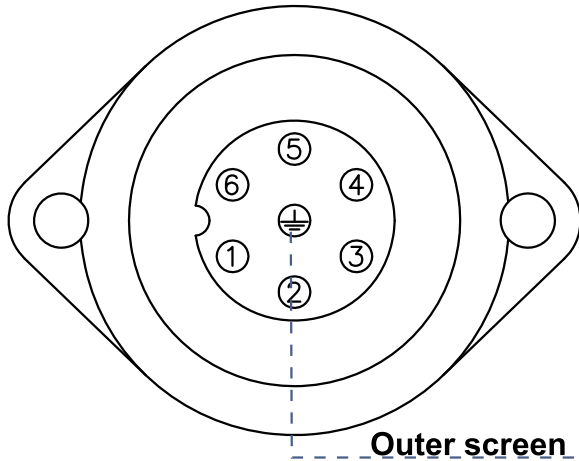
The socket is located on the bottom of the suitcase. The socket is made to fit an Amphenol Ecomate 6-pin connector. The connector is part of the delivery.

### Minimum cable requirements

Not applicable. If you need an extension cable, contact your dealer (or Kongsberg Maritime) for support.

## EA440SP Channel 3 transducer cable

Once the transducer cable has been installed, you can connect it to the Suitcase using the plug provided.



Channel 3	1
Channel 3	2
	3
	4
	5
	6

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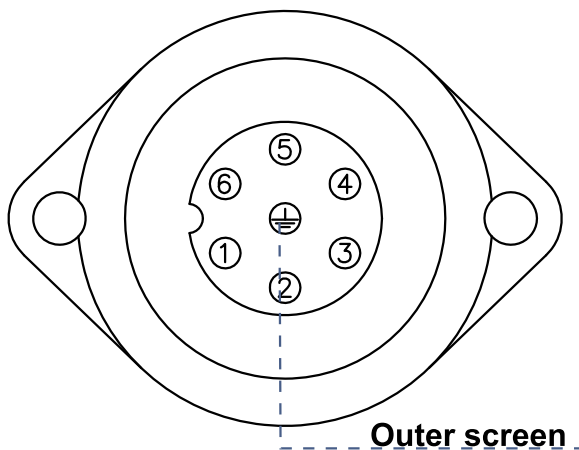
The socket is located on the bottom of the suitcase. The socket is made to fit an Amphenol Ecomate 6-pin connector. The connector is part of the delivery.

### Minimum cable requirements

Not applicable. If you need an extension cable, contact your dealer (or Kongsberg Maritime) for support.

## EA440SP Channel 4 transducer cable

Once the transducer cable has been installed, you can connect it to the Suitcase using the plug provided.



Channel 4	1
Channel 4	2
	3
	4
	5
	6

(CD0808\_010\_004)

The socket is located on the bottom of the suitcase. The socket is made to fit an Amphenol Ecomate 6-pin connector. The connector is part of the delivery.

**Minimum cable requirements**

Not applicable. If you need an extension cable, contact your dealer (or Kongsberg Maritime) for support.

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