WEINTEK LABS., INC.

iR-AI04-TR Module Configuration

Demo Project

Contents

1. Overview

This demo project introduces how to add SDO and configure iR-AI04-TR in CODESYS.

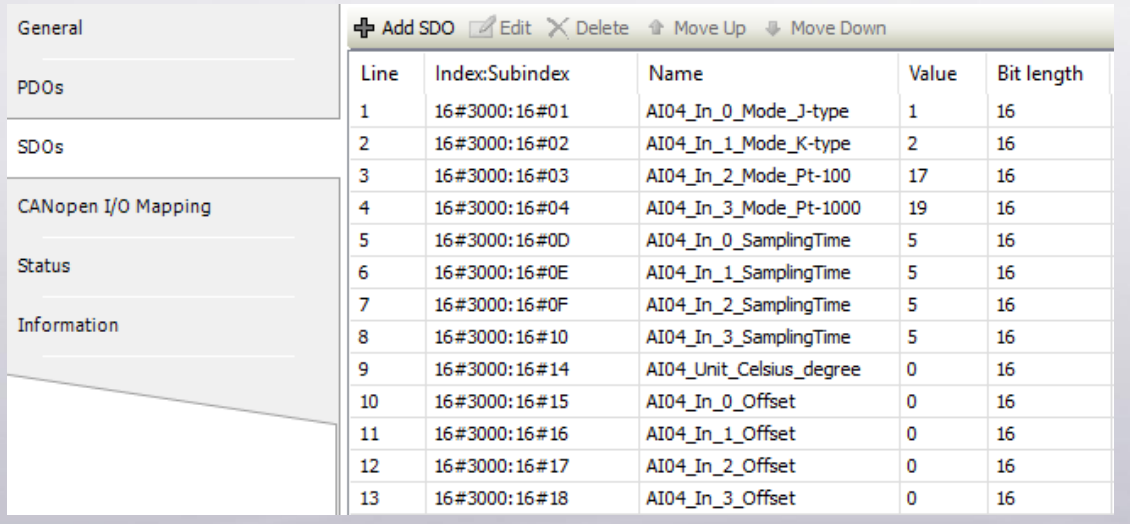
In this demo project, iR-AI04-TR is the first module in the system and its channels are set as below:

Input Channel	Channel Mode	Filter Frame Size	Temperature Offset
Channel.0	J-Type	5	0
Channel.1	K-Type	5	0
Channel.2	Pt100	5	0
Channel.3	Pt1000	5	0

2. Operation

Step 1. Connect iR-COP and open “SDOs” tab.

Step 2. Add SDO as shown below.



Line	Index:Subindex	Name	Value	Bit length
1	16#3000:16#01	AI04_In_0_Mode_J-type	1	16
2	16#3000:16#02	AI04_In_1_Mode_K-type	2	16
3	16#3000:16#03	AI04_In_2_Mode_Pt-100	17	16
4	16#3000:16#04	AI04_In_3_Mode_Pt-1000	19	16
5	16#3000:16#0D	AI04_In_0_SamplingTime	5	16
6	16#3000:16#0E	AI04_In_1_SamplingTime	5	16
7	16#3000:16#0F	AI04_In_2_SamplingTime	5	16
8	16#3000:16#10	AI04_In_3_SamplingTime	5	16
9	16#3000:16#14	AI04_Unit_Celsius_degree	0	16
10	16#3000:16#15	AI04_In_0_Offset	0	16
11	16#3000:16#16	AI04_In_1_Offset	0	16
12	16#3000:16#17	AI04_In_2_Offset	0	16
13	16#3000:16#18	AI04_In_3_Offset	0	16

Step 3. Declare variables and add channels.

```
PROGRAM PLC_PRG
VAR
    iAI04_In_0, iAI04_In_1, iAI04_In_2, iAI04_In_3 : INT ;
    aiIn : ARRAY[0..3] OF INT ;
END_VAR
```

```
iAI04_In_0 := aiIn[0] ;
iAI04_In_1 := aiIn[1] ;
iAI04_In_2 := aiIn[2] ;
iAI04_In_3 := aiIn[3] ;
```

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Variable	Mapping	Channel	Address	Type
		AO word 10	%QW13	INT
		AO word 11	%QW14	INT
		AO word 12	%QW15	INT
		DI byte 1	%IB0	USINT
		DI byte 2	%IB1	USINT
		DI byte 3	%IB2	USINT
		DI byte 4	%IB3	USINT
		DI byte 5	%IB4	USINT
		DI byte 6	%IB5	USINT
		DI byte 7	%IB6	USINT
		DI byte 8	%IB7	USINT
Application.PLC_PRG.aiIn[0]		AI word 1	~~%IW4~~	INT
Application.PLC_PRG.aiIn[1]		AI word 2	~~%IW5~~	INT
Application.PLC_PRG.aiIn[2]		AI word 3	~~%IW6~~	INT
Application.PLC_PRG.aiIn[3]		AI word 4	~~%IW7~~	INT
		AI word 5	%IW8	INT
		AI word 6	%IW9	INT
		AI word 7	%IW10	INT
		AI word 8	%IW11	INT
		AI word 9	%IW12	INT
		AI word 10	%IW13	INT
		AI word 11	%IW14	INT
		AI word 12	%IW15	INT

Step 4. Click [login] and CODESYS will write values into the registers of iR-AI04-TR and start conversion.