ISO-LDH/ISO-LDL

Islated Strain Gauge Type Loadcell Input Board

PIN Assignment   Software   Manual

Functional Description

The ISO-LD series is a bus-type isolated loadcell input board. The isolation inputs can operate with up to 500Vrms of common-mode voltage.

The ISO-LD series features a 12-bit analog-to-digital converter, on board 1 K bytes FIFO buffer, one loadcell signal input channel, one analog input channel, 8-channel 12-24V isolated digital inputs, 7-channel isolated open-collector digital outputs, one programmable 8-bit LED indicator to indicate the magnitude of strain gauge input signal.

The ISO-LD series board is suitable for static force measurement and dynamic force analysis. Because there are on board excitation voltage, high gain amplifier, you don*t have to buy any excitation voltage and signal conditioning module. In other words, it save your money and space. The board also have some special features, such as

1.12-bit programmable offset voltage. Therefore the user can cancel the DC bias and amplify the AC signal

2.The isolated structure eliminate the ground loop noise and protect your computer.

3.On board FIFO buffer support gap-free A/D conversion under DOS and Windows environment.

4.Except the loadcell input channel, there are a lot digital I/O and one analog input channel .The user can implement a measurement and analysis system.

Features

- AT bus
- 500 Vdc photo-isolation protection
- one channel strain gauge input channel
- One channel analog input channel
- Built-in 1K bytes FIFO
- Excitation voltage for loadcell : 12V, 50mA
- Maximum gain up to 40,000
- Programmable 12-bit resolution ,DC offset voltage (0~5V)
- Second order low pass filter build-in
- Direct connection to strain gauge type loadcell
- 8-channel 12-24V isolated digital input
- 7-channel isolated open-collector digital output

Specifications

Analog Input Specifications

Channels	1 loadcell input channel & 1 analog input channel
Resolution	12-bit
Conversion rate	16 KS/s max
Nonlinearity	+/- 0.01 %
Gain error	0.005% of reading maximum
Input Impedance	10,000MW||6pF
bias current	+/- 3 nA (maximum)
Input offset current	+/- 2 nA (maximum)
CMRR	90 dB (Minimum)
Recommended warm-up time	10 minutes
sample & hold	On chip

ISO-LDH Input Range

Analog input range	0~10V , 0 ~1V , 0~0.1V , 0~0.01V
Strain Gauge input range	0 ~ 37.5mV
Resolution	12-bit
Gain Input range	400 0~37.5 4,000 0~15 40,000 0~12.75

ISO-LDL Input Range

Normal input range	0~10V, 0~5V, 0~2.5V, 0~1.25V
Loadcell input range	0 to 37.5mV
Loadcell offset voltage adjustment	0 to -5V, 8-bit
Resolution	12-bit
Gain Input range(mV)	400 0~37.5 8,00 0~25 1,600 0~18.75 3,200 0~15.625
Loadcell Offset Voltage Adjustment	0 to -5V, 12 bit resolution

Digital I/O

digital input	8 photo-isolated 12~24V
digital output	7 isolated open-collector (100mA)
output	8 TTL/LED

General Environmental

Power Requirements:	+5V @ 400mA max.
Operating temp	0-50°C
Storage temp	-20 to 70°C
Humidity	0 to 90% non-condensing
Dimensions	190 mm x 122 mm

Applications

- Strain gauge type loadcell measurement
- Dynamic force on line monitoring system .
- Dynamic pressure measurement

Options :

- Programmable 8-bit LED indicator.
- Command set programming

DN-25 : 9-pin , 25-pin D-sub Connector Screw Termianl Board
S-50 : S-type Load-cell

Software

- Toolkit for DOS
- Toolkit for Windows 98/ME
- Toolkit for Windows NT 4.0
- Toolkit for Windows 2000/XP
- ActiveX Control (OCX) 95/98
- ActiveX Control (OCX) NT
- ActiveX Control (OCX) 2000/XP
- Driver for LINUX

Ordering Information

ISO-LDH	12-bit Load-cell input Board (High Gain)
ISO-LDH/S	ISO-LDH + DN-25
ISO-LDL	12-bit Load-cell input Board (Low Gain)
ISO-LDL/S	ISO-LDL + DN-25