



SERIAL PORT INTERFACE KW909-SPI



INTRODUCTION

Some ships are fitted with alarm or instrumentation systems which output their status as proprietary serial data. This is not suitable for sending to a VDR. Examples...

- Autronica fire alarm.
- Pizzorno engine telegraph
- Radar data in proprietary format
- Engine room or hull stress monitor system
- Meteorological instrumentation

The KW909-SPI converts the data into the standard required

- NMEA 0183 or IEC 61162

The principle of this interface is simplicity, with any complexity waiting for the time of replay. It makes no attempt to *translate or interpret* the contents of the proprietary data being input.

Example of use: A ship has a system periodically sending a line of data to a printer, giving RPM, pitch, and rudder angle in a printable form with the data separated by spaces. The KW909-SPI converts the data string to an NMEA 0183 proprietary \$PAMI sentence and sends it to the VDR. (It does not convert it to \$ERRPM or \$IIRSA or similar sentences although that could be possible to special order.)

The data can be replayed from a VDR memory, passed through the interface, and output in the original proprietary format. The meaning of the data might be displayed using a PC program available from the instrumentation manufacturer. Alternatively it can be translated by eye and hand using the original manufacturer's documentation. For the previous example the replayed data could be fed via the interface directly to a printer so it would be seen just as it would have been on the ship.

SPECIFICATION

INPUT PORT 1:	NMEA 0183 data from other interfaces. This provides the KW909-SPI with a daisy-chain ability
OUTPUT PORT 1:	NMEA 0183, 5 volt level via 47 ohms per line at 10 mA Data from port 2, converted (or encoded) to NMEA 0183 compatible data Data format \$PAMI3,ccc,CR LF where "3" is ID 1 to 4. Further ID available by changing location in EPROM "ccc" is the incoming message translated to NMEA 0183 compliant form (except that an extended length of up to 132 characters is allowed) Data output: repeat of the input data of port 1, this gives the daisy-chain function
INPUT PORT 2:	Opto isolated input port. NMEA 0183 or RS422 or RS232 or 20 mA current loop. Baud rate switch selectable from 300 to 38400 Data is standard 8 or 7 bit serial data format using all codes 00 to FF hex.
OUTPUT PORT2:	10 sec rate transmission of "CR" for request of data when required. This ports output may be required to request information from systems.
POWER:	18 to 36 volts DC at less than 0.1 amps. Intended for 24 volt systems. Power is isolated in the interface.
DAISYCHAIN:	Connection of 24v and serial data port 1 via 9 way HE14 IDC connectors
"REPLAY" FACILITY:	DIP switch selectable. Input the converted or encoded NMEA 0183 data from VDR, into port 1. Output from port 2 the original proprietary data.
ENCLOSURE:	222 x 155 x 55 mm diecast aluminium box powder coated black.
DATA CONVERSION:	Future options can be provided for the direct translation of proprietary data. Example; met data to NMEA 0183 WIMWV. Sperry Rascar tracked targets to RATTM

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