


SAFETY, ENVIRONMENTAL, AND REGULATORY INFORMATION


SHDB9M-DB9F-SHUNT

Shunt, 9-Pin Male DSUB to 9-Pin Female DSUB


Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.


Icons

 **Notice**—Take precautions to avoid data loss, loss of signal integrity, degradation of performance, or damage to the model.

 **Caution**—Take precautions to avoid injury. Consult the model documentation for cautionary statements when you see this icon printed on the model. Cautionary statements are localized into French for compliance with Canadian requirements.

Safety


 **Caution** Observe all instructions and cautions in the user documentation. Using the model in a manner not specified can damage the model and compromise the built-in safety protection. Return damaged models to NI for repair.

 **Attention** Suivez toutes les instructions et respectez toutes les mises en garde de la documentation utilisateur. L'utilisation d'un modèle de toute autre façon que celle spécifiée risque de l'endommager et de compromettre la protection de sécurité intégrée. Renvoyez les modèles endommagés à NI pour réparation.


Safety Voltage and Power

Maximum working voltage (any pin to any pin, pin to shield) ± 10 V DC

Maximum power dissipation 2 W

 **Notice** Do not connect this shunt to signals that exceed the maximum working voltage. Connecting to voltages that exceed specifications could damage the shunt, the connected cable, and the connected transducer.

Environmental Guidelines

 **Notice** This model is intended for use in indoor applications only.

Environmental Characteristics

Temperature

Operating 0 °C to 55 °C

Storage -40 °C to 71 °C

Humidity

Operating 10% RH to 90% RH, noncondensing

Storage 5% RH to 95% RH, noncondensing

Pollution Degree 2


Maximum altitude 2,000 m

Environmental Management

NI is committed to designing and manufacturing products in an environmentally responsible manner. NI recognizes that eliminating certain hazardous substances from our products is beneficial to the environment and to NI customers.

For additional environmental information, refer to the *Minimize Our Environmental Impact* web page at ni.com/environment. This page contains the environmental regulations and directives with which NI complies, as well as other environmental information not included in this document.

Waste Electrical and Electronic Equipment (WEEE)

 **EU Customers** At the end of the product life cycle, all NI products must be disposed of according to local laws and regulations. For more information about how to recycle NI products in your region, visit ni.com/environment/weee.

电子信息产品污染控制管理办法（中国 RoHS）

 **中国客户** National Instruments 符合中国电子信息产品中限制使用某些有害物质指令 (RoHS)。关于 National Instruments 中国 RoHS 合规性信息, 请登录 ni.com/environment/rohs_china。(For information about China RoHS compliance, go to ni.com/environment/rohs_china.)

Environmental Standards

This product meets the requirements of the following environmental standards for electrical equipment.

- IEC 60068-2-1 Cold
- IEC 60068-2-2 Dry heat
- IEC 60068-2-78 Damp heat (steady state)
- MIL-PRF-28800F
 - Low temperature limits for operation Class 3, for storage Class 3
 - High temperature limits for operation Class 2, for storage Class 3
 - High temperature limits for operation Class 4, for storage Class 3

Physical Characteristics

Length	72.0 mm (2.83 in.)
Weight	90.0 g (3.17 oz)
I/O connector	
Male	9-pin DSUB
Female	9-pin DSUB

Table 1. Resistance and Temperature Coefficient of Resistance (TCR)

Part Number	Resistance	Resistance Tolerance	Typical TCR and Maximum Spread ¹
786897-0R5	0.5 Ω	±0.05%	±0.2 ± 2.8 ppm/°C
786897-01	1 Ω		
786897-02	2 Ω		
786897-05	5 Ω		
786897-10	10 Ω	±0.02%	±0.2 ± 1.8 ppm/°C

Maintenance

Clean the hardware with a soft, nonmetallic brush. Make sure that the hardware is completely dry and free from contaminants before returning it to service.

CE Compliance

This product meets the essential requirements of applicable European Directives, as follows:

- 2011/65/EU; Restriction of Hazardous Substances (RoHS)

Export Compliance

This model is subject to control under the U.S. Export Administration Regulations (15 CFR Part 730 et. seq.) administered by the U.S. Department of Commerce's Bureau of Industry and Security (BIS) (www.bis.doc.gov) and other applicable U.S. export control laws and sanctions regulations. This model may also be subject to additional license requirements of other countries' regulations.

Additionally, this model may also require export licensing before being returned to NI. The issuance of a Return Material Authorization (RMA) by NI does not constitute export authorization. The user must comply with all applicable export laws prior to exporting or re-exporting this model. See ni.com/legal/export-compliance for more information and to request relevant import classification codes (e.g. HTS), export classification codes (e.g. ECCN), and other import/export data.

¹ TCR values typical at -55 °C to 125 °C, +25 °C ref

Product Certifications and Declarations

Refer to the product Declaration of Conformity (DoC) for additional regulatory compliance information. To obtain product certifications and the DoC for NI products, visit [ni.com/certification](#), search by model number or product line, and click the appropriate link in the Certification column.

Additional Resources

Visit [ni.com/manuals](#) for more information about your device, including specifications, pinouts, and instructions for connecting, installing, and configuring your system.

Worldwide Support and Services

The NI website is your complete resource for technical support. At [ni.com/support](#), you have access to everything from troubleshooting and application development self-help resources to email and phone assistance from NI Application Engineers.

Visit [ni.com/services](#) for information about the services NI offers.

Visit [ni.com/register](#) to register your NI product. Product registration facilitates technical support and ensures that you receive important information updates from NI.

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