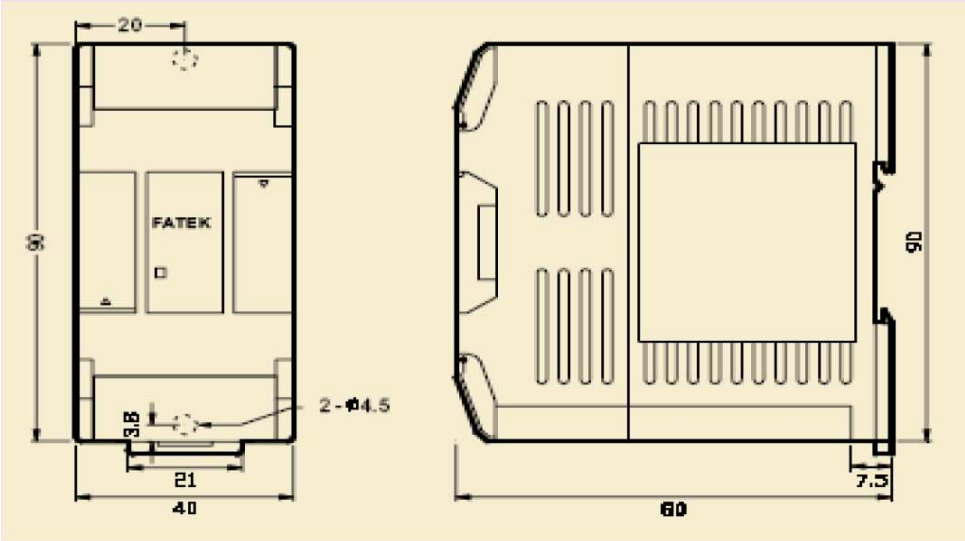
FBs-2LCHR – 2 Channel 18-bit Load Cell Input Module

Rev_1

Introduction

FBs-2LCHR is one of the analog input modules of FATEK FBs series PLC. It provides 2 channels of load cell input for weight measurement. The raw conversion result is represented by a signed 18 bit integer value. In order to filter out the field noise imposed on the signal, it also provides the average of sample input function.

