

Type Approval Certificate

This is to certify that Certificate No. 05/60002(E7) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER National Instruments Corporation

11500 N. Mopac Expressway Austin, Texas, 78759-3504 United States of America (USA)

PLACE OF PRODUCTION National Instruments Hungary Kft.

4031 Debrecen, 1/A Hatar Street

Hungary

PRODUCT DESCRIPTION Reconfigurable Control and Data Acquisition System

PRODUCT TYPE CompactRIO (cRIO)

APPLICATION Marine and offshore application in Category ENV1, ENV2, ENV3*

and ENV4 as defined in Lloyd's Register Type Approval System
Test Specification No. 1 March 2019 where the test specification is

satisfactory for the intended operation. *Note:* Items marked * are not ENV3.

STANDARDS Lloyd's Register Test Specification No. 1, March 2019.

Rules and Regulations for the Classification of Ships, July 2019

Manufacturer's Specification

IEC60068-2-27 (shock)

IEC60068-2-64 (random vibration) IEC60068-2-6 (sinusoidal vibration)

EN61326-1:1997 + A2:2002

FCC (47CFR 15)

ICES 003

Certificate No. 05/60002(E8)

Issue Date 27 January 2020

Expiry Date 12 February 2025

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Americas Technical Support Office

Lloyd's Register Canada Limited

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AS/NZS 2064 IEC 61010-1 EN61010-1 UL 61010-1 CSA No.61010-1

IEC 60079-0, IEC 60079-15 EN 60079-0, EN 60079-15 UL 60079-0, UL 60079-15 CSA 60079-0, CSA 60079-15

TECHNICAL DETAILS

Controllers:

cRIO-9012 Controller, 9-35Vdc, 20W CRIO-9014 Controller, 9-35Vdc, 20W CRIO-9022* Controller, 9-35Vdc, 35W CRIO-9023 Controller, 9-35Vdc, 35W CRIO-9024* Controller, 9-35Vdc, 35W Controller, 9-35Vdc, 35W

Chassis:

cDAQ-9188XT 8 Slot Ethernet Chassis, 9-30V, 15W 4 I/O Module Slots, 30Vdc, 4 ch cRIO-9101 8 I/O Module Slots, 30Vdc, 8 ch cRIO-9102 4 I/O Module Slots, 30Vdc, 4 ch cRIO-9103 cRIO-9104 8 I/O Module Slots, 30Vdc, 8 ch 4 I/O Module Slots, 30Vdc, 4 ch cRIO-9111 8 I/O Module Slots, 30Vdc, 8 ch cRIO-9112 4 I/O Module Slots, 30Vdc, 4 ch cRIO-9113 8 I/O Module Slots, 30Vdc, 8 ch cRIO-9114 cRIO-9116 8 I/O Module Slots, 30Vdc, 8 ch cRIO-9118 8 I/O Module Slots, 30Vdc, 8 ch NI 9157* 14 I/O Module Slots, 9-30Vdc, 35W 14 I/O Module Slots, 9-30Vdc, 35W NI 9159 I/O Module Slots, 9-30Vdc, 20W NI 91448 NI 9148* 8 I/O Module Slots, 9-30Vdc, 20W NI 91464 I/O Module Slots, 9-30Vdc, 15W 8 I/O Module Slots, 9-30Vdc, 30W NI 9154*

8 I/O Module Slots, 9-30Vdc, 30W

Chassis with integrated Controllers:

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cRIO-9030 4 I/O Module Slots, Controller, 9-30Vdc, 40W, 4-ch 4 I/O Module Slots, Controller, 9-30Vdc, 40W, 4-ch cRIO-9031 cRIO-9033 4 I/O Module Slots, Controller, 9-30Vdc, 40W, 4-ch cRIO-9034 4 I/O Module Slots, Controller, 9-30Vdc, 40W, 4-ch 8 I/O Module Slots, Controller, 9-30Vdc, 46W, 8-ch cRIO-9035 8 I/O Module Slots, Controller, 9-30Vdc, 46W, 8-ch cRIO-9036 cRIO-9038 8 I/O Module Slots, Controller, 9-30Vdc, 46W, 8-ch 8 I/O Module Slots, Controller, 9-30Vdc, 46W, 8-ch cRIO-9039 8 I/O Module Slots, Controller, 9-30Vdc, 25W, 8-ch cRIO-9066 8 I/O Module Slots, Controller, 9-30Vdc, 25W, 8-ch cRIO-9067 8 I/O Module Slots, Controller, 9-30Vdc, 25 W, 8-ch cRIO-9068 NI 9149 **Ethernet Expansion for C Series Modules** cDAQ-9133 8 I/O Module Slots, Controller, 9-30Vdc, 46 W, 8-ch cDAQ-9135 8 I/O Module Slots, Controller, 9-30Vdc, 46 W, 8-ch 4 I/O Module Slots, Controller, 9-30Vdc, 4-ch cDAQ-9132 4 I/O Module Slots, Controller, 9-30Vdc, 40W, 4-ch cDAQ-9134 8 I/O Module Slots, Controller, 19-30Vdc, 20W, 8 ch cRIO-9074* cRIO-9073* 8 I/O Module Slots, Controller, 19-30Vdc, 20W, 8 ch cRIO 9081* 8 I/O Module, Controller, 9-30Vdc, 75W, 8 ch cRIO 9082* 8 I/O Module, Controller, 9-30Vdc, 75W, 8 ch cRIO 9075* 4 I/O Module Slots, Controller, 9-30Vdc, 15W, 4 ch cRIO 9076* 4 I/O Module Slots, Controller, 9-30Vdc, 15W, 4 ch *Modules:* NI 9201 Analog Input, Medium Voltage, 30Vdc, 250V chto-earth, 8 ch NI 9201 Analog Input, Medium Voltage, 10Vdc, 60V chwith DSUB to-earth, 8 ch NI 9203 Analog Input, Current, 20mA, 250V ch-to-earth,

