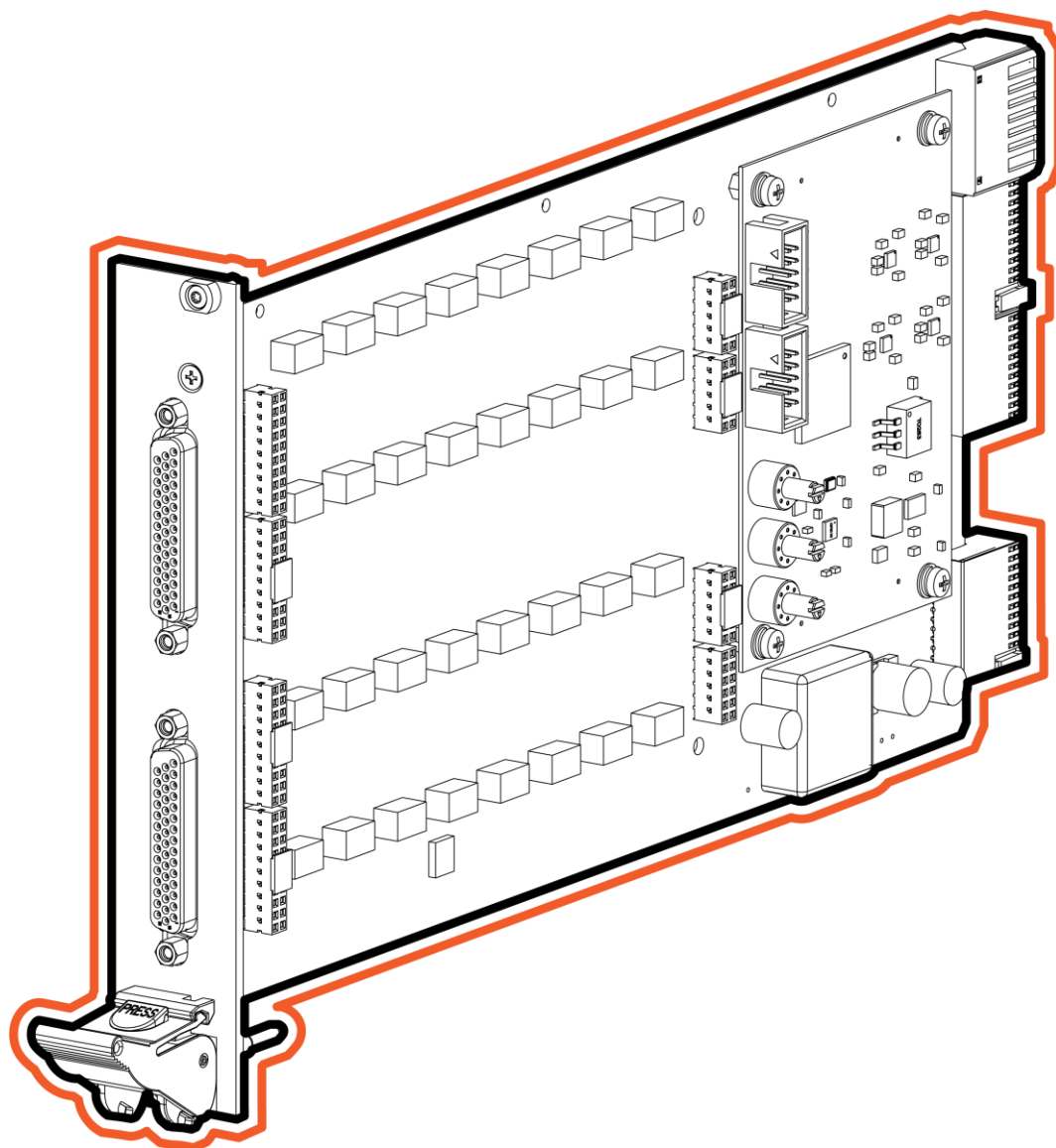


DE9003 DATASHEET

SLSC CURRENT OUTPUT MODULE 100MA



 **DEICO**

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DESCRIPTION

DE9003 SLSC Current Output Module 100MA is a 32-channel current module used in the SLSC enclosure, which connects to test equipment and products under test. It provides current output in the range of $\pm 100\text{mA}$ at $100\mu\text{A}$ resolution by using $\pm 10\text{V}$ analog Voltage from the input. Signal outputs are relay controlled and it is provided by the controller on the module. SLSC chassis is required to use the product.



