E325

Universal amplifier conditioner converter of signals

APPLICATIONS

- Acquires very low signals in disturbed areas needing galvanic isolated amplifiers.
- All types of measuring with universal acquisition card: temperature, distortion, pressure, force, acceleration, displacement...

DESCRIPTION

E325 is a very flexible programmable amplifier and easy to adapt for the user, whether material or software wise. E325 acquires all types of sensors. All functions are within the card, without any mechanical setting up : the user has direct access through connectors at the rear. Programming and tunning software (included for Windows) treats all configurations. VISA driver is also available.

Main features

- Battery saving of RAM configuration setting
- Automatic calibration of the channels
- Modular organization for each channel
- 16 channels for a 19"3U rack
- IEEE-488 bus and serial link RS-232 programmable
- The following functions are available within each card, without any mechanical tunning:
- Filtered and non-filtered output
- High pass/ low cut filter
- Temperature masuring: platinium sensor, thermocouple
- Bridge mounting complements: ¼, ½, 60W, 120W, 350W, 1000W
- Sensor power supply in voltage or current (for strain gauge, piezoresistant sensor, potentiometer...)
- Amplifier for high/ low signal level (gain from 0.1 to 20,000)
- Input / output galvanic isolation ±500V, with excellent common mode rejection

Amplifier

Input	
Input resistance	100ohm
Input capacity	500pF
Input/ output isolation	<table><tr><td>Rd=0ohm</td><td>DC </td><td>160dB</td><td>G=1000</td></tr> <tr><td>Rd=0ohm </td><td> 50Hz </td><td>140dB</td><td> G=1000 </td></tr> <tr><td>Rd=1ohm </td><td> DC </td><td>140dB </td><td>G=1000</td></tr> <tr><td> Rd=1ohm </td><td> 50Hz </td><td>120dB</td><td></td></tr></table>
Input voltage	±500V
Input current	±10V linear rev ±15V without damage ±100V linear rev Att. 1/10
5µV RTI 90KHz bandwidth	±1nA
Gain	±1nA
Range	
Accuracy	0.1 to 2000
Extrapolation	0.02%, gain 1-2-5...1000
Non linearity	Not continuously variable from 0.1 to 2000
Stability	0.01% of full scale
Zero	0.0025% of full scale
Thermal drift	
Zero adjustment	0.1µV/°C RTI 75µV/°C RTO
Drift	Self-calibration
3 automatic ranges	
Stability	±20mV (0.2µV not available) ±0.2V (1µV not available) ±10V (10µV not available)
Filters	0.005% of full scale
Low cut	
Type	
Optional	Butterworth
Order	Bessel, Tchebytcheff, elliptic
Optional	4th order
Increment	6th order, 8th order
High pass	10Hz until 2550Hz 400Hz from 2.8KHz to 100KHz
Type	
Optional	
Order	Butterworth
Optional	Bessel, Tchebytcheff, elliptic
Increment	4th order
Output	6th order, 8th order
Type	1Hz until 63Hz 50Hz from 100Hz to 3150Hz
Optional	
Output voltage	Filtered and non-filtered
Output current	250KHz (±50V isolation)

Sensor supply (OPPJ option)

Voltage mode	±5mA
Range	
Accuracy	
Stability	100mV for 15V by 0.25mV steps
Max. current	±0.02% of full scale
Current mode	±0.001% with constant temperature over 200 hours
Range	100mV for 5V 90mA 5V for 10V 50mA 10mV for 15V 30mA
Accuracy	
Stability	100µA for 25mA by 0. 5µA steps
Bridge configuration	±0.02% of full scale
Type	±0.001%/°C
Complement value	
Bridge reset	½, ¼, full bridge by software
Calibration	60ohm, 120ohm, 325ohm, 1Kohm

Platinum sensor 100ohm (with OPPJ option)

Range	±2048 step, values from 10kohm to 200Mohm
High temperature	
Low temperature	from -200°C to +800°C
Slope	Programmable from -200°C to +800°C
Accuracy	Programmable from -200°C to +800°C
Linearization	10mV/°C for 200V/°C max
Thermocouples	0.05% of full scale
J-type	by software (on-off)
K-type	
T-type	from -200°C to +750°C
High temperature	from -250°C to +1200°C
Low temperature	from -250°C to +400°C
Slope	Programmable from -200°C to +800°C
Accuracy	Programmable from -200°C to +800°C
Linearization	10mV/°C for 200V/°C max
Cold junction compensation	0.05% of full scale
Mechanical features	Table stored in EPROM
Dimensions	By platinum sensor with connector or voltage signal with 100mV/°C slope
Connector use	
Environment	PCB 425mm x 111.8mm
Use temperature	16 x subD 9pts : input 2 x subD 37pts : output
Storage temperature	
	0°C to +60°C
	-25°C to +85°C