

FBs-6NTC

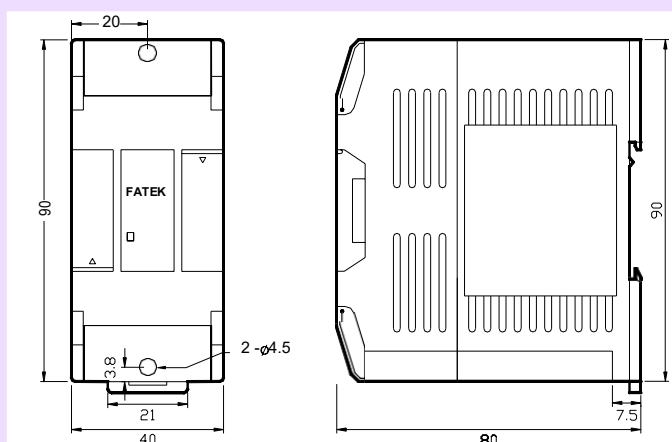
6-channel NTC Temperature Input Module



Introduction

FBs-6NTC 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.

Dimensions



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- $\pm 1\%$

Sensor Type- 2K, 5K, 10K, 20K Ω (@25°C) NTC sensor

Software Filter- Moving average

Average Samples- 1,2,4,8 configurable

Recommended Resistance Range-100 Ω ~100K Ω

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

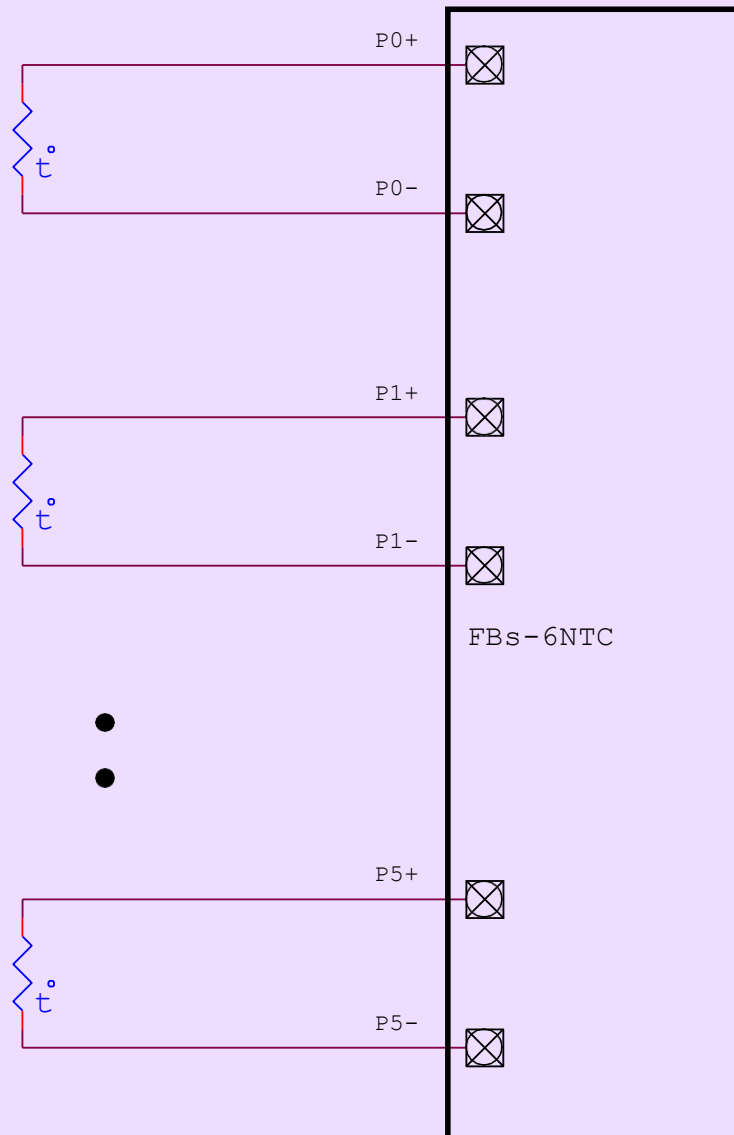
Internal Power Consumption- 5V, 35mA

Operating Temperature- 0 ~ 60 °C

Storage Temperature- -20 ~ 80 °C

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

Wiring Diagram



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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”

I/O Configuration MC v4.x

Utilization | Timer/Counter | Interrupt Setup | Output Setup | Input Setup | **Temp. Configuration**

Temperature Configuration

Starting Address of Configuration Table: R5000 (R5000~R5004)

Starting Address of Temperature Register: R10 (R10~R15)

Starting Address of Working Register: D0 (D0~D7)

Address	Module Name	Sensor Type	Unit of Temp.:
#1: R3840	FBs-6NTC		Celsius
#2:			No
#3:			Normal
#4:			
#5:			
#6:			
#7:			
#8:			

Unit of Temp.: Celsius

Times of Average: No

Scan Rate: Normal

Utilization:

I/O No.	Function
X0	Undefined
X1	Undefined
X2	Undefined
X3	Undefined
X4	Undefined
X5	Undefined
X6	Undefined
X7	Undefined
X8	Undefined
X9	Undefined
X10	Undefined
X11	Undefined
X12	Undefined
X13	Undefined
X14	Undefined
X15	Undefined
Y0	Undefined
Y1	Undefined
Y2	Undefined
Y3	Undefined
Y4	Undefined
Y5	Undefined
Y6	Undefined

Ok Cancel

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 6NTC 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.