Note DE9003 is compatible with DE9002 SLSC Instrument Expansion Module and able to measure all of the routed channels when used together.

The general features of DE9003 are listed below:

- ⇒ Current output in the range of $\pm 100\text{mA}$
- ⇒ Independent channel configurations
- ⇒ Output control with relay available
- ⇒ $100\mu\text{A}$ resolution
- ⇒ Load connection can be connected up to a maximum voltage of 14.5V
- ⇒ SLSC chassis compatible
- ⇒ 2 Slots for Instrumentation Modules

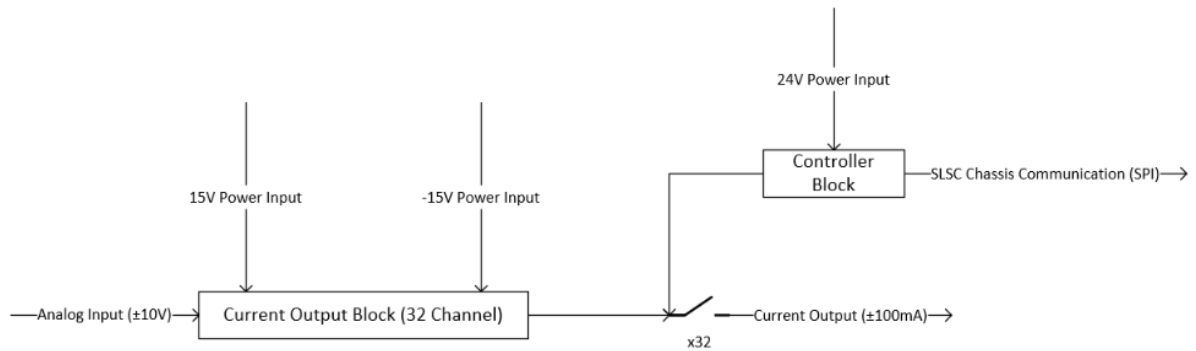
DE9003 is compatible with *IEC 60068-2-1/ IEC 60068-2-2/ IEC 60068-2-78/ IEC 60068-2-27/ IEC 60068-2-64/ EN 61326 (IEC 61326) / EN 55011 (CISPR 11) / AS/NZS CISPR 11/ FCC 47 CFR Part 15B/ ICES-001* standards.

Areas of application include:

- ⇒ HIL Testing
- ⇒ Current Output

HARDWARE OVERVIEW

Circuitry



Hardware Specifications

Electrical

Specification	Minimum	Typical	Maximum	Notes
Input Voltage	—	24V 15V -15V	—	Main Power Positive voltage to drive current output Negative voltage to drive current output
Analog Input Voltage	-10V	—	10V	Analog input voltage
Input Current	—	—	2A 8A 8A	Main Current Positive current to drive current output (P15V) Negative current to drive current output (N15V)
Current Output Range	-100mA	—	100mA	—
Output Resolution	—	100uA	—	With respect to full scale

