FBs-NTC6

6-channel NTC
Temperature Input Module

Introduction

FBs-NTC6 is one of the temperature input modules of FATEK FBs series PLC. It provides 6 channels of Negative (or Positive) temperature coefficient resistance measurement capability with 14-Bit resolution. The scan rate can be 1 or 2 seconds by setting. All the optional features of this module are software configurable, there are no hardware jumpers or switches for user to setup.

Specifications

Total Channels - 6 CH

Resolution- 14-Bit

I/O Address Occupied –

1 RI(Input Register)

8 DO(Discrete Output)

Conversion Time- 1 Sec.(Fast) or 2 Sec.(Normal)

Accuracy- ±1 **%**

Sensor Type- 2K, 5K, 10K, 20KΩ(@25℃) NTC sensor

Software Filter- Moving average

Average Samples- 1,2,4,8 configurable

Recommended Resistance Range-100Ω~100KΩ

Sensor Open Circuit Detection- By application program to detect the reading value out of measurement range

Isolation- Transformer(Power) and photo-coupler(Signal)

Indicator(s) – 5V PWR LED

Supply Power- 24V-15%/+20%, 2VA

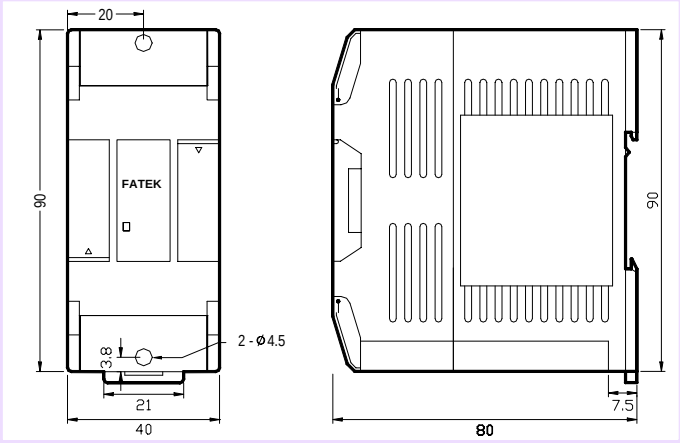
Internal Power Consumption- 5V, 35mA

