ITS-16200 Specifications

2025-03-10

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Contents

ITS-16200 Specifications

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These specifications apply to all ITS-16200 configuration options unless otherwise noted.

Definitions

Warranted specifications describe the performance of a model under stated operating conditions and are covered by the model warranty. Warranted specifications account for measurement uncertainties, temperature drift, and aging. Warranted specifications are ensured by design or verified during production and calibration.

Characteristics describe values that are relevant to the use of the model under stated operating conditions but are not covered by the model warranty.

- Typical specifications describe the performance met by a majority of models.
- *Nominal* specifications describe an attribute that is based on design, conformance testing, or supplemental testing.
- *Measured* specifications describe the measured performance of a representative model.

Specifications are *Warranted* unless otherwise noted.

Conditions

Refer to <u>ni.com/manuals</u> for detailed specifications on the specific instruments used within the ITS-16200.

Specifications are valid for the system and all included instruments under the following conditions unless otherwise noted.

- Inverter Test System environmental characteristics are met
- Instrument-level conditions are met

Calibration Conditions

The performance of an externally calibrated instrument is defined in the instrument specifications. Additionally, specifications for externally calibrated instruments are only valid if the conditions defined in the instrument specifications are met. For applications that require calibrated power measurements, NI recommends using switch load and signal conditioning (SLSC) and PXI instrumentation.

ITS-16200 Pinout

iCon Connector Pinout



Table 1. iCon Connector Signal Descriptions

Signal	Description	
Bank x	Maps to J x connector	

J Connector Pinout



Table 2. J Connector Signal Descriptions

Signal	Description
Bank x_y	Line y in Bank x

Physical Characteristics

Dimensions		
Width	584 mm (23 in.)	
Depth	811 mm (32 in.)	

Height	1,362 mm (54 in.)	
Weight ¹		
Minimum		191 kg (422 lb)
Maximum		223 kg (490 lb)
Rack Paint		
Color	RAL-7035 gray	
Paint type	ESD dissipative paint as defined in IEC 61340-5-1	

Protective Earthing

High levels of leakage current may be present on the ITS-16200. Connect the ITS-16200 protective earth terminal before connecting to AC power.

Note The facility installation shall provide a means for connection to protective earth, and qualified personnel shall install a protective earthing conductor from the ITS-16200 protective earthing terminal to the protective earth wire in the facility.

Protective Earth Terminal Wiring		
Grounding wire	2.1 mm ² (14 AWG)	
Ring lug		

1. The estimated weight of the system depends on which options are purchased and installed.

Size	M8	
Length	20 mm (0.8 in.)	
Minimum protective earth terminal torque		1.29 N · m (11.5 lb · in.)

Power Requirements

Input voltage range	100 VAC to 240 VAC, 50/60 Hz, 16 A
Input power receptacle	IEC 60320 C20

The ITS-16200 shipment contains a power cord that corresponds to your country of operation.

Maximum Thermal Load

Maximum internat temperature 50°C

Table 3. Maximum Allowable Internal Dissipation

Environment Temperature	Power		
	120 V	240 V	
40 °C Ambient	1,350 W	1,350 W	
28 °C Ambient	1,870 W	3,400 W	
23 °C Ambient	1,870 W	3,790 W	

Note All equipment inside the rack must be powered, directly or indirectly, through the rack power entry panel. Other sources of external power must not be used.

Power Output

Table 4. AC Output Ratings

PDU Output	Total AC Ratings
100 VAC to 120 VAC, 10 A (per receptacle), 50/60 Hz	 15.2 A with low speed fan panel 8.7 A with DC supply fully loaded
200 VAC to 240 VAC, 10 A (per receptacle), 50/60 Hz	 15.5 A with low speed fan panel 12.4 A with DC supply fully loaded

Table 5. RMX-4102 Maximum Total Output

Rated output voltage	0 V to 36 V	0 V to 60 V
Maximum quantity	2	2
Rated output current	12 A	7 A
Rated output power	432 W	420 W

I/O

Network Ports			
External			
Туре	1219		
Standard	IEEE 802.3 Ethernet, 10BASE-T, 100BASE-TX, 1000BASE-T		

Speed	10 Mbps, 100 Mbps, 1000 Mbps				
Internal	'				
Speed		10 Mbps, 100 Mbps			
Number of ports		15 switched ports			
USB Ports					
Rear					
Number of por	Number of ports 2				
Туре				USB 3.0	
Internal					
Number of ports			4		
Туре			USB 2.0		
Mass Interconnect Virginia Panel Corporation (VPC) iCon) iCon		

Environmental Characteristics

Notice This product is intended for use in indoor applications only.