Physical

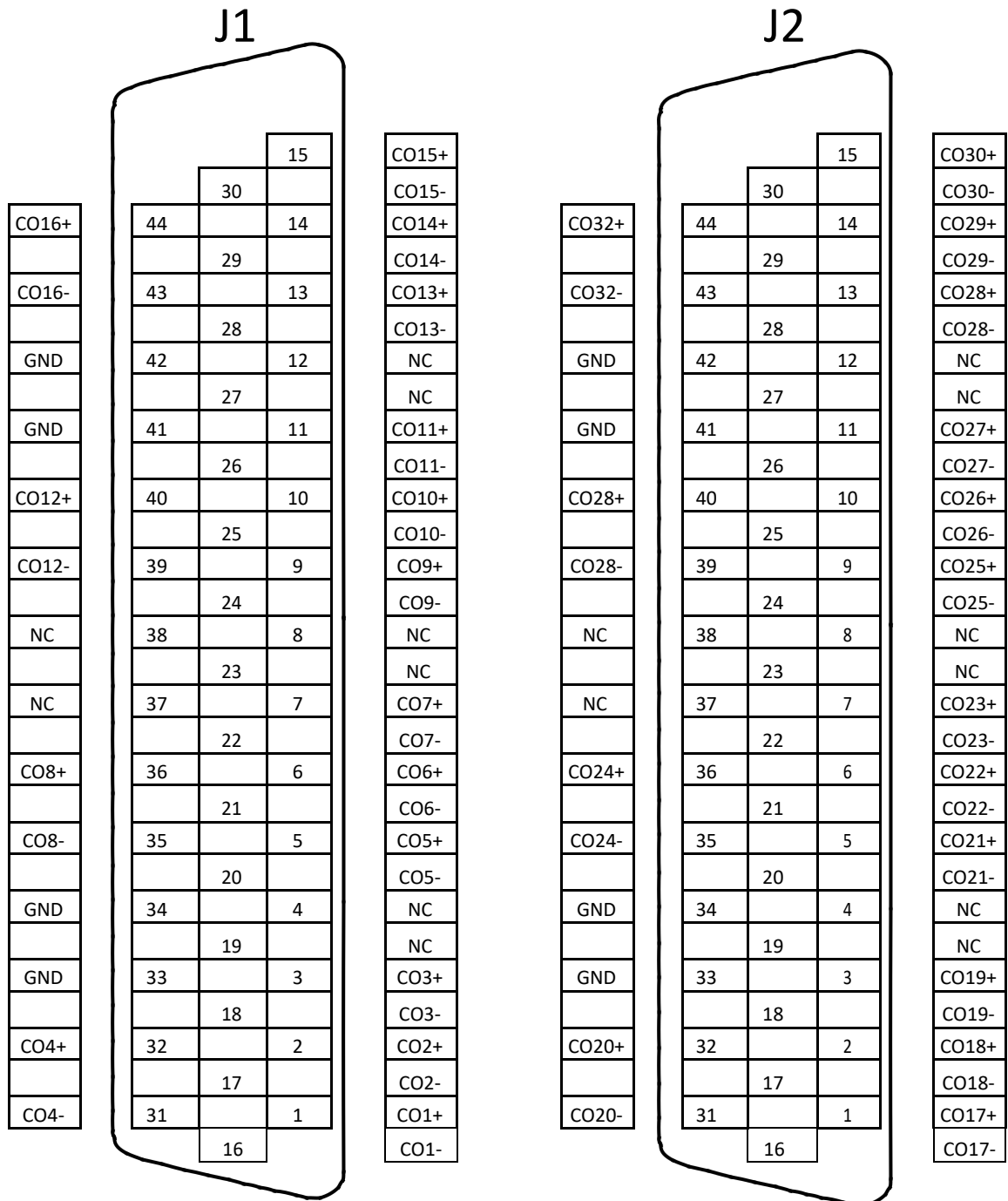
Specification	Typical	Notes
Dimensions	144.32mm x 30.48mm x 302mm (excluding ejector)	SLSC Standard Dimensions
Front panel connectors (x2)	HD44F	MPN: 2311770-1

Environmental

Specification	Condition	Value
Operating Humidity	Relative, non-condensing	10% - 90%
Storage Humidity	Relative, non-condensing	5% - 95%
Operating Temperature	Forced-air cooling from chassis	0°C - 40°C
Storage Temperature	Non-operational	-40°C - 85°C

SIGNAL CONNECTIONS

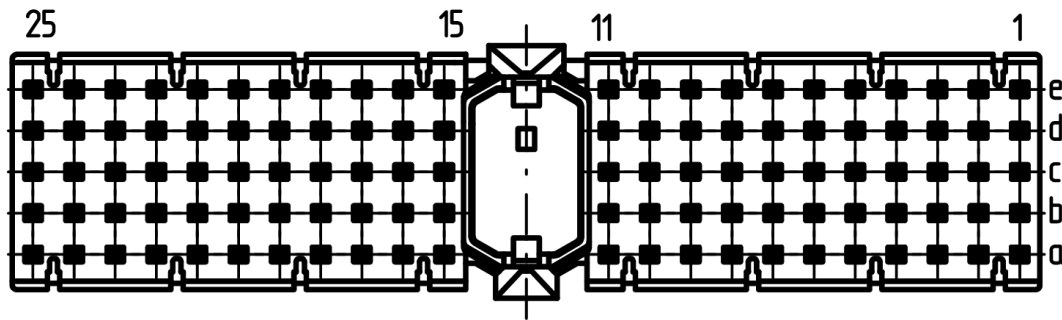
J1, J2 Pinout (Front)



