

e-LCell4

High speed LoadCell (24-bit, 15KHz) Input Module,
4-channel, Terminal Block

Features

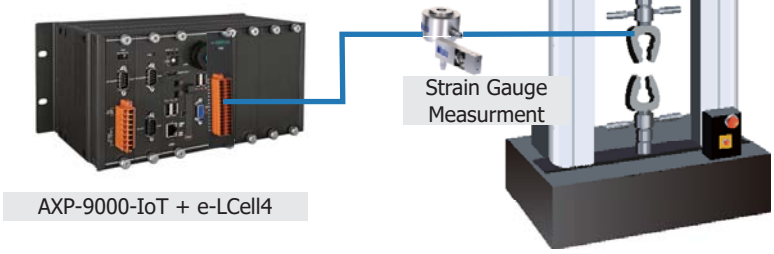
- 4-channel Load Cell Transducer Input
- Built-in 2048 samples FIFO for Analog Inputs
- Software Calibration
- 24-bit ADC Resolution
- 15 kS/s Sampling rate
- Wide Operating Temperature Range: -25 to +75 °C

Introduction

The e-LCell4 is an e-Bus x 1 (similar to PCI-E x1) module that provides 4-channel Load Cell Input. This module needs to be installed on an e-Bus x1 slot of the AXP-9000-IoT Programmable Automation Controller (PAC).

The e-LCell4 equips the high-accuracy ADC, so it provides 4 strain gauge input channels for measuring the minor changes of the Load Cell signal. The module can be used to measure Load cell transducer Input signals for floating signal source in differential mode (4-Wire/6-Wire Load Cell)

The module installed on AXP-90000 with 64-bit Windows 10 IoT OS supports DLL SDK and Active X control together with various language sample programs based on Visual C++, Visual Basic, C#.NET, Visual Basic.NET and LabVIEW are provided in order to help users quickly and easily develop their own applications.



AXP-9000-IoT + e-LCell4

System Specifications

System	
Type	e-Busx1
Data Bus	32-bit
Hardware	
Connector	32-pin Terminal Block
Software	
SDK	LabVIEW Demo, VB/VC/Delphi/BCB/ VB.NET/C#.NET/VC.NET/MATLAB Demo
LED Display	
System LED Indicator	1 LED as Power Indicator
Power	
Consumption	1 A @ +5 V
Mechanical	
Dimensions (W x L x H)	31 mm x 134 mm x 145 mm
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-40 ~ +85 °C
Humidity	10 ~ 90 % RH, Non-condensing

I/O Specifications

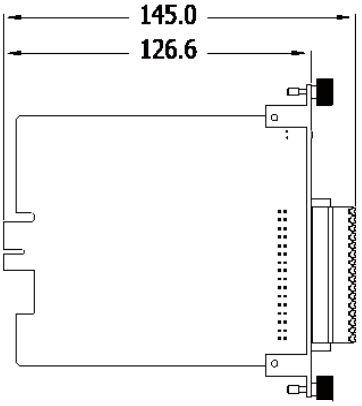
Strain Gauge, Load Cell Input	
Channels	4 (Load Cell Transducer)
Range	±227 mV (Load Cell Transducer)
Wiring	Full-Bridge, Half-Bridge, Quarter-Bridge
Accuracy	0.05% of FSR ±1 LSB @ 25 °C, ±10 V
Resolution	24-bit
Sampling Rate	15 kS/s
Input Impedance	10,000 MΩ/4 pF
Overvoltage Protection	Continuous ±35 Vp-p
Excitation Voltage Output	
Channels	4
Voltage Output	10 V
Max. Output Load Current	60 mA
Accuracy	±0.05 % of FSR
Drift	±50 ppm/°C

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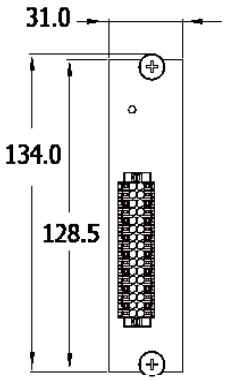
Applications