NI 9205 Analog Input, Medium Voltage, 10Vdc,

250V ch-to-earth, 32 ch

NI 9205 with Analog Input, Medium Voltage, 10Vdc, 250V

DSUB ch-to-earth, 32 ch

NI 9206 Analog Input, Medium Voltage, 10Vdc, 600V

(US)/400V(EU)

ch-to-earth, 16 ch for Fuel Cells

NI 9207 with Analog Input, Thermocouple, Voltage, 10Vdc,

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DSUB 20mA, 60V ch-to-earth, 16 ch

NI 9208 with Analog Input, Current, 20mA, 60V ch-to-earth,

DSUB 16 c

NI 9211 Analog Input, Thermocouple, 30V, 250V ch-to-

earth, 4 ch

NI 9212 and Analog Input, Thermocouple, 30V 250V ch-to-

TB-9212 earth, 16-ch

NI 9214 Analog Input, Thermocouple, 78mV, 250V ch-

to-earth, 16 ch

NI TB-9214 Analog Input, 78mV, 250V ch-to-earth, 3 ch NI 9215 Analog Input, Medium Voltage, 10Vdc, 250V

ch-to-earth, 4 ch

NI 9215 Analog Input, Medium Voltage, 10Vdc, 60V ch-

with BNC to-earth, 4 ch

NI 9217 Analog Input, RTD, 400 Ohm, 250V ch-to-earth,

4 ch

NI 9218 with Dynamic universal, ±30V ch-to-ch, 60Vdc ch-to-

DSUB earth, 2-ch

NI 9219 Analog Input, High Voltage, 60V, 250V ch-to-

earth, 4 ch

NI 9220 Analog Input, Medium Voltage, 10Vdc, 60Vdc

with DSUB ch-to-earth, 16 ch

NI 9221 Analog Input, High Voltage, 60V, 250V ch-to-

earth, 8 ch

NI 9221 with Analog Input, High Voltage, 60Vdc, 60V ch-to-

DSUB earth, 8 ch

NI 9222 with Analog Input, ±10 V, ch-to-ch, 60Vdc ch-to-

BNC earth, 4-ch

NI 9222 Analog Input, Medium Voltage, 10V, 60Vdc ch-

to-ch, ch-to-earth, 4 ch

NI 9223 Analog Input, Medium Voltage, 10V, 60Vdc ch-

to-ch, ch-to-earth, 4 ch

NI 9223 with Analog Input, ±10 V, ch-to-ch, 60Vdc ch-to-

BNC earth, 4-ch

NI 9225 Analog Input, High Voltage, 300V, 300V ch-to-

earth, 3 ch

NI 9229 Analog Input, High Voltage, 60V, 250V ch-to-

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earth, 4 ch Analog Input, IEPE and AC/DC, ±30 V, 3-ch NI 9230 NI 9232 Analog Input, IEPE sensors, 30V, 60Vdc ch-toearth, 3 ch NI 9237 Analog Input, Full/Half-Bridge Strain, 250mVdc, 250V ch-to-earth, 4 ch NI 9237 with Analog Input, Half/Full Bridge, V dc Al Bridge, **DSUB** 60Vdc ch-to-earth, 4 ch NI 9238 24-bit ch-ch analog input module, ±0.5V NI 9239 Analog Input, Medium Voltage, 10V, 250V chto-earth, 4 ch NI 9242 24-bit analog input, 4-ch, 250Vrms L-N, 400Vrms L-L NI 9244 24-bit analog input, 4-ch, 400Vrms L-N, 690Vrms L-L NI 9260 with 24-bit analog output, 2-ch, 3Vrms output BNC NI 9263 Analog Input, Medium Voltage, 10V, 250V chto-earth, 4 ch NI 9264 with Analog Output, Voltage, 10V, 60V ch-to-earth, **DSUB** 16 ch Analog Output, Current, 20mA, 250V ch-to-NI 9265 earth, 4 ch NI 9344 4-ch switch input, 4-ch LED output NI 9375 Digital Input, 30V Sinking, Digital Output, 30V Sourcing, 30Vdc, 60Vdc ch-to-earth, 32 ch NI 9375 Digital Input, 30V Sinking, Digital Output, 30V Sourcing, 30Vdc, 60Vdc ch-to-earth, 32 ch with DSUB

