



HERMES

Installation Manual

Part Number: 5258-31-0006

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- 3 On completion of any warranty work, Sonavision Limited will return the equipment, freight prepaid.
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GENERAL WARNINGS

- 1 Lethal voltages are exposed within the surface control unit when the top cover is removed.
- 2 The surface control unit should always be disconnected from the mains supply before removing or operating any of the access panels.
- 3 The surface unit should be earthed at all times via the mains earth or the chassis stud at the rear of the control unit.
- 4 Both surface and subsea units contain electrostatically sensitive devices (ESSD).

RELATED INFORMATION

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1 Introduction

The Hermes multiplexes 8 full duplex RS232 or 8 half duplex RS485 channels onto a high speed RS485 twisted pair. This high speed RS485 umbilical runs at either 230400 or 115200 baud, the user selects the speed based on requirements and umbilical cable quality.

A Hermes multiplexer system consists of two identical PCB's one configured to a master (the local end) and a slave (remote end). The system is configured by a USB connection to the local end of the system, settings are transferred to the remote end via the umbilical. Each channel can be individually configured to operate on RS232 or RS485 on any standard baud rate up to 230400 baud.

2 System Setup

2.1.1 Hardware Setup

As the Hermes system operates as a pair the umbilical baud rate must be set to the same at the local end and remote end, there must also be 1 master and 1 slave on each system. These settings are selected by the DIP switch S1 on the PCB see Appendix A for details.

Setup example:

Master PCB
S1 Switch 1 – Off for 230400 baud selection
S1 Switch 2 – On to set as master

Slave PCB
S1 Switch 1 – Off for 230400 baud selection
S1 Switch 2 – Off to set as slave

2.1.2 Configuration Setup

Before connection via USB the Hermes application (includes USB drivers) should be installed and both local and remote ends connected by an umbilical and powered from a suitable DC supply.

Connect the master to a PC via a mini USB lead and run the Hermes application. Each channel can now be configured to the correct mode RS232 or RS485 and the required baud rate.

3 Appendix A

3.1 Switch functions

S1 is only read when the system is powered up or reset. Therefore any changes to S1 will only come into effect when re-powered or reset.

Switch	Function	
	On	Off
S1 - 1	Umbilical baud rate = 115200	Umbilical baud rate = 230400
S1 - 2	Board is a master	Board is a slave
S2	Reset board	-
S3	Factory use	-

