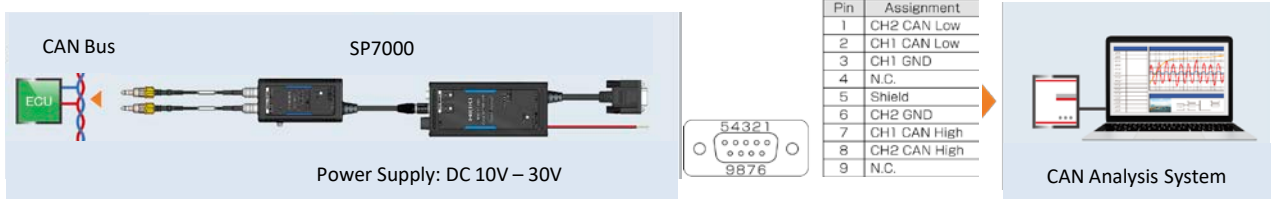


Industry: Automotive, Transportation

Work type: R&D, Testing

Connectable Products of the Non-Contact CAN Sensor SP7001/SP7002

The non-contact CAN sensor SP7000 series detect CAN signals from outside insulation. You can acquire CAN data immediately whenever you want without a sub-harness or modifying CAN cables. You need only connect the sensor to your CAN analysis system and supply power from a DC power source.



Supported CAN Interfaces (Example)

Manufacturer	CAN Interface
HIOKI	MR6000 + VN1600 Interface Family (Vector Product)
HIOKI	MR8875 + MR8904
Vector	VN1600 Interface Family, etc.
ETAS	ES582 USB-CAN FD Bus Interface, etc.
Kvaser	Leaf Light HS v2, etc.
Intrepid Control Systems	ValueCAN4 Family, etc.
National Instruments™	USB-8502 CAN Interface Device, etc.
PRISM	MLT Advance, etc.
DTS INSIGHT	RAMScope-EXG GT170series, etc.
YOKOGAWA Test & Measurement	DL850EV ScopeCorder, etc.



Hioki MR6000
https://www.hioki.com/en/products/detail/?product_key=6439



Vector VN1600 Interface Family
<https://www.vector.com/int/en/products/products-a-z/hardware/network-interfaces/vn16xx>



ETAS ES582
USB-CAN FD Bus Interface
https://www.etas.com/en/products/es582_usb_can_fd_bus_interface.php



PRISM MLT Advance
<https://www.prism-arts.co.jp/en/products/advance/>

Please be sure to check the pin layout in the CAN interface user manual. In particular, be careful when using CH2. Some devices have a different pin layout from the SP7000 series concerning CH2, and some devices only have CH1.

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* Company names and product names appearing in this catalog are trademarks or registered trademarks of various companies.

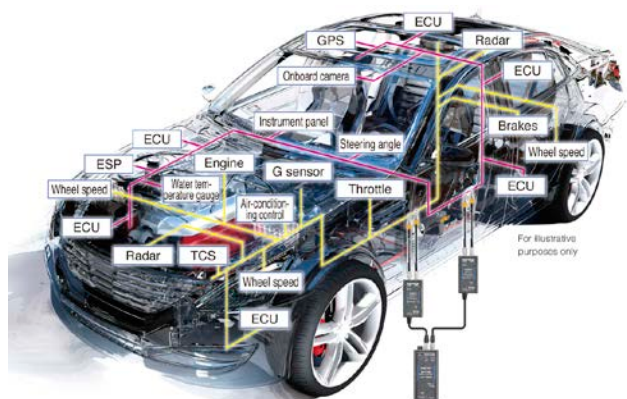
For monitoring CAN signals with an oscilloscope

You can connect sensors to an oscilloscope by using an adapter (special-order product) that converts outputs from the Dsub terminal to BNC terminals.

Connected device	General-purpose oscilloscope with serial bus analysis function
Application	Development evaluation, shipment inspection, failure analysis of purchased/own products, etc.
Are you using it this way?	<ul style="list-style-type: none"> Serial bus trigger (triggering with specific serial data such as IDs or error frames) Symbolic trigger (triggering with analog values decoded in DBC files) , etc.
Benefits of the non-contact CAN sensor	<ul style="list-style-type: none"> No modification of the CAN bus is necessary for monitoring CAN signals It is ideal for observing infrequent errors or errors with unknown occurrence conditions because sensors' no-metal-contact probes do not change the CAN bus condition.
How to connect	<p>Step 1. Connect the sensor to the Dsub side of the Dsub-BNC conversion adapter</p> <p>Step 2. Connect the BNC side of the Dsub-BNC conversion adapter to an oscilloscope</p>



※The non-contact CAN sensor outputs stable CAN signals by excluding noise and waveform distortion. It does not directly reproduce signal waveforms of the CAN bus.



Oscilloscope

Step 2



Dsub-BNC conversion adapter (special-order product)

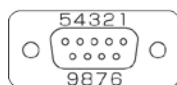
Step 1

Pin	Assignment
1	CH2 CAN Low
2	CH1 CAN Low
3	CH1 GND
4	N.C.
5	Shield
6	CH2 GND
7	CH1 CAN High
8	CH2 CAN High
9	N.C.

Dsub-BNC conversion adapter

Please specify signal pins from the Dsub terminal to output to BNC terminals.

e. g.) If you want to input 'CH1 CAN Low' and 'CH2 CAN Low' to your oscilloscope, please specify as follows:
 BNC1 → CH1 CAN Low – CH1 GND (Pin2 - Pin3)
 BNC2 → CH2 CAN Low – CH2 GND (Pin1 - Pin6)



Products used

- SP7001-90 Non-contact CAN Sensor (supports CAN FD & CAN)
- SP7002-90 Non-contact CAN Sensor (supports CAN)
- Dsub-BNC Conversion Adapter (special-order product)※

※It is necessary to connect to a device with BNC terminals like an oscilloscope. Not required to connect to a device with Dsub 9pin terminals.

The SP7001-90 and SP7002-90 are representative models of the non-contact CAN series.

Please refer to the catalog or selection guide when you purchase.

Selection Guide for the SP7000 series :

https://www.hioki.co.jp/file.jsp?file/SP7001_SP7002_select_E1-02M.pdf

Introductory Video



https://www.youtube.com/watch?v=MACZmj_FHl

Information valid as of August 2020. Specifications are subject to change and revision without notice.