

NMEA Opto-Isolator 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 9-pin serial port to be connected to any NMEA 0183 marine bus link.

Actisense™ PC-OPTO-1 cable

The PC-OPTO-1 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.

No external power supply is required, as

each interface takes all necessary power from the PC port.

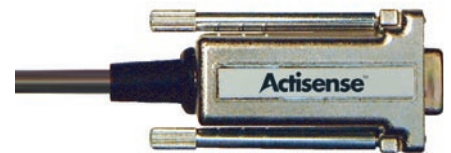
Simple installation requires wiring the open end to the NMEA bus, and plugging the D-type connector into the PC. The NMEA data will then be available to the computer via its serial port.

Actisense™ PC-OPTO-2 Cable

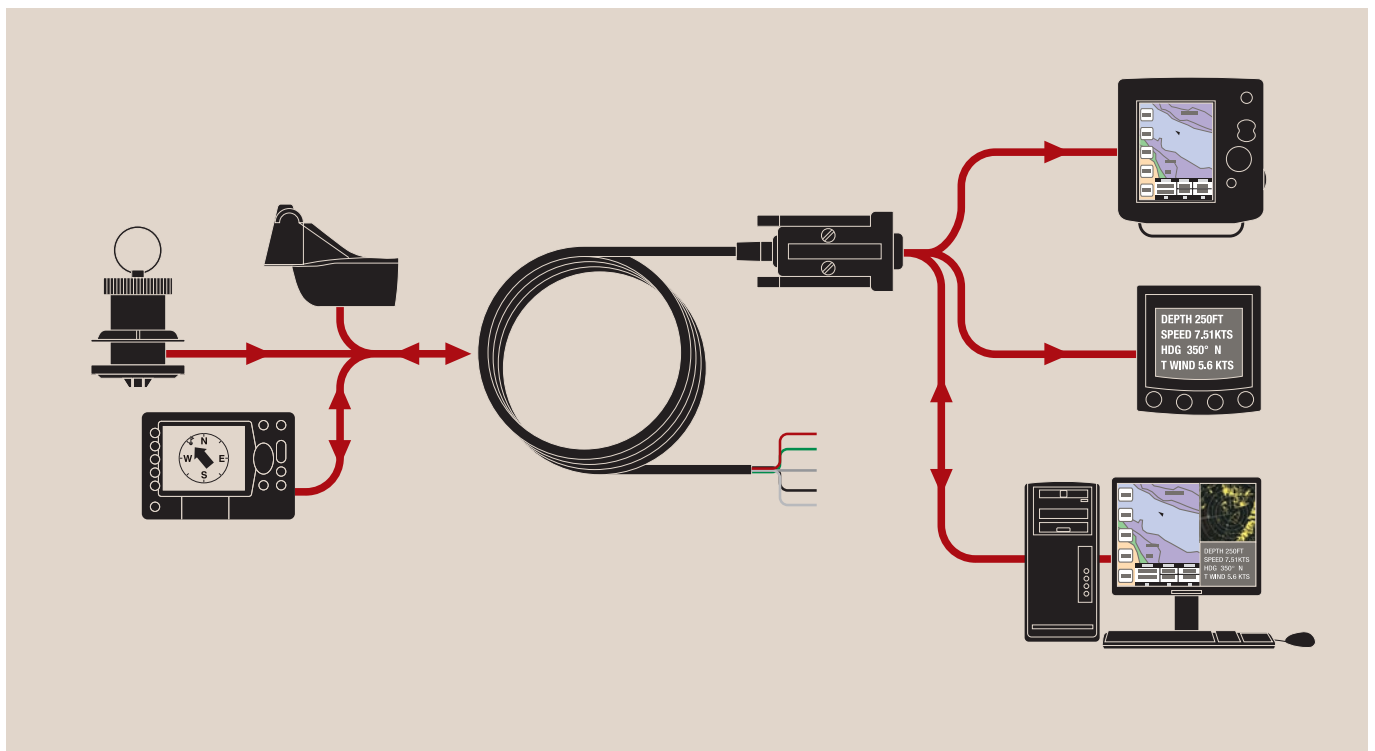
As an enhancement for professional installations, the Actisense NMEA opto isolator cable is also available with a fully shielded cable and plug-case. This device, part number PC-OPTO-2, offers a complete solution for system builders that require all components to be shielded (particularly in noisy and/or commercial environments).



PC-OPTO-1 Cable



PC-OPTO-2 Cable



NMEA Opto-Isolator Cables

Specifications

Bi-directional Opto-isolator

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

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.

General

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

Part number

- PC-OPTO-1
- PC-OPTO-2

Additional Specifications for PC-OPTO-2

- 4-Core cable with screen
- Fully shielded case

Active Research Limited
Unit 5, Wessex Trade Centre
Ringwood Road, Poole
Dorset UK BH12 3PF

t: +44 (0)1202 746682
f: +44 (0)1202 746683
e: sales@actisense.com
www.actisense.com

ActisenseTM