

PC Interface Cables

Protection for electronic equipment and reprogram Active Depth/Speed/Temp modules or transducers

For an easy, safe and low-cost connection from an NMEA system to a PC / laptop, **Actisense™** provides two variants of its PC Interface cable. Both allow a **standard RS232/RS485 9-pin serial port** to be connected to any **NMEA 0183** marine bus link.

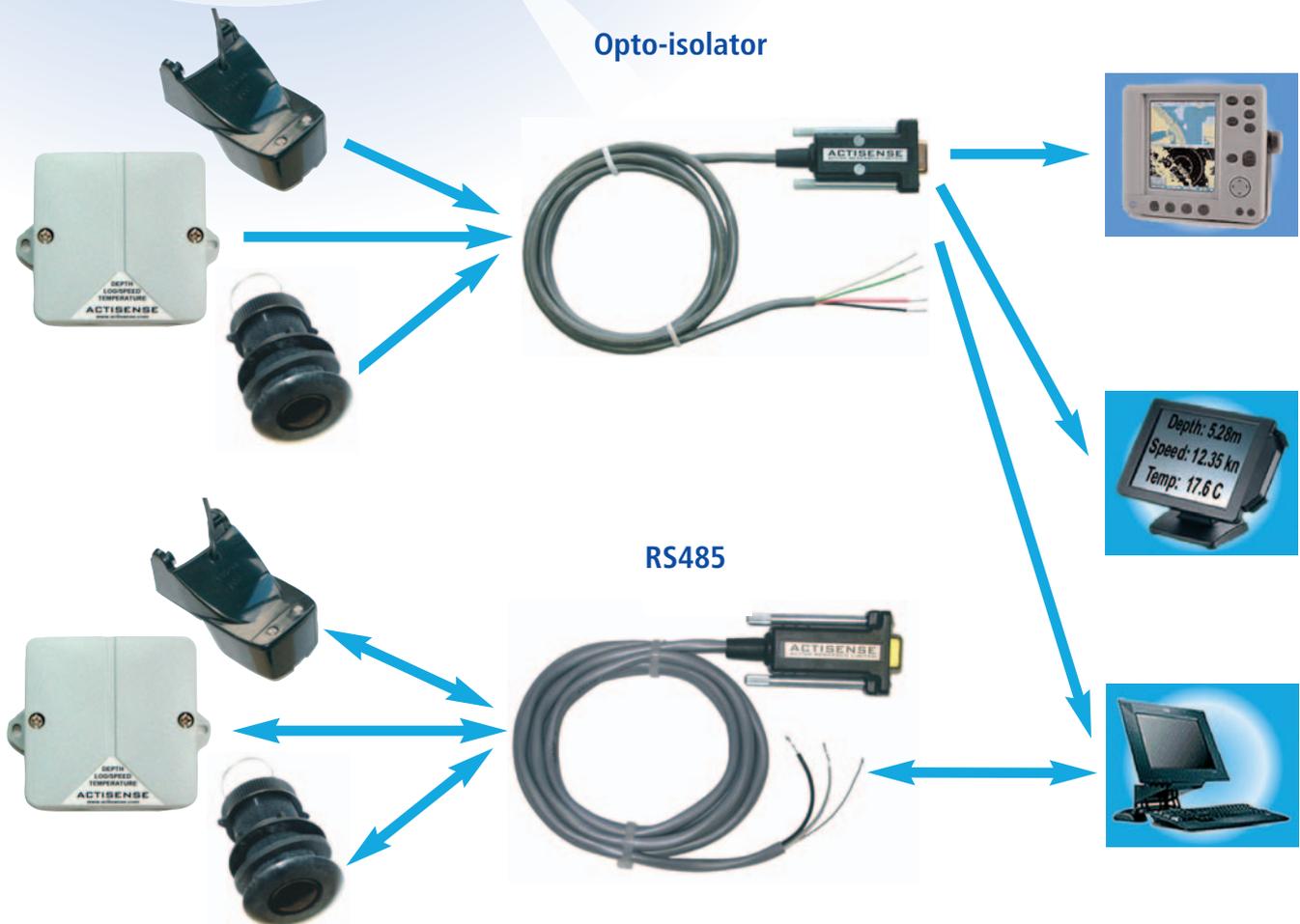
Actisense™ opto-isolator cable

The **PC-OPTO-1-A** is a **bi-directional** NMEA 0183 to RS232 interface cable. It utilises **full opto-isolation** to protect the PC input and "tranzorb" protection for the PC output, providing **comprehensive isolation of expensive PC hardware** when connecting to an NMEA 0183 bus that may have picked up **potentially hazardous voltages** around the electrically noisy environment of a boat. **Designed for general-purpose PC protection.**

