

35900E Dual-Channel Interface with Modular Input/Output

Specifications



Analog-to-Digital Conversion

General Specifications			
Processor:	Motorola 68331 at 16.78 MHz		
Number of channels:	Two independent		
Type of A/D conversion:	Continuously integ dual-slope, 100% a	rating rea recovery	
Memory:	1 MB RAM		
Electrical Specifications			
Input signal voltage range:	-18 mV to +1.0 V	–18 mV to +1.0 V	
Maximum (no damage):	±10 V	±10 V	
Analog dynamic range:	>140 dB (≤2 Hz) ty	>140 dB (≤2 Hz) typical	
Resolution:	24 bits		
Common-mode voltage:	±100 V maximum: I	±100 V maximum: relative to instrument chassis	
DC input impedance:	Differential: Common-mode:	33 MΩ typical 8 MΩ minimum 500 MΩ minimum	
Input noise:	40 nV rms, typical (with input shorted) 150 nV rms, maximum		
Common-mode rejection:	140 dB minimum, d	140 dB minimum, dc to 100 Hz	
Bandwidth:	15 Hz		
Thermal drift:	0.8 μV/°C, typical: 1.7 μV/°C, typical: 3.5 μV/°C, maximu 10 μV/°C, maximu	0.8 μV/°C, typical: 0 °C to 35 °C 1.7 μV/°C, typical: 35 °C to 55 °C 3.5 μV/°C, maximum: 0 °C to 35 °C 10 μV/°C, maximum: 35 °C to 55 °C	
Integral nonlinearity: (monotonicity guaranteed)	0.004% FS, typical 0.02% FS, maximur	n	
Conversion factor:	10 nV per count (±3%)		
Area resolution:	65 nV-second (±3%)		
A/D sampling rate:	0.1 to 100 Hz	0.1 to 100 Hz	
RFI immunity:	Maximum baseline shift of 50 μV with application of up to 3 V/m of RF field strength from 26 MHz to 1000 MHz		



Run Control Specifications

Remote Control

Remote start/stop/ready:	Two independent connectors, open collector TTL input/output
Digital I/O	
Number of lines:	16 lines per channel (8 bidirectional, 8 input only)
I/O signal levels:	TTL level inputs, open collector outputs
Input common mode range:	0–5 V
Connectors:	Two 25-pin female D-subminiature connectors
Notes:	

1. Differential ratings apply between the positive and negative input terminals.

 $\ensuremath{\mathbf{2}}.$ The common mode ratings apply between both positive and negative input

terminal and common GROUND (instrument ground or chassis).

Host Communications Specifications

Modular Input/Output (MIO) cards conform to MIO 5.0 specification.

LAN MIO Card

Network type:	Ethernet
Protocol:	TCP/IP
Cable requirements:	Thin Ethernet cable (thin coax [10Base2])Twisted-pair cable (unshielded/shielded [10BaseT])

GPIB RS-232-C MIO Card

Type of interface:	GPIB
Communications protocol:	GPIB (Agilent interface bus); conforms to ANSI/IEEE-488 standard
Type of interface:	RS-232-C
Baud rates:	300, 600, 1200, 2400, 4800, 9600, 19200, 38400
Transmission:	Full duplex
Parity:	Even, odd, none
Start bits:	One
Stop bits:	One
Pacing:	XON/XOFF both directions, hardware handshake
Connectors:	One standard 25-pin male D-subminiature connector

www.agilent.com/chem

Instrument Control Port Specifications

Type of interface:	RS-232-C
Baud rates:	300, 1200, 2400, 4800, 9600
Transmission:	Full duplex
Parity:	Even, odd, none
Start bits:	One
Stop bits:	One, two
Pacing:	XON/XOFF both directions, hardware handshake
Connectors:	Two standard 9-pin male D-subminiature connectors

Physical Specifications

Mechanical

Size:	325 mm (12.8 inches) wide 285 mm (11.2 inches) deep 104 mm (4.1 inches) high
Weight:	4.1 kg (9 lbs)
Electrical	
Line voltage range:	100 V~240 V
Line voltage fluctuations:	±10% maximum
Line frequency range:	50/60 Hz
Line power consumption:	25 W
Safety classification:	IEC safety Class III (Excludes the power adapter. The power adapter is grounding protected.)
Safety installation category:	IEC overvoltage category II
Environmental	
Heat dissipation:	Nominal: 137 Btu/h Maximum: 205 Btu/h
Temperature ranges:	Operating: 5 °C to +40 °C
Humidity:	0% to 80% (noncondensing)
Altitude:	2,000 meters maximum
Safety pollution degree:	IEC pollution degree 2

Agilent shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material. Information, descriptions, and specifications in this publication are subject to change without notice.

© Agilent Technologies, Inc. 2005

Printed in the USA September 12, 2005 5989-3884EN