NI 9381 Multi I/O, 0-5Vdc, 20 ch

with DSUB

NI 9401 Digital Input, Medium Voltage, 10V, 250V ch-

to-earth, 4 ch

NI 9403 with Digital Input, Medium Voltage, 30V, 60V ch-to-

DSUB

earth, 32 ch NI 9411 Digital Counter/Timer, TTL Sinking/Source, 5V,

250V ch-to-earth, 8 ch

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NI 9421 Digital Input, 24V Sinking, 30Vdc, 250V ch-to-

earth, 8 ch

NI 9421 Digital Input, 24V Sinking, 30Vdc, 60V ch-to-

with DSUB earth, 8 ch

NI 9422 Digital Input, 24V Sinking/Sourcing, 60Vdc,

250V ch-to-earth, 8 ch

NI 9423 Digital Input, 24V Sinking, 30V, 250V ch-to-

earth, 8 ch

NI 9425 with Digital Input, 24V Sinking, 60Vdc, 60Vdc ch-to-

DSUB earth, 32 ch

NI 9426 with Digital Input, 30V Sinking, 30Vdc, 60Vdc ch-to-

DSUB earth, 32 ch

NI 9435 Digital Input, 250 AC/DC Universal, 250V,

250Vdc ch-to-earth, 4 ch

Sinking digital input, 8-ch, 24-250Vdc ch-to-NI 9437

earth

NI 9467 SMA Female Connector, Antenna Output, 5Vdc,

30mA, 1 port

RJ45, -1.4 V to 3.8 V (M-LVDS), 3 port NI 9469

Digital Output, 24V Sourcing, 30V, 0.75/ch, NI 9472

60Vdc ch-to-earth, 8 ch

NI 9472 Digital Output, 24V Sourcing, 30V, 0.75/ch, 60V

with DSUB ch-to-earth, 8 ch

NI 9474 Digital Output, 24V Sourcing, 30V, 250V ch-to-

earth, 8 ch

NI 9475 with

DSUB

Digital Sourcing, 60V, 60Vdc ch-to-earth, 8 ch

NI 9476 with Digital Output, 30V Sourcing, 30V, 1A/ch,

DSUB 60Vdc ch-to-earth, 32 ch

NI 9477 Digital Output, RTD Sinking, 60Vdc, 250V ch-

to-earth, 8ch

NI 9478 with

Digital Output, 50V, 60Vdc ch-to-earth, 16 ch

DSUB

NI 9485 Relay Output, SSR Form A (SPST), 60Vdc, 250V

ch-to-earth, 8 ch

NI 9801 Secure Digital Storage 2 slot

NI 9861 9-30Vdc, 60Vdc ch-to-earth, 1 port

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NI 9862	9-30Vdc, 60Vdc ch-to-earth, 1 port
NI 9866	8-18Vdc, 60Vdc ch-to-earth, 1 port
NI 9870	RS232 Serial Communications, 25Vdc, 60Vdc
	ch-to-earth, 4 port
NI 9871	RS485 Serial Communications, 13Vdc, 60Vdc
	ch-to-earth, 4 port
NI 9881	9-30Vdc, 60Vdc ch-to-earth, 1 port
NI 9882	9-30Vdc, 60Vdc ch-to-earth, 1 port

CONDITIONS FOR APPLICATION

- 1. Installation of this equipment for marine applications is to be in accordance with current Lloyd's Register Rules and Regulations.
- 2. Model number 'NI' prefix may or may not be present or may be cRIO.
- 3. To meet electromagnetic compatibility (EMC) requirements the product is to be installed in a shielded enclosure with shielded and/or filtered power and input/output ports. Power supply and module cables shall be separated on opposite sides of the enclosure and enter/exit through opposing enclosure walls.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

The application of this Type Approval Certificate will be limited to the relevant scope of the Specified Standards and acceptance thereof by the local authorities.

A periodical assessment of the Product Quality Assurance will be required to maintain the validity of the Type Approval of the product. This assessment by LR Surveyor is required 30 months after the date of issue of this Certificate.

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