

DATA SHEET

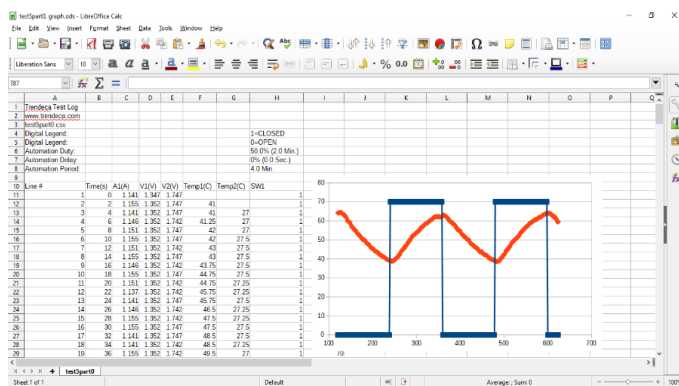
No: DOC-1002
REV: 7.0

Trendeca Model 100

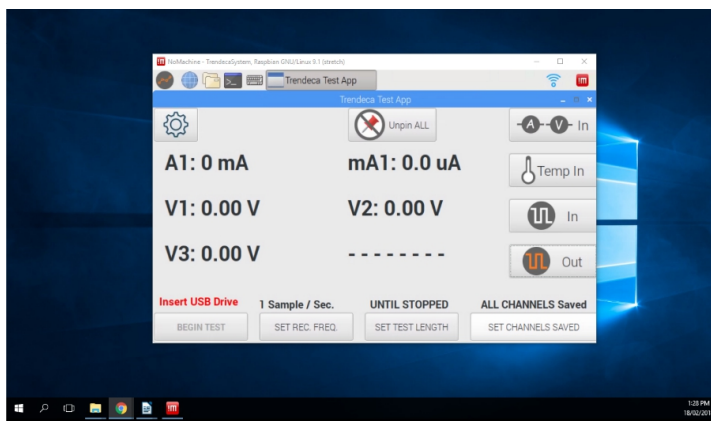
Data Acquisition and Test Automation Device

Gathering high quality data has never been this easy. Wide input ranges, automatic gain selection, a touch screen interface, and other innovative features ensure you can spend your time analyzing your data, not your DAQ.

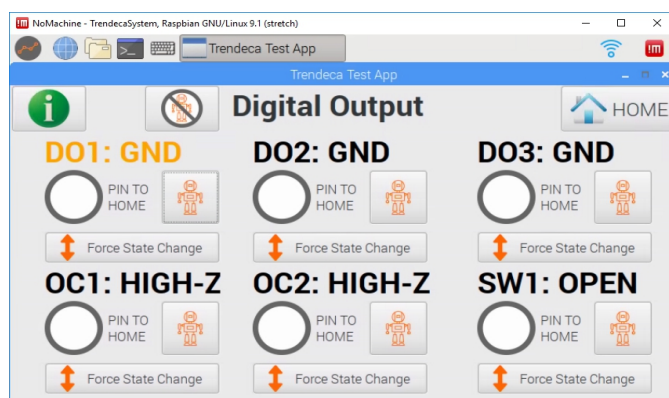
Software



Import data in CSV format for analysis with your favorite tool (Matlab, Excel, Python, etc.)















Control the device, view real-time readings, and download data remotely via Wifi connectivity



Quickly configure test settings and automation outputs via the simple touch screen interface




Key Features

-  **Voltage Measurement**
Differential measurement up to +/-60V
-  **Current Measurement**
Measure currents between +/-1uA and +/-10A
-  **Temperature Measurement**
Record up to three K Type thermocouples
-  **Digital Input Measurement**
Several digital input types provided
-  **Test Automation Built-In**
10A relay and other output types included
-  **Touch Screen Interface**
Configure and start a test in seconds
-  **Wifi Connected**
Control tests from anywhere
-  **Multiple Power Options**
Power via wall adapter or external 12V supply
-  **USB Enabled**
Log data directly to your USB drive
-  **Simple Data Format**
Import the CSV data file into your favorite tool
-  **Embedded Specs**
Hardware specs available on screen
-  **Push to Connect**
No tool needed to connect test leads

Technical Specifications

Data Input


Large Current Input - 1 Channel

Resolution	1mA
Accuracy	+/- (1mA +1%)
Burden Voltage	0.025V/A
Max Applied Voltage	60V
Max Applied Current	+/-10A (Fused)
Max Acquisition Rate	10Hz
Symbol	


