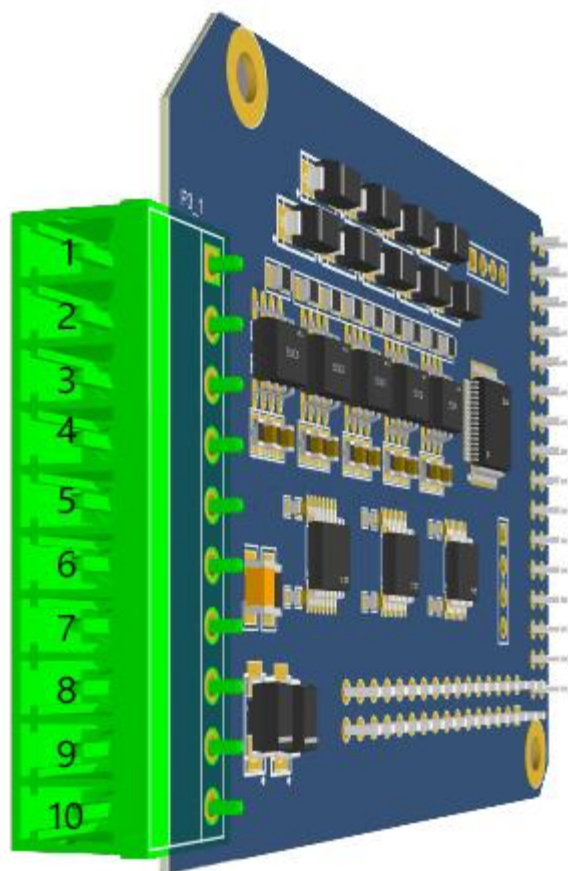


Y Series I/O Modules

2CH RTD Input Module Y51/Y52/Y53/Y54



Y51/Y52/Y53/Y54 User Manual

Version: V1.0

Date: 2024-12-06

Shenzhen Beilai Technology Co.,Ltd

Website: <https://www.bliiot.com>

Preface

Thanks for choosing BLIIoT Y series I/O modules. These operating instructions contain all the information you need for operation of Y series I/O modules.

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Disclaimer

This document is designed for assisting user to better understand the device. As the described device is under continuous improvement, this manual may be updated or revised from time to time without prior notice. Please follow the instructions in the manual. Any damages caused by wrong operation will be beyond warranty.

Revision History

Revision Date	Version	Description	Owner
2024/12/06	V1.0	Initial Release	HYQ

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1 Introduction

1.1 Overview

The RTD input module is one of the Y series I/O modules for IOy series and ARMxy series products. This module features two input channels, namely RTD1 and RTD2, which support 3-wire and 4-wire PT100 and PT1000 sensors.

The input signal from each channel is electrically isolated, converted into a digital signal, and transmitted with 15-bit resolution.

1.2 Technical Specifications

Name	Parameter	Description
Power Supply	Operating Voltage	Internal Voltage
	Power Consumption	0.168W
RTD Input	Channels	2 channels
	Input Type	3-wire or 4-wire PT100, PT1000
	Measurement Range	PT100 (-200~850°C), PT1000 (-50~300°C)
	Resolution	15Bit
	Accuracy	±1°C (within 20m using AWG16 shielded cable)
	Conversion Rate	400 ms
Certifications	EMC	IEC 61000-4-2 (ESD) Level 3
		IEC 61000-4-4 (EFT) Level 3
		IEC 61000-4-5 (Surge)Level 3

