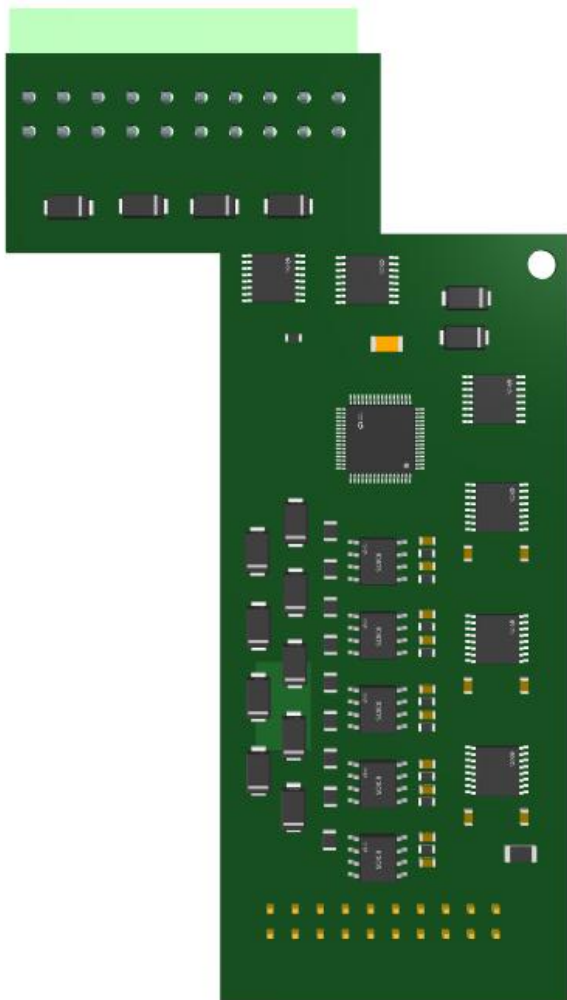


X Series I/O Modules

2DI+2DO Module X13



X13 User Manual

Version: V1.0

Date: 2025-4-9

Shenzhen Beilai Technology Co.,Ltd

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

Preface

Thanks for choosing BLIIOT X series I/O modules. These operating instructions contain all the information you need for operation of X 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
2025/4/9	V1.0	Initial Release	PH

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1 Introduction

1.1 Overview

X13 is an industrial-grade expansion module specifically designed for the ARMxy series ARM embedded computers. The module features electrical isolation, overvoltage protection, ESD protection, fault protection, and overcurrent protection circuit designs, ensuring stability and reliability in complex industrial environments.

X13 provides 2 digital inputs (DI) and 2 digital outputs (DO), significantly expanding the I/O capabilities of the ARMxy series ARM embedded computers.

The 2 DI and 2 DO channels support electrical isolation, and the DI channels support dry or wet contact input.

1.2 Technical Specifications

Name	Parameter	Description
Power Supply	Operating Power	Internal Voltage
	Working Voltage	12V-24V
	Power Consumption	1.5W
Digital Output	Channel	2 channels
	Output Mode	Single-ended output
	Output Type	Active low output, output 0VDC
	Maximum Output Current per Channel	100mA
	Isolation Protection	2KVrms
Digital Input	Channel	2 Channels
	Trigger Mode	Low-level trigger or high-level trigger (optional)
	Dry/Wet Contact	Optional
	Logic Level	Logic "1": +9 to +12VDC Logic "0": -3 to +5VDC
	Isolation Protection	2KVrms
Certifications	EMC	IEC 61000-4-2 (ESD) Level 3
		IEC 61000-4-4 (EFT) Level 3
		IEC 61000-4-5 (Surge) Level 3