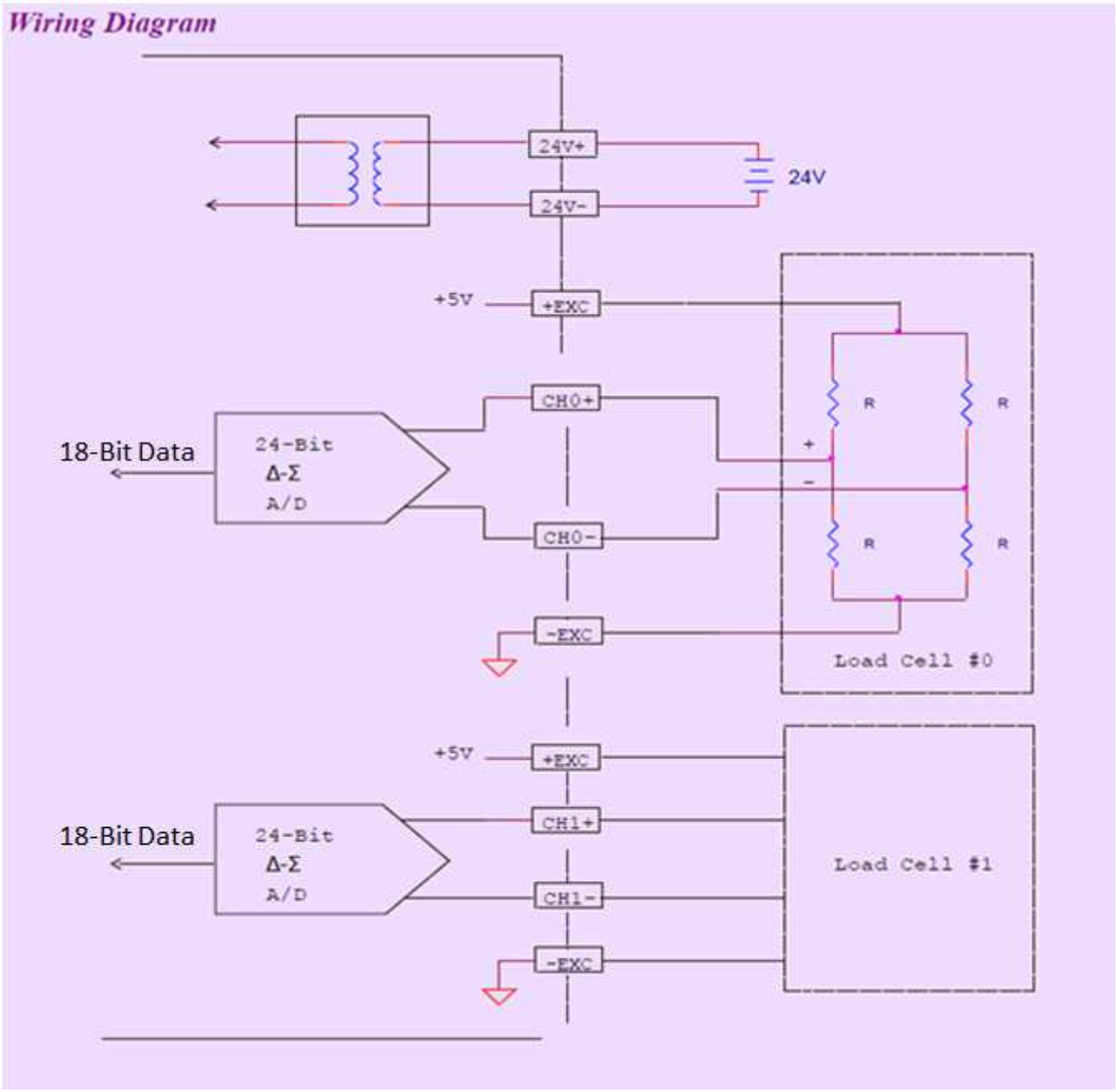
Dimension



Specifications

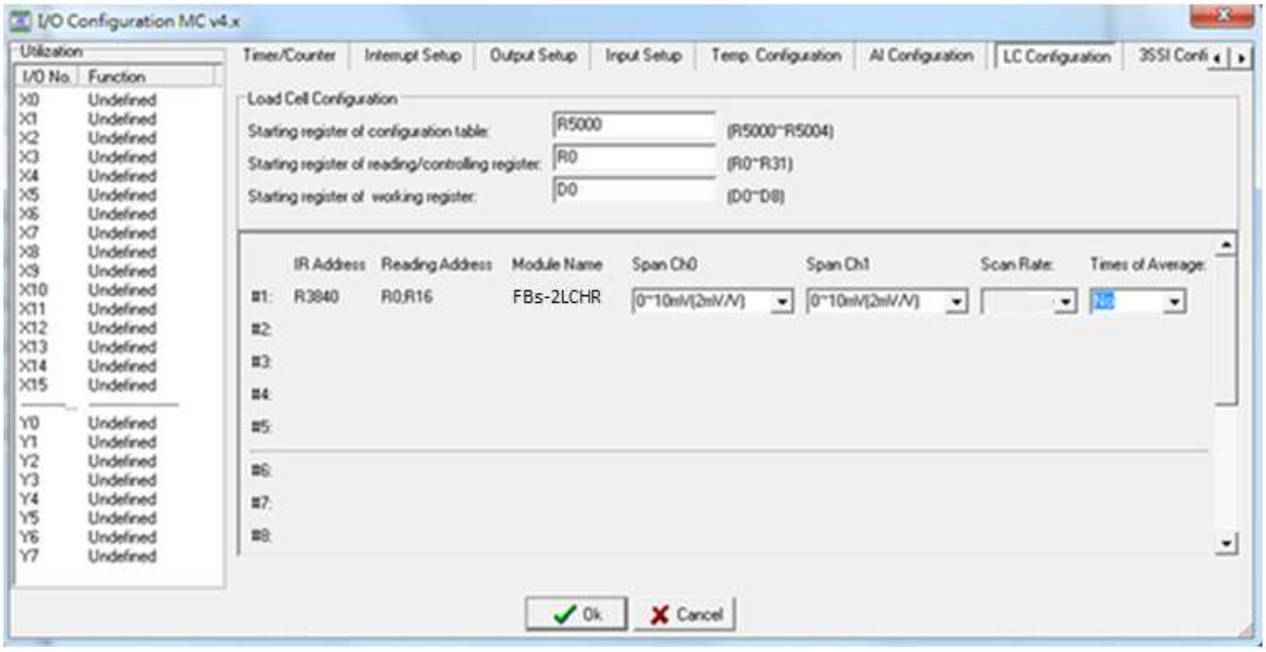
Total Channels	2 CH
A/D Converter Utilized	24-bit ΔΣ ADC
Resolution	Up to 18 bit (include signed bit) @ 5Hz Conversion Rate
I/O Points Occupied	4 IR (Input Register) and 8DO
Conversion Rate	5 /10/25/30 Hz
Non-linearity	0.01%F.S. (@25℃)
Zero Drift	0.2uV/℃
Gain Drift	10ppm/℃
Excitation Voltage	5V with 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-couple (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



The raw conversion result is represented by a 18-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.

PLC Control (The figure is for temporary use to explain the details)



Before FBs-2LCHR 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. 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.

Scan Rate: Conversion rate. 5 / 10 / 25 / 30 Hz

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.