Small Current Input - 1 Channel

Resolution	
<1mA Applied	0.1uA
<0.5A Applied	0.1mA
<2A Applied	1mA
Accuracy	
<1mA Applied	+/- (1uA +1%)
<0.5A Applied	+/- (1mA +1%)
<2A Applied	+/- (1mA +1%)
Burden Voltage	
<1mA Applied	75mV/mA
>1mA Applied	0.15V/A
Max Applied Voltage	9V
Max Applied Current	+/-2A (Fused)
Automatic Gain Switching Time	<1mS
Max Acquisition Rate	10Hz
Symbol	

Voltage Input - 3 Channels

Resolution	0.01V
Accuracy	+/- (0.01V +1%)
Max Applied Voltage	+/-60V
Input Impedance	10M Ohms
Input Capacitance (Between + and - Terminals)	< 100pF
Filter Capacitance (Between + Terminal and Trendeca GND)	1uF
Measurement Type	Differential Voltage Measurement
Max Acquisition Rate	10Hz
Symbol	

Temperature Input - 3 Channels



Resolution	0.01C
Accuracy	+/- (1C +1%)
Thermocouple Type	K Type Only
Thermocouple Connector	Standard Mini-Connector; Length: 25mm; Width: 15mm; Pitch: 8mm
Provided Thermocouple Temperature Range	-20C to 400C
Provided Thermocouple Length	95cm
Alternative Thermocouple Compatibility	Reads all K Type (extended temp. range / alternative length acceptable)
Max Acquisition Rate	1 Hz
Symbol	

Trendeca Ltd.

Christchurch, New Zealand

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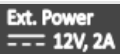
Digital Input - 4 Channels	
Digital Behaviour	
>0.5V Applied (referenced to GND)	HIGH Measured
<0.5V Applied (referenced to GND)	LOW Measured
Max Applied Voltage	60V
Max Acquisition Rate	10Hz
Symbol	
Pull Up Input - 1 Channels	
Digital Behaviour	
Open Circuit Applied	HIGH Measured
Shunt to GND Applied	LOW Measured
Pull Up Voltage	3.3V
Pull Up Resistor Value	10K Ohms
Max Acquisition Rate	10Hz
Symbol	
Output (Test Automation)	
Configuration Options (Applies to All Output Channels)	
Manual Output Toggling	Changes Output State Immediately
Timed Pulse Output	Pulse Train with Configurable Duty Cycle, Period, and Phase Shift
Minimum Output Pulse Period	100mS
Switch Output (Solid State Relay) - 1 Channel	
Digital Behaviour	
Output HIGH	Switch CLOSED
Output LOW	Switch OPEN
Max Applied Voltage	60V
Max Applied Current	+/-10A (Fused)
Switching Time	<1mS
On State Resistance	<0.035 Ohms
Symbol	
Digital Output - 3 Channels	
Digital Behaviour	
Output HIGH	3.3V Output
Output LOW	Shunted to GND
Max Current Draw Allowed	10mA
Max Current Sink Allowed	10mA
Symbol	
Open Collector Output - 2 Channels	
Digital Behaviour	
Output HIGH	Shunted to GND
Output LOW	High Impedance
Max Applied Voltage	50V
Max Applied Current	250mA (Fused)
Symbol	

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General Properties	
System Attributes	
LCD Touch Screen	5 Inch 800 X 480 Pixel Colour Touch Screen
Wifi	150Mbps, 802.11 b, g, n, 2.4Ghz
USB Ports	3 General Purpose USB 2.0 Ports
Memory	8Gb SD Card, Externally Accessible
Input / Output Wire Connections	Push to Connect (16-30AWG Compatible)
Recorded Data File Format	CSV Data File (Easily Imported Into Excel, Matlab, Python, etc.)
Over Voltage Protection	All Input and Output Ports Protected
Universal Wall Power Adapter	
Input Voltage	100-240VAC; 50/60Hz
Output Voltage/Current	12V DC, 2A
Plug Adapters Provided	All Markets (Includes USA, AUS, NZ, CN, UK, EU and more)
External Power Supply Terminal	
Voltage to Apply	12V (Acceptable Range: 11V to 16V)
Maximum Current Draw	2A
Typical Current Draw	0.5A
Electrical Protection	Reverse Polarity Protected
Symbol	
Physical	
Dimensions	Length: 24cm, Width: 9.5cm, Height: 4cm
Mass	0.75 Kg
Operating Temperature	Lab Grade (10C - 35C)
Housing	Urethane Plastic
Compliance	FCC and RCM Marks: Compliant to CISPR 22 and FCC Part 15 B
Calibration	
Most Recent Calibration Date	Available via Touch Screen
Recommended Calibration Check Period	2 Years
Calibration Check or Re-Calibration Service	Email: support@trendeca.com

Included Accessories

		
3 K Type Thermocouples	8Gb USB Drive - Contains Support Docs.	Universal Wall Power Adapter

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