SENT Signal Modifier

Description:

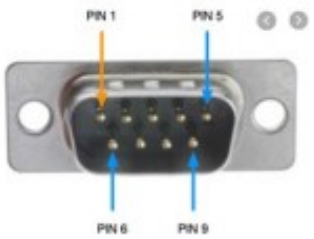
This tool connects in-line to any SENT network. The tool will use the input configuration and modifies the SENT signal using an offset or scaling. This output signal can be adjusted using a Y=MX+B slope and off-set formula. This device also can do data bit modifications, as well as tick timing modifications.

Basic Operation:

The SENT signal is configured using the Windows based setup utility that is provided with the tool. The setup utility monitors and displays the fast and slow parts of the SENT signals. The signal can be scaled with a algebraic formula of Y=MX+B. The CAN or CAN FD channel can be used to monitor the SENT signal coming in, the modification that was done to the signal, and the SENT signal coming out of the module. These CAN channels display over the user interface, both the original message sent out and the new, modified message that returned. This interface can also display the data bit modification and the tick timing modifications. All modifications are configured using a USB-B port connection. Once they are set on the interface they operate on the device until those values or formulas are changed or cleared. One use case of the SENT signal modifier is that it can be used to detect faults/errors in systems to determine if that system is catching those faults.

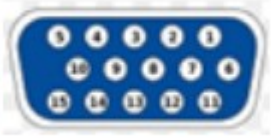
DB9 Input connector pinouts:

(1) NC	(6) GND
(2) CAN FD LOW	(7) CAN FD HIGH
(3) GND	(8) NC
(4) NC	(9) NC



DB15 Input connector pinouts:

(1) SENT SIGNAL OUT	(9) NC
(2) GND	(10) NC
(3) SENT SIGNAL IN	(11) NC
(4) GND	(12) NC
(5) NC	(13) +5 V
(6) NC	(14) GND
(7) NC	(15) +12V Supply
(8) NC	



Novellus Engineering Services Inc. 44800 Helm Street Plymouth, MI 48170
(734)335-7307
info@novelluseng.com

Signal Specification DB15:

Signal Name	Pin Number	Signal Description
SENT SIGNAL OUT	1	The modified SENT signal coming out of the device
GND	2, 4, 14	Ground
SENT SIGNAL IN	3	The original SENT signal entering the device
NC	5, 6, 7, 8, 9, 10, 11, 12	Not Connected
+5V	13	+5V Supply from regulated input voltage
+12V	15	Supply voltage, typically battery voltage + 7 VDC to +20VDC

Signal Specification DB9:

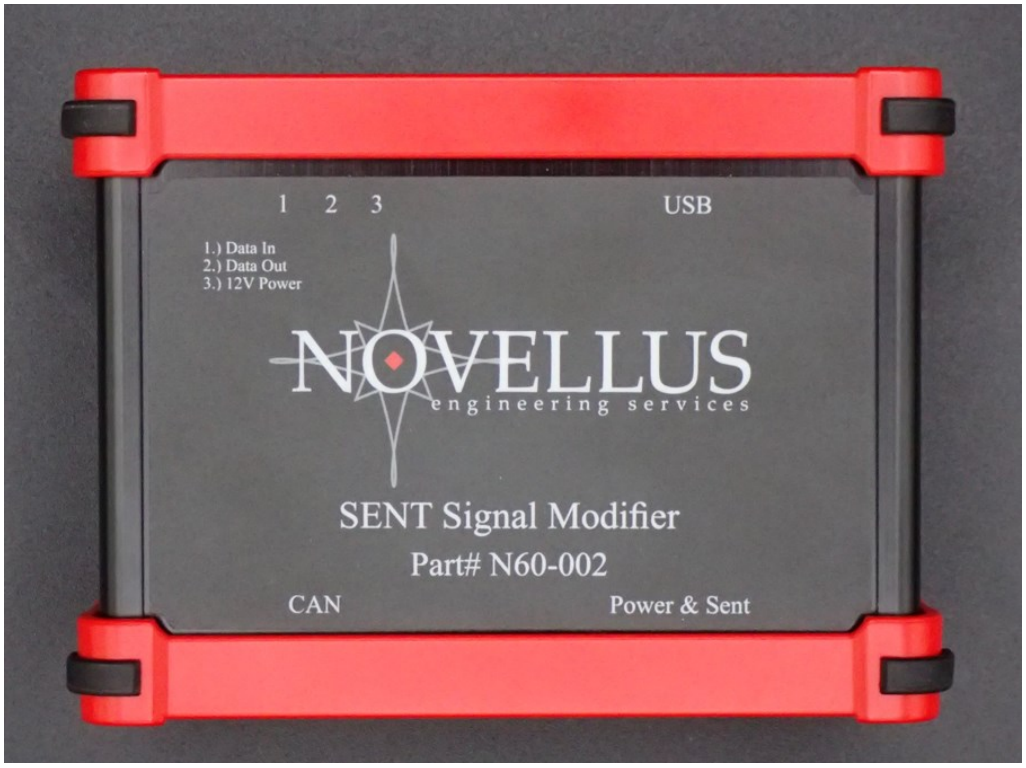
Signal Name	Pin Number	Signal Description
NC	1, 4, 5, 6, 8, 9	Not Connected
CAN_LOW	2	CAN Channel LOW
GND	3	Ground
CAN_H	7	CAN Channel HIGH

Electrical Specifications:

Signal	Minimum	Typical	Maximum
Input Supply Voltage	+7 VDC	+12 VDC	+20 VDC
Input Supply Current			
Operation Temperature	-40ºC		+125ºC

Novellus Engineering Services Inc. 44800 Helm Street Plymouth, MI 48170
(734)335-7307
info@novelluseng.com

Dimensions LxWxH: (130x116x56)mm



Novellus Engineering Services Inc. 44800 Helm Street Plymouth, MI 48170
(734)335-7307
info@novelluseng.com