3.2 Pinouts

3.2.1 Connectors J4 to J11 multiplexed channels

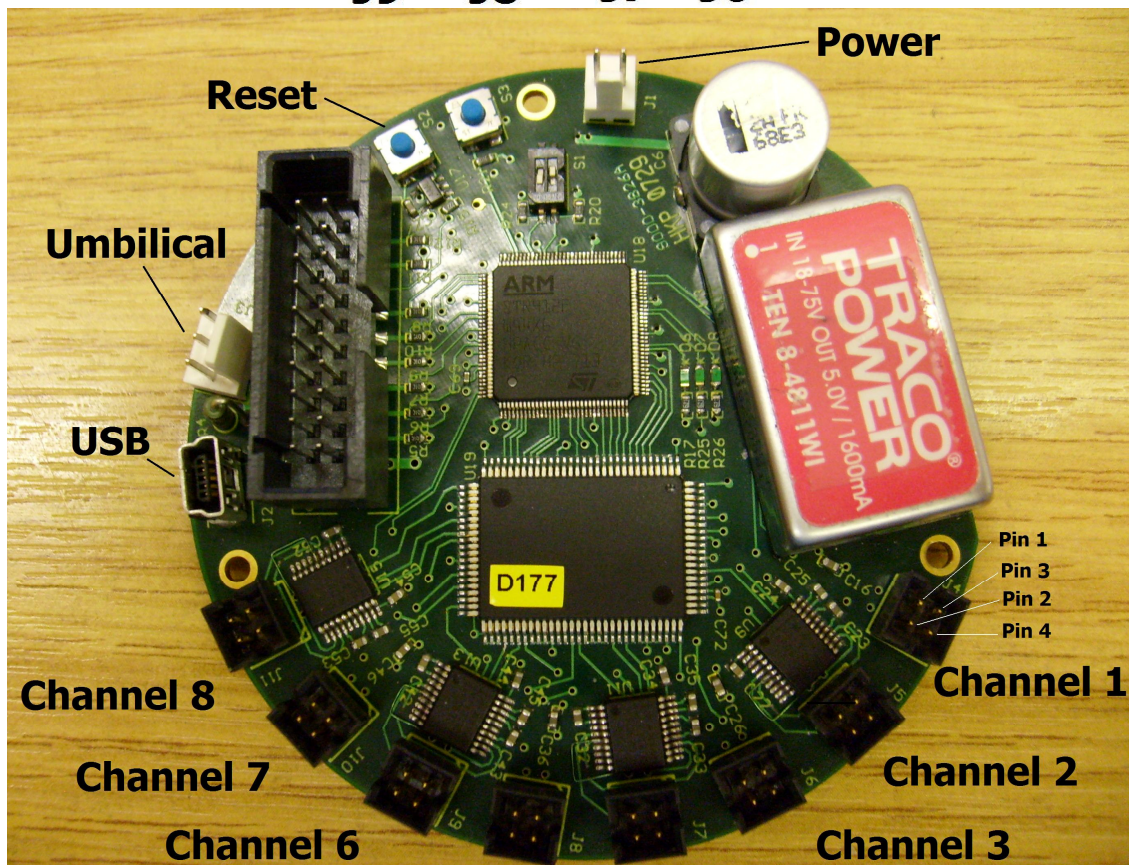
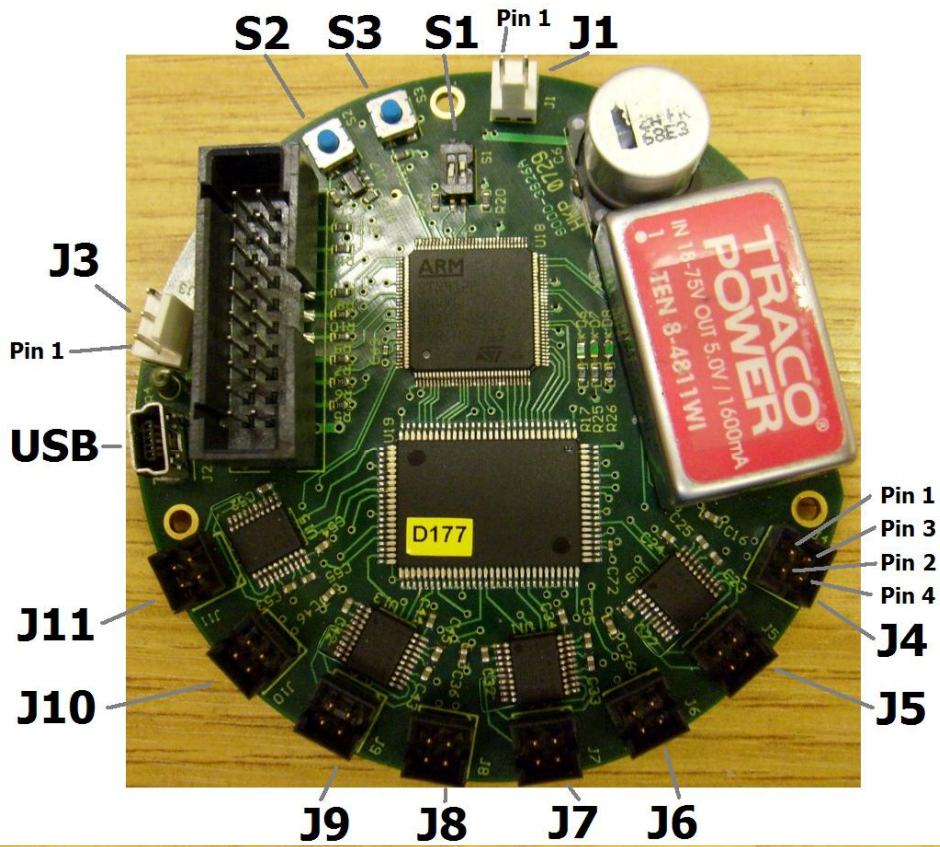
Pin	Function
1	RS485 +
2	RS232 TX (data out) / RS485 -
3	RS232 RX (data in)
4	0 V

