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highways
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International Road Dynamics Inc. develops and maintains traffic management products and systems technology that make highways talk. What are they saying? They are providing information that roadway administrators need to manage traffic, preserve infrastructure and provide safety warnings to drivers.

IRD's multi-discipline, innovative and customer-focused team is expert in advanced technologies, advanced traffic solutions and custom-designed systems.



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Smart Dynax® Treadle Interface For Toll Audit Systems

Overview

The Smart Dynax® Treadle Interface delivers high accuracy axle counts for toll audit systems using IRD multi-sensor treadles. The microcontroller-based model provides several new features for system integrators.



Smart Dynax® Treadle Interface Card



Dynax® Interface Configuration Utility

Advantages and Features

New Technology - Surface mount technology and micro-processor.

No Adjustments - Sensitivity tracking is continuously variable and completely automatic. No adjustments are required by the toll operator.

Self-test - Self-test routine on boot-up; boot can be initiated by push-button switch. Results are reported visually and over the communications port.

Low Power - 75ma maximum at 12V DC.

Communications Port Hardware - RS-232, DB9 female connector (DCE), 57.6kbps.

End of Life (EOL) Indication - Sensor EOL indications are reported visually (LED) and over the communications port.

Manual Switch Option - Switch to enable or disable a sensor.

LEDs for Diagnostics - Displays conditions for each channel of working sensor: no signal, stuck on, intermittent, and end of life.

Communications Port Messages and Diagnostics:

Configuration Utility: The Dynax® Treadle Interface Configuration Utility allows configuration and monitoring of the Dynax® Treadle Interface electronics.

Status Messages: Health status (temperature, voltage, errors), channel activation, direction of travel.

Control Messages: Report channel activation count, clear channel activation count, perform self-test.

Boot Messages: Hardware P/N, hardware S/N, reset count, self-test results.

Field Upgradable - Firmware can be upgraded on site over diagnostic port using a laptop computer.

Travel Direction - Reports number of forward and reverse axles and stores in non-volatile memory.

Smart Dynax® Treadle Interface Specifications

Inputs

DYNAX® Resistance	0 - ∞ Ohms
Sensor Lead Length	200 ft max., 75 mph operation

Outputs

Isolated	
OFF	+30VDC max.
ON	1.0VDC @ 50mA max.
Non-isolated	
OFF	+Vcc max.
ON	0.75VDC @ 25mA max.

Power

Supply Voltage (Vcc)	10 - 30V DC max
Supply Current	
Idle	35mA typ.
Maximum	75mA
Output Voltage (V out)	5 - 30VDC max

Environmental

Operating Temperature	-40 to +85°C
Storage Temperature	-40 to +85°C
Relative Humidity	20% to 95% (non-condensing)

Dimensions

Length	3.0" (7.6 cm)
Width	8.0" (21.0 cm)

Serial Port

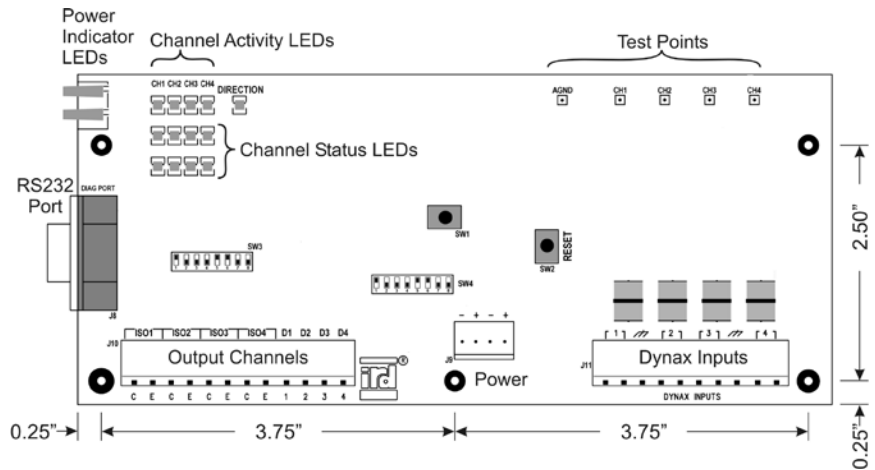
Connector	RS-232, DE9S, DCE
Port Settings	57600, N, 8, 1
Flow Control	OFF

LED Indicators

Channel Activity	
Axle Detected	
Direction of Travel	
Forward	
Reverse	
Sensor/Channel Status	
Normal	
No Signal	
Stuck On	
Intermittent	
End of Life Warning	
Built-in Test Failure	

Switches

Channel Mode	
Channel Enable/Disable	
Direction Output Enable/Disable	
Isolated Output Configuration	
Pull-up Resistor Enable/Disable	
Ground Reference Enable/Disable	
Board Reset (Momentary)	
Reset/Start Built-In-Test (BIT)	



Mounting Dimensions

Corporate Office

702 - 43rd Street East
Saskatoon, Saskatchewan
Canada S7K 3T9
Tel: +1(306) 653-6600
Fax: +1(306) 242-5599
Toll Free: 1-877-444-4IRD (4473)
Email: info@irdinc.com

U.S. Office

2402 Spring Ridge Drive, Suite E
Spring Grove, IL
USA 60081
Tel: +1(815) 675-1430
Fax: +1(815) 675-1530



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Road Dynamics Inc.



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