B1-L4NTC

4-channel NTC temperature measurement left side expansion module

Introduction

B1-L4NTC is one of the B1-PLC series analog expansion modules which can support up to 4 channels of NTC thermistor measurement. The measurement is conducted by internally place a reference voltage with a series resistor to excite the NTC under test. If the temperature is changed then the resistance of NTC is also changed which will also be reflected on the changing of A/D conversion value. By looking up the temperature/resistance characteristic and the A/D value, the user can deduce the measurement temperature.

Specification

Channel No. - 4 CH

A/D resolution- 12-bit

Interface– The conversion A/D value are placed in 4 registers

D4072 – CH0 value

D4073 – CH1 value

D4074 – CH2 value

D4075 – CH3 value

Conversion time – updated for each scan

A/D accuracy- ±1 **%**

Resistance measurement range- 100Ω~100KΩ

Internal series resistor – 10KΩ

Isolation type- non

Indicator- non

Connector type- 3.81mm European detachable terminal block.

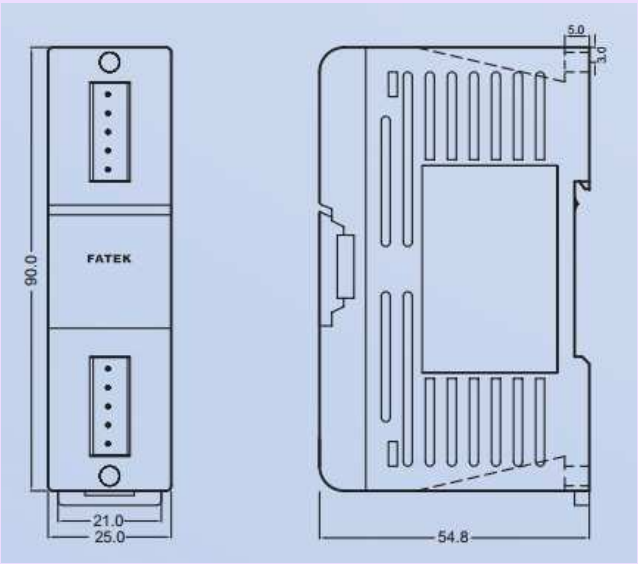
Internal power consumption- 5V, 35mA

Operating temperature- 0 ~ 60 ℃

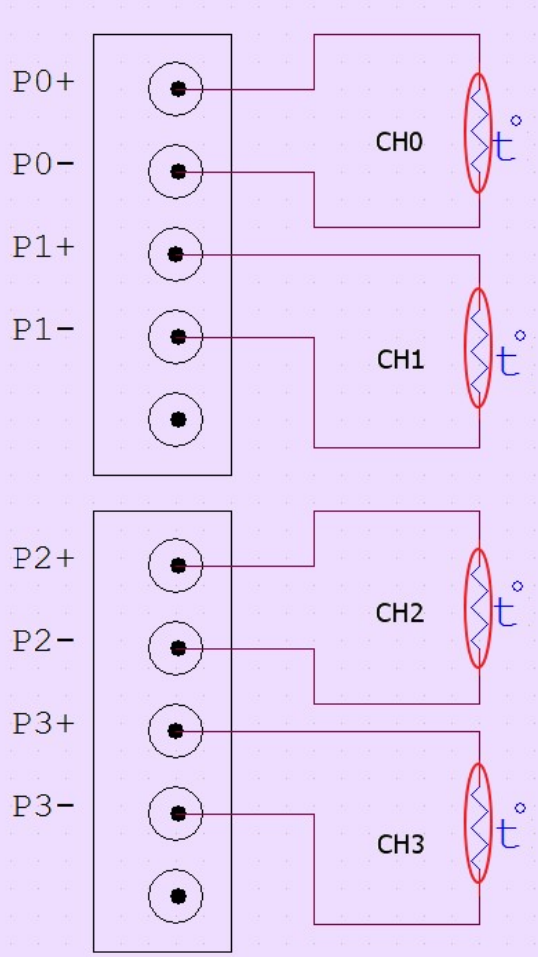
Storage temperature- -20 ~ 80 ℃

Outline dimension- 25(W)x90(H)x54.8(D) mm

Outline and dimension



Wiring diagram



Application

Due to the characteristic of temperature/resistance of NTC and the relation between measurement resistance and A/D value are non- linear, the user should first establish a data table according to the characteristic of applied NTC then apply it in MLC ladder function in order to convert the A/D value back into corresponding temperature. The sample program for L4NTC module can be derived by downloading the L4NTC.rar file on the FATEK Web site.

* Left Side Expansion Module has to add module manually in Winproladder.