Actisense™ RS485 cable

The second type, p/n **PC-RXTX-1-A** contains a **full RS485 bi-directional (automatic) interface**, with protection against electrostatic discharge included. This does not provide the complete protection of the opto-isolation device, as the ground connection is common, but it **will protect a PC against most common noise spikes present on a boat.**

Designed for use in **reprogramming** the **Actisense™** Depth/Speed/Temperature (DST) modules and transducers. Enables the **flash update software** to connect to the sensor and download new software whenever it becomes available on the **Actisense™ website.**



No external power supply is required, as each interface takes all necessary power from the PC port.

Simple installation requires wiring the open end to the NMEA bus, and plugging the D-type connector into the PC. The **NMEA data** will then be available to the computer **via its communications port.**

When connected to the NMEA bus, the PC can pick up transmitted NMEA sentences, for display by any standard **NMEA 0183 display software**, such as a chart plotter program or the **Actisense™ Multi NMEA display PC program.**



Opto-isolator model

NMEA Input

- Exceeds all NMEA 0183 input voltage specifications
- Capable of receiving 1.8v differential signal levels
- Current limited (protects from cable faults)
- Over voltage protected to 35v DC
- Logic '1' / stop bit: Minimum -15.0v, Maximum 0.5v
- Logic '0' / start bit: Minimum 4.0v, Maximum 15.0v
- NMEA input to output protection: 2000v DC

NMEA Output

- Exceeds all NMEA 0183 output voltage specifications
- Maximum current: 10 mA (dependent on port)
- Max. short circuit current: 10 mA (dependent on port)
- Logic '1' & '0' Dependent upon RS232 port voltage levels

RS232 Input

- Voltage range: Minimum -15v, Maximum +15v
- Voltage threshold: Logic '0' > 3.0v, Logic '1' < 2.0v

RS232 Output

- Voltage swing: Minimum -V, Maximum +V volts
(Loaded with 3K Ω to gnd, V = RS232 port voltage)
- Output resistance: Minimum 200 Ω

Baud rates possible

- Minimum 2400 Baud, Maximum 57600 Baud

Part number

- Bi-directional, opto-isolator: PC-OPTO-1-A

Power supply (derived from PC port)

- Supply voltage range: 7 to 15 volts DC
- Current: Minimum 2 mA, Maximum 5 mA
- Power consumption: @ 9v, 45mW Maximum

Environmental

- Recommended operating temperature: -40°C to +80°C
- Miniature design fits inside a standard D-type serial plug connector.
Includes securing bolts.

RS485 model

NMEA Input

- Exceeds all NMEA 0183 input voltage specifications
- Capable of receiving 0.2v differential signal levels
- Input resistance: Minimum 4K Ω
- Logic '1' / stop bit: Minimum -15.0v, Maximum 0.5v
- Logic '0' / start bit: Minimum 4.0v, Maximum 15.0v

NMEA Output

- Exceeds all NMEA 0183 output voltage specifications
- Maximum current: 10 mA (dependent on port)
- Max. short circuit current: 10 mA (dependent on port)
- Logic '1' / stop bit: Minimum 0.0v, Maximum 0.5v
- Logic '0' / start bit: Minimum 4.8v, Maximum 5.2v

RS232 Input

- Voltage range: Minimum -15v, Maximum +15v
- Voltage threshold: Logic '0' > 3.0v, Logic '1' < 2.0v

RS232 Output

- Voltage swing: Minimum -V, Maximum +5 volts
(Loaded with 3K Ω to gnd, V = RS232 port voltage)
- Output resistance: Minimum 100 Ω

Baud rates possible

- Minimum 4800 Baud, Maximum 115200 Baud

Part number

- Bi-directional, RS485: PC-RXTX-1-A

General

- Weight: Connector 100 grams, cable 400 grams
- Dimensions: Standard D-type serial plug connector
- Cable Length: 1.5 metres
- Guarantee: 2 years

excelling in smart sensor design



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