3.2.2 Connector J3 umbilical connector

Pin	Function
1	RS485 +
2	RS485 -
3	0 V

3.2.3 Connector J1 power connector

Pin	Function
1	0 V
2	+18 V – 72 V



4 Appendix B

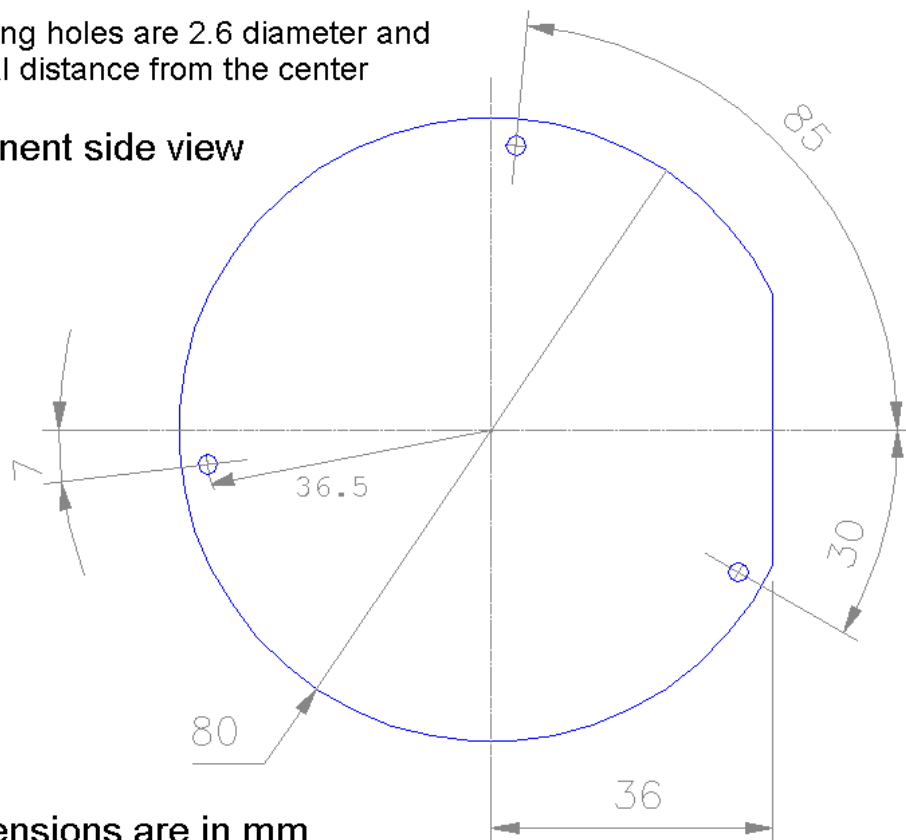
4.1 Specification

Supply Voltage	18 – 72 VDC
Power consumption	1.3 W
Typical current consumption	53 mA @ 24VDC
Multiplexed channels	8
Channel communication modes	RS232 full duplex / RS485 2 wire all channels
Channel supported baud rates	All standards up to 230400 and user defined
Umbilical communication	RS485 230400 or 15200 baud rate
Storage temperature range	-40°C to + 80°C
Operating temperature range	-10°C to + 40°C

4.2 Mechanical dimensions

3 mounting holes are 2.6 diameter and are equal distance from the center

Component side view



All dimensions are in mm