

## NGW-1

## NMEA 2000® to NMEA 0183 Gateway

Hook up to NMEA 2000 whilst keeping currently installed NMEA 0183 devices.

### Introduction

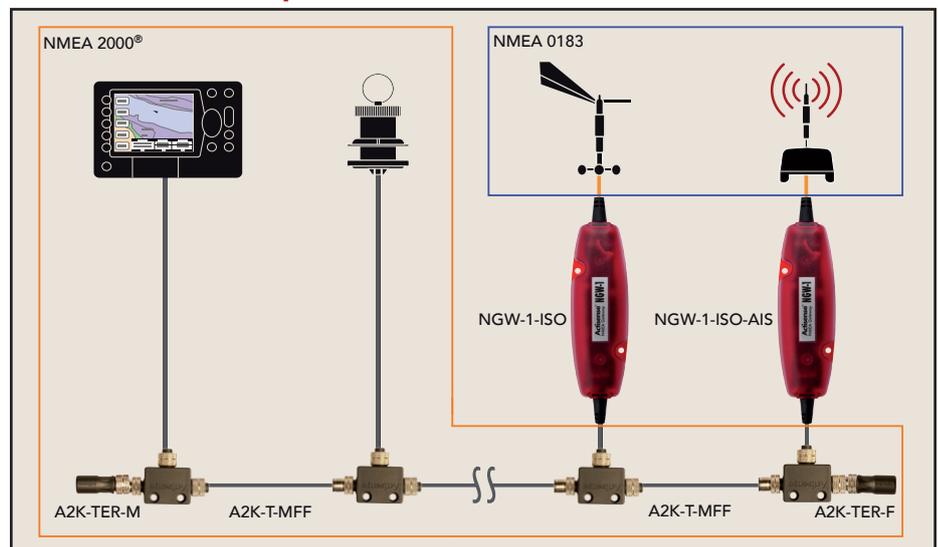
The Actisense NMEA 2000 to NMEA 0183 Gateway (NGW-1) provides an easy way to link between your boat's old and new data networks. The NGW-1 makes it possible to convert data between NMEA 0183 and NMEA 2000.

### Features

- Converts the most common NMEA 0183 sentences into NMEA 2000 PGNs
- Converts the most common NMEA 2000 PGNs into NMEA 0183 sentences
- Galvanic Opto-isolation on NMEA 0183 input
- Galvanic isolation on NMEA 0183 / **ISO-Drive™** output
- Galvanic Opto-isolation on NMEA 2000 CAN bus connection
- Compatible with all NMEA 0183 versions without configuring
- NMEA 0183 output compatible with RS422, RS232 and RS485 type Listeners
- NMEA 0183 input compatible with RS422 and RS232 type talkers
- Configuration options available in NMEA Reader
- Configurable baud rate
- Transfer list for selecting which NMEA 2000 PGNs are sent and received
- Free Firmware updates provided when new features and conversions are added - update in the field via PC
- Pre-fitted cables for ease of installation
- Screw terminals for easy installation of custom cables if required
- Four available variants for different installation situations (see part code list on next page)
- Adaptor cable for connecting to Raymarine® Seataalk<sup>NG</sup> networks provided with the STNG variant
- Multiple NGW-1 units can be used to multiplex numerous NMEA 0183 devices onto the NMEA 2000 network