Temperature

Operating		5 °C to 40 °C		
Storage		0 °C to 60 °C		
Humidity		'		
Operating 20% to 80%, nonc		condensing		
Storage 10% to 80%, nonc		condensing		
Pollution Degree	'		2	
Maximum altitude			2,000 m	

Hardware Components

The following components are used within the ITS-16200.

Note Detailed specifications for hardware components are available online at <u>ni.com/manuals</u>.

Refer to the detailed specifications of OP8911-F, OP8913-F, OP8934-F, OP8935-F, and OP8940-F at <u>www.opal-rt.com</u>.

Table 6. Hardware Components

Component Type	Part	Description	Required Quantity		
			Base Configuration	Two DUT Configuration	Four DUT Configuration
Test Rack	ITS-16251—Inverter	Custom ATE	1	1	1

Common and	Part	Description	Required Quantity			
Туре			Base Configuration	Two DUT Configuration	Four DUT Configuration	
	Test System, 24U Base Rack	Core Configuration assembly, low power, 24U with included: • Power distribution unit (PDU) • Power entry panel (PEP) • Ethernet switch • Fan panel				
PXI Components	<u>PXIe-1095</u>	18-slot (5 hybrid slots, 11 PXI express slots, 1 PXI express system timing slot, and 1 system controller slot), up to 24 GB/s PXI chassis	1	1	1	
	<u>PXIe-7868R</u>	Kintex-7 325T FPGA, 18-channel AO, 1 MS/s, PXI multifunction reconfigurable I/O module	1	1	2	
	<u>PXIe-8510</u>	6-port vehicle multiprotocol interface module, TRC-8543, NI-	1	1	1	

Component	Part	Description	Required Quantity			
Туре			Base Configuration	Two DUT Configuration	Four DUT Configuration	
		XNET CAN XS (LS/FT, HS/FD) transceiver cable, 18 in. Base = 2, 2 DUT = 4, 4 DUT = 6				
	<u>PXIe-8881</u>	3.9 GHz 8-core PXI controller	1	1	1	
	<u>PXIe-6363</u>	32 AI (16-bit, 2 MS/s), 48 DIO, PXI multifunction I/O module		1	1	
	<u>PXIe-6738</u>	1 MS/s, 16-bit analog output	_	1	1	
	SLSC-12001 ²	12-slot chassis for SLSC	1	1	1	
	<u>SLSC-12201</u>	32 channel, 5 V to 33 V, digital input/output	_	1	1	
SLSC	OP8911-F	High-speed digital I/O with FIU SLSC conditioning board	1	1	1	
	OP8913-F	High-speed digital I/O with FIU SLSC conditioning board	1	1	2	
	OP8934-F	16 Analog OUT differential from single- ended input with FIU SLSC	1	1	2	

Component	Part	Description	Required Quantity			
Туре			Base Configuration	Two DUT Configuration	Four DUT Configuration	
		conditioning board				
	OP8935-F	8 Analog IN/ OUT with FIU SLSC conditioning board	1	1	2	
	OP8940-F	Channel passthrough board with FIU	_	2	3	
	<u>RTI-12307</u>	Rear transition interface for generic DIO/AO/ AI with MDR headers	3	3	5	
	RTI-12309	Rear transition interface for generic DIO/AO/ AI with 8 ix headers	1	4	6	
	SET-1210	SLSC 16-channel resistor simulator		1	1	
Power Supplies	<u>RMX-4102</u>	36 V, 12 A, programmable power supply device		1	2	
	<u>RMX-4102</u>	60 V, 7 A, programmable power supply device	1	1	2	

2. Refer to the *SLSC-12001 Getting Started Guide and Specifications* to learn more about SLSC capabilities, including routing information and supported signal bandwidth.

Component Type	Part	Description	Required Quantity		
			Base Configuration	Two DUT Configuration	Four DUT Configuration
Mass Interconnect	<u>ITS-16250</u>	Mass interconnect PCB assembly	1	2	3