Operating Temperature- 0 ~ 60 ℃

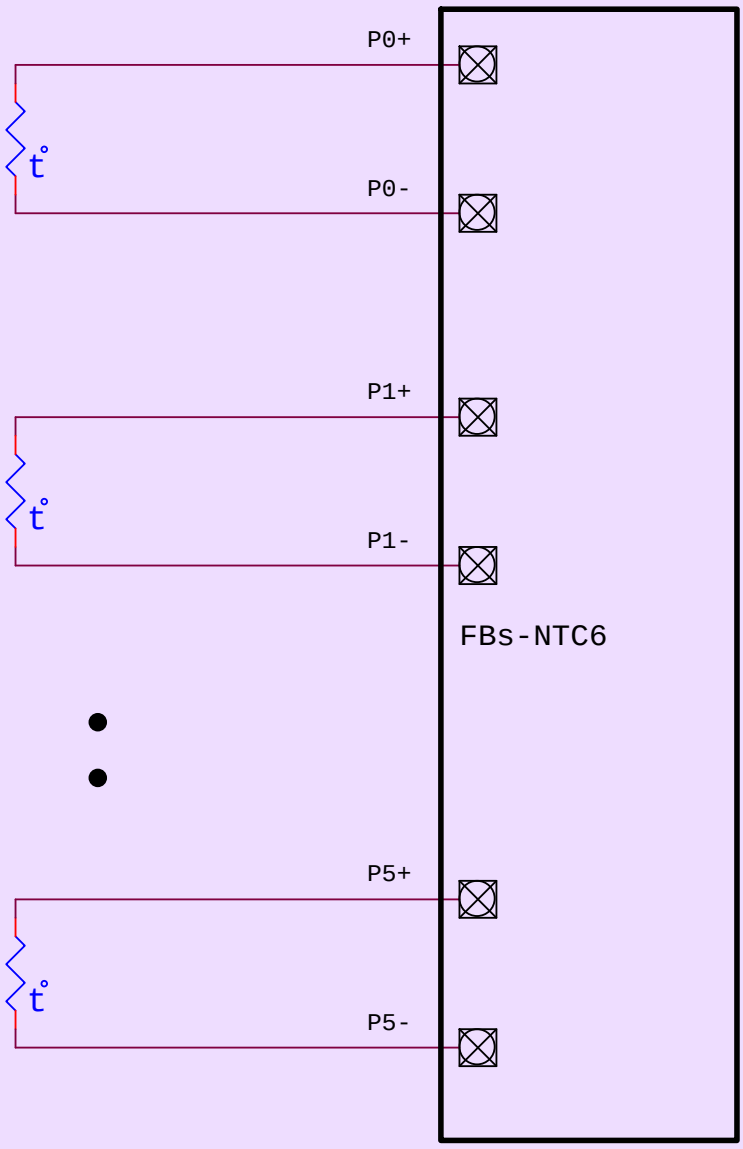
Storage Temperature- -20 ~ 80 ℃

Dimensions- 40(W)x90(H)x80(D) mm

Dimensions

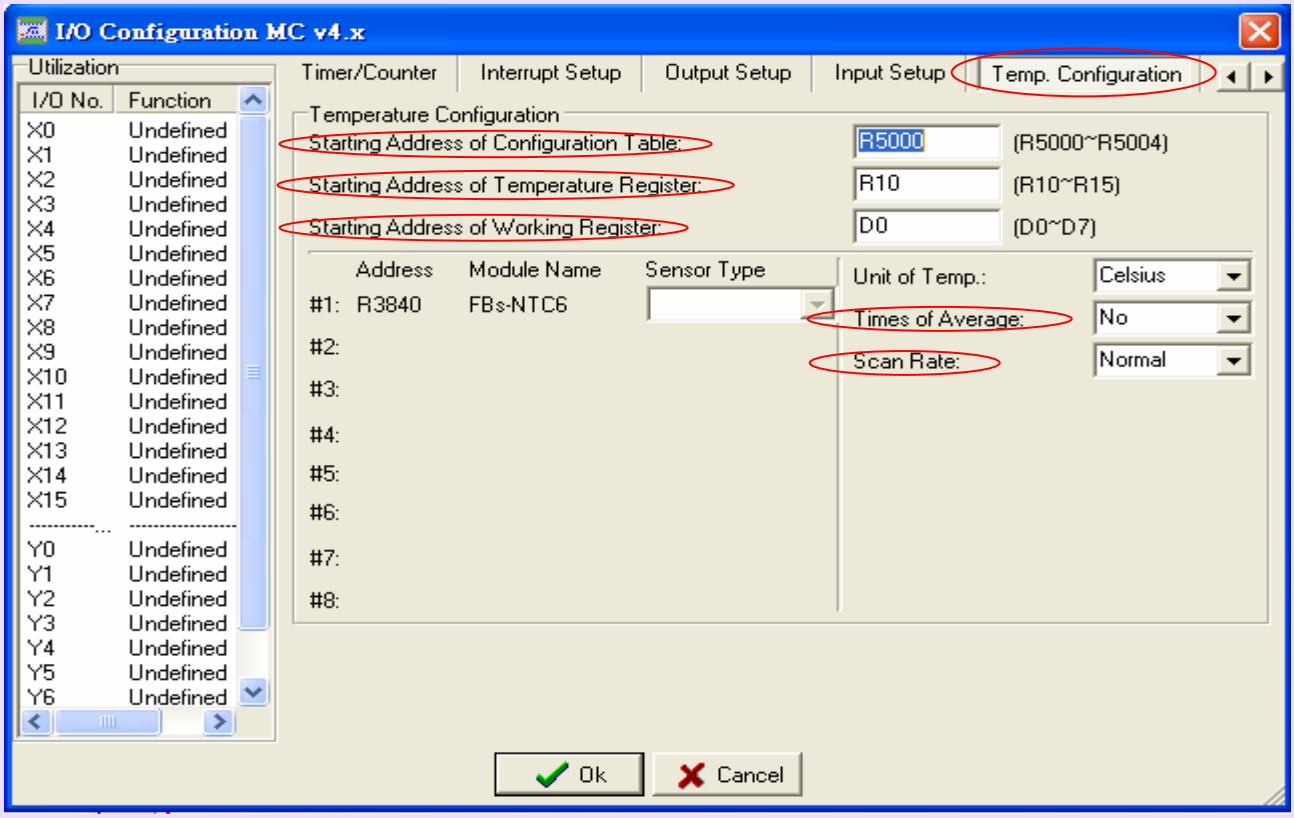


Wiring Diagram



I/O Configuration

Before the temperature value can be retrieved, the user should perform the I/O configuration of temperature module with the help of WinProladder software. The following screen will be shown when performing the “System Configuration”, and double click “I/O configuration”



The user needs to assign a starting register of a contiguous register area for Configuration Table, Temperature Register, and Working Register; also, the settings of Times of Average, and Scan Rate.

Please refer to the chapter 21 of User’s Manual II for detailed explanation.

Owing to the reading values provided by the NTC6 module are a non-linear raw A/D conversion value, so when using this module there should put an additional MLC (Multiple-segment Linear Conversion) function instruction in the ladder diagram program, which will convert the raw reading value into the final temperature value.