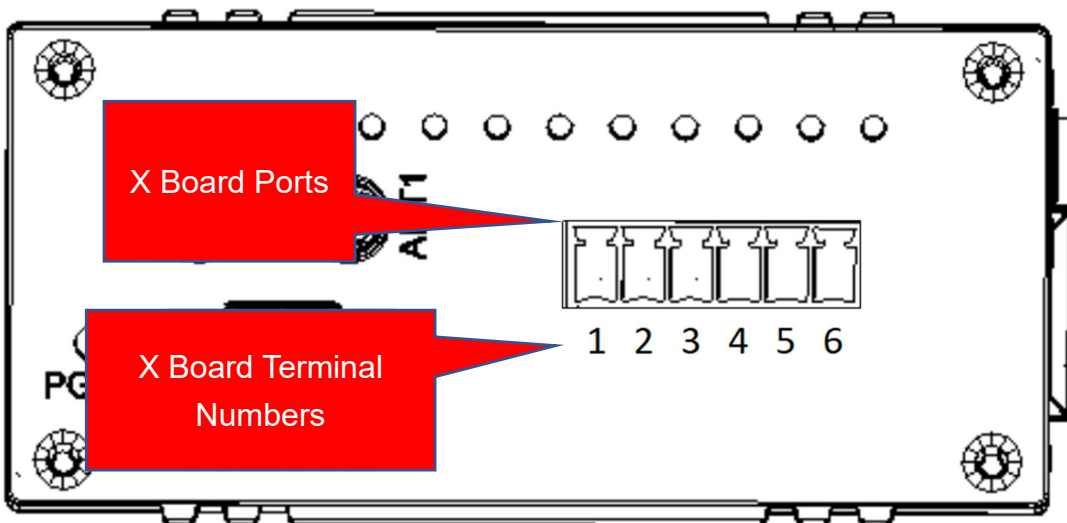
1.3 Model Selection

No.	Name	Model	Signal Type
1	2DI+2DO Module	X13	DI: High-Level Trigger / Low-Level Trigger DO: NPN (Active Low Output)

2 Wiring

2.1 Terminal Definitions

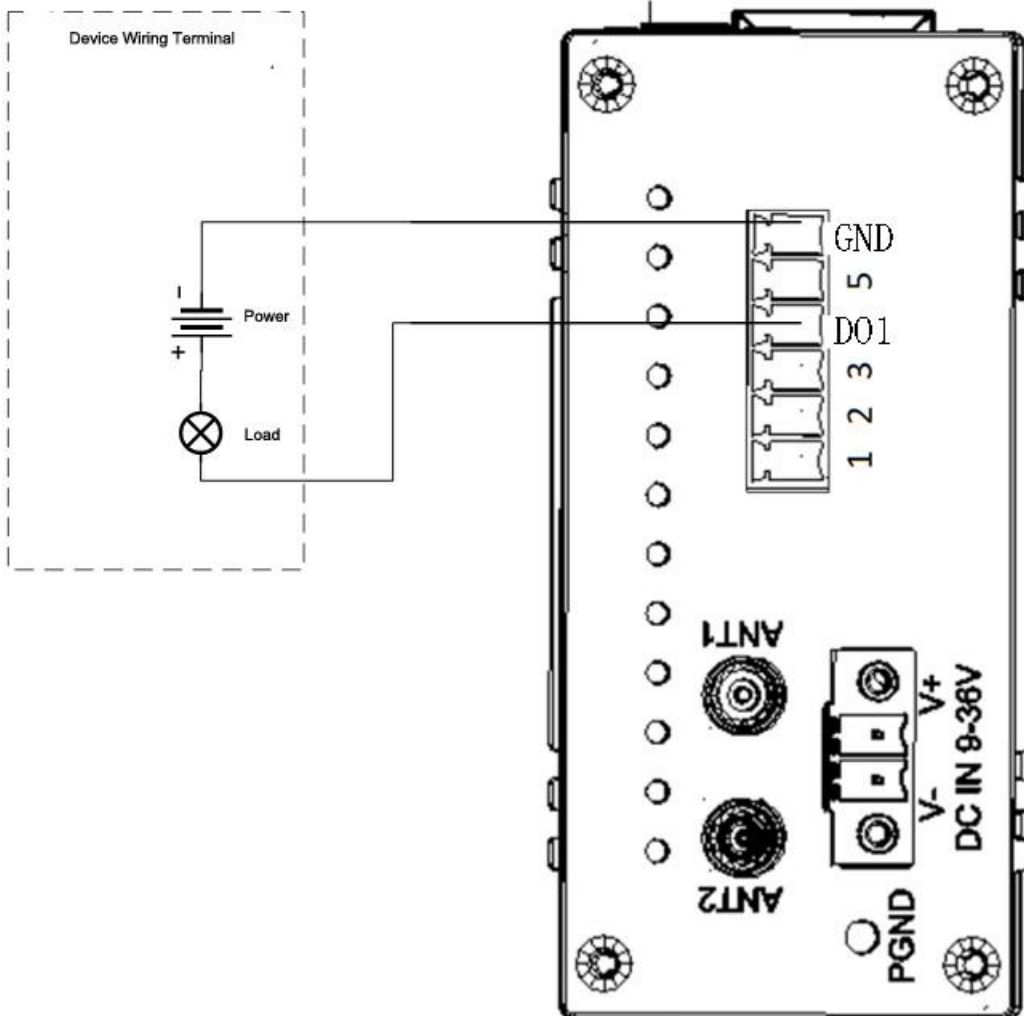
Notice: Please refer to the product's label for the specific terminal numbering sequence.