### Connection Example



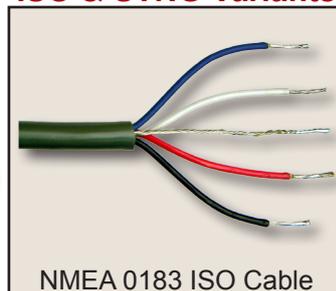
### ISO & USB Variants



### STNG Variant



### ISO & STNG Variants



### USB Variant



# NGW-1

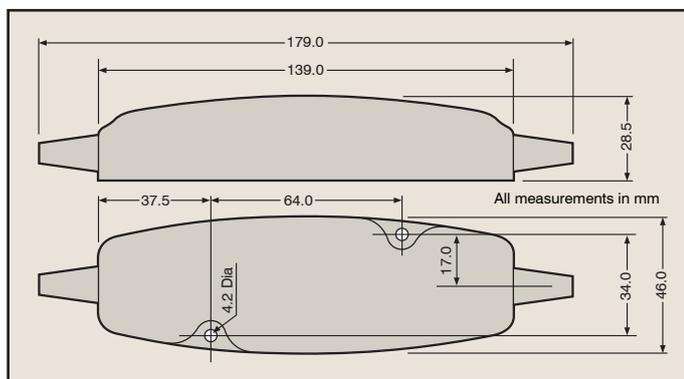
# NMEA 2000® to NMEA 0183 Gateway

## Technical Specifications

Power Supply (ISO, ISO-AIS & STNG Variants)	
Supply Voltage (NMEA 2000 Port)	9.5 to 35V DC
Supply Current (NMEA 2000 Port)	35mA @ 12V DC Max 50mA
LEN	1
Power Supply (USB Variants)	
Supply Voltage (NMEA 2000 Port)	9 to 29V DC
Supply Current (USB Host Port)	85mA @ 5V DC
Supply Current (NMEA 2000 Port)	15mA @ 12V DC Max 50mA
LEN	1
Mechanical	
Housing Material Lid	Polycarbonate
Housing Material Base	Flame retardant ABS
Weight NGW-1-ISO & ISO-AIS	220g
Weight NGW-1-USB	210g
Weight NGW-1-STNG	260g
Approvals and Certifications	
Fully NMEA 2000 Certified	
Meets all IEC 61162-1 & 61162-2 requirements	
Meets all IEC 61162-3 requirements	
EMC	IEC 60945 (Sections 9,10 &11.2)
Environmental Protection	IP54
Operating Temperature	-20°C to +55°C
Storage Temperature	-30°C to +70°C
Recommended Humidity	0 - 93% RH
Guarantee	3 years

All specifications are taken with reference to an ambient temperature (TA) of +25°C.

## Dimensions



NMEA 2000 Port (All Variants)	
Compatibility	Fully NMEA 2000 certified
Galvanic Isolation	Refer to 'NMEA 0183 port' or 'USB port'
Speed / Baud Rate	250kbps
Connectivity	M12 Male (A polarised) connector moulded on cable
Cable Length NMEA 2000	1.5m
Cable Length STNG Adapter	0.4m (1.9m with NMEA 2000 cable connected)

NMEA 0183 Port (ISO, ISO-AIS & STNG Variants)	
Compatibility	Full NMEA 0183, RS232 & RS422 compatible. RS485 Listener compatible
Galvanic Isolation	2500V input to ground 1500V output to ground using <b>ISO-Drive</b>
Speed/Baud Rate	4800 to 115200 Baud
Output Voltage Drive	>= 2.1V (differential) into 100Ω
Output Current Drive	20mA max.
Output Protection	Short circuit and ESD
Input Voltage Tolerance	-15V to +15V continuous -35V to +35V short term (< 1 second)
Input Protection	Current limited and overdrive protection to 40V DC
Connectivity	5mm stripped and tinned wire
Cable Length	1.5m

USB Port (USB Variant)	
Compatibility	USB 1.1, 2.0 and 3.0
Galvanic Isolation	2500V input to ground
Speed / Baud Rate	4800 to 230400 Baud
Connectivity	Male type A plug moulded onto cable
Cable Length	1.5m
Drivers (Latest OS)	Windows XP, Vista, 7, 8 & MAC OS X supplied on CD & <a href="http://www.actisense.com/NGW-1/Downloads">www.actisense.com/NGW-1/Downloads</a>
Drivers (Legacy OS)	Contact Actisense for full details of the legacy OS versions supported: <a href="mailto:support@actisense.com">support@actisense.com</a>

## Additional Information

Each NGW-1 firmware version has a list of supported conversions. Always check the NMEA 2000 PGNs and NMEA 0183 sentences required are supported. This list can be found on the NGW-1 download page: [www.actisense.com/NGW-1/Downloads](http://www.actisense.com/NGW-1/Downloads)

Part Number	Description
NGW-1-ISO	NMEA 0183 to NMEA 2000 Gateway, standard configuration
NGW-1-ISO-AIS	NMEA 0183 to NMEA 2000 Gateway, pre-configured with AIS conversions
NGW-1-STNG	NMEA 0183 to SeaTalk NG Gateway
NGW-1-USB	NMEA 0183 to NMEA 2000 Gateway with USB, standard configuration
STNG-A06045	SeaTalkNG to NMEA 2000 adaptor cable (drop). Only for purchase with Actisense NMEA 2000 devices