

INSTRUMENTATION I/O SYSTEM

A COMPONENT OF FIDERIS'S FUEL CELL TEST SYSTEM™

An Advanced Testing System for Fuel Cell Development



- Customer Defined Inputs and Outputs, Providing Complete Software Integration with Fideris's Other Fuel Cell Test Equipment
- All Signal Inputs and Outputs are Differential and Isolated
- System Wide Control of All Fideris Fuel Cell Test System Equipment Using FCPower™ Software
- Ideal Instrument to Extend Fuel Cell Testing Data Acquisition and Control to Additional Equipment
- Monitor Conditions and Status, and Expand Input / Output Capabilities
- Mix and Match Any Number of Inputs and Outputs - Up to a Maximum of 63
- Static and Differential Pressure Input Ports Available



fideris
innovative solutions

MODEL FCTS I/O™
FUEL CELL TEST SYSTEM INPUT/OUTPUT UNIT™

INSTRUMENTATION INPUT-OUTPUT SYSTEM

A MEMBER OF FIDERIS'S FUEL CELL TEST SYSTEM™ FAMILY

FEATURES:

- Available outputs include: Digital AC, Digital DC, and Analog
- Available inputs include: Digital AC and DC, Contact Closure, Pressure, Analog, and Temperature
- Custom I/O signals available
- Front panel I/O signals include LEDs, alarms, and switches
- System wide control of all Fideris FCTS™ equipment using FCPower™ Software

I/O SPECIFICATIONS:

Digital AC Output:	3.5 Amps, wide selection of voltage outputs with each channel individually fused Isolation 4,000 VAC	Digital AC Input Voltage Range:	90-140 V or 180-280 V Isolation 4,000 VAC
Digital DC Output:	3.5 Amps, 3-60 Volts, each channel individually fused Isolation 4,000 VDC	Digital DC Input Voltage Range:	Dry contact closure, 3-32 V, 35-60 V Isolation 4,000 VDC
Analog Output:	0-5 VDC @ 20 mA max 0-10 VDC @ 10 mA max 4-20 mA into 450 ohms Isolation 2,500 V _{rms}	Analog Input:	0-50 or 0-100 mV 0 to 1, 0 to 5, 0 to 10, -5 to 5, and -10 to 10 VDC 4-20 mA Isolation 2,500 V _{rms}
Temperature Input:	Type J, Type K, or Type T Thermocouple AD590 Probe 100 ohm Pt RTD Isolation 2,500 V _{rms}		

UNIT SPECIFICATIONS:

Front Panel Connections: User configurable
Any combination of LEMO®connectors, BNC connectors, mini thermocouples, LEDs, alarms, switches, or other customer specified connectors

Back Panel Connections:
Power inlet: IEC-320 (mating cord provided)
Data connection: RS485 DB9
Line voltage receptacles

Electrical Requirements:
Voltage: 120 VAC (208/220/240 optional)
Frequency: 60 Hz (50 Hz optional)
Current: Depends upon configuration- 2 Amps minimum

Installation Requirements:
Clearance for operation: Back: 6", RH: 0", LH: 0", Top: 0"

Physical Characteristics:
Dimensions: 6.5" high; 18.5" wide; 18.5" deep
System weight: 25 lbs
Operating environment: 40° to 100° Fahrenheit; 85% RH
Cabinet rating: Indoor

Specifications subject to change.

This equipment may be protected by one or more of the following patents: U.S. Patent # 5,512,831, 6,324,042, 6,383,671, 6,792,320. Additional patents pending. All brand or product names are the trademarks or registered trademarks of their respective companies. Fuel Cell Test System, FCTS, Fuel Cell Test System Instrumentation Input/Output Unit, Fuel Cell Test System Input/Output Unit, FCTS I/O, FCTS BH, FCPower, SafeState, and Fideris are trademarks of Fideris Incorporated.

Input / Outputs Available

A = AC switch output 120VAC @ 3.5 amps	Q = 0 to 50 mV analog voltage input
B = AC switch output 240VAC @ 3.5 amps	R = 0 to 100 mV analog voltage input
C = DC switch output 60VDC @ 3.5 amps	S = 0 to 1 VDC analog voltage input
D = Dry switch output 100 VDC @ 0.5 Amp resistive	T = 0 to 5 VDC analog voltage input
E = Dry switch output 200 VDC @ 1 Amp resistive	U = 0 to 10 VDC analog voltage input
F = AC/DC present input 90-140V	V = -5 to 5 VDC analog voltage input
G = AC/DC present input 180-280V	W = -10 to 10 VDC analog voltage input
H = DC present input 3-32V	X = 0 to 20 mA analog current input
I = AC/DC present input 35-60V	Y = 4 to 20 mA analog current input
J = Contact closure input for dry switch	Z = 0 to 5 A analog current input
K = 0 to 5 VDC analog voltage output	1 = 28 to 140 VAC analog voltage input
L = -5 to 5 VDC analog voltage output	2 = 28 to 280 VAC analog voltage input
M = 0 to 10 VDC analog voltage output	3 = Type J input thermocouple
N = -10 to 10 VDC analog voltage output	4 = Type K input thermocouple
O = 4 to 20 mA analog current output	5 = Type R input thermocouple
P = 0 to 20 mA analog current output	6 = Type T input thermocouple
	7 = AD590 temperature probe input
	8 = RTD input

Selection availability subject to change.

For sales, literature, or technical information regarding Fideris's Fuel Cell Test Systems, please contact:



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