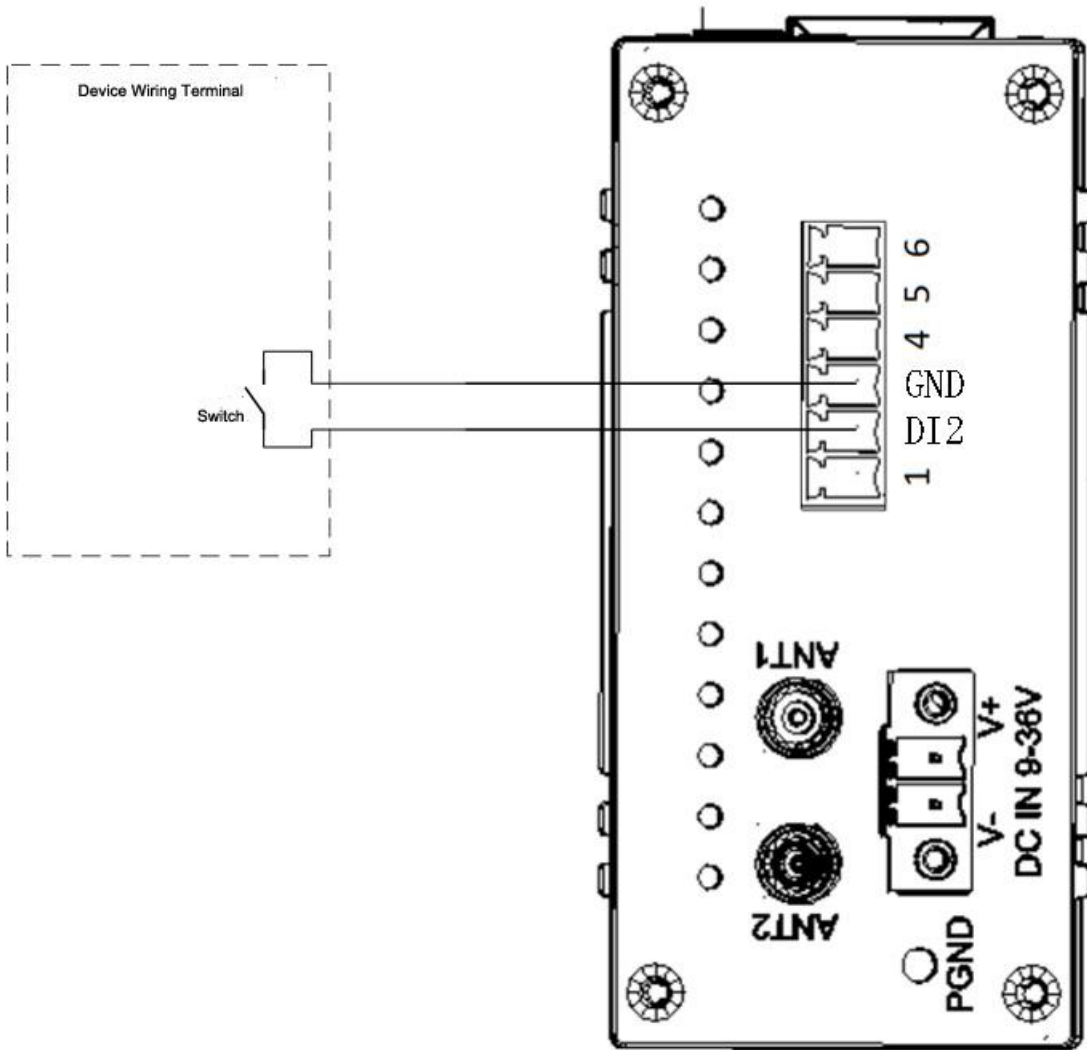
Terminal NO.	Definition	Description	Terminal NO.	Definition	Description
1	DI1	Digital Input 1	4	DO1	Digital Output 1
2	DI2	Digital Input 2	5	DO2	Digital Output 2
3	GND	Ground Terminal	6	COM	Common Negative

