FBs-2LC

Dual-Channel Load Cell Input Module

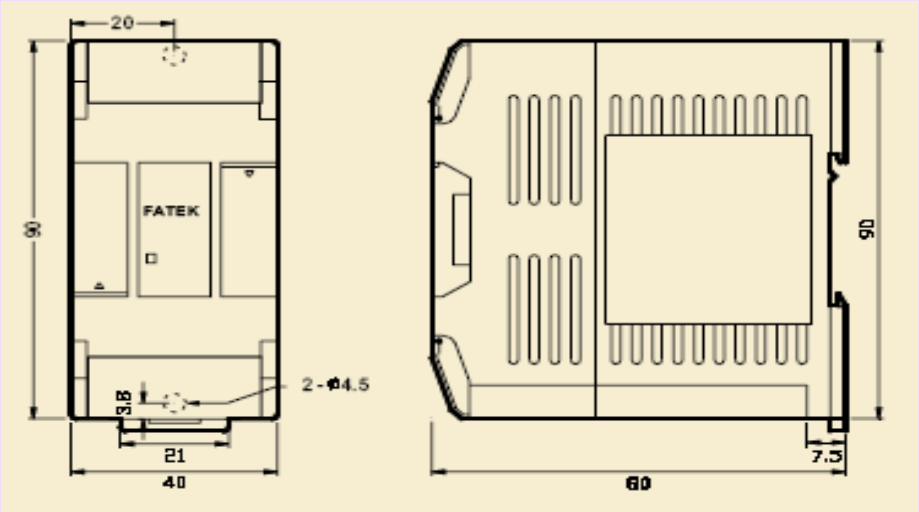
Introduction

FBs-2LC is one of the analog input modules of FBs series PLC. It supports two channels of load cell input for weight measurement. The raw conversion result is represented by a signed 16 bit integer value. In order to filter out the field noise imposed on the signal, it also provides the average of sample input function.

Specifications

Total Channels - 2
A/D Converter Utilized – 24-bit Δ-Σ A/D
Resolution- 16 bits (include signed bit)
I/O Points Occupied - 1 RI(Input Register) and 8 DO
Conversion Rate- 1/3/5/8 Hz
Non-Linearity- 0.01% F.S. (@25℃)
Zero Drift- 0.2 μV/℃
Gain Drift- 10 ppm/℃
Excitation Voltage – 5V with 100Ω driving capability
Sensitivity - 2mV/V, 5mV/V, 10mV/V, 20mV/V
Software Filter- Moving average
Average Samples- 1~8 configurable
Isolation- Transformer(Power) and photo-coupler(Signal)
Indicator(s) - 5V PWR LED
Supply Power- 24V-15%/+20%, 2VA
Internal Power Consumption- 5V, 100mA
Operating Temperature- 0 ~ 60 ℃
Storage Temperature- -20 ~ 80 ℃
Dimensions- 40(W)x90(H)x80(D) mm

Dimensions



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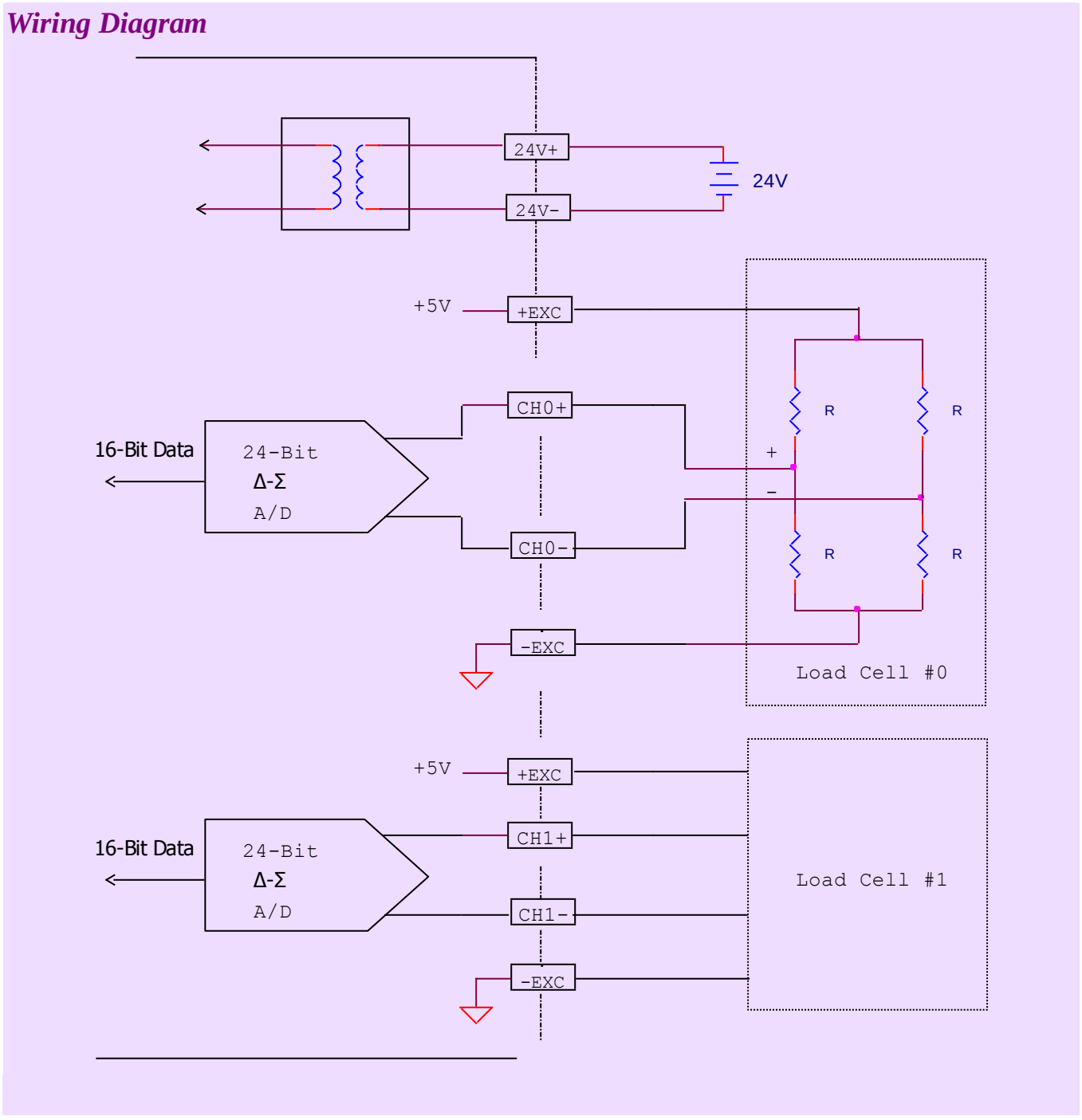
Wiring Diagram