- Signal Analysis
- FFT and Frequency Analysis
- Transient Analysis
- Vibration Analysis
- Other Industrial and Laboratory Measurement and Control

Dimensions (Units: mm)

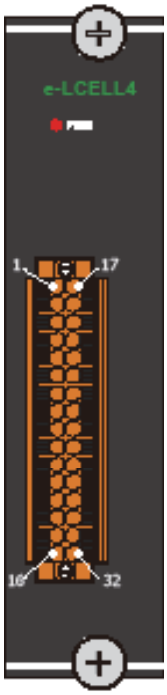


Left View



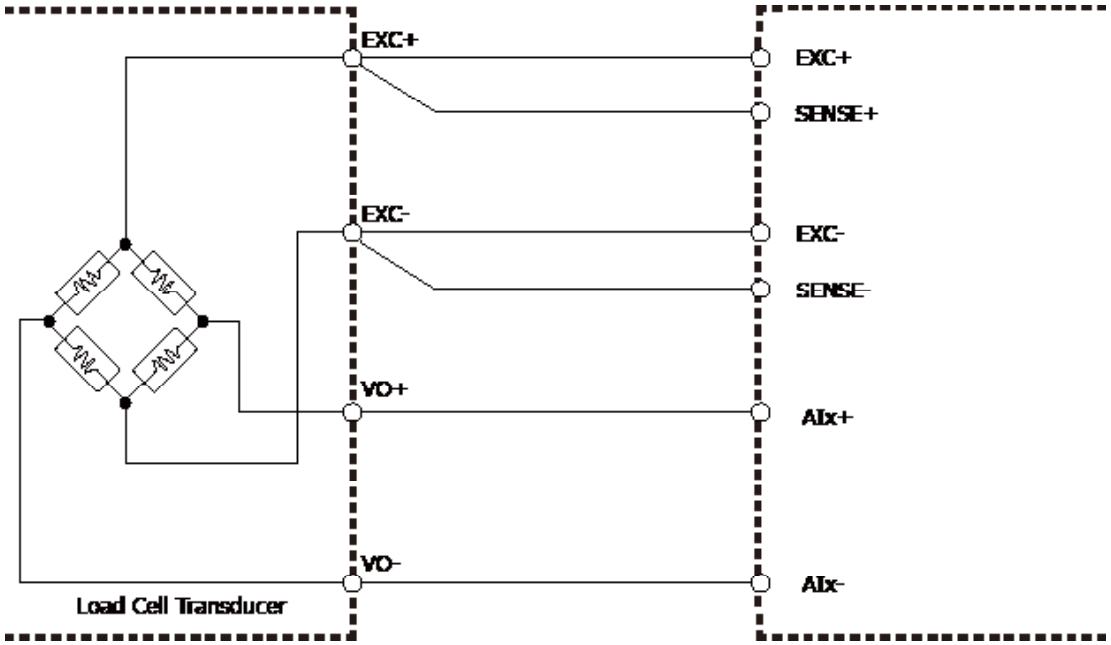
Front View

Pin Assignments



Pin Assignment	Terminal No.		Terminal No.	Pin Assignment
AI0-	01		17	AI0+
EXC0-	02		18	EXC0+
SENSE0-	03		19	SENSE0+
NC	04		20	NC
AI1-	05		21	AI1+
EXC1-	06		22	EXC1+
SENSE1-	07		23	SENSE1+
NC	08		24	NC
AI2-	09		25	AI2+
EXC2-	10		26	EXC2+
SENSE2-	11		27	SENSE2+
NC	12		28	NC
AI3-	13		29	AI3+
EXC3-	14		30	EXC3+
SENSE3-	15		31	SENSE3+
NC	16		32	NC

Wire Connections



Ordering Information

e-LCell4 CR	High speed LoadCell (24-bit, 15KHz) Input Module, 4-channel, Terminal Block (RoHS)

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