2.2 Connection Example

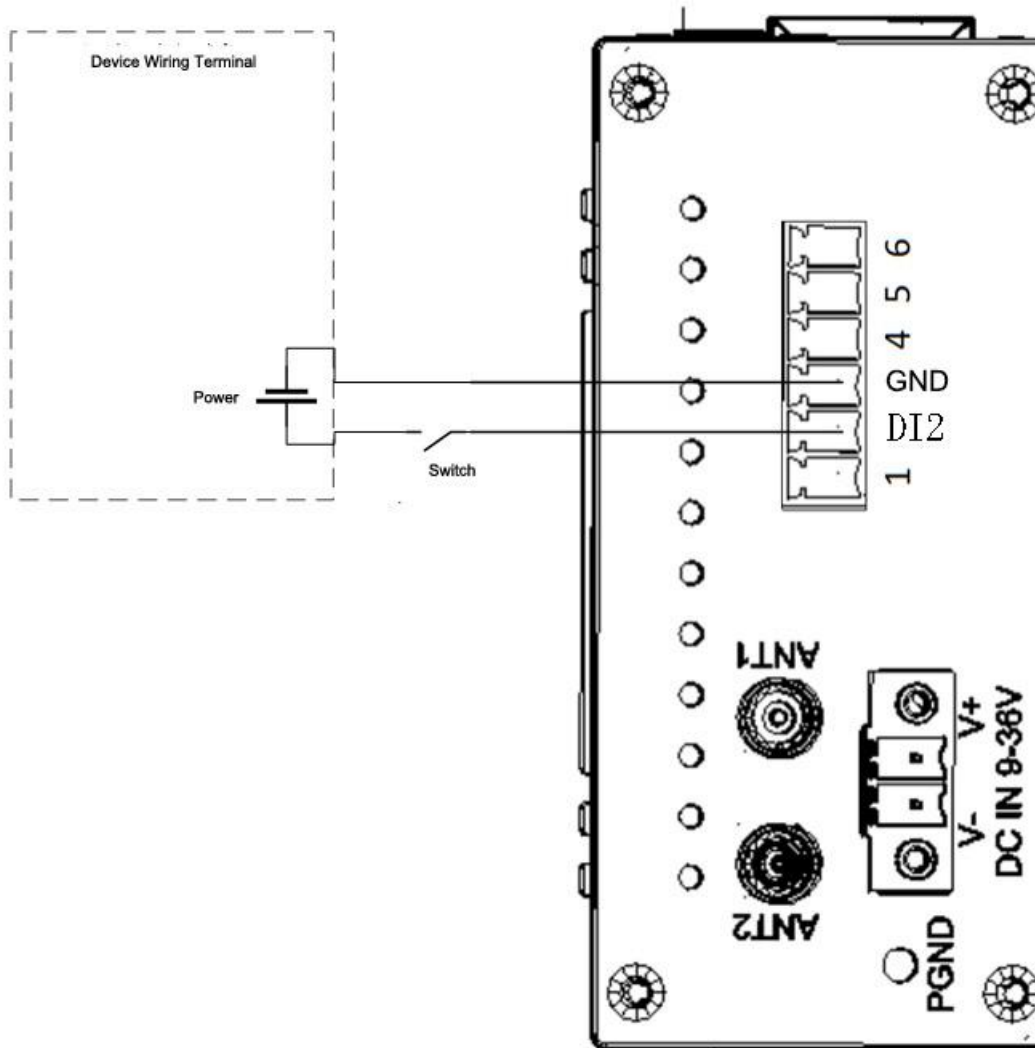
2.2.1 DO Connection



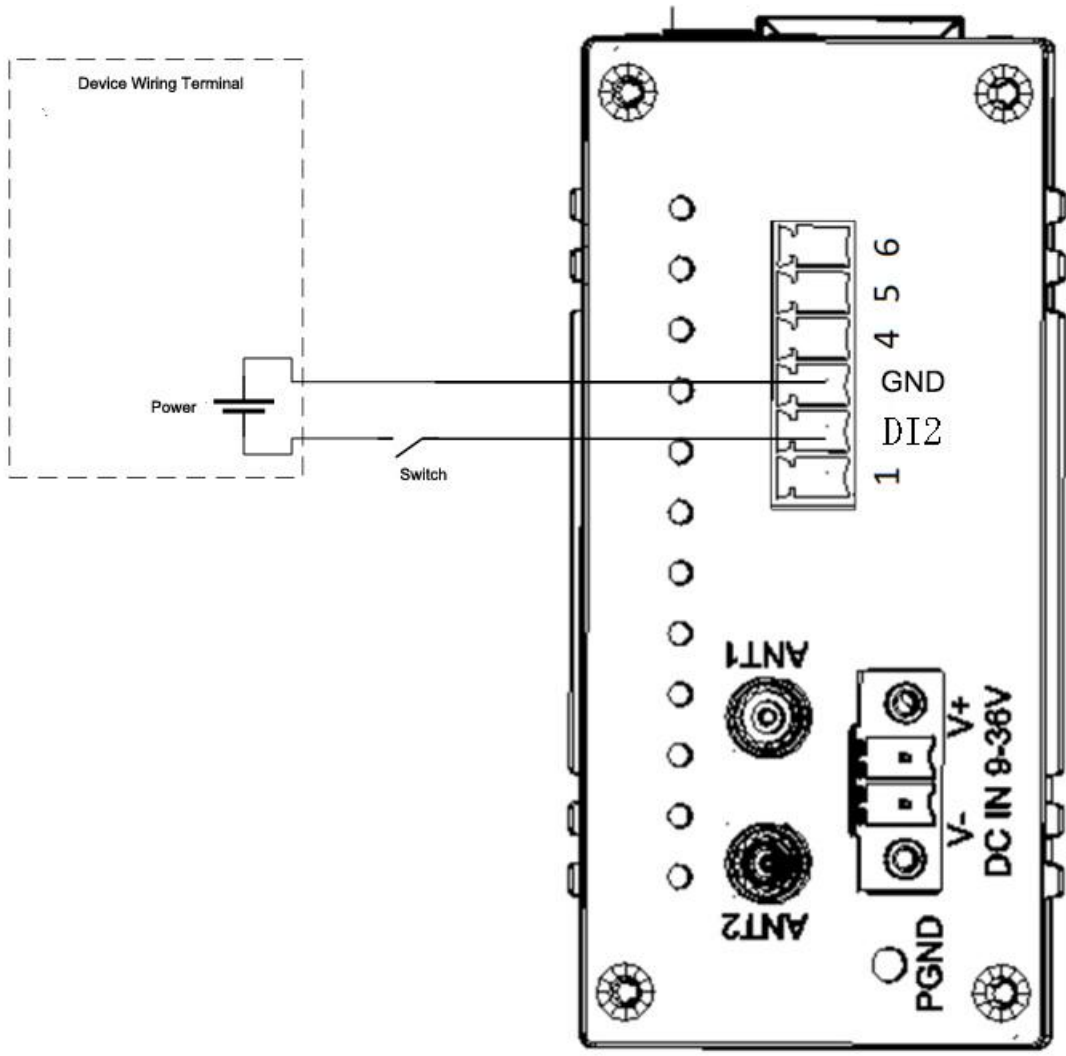
2.2.2 DI Dry Contact Connection



2.2.3 DI Wet Contact Positive Power Connection



2.2.4 DI Wet Contact Negative Power Connection



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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