The raw conversion result is represented by a 16-bit signed value. After setting the full range engineering value and perform the zero and full scale calibration procedure, the system will automatically convert the raw conversion reading value into engineering weight value for user application.

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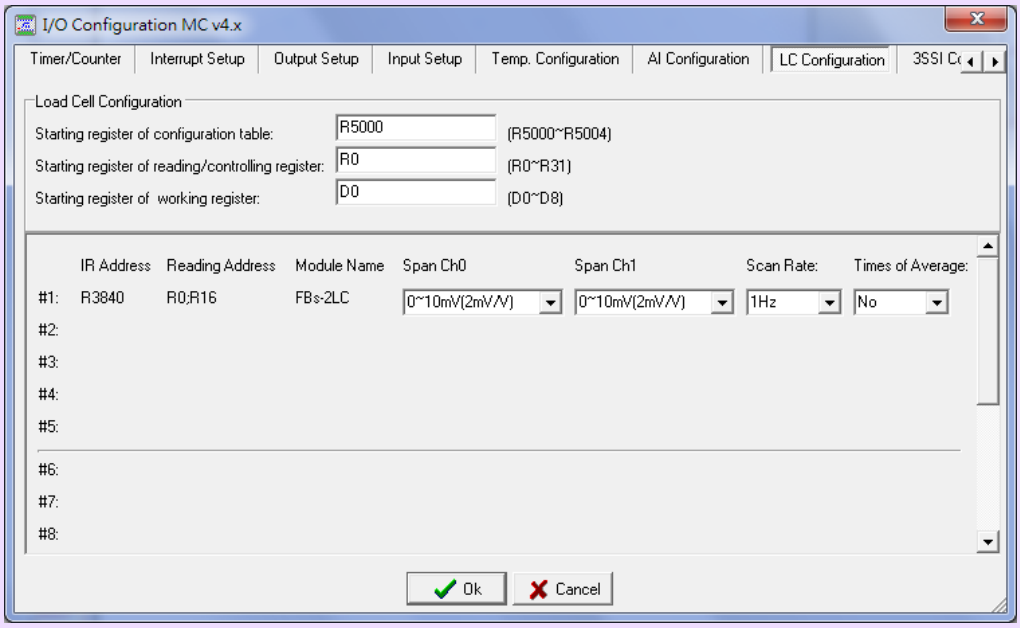
PLC Control



Before FBs-2LC module can be working, the configuration of the module should be set by the Winproladder software tool. The picture shown at above is the I/O configuration page for "LC module" setup.

Starting register of configuration table : Please input the starting register number of a block register that allocated for load cell module configuration in this field. The size of configuration table depends on the total installed load cell modules. The actual number of register allocated for configuration can be seen following the field entry, in this case it takes 5 registers for configuration.

Starting register of reading/control registers: Please input the starting register number of a block register that were allocated for receiving the measurement value and control parameters for load cell.

Starting register of working registers: Please input the starting register number of a block register that were allocated for internal process.

Span Ch0: The sensitivity of incorporated load cell or measurement range for channel 0. There are 2mV/V, 5mV/V, 10mV/V and 20mV/V can be set. The corresponding measurement range are 0~10mV, 0~25mV, 0~50mV and 0~100mV.

Span Ch1: The sensitivity of incorporated load cell or measurement range for channel 1

Scan Rate: Conversion rate. There are 1Hz, 3Hz, 5Hz and 8Hz can be set

Times of Average: There are No, 2 times, 4 times and 8 times average can be set.

The processing capability of load cell module for one PLC is 16 in total.

Please refer the user's manual for more detail explanation.

Note: The supporting for FBs-2LC module is available only for PLC OS V4.71 and Winproladder V3.22 or later version.