ICP DAS I-7058_FG

ICP DAS I-7058_FG User Manual

8 Channel Isolated AC Voltage Digital Input Data Acquisition Module

1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of the ICP DAS I-7058_FG 8 Channel Isolated AC Voltage Digital Input Data Acquisition Module. Please read this manual thoroughly before using the device to ensure proper and safe operation.
The I-7058_FG is designed for reliable data acquisition in industrial environments, offering isolated AC voltage digital inputs and communication via RS-485.

2. Safety Information

Always observe the following safety precautions to prevent injury and damage to the device:

- Ensure the power supply is disconnected before installation or maintenance.
- Do not operate the module in environments exceeding its specified temperature range (-25 to 75°C).
- Only qualified personnel should perform installation and wiring.
- Protect the module from moisture, dust, and corrosive substances.
- Use appropriate personal protective equipment (PPE) when handling electrical components.

3. Product Overview

The I-7058_FG is an 8-channel isolated AC voltage digital input module. Key features include:

- 8 Isolated AC Voltage Digital Input Channels
- RS-485 Communication Interface
- Wide Operating Temperature Range: -25 to 75°C
- DIN Rail Mountable design for easy installation.
- Provides cost-effective protection for industrial control signals.
- Supports various industrial control systems.

Figure 3.1: Front view of the ICP DAS I-7058_FG module, showing input terminals and display area.

4. Setup and Installation

4.1 Unpacking

Carefully unpack the I-7058_FG module and inspect it for any signs of damage. Report any damage to your supplier immediately.

4.2 Mounting

The I-7058_FG module is designed for DIN rail mounting. Securely attach the module to a standard DIN rail in a suitable enclosure, ensuring adequate ventilation.

4.3 Wiring

Connect the power supply and RS-485 communication cables to the module's designated terminals. Refer to the wiring diagram below for correct connections. Ensure all connections are secure to prevent intermittent operation.
For AC voltage digital inputs, connect your signal sources to the input terminals. Observe polarity and voltage ratings.
(Note: A detailed wiring diagram would typically be included here. For this exercise, a textual description is provided.)

4.4 Initial Configuration

The DCON utility can be used to configure and test the module. This utility provides an interface for setting communication parameters (e.g., baud rate, device ID) and verifying input readings. Library functions and demo programs are also provided to assist with integration into your system.
For detailed instructions on using the DCON utility, please refer to the software's documentation or the ICP DAS website.

5. Operating Instructions

Once installed and configured, the I-7058_FG module operates by acquiring AC voltage digital input signals and transmitting them over the RS-485 bus to a host system (e.g., PC, PLC, HMI).

5.1 Data Acquisition

The module continuously monitors the state of its 8 AC voltage digital input channels. The status of these inputs can be read by the host system via RS-485 commands.

5.2 Communication Protocol

The I-7058_FG uses a standard RS-485 communication protocol. Ensure your host system's communication settings match those configured on the module (e.g., baud rate, parity, data bits, stop bits, device ID).
Refer to the ICP DAS communication protocol guide for specific commands and data formats.

6. Maintenance

The I-7058_FG module is designed for low maintenance. However, periodic checks are recommended to ensure optimal performance and longevity.

- **Cleaning:** Keep the module clean and free from dust and debris. Use a soft, dry cloth for cleaning. Do not use liquid cleaners.
- **Connection Checks:** Periodically inspect all wiring connections for tightness and signs of corrosion.
- **Environmental Monitoring:** Ensure the operating environment remains within the specified temperature and humidity ranges.

7. Troubleshooting

If you encounter issues with your I-7058_FG module, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Module not powering on.	Incorrect power supply voltage or wiring.	Verify power supply voltage and check wiring connections.
No communication with host.	Incorrect RS-485 wiring, mismatched communication parameters (baud rate, ID), or faulty cable.	Check RS-485 wiring (A/B lines), ensure host and module communication settings match, test cable continuity. Use DCON utility to verify module communication.
Incorrect input readings.	Incorrect input wiring, faulty sensor, or signal interference.	Verify input wiring, test the input signal source, check for sources of electrical noise.

If the problem persists, contact ICP DAS technical support for further assistance.

8. Specifications

Detailed technical specifications for the ICP DAS I-7058_FG module:

Parameter	Value
Model Number	I-7058_FG
Input Channels	8 (Isolated AC Voltage Digital Input)
Communication Interface	RS-485
Operating Temperature	-25 to 75°C (-13 to 167°F)
Item Weight	2.5 Pounds (approx. 1.13 kg)
Mounting	DIN Rail Mountable
Manufacturer	ICP DAS
Country of Origin	Taiwan
First Available Date	August 14, 2014

9. Warranty Information

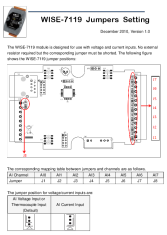
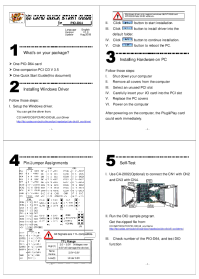
This product is sold by ICP DAS USA. For specific warranty terms and conditions, please refer to the official ICP DAS USA warranty policy available on their website or contact their customer service. Typically, products come with a standard manufacturer's warranty covering defects in materials and workmanship.
Keep your proof of purchase for warranty claims.

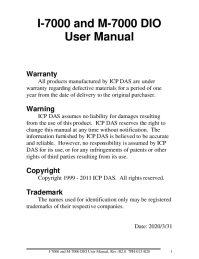
10. Technical Support

For technical assistance, troubleshooting beyond this manual, or inquiries regarding the I-7058_FG module, please contact ICP DAS USA technical support:

- **Manufacturer:** ICP DAS
- **Seller:** ICP DAS USA
- **Website:** www.icpdas-usa.com (or refer to the link provided in the Amazon listing for the seller:ICP DAS USA Seller Page)
- **Contact Information:** Please visit the official ICP DAS USA website for the most current contact details, including phone numbers and email addresses for technical support.

Related Documents - I-7058_FG

	WISE-7119 Jumpers Setting Guide - ICP DAS Guide to configuring jumper settings for the ICP DAS WISE-7119 module, detailing voltage and current input setups with mapping tables and visual representations.
	ICP DAS PIO-D64 Quick Start Guide - Installation and Setup Comprehensive quick start guide for the ICP DAS PIO-D64 PCI I/O card, covering package contents, Windows driver installation, hardware installation, pin assignments, and self-testing procedures.
	ICP DAS UniDAQ ICP DAS UniDAQ UniDAQ API Windows ICP DAS PCI I/O

	ICP DAS I-756xU Series USB to Serial Converters User Manual This user manual from ICP DAS details the I-7560U, I-7561U, and I-7563U series USB to serial converters. It covers essential hardware specifications, software installation procedures, and testing methods for connecting industrial serial devices (RS-232, RS-422, RS-485) to USB-equipped computers.
	ICP DAS ET-7X00/PET-7X00 Series Ethernet I/O Modules User Manual Comprehensive user manual for ICP DAS ET-7X00 and PET-7X00 series Ethernet I/O modules. Covers features like web server, PoE, Modbus TCP, installation, configuration, and troubleshooting for industrial data acquisition systems.
	ICP DAS I-7000 and M-7000 DIO Series User Manual Comprehensive user manual for ICP DAS I-7000 and M-7000 series Digital Input/Output (DIO) modules. Covers specifications, wiring, DCON and Modbus RTU protocols, troubleshooting, and technical support for industrial automation applications.