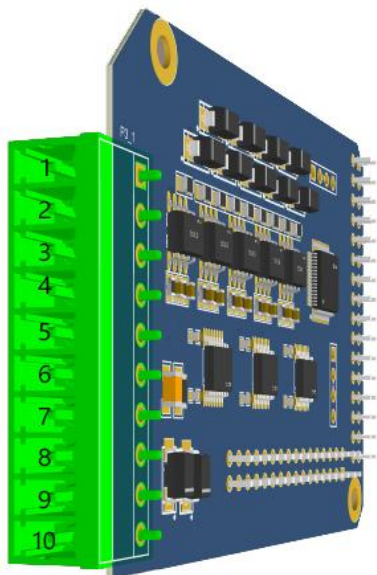
1.3 Model Selection

No.	Name	Model	Channel	Signal Type
1	2-Channel 3-Wire PT100 Input Module	Y51	2	3-Wire PT100
2	2-Channel 3-Wire PT1000 Input Module	Y52	2	3-Wire PT1000
3	2-Channel 4-Wire PT100 Input Module	Y53	2	4-Wire PT100
4	2-Channel 4-Wire PT1000 Input Module	Y54	2	4-Wire PT1000

2 Wiring

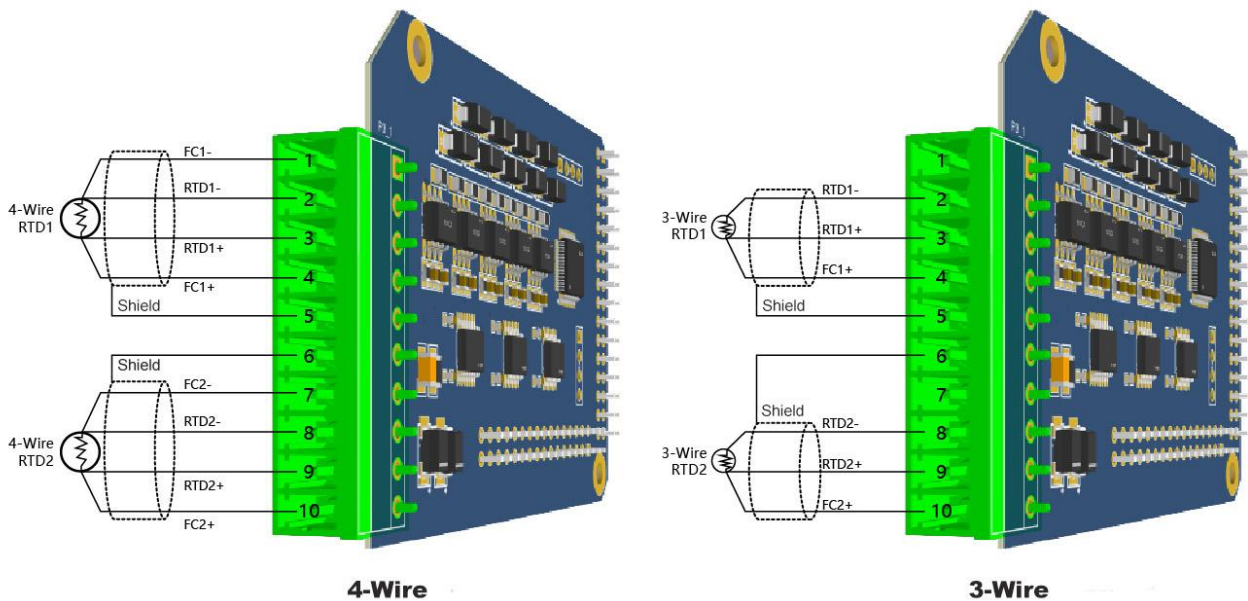
2.1 Terminal Definitions

Notice: Please refer to the product's label for the specific terminal numbering sequence.



Terminal NO.	Definition	3-Wire Description	4-Wire Description	Terminal NO.	Definition	3-Wire Description	4-Wire Description
1	FC1-	Not Connected	First RTD Input	6	GND	Connect Shielded Cable	Connect Shielded Cable
2	RTD1-	First RTD Input		7	FC2-	Not Connected	Second RTD Input
3	RTD1+			8	RTD2-		
4	FC1+			9	RTD2+		
5	GND	Connect Shielded Cable	Connect Shielded Cable	10	FC2+	Second RTD Input	

2.2 Connection Example



3 Warranty Terms

- 1) This equipment will be repaired free of charge for any material or quality problems within one year from the date of purchase.
- 2) This one-year warranty does not cover any product failure caused by man-made damage, improper operation, etc

4 Technical Support

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