J1, J2 Connector Pin Assignments

Signal	Description
COx	Current Output Channel x
GND	Ground connection
NC	No connection

XJ2 Connector Pinout (Rear)



XJ2 Connector Pin Assignments

Row	a	b	c	d	e
1	VI1+	VI1-	NC	VI2+	VI2-
2	VI3+	VI3-	NC	VI4+	VI4-
3	GND	GND	GND	GND	GND
4	VI5+	VI5-	NC	VI6+	VI6-
5	VI7+	VI7-	NC	VI8+	VI8-
6	GND	GND	GND	GND	GND
7	VI9+	VI9-	NC	VI10+	VI10-
8	VI11+	VI11-	NC	VI12+	VI12-
9	GND	GND	GND	GND	GND
10	VI13+	VI13-	NC	VI14+	VI14-
11	VI15+	VI15-	NC	VI16+	VI16-
15	VI17+	VI17-	NC	VI18+	VI18-
16	VI19+	VI19-	NC	VI20+	VI20-
17	GND	GND	GND	GND	GND
18	VI21+	VI21-	NC	VI22+	VI22-
19	VI23+	VI23-	NC	VI24+	VI24-
20	GND	GND	GND	GND	GND
21	VI25+	VI25-	NC	VI26+	VI26-
22	VI27+	VI27-	NC	VI28+	VI28-
23	GND	GND	GND	GND	GND
24	VI29+	VI29-	NC	VI30+	VI30-
25	VI31+	VI31-	NC	VI32+	VI32-

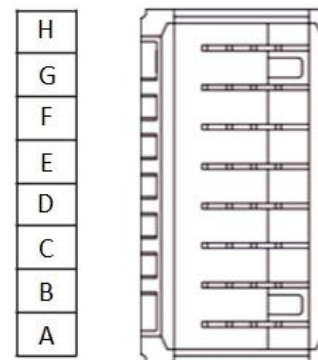
XJ2 Connector Signal Descriptions

Signal	Description
VIx	Voltage Input Channel x
GND	Ground connection
NC	No connection

XJ3 Connector Pinout (Rear)

XJ3 Connector Pin Assignments

Pins	Signal
A	N15V
B	GND
C	GND
D	P15V
E	INST1-
F	INST1+
G	INST0-
H	INST0+



CONFIGURATION

DE9003 control is based on NI-SLSC API. Before installing the device, NI-SLSC 19.5 or later must be installed. After installing software & the device, the device appears in the <LabVIEW Folder>\examples\SLSC\Configuration.vi front panel under the related SLSC Chassis when the VI is executed. If the device does not appear in Configuration VI, use the following troubleshooting guidelines:

- ⇒ Verify that the related SLSC Chassis is present on NI MAX and Configuration VI.
- ⇒ Use 'Refresh' button on the Configuration VI for the SLSC Chassis.
- ⇒ Use 'Restart' button on the Configuration VI to restart the SLSC Chassis.
- ⇒ Power off and unplug the chassis, and install the device in a different slot.

PROGRAMMING THE DEVICE

Programming the Device in Software

To use DE9003 in software, DE9003 LabVIEW Driver must also be installed on the system. After the driver is installed, device control VIs can be found on Instrument I/O>Instr Drivers>DE9003 palette in LabVIEW. Driver also provides programming examples. For more information on the subject, refer to the User Manual of DE9003.

SAFETY GUIDELINES



Caution Do not operate the DE9003 in a manner not specified in this document. Product misuse can result in a hazard. You can compromise the safety protection built into the product if the product is damaged in any way. If the product is damaged, return it for repair.

COMPATIBILITY GUIDELINES

Electromagnetic Compatibility Guidelines

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC). These requirements and limits provide reasonable protection against harmful interference when the product is operated in the intended operational electromagnetic environment.

This product is intended for use in industrial locations. However, harmful interference may occur in some installations, if the product is connected to a peripheral device or test object, or if the product is used in residential or commercial areas. To minimize interference with radio and television reception and prevent unacceptable performance degradation, install and use this product in strict accordance with the instructions specified in the product documentation.

Furthermore, any changes or modifications to the product not expressly approved by DEICO could void your authority to operate it under your local regulatory rules.



Caution To ensure the specified EMC performance, operate this product only with shielded cables and accessories.

Caution To ensure the specified EMC performance, the length of any cable attached to connectors J1 and J2 must not be longer than 3 m (10 ft.)



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