# ICP DAS

## I-87055  I-87055-G
8-ch Non-isolated DI and 8-ch Non-isolated DO Module

## Features

- 8-channel Non-isolated Digital Input and 8-channel Non-isolated Digital Output
- Sink-type Digital Output Channels
- Dry Contact Digital Input Channels
- All Digital Input Channels can be used as 16-bit Counters
- All Channels are Non-isolated
- Configurable Power-on Value
- Configurable Safe Value

CE  FC  RoHS

## Introduction

The I-87055 module offers 8 non-isolated Digital Input channels and 8 nonisolated Digital Output channels. All Digital Input channels are also able to be used as 16-bit counters. The I-87055 supports sink-type Digital Output and Digital Input with dry contact connections. The I-87055 includes 16 LED indicators that can be used to monitor the status of the Digital Input and Digital Output channels, and options are available for configuring both poweron and safe values.

## Applications

- Building Automation
- Factory Automation
- Machine Automation
- Remote Maintenance
- Remote Diagnosis
- Testing Equipment

## System Specifications

| CPU Module | |
|---|---|
| Watchdog Timer | Yes, Module (1.6 Seconds), Communication (Programmable) |
| **LED Indicators** | |
| Status | 1 x Power and Communication 16 x I/O |
| **COM Ports** | |
| Baud Rate | 115200 bps |
| Data Format | N, 8, 1 |
| Protocol | DCON |
| **Power** | |
| Power Consumption | 0.9 W Max. |
| **Mechanical** | |
| Dimensions (W x L x H) | 31 mm x 116 mm x 88 mm |
| **Environment** | |
| Operating Temperature | -25 ~ +75 °C |
| Storage Temperature | -30 ~ +75 °C |
| Humidity | 5 ~ 95% RH, Non-condensing |

## I/O Specifications

| Digital Input | |
|---|---|
| Low Pass Filter | Yes |
| **Digital Input/Counter** | |
| Channels | 8 |
| Type | Dry Contact, Wet Contact |
| Sink/Source (NPN/PNP) | Sink |
| Dry Contact, ON Voltage Level | Close to GND |
| Dry Contact, OFF Voltage Level | Open |
| Max. Counts | 16-bit (65535) |
| Frequency | 100 Hz |
| Min. Pulse Width | 5 ms |
| **Digital Output** | |
| Channels | 8 |
| Type | Open Collector |
| Sink/Source (NPN/PNP) | Sink |
| Load Voltage | +5 $V_{DC}$ ~ +30 $V_{DC}$ |
| Max. Load Current | 100 mA/channel |
| Power-on Value | Yes |
| Safe Value | Yes |

## ■ Internal I/O Structure



## ■ Dimensions (Units: mm)



| Left View | Front View | Top View |
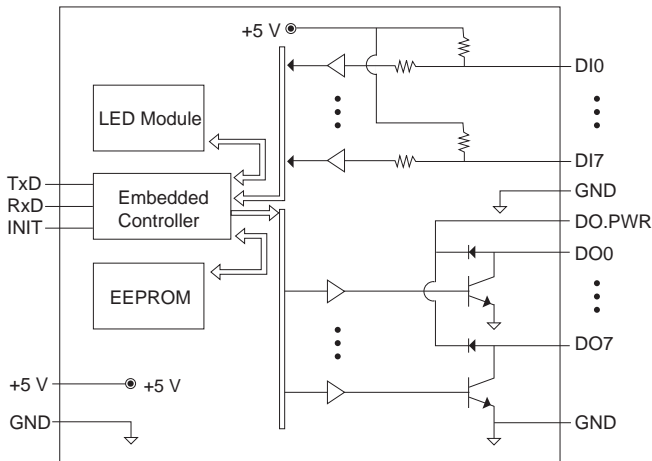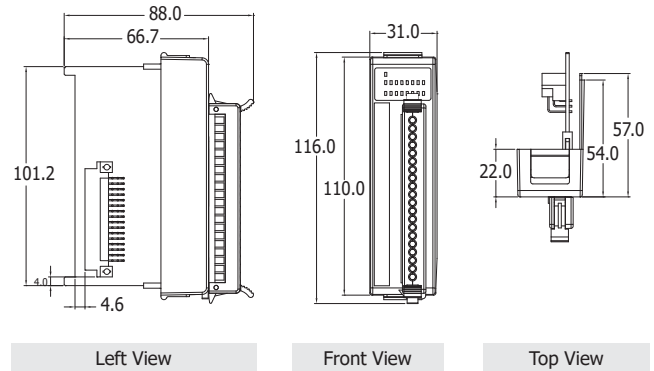
## ■ Wire Connections

| Input Type | ON State LED ON Readback as 1 | OFF State LED OFF Readback as 0 |
|---|---|---|
| Relay Contact | Relay ON | Relay OFF |
| | Relay Close — DIx / GND | Relay Open — DIx / GND |
| TTL/ CMOS Logic | Voltage < +1 V | Voltage > +3.5 V |
| | Logic Level Low, Logic GND — DIx / GND | Logic Level High, Logic GND — DIx / GND |
| Open Collector | Open Collector ON | Open Collector OFF |
| | On — DIx / GND | Off — DIx / GND |

| Input Type | ON State LED ON Readback as 1 | OFF State LED OFF Readback as 0 |
|---|---|---|
| Drive Relay | Relay ON | Relay OFF |
| | DO.PWR / DOx / GND | DO.PWR / DOx / GND |
| Resistance Load | DO.PWR / DOx / GND | DO.PWR / DOx / GND |
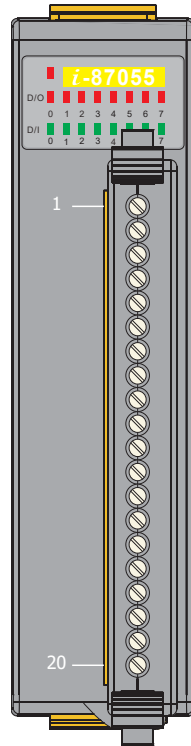
## ■ Pin Assignments



| Terminal No. | Pin Assignment |
|---|---|
| 01 | DI0 |
| 02 | DI1 |
| 03 | DI2 |
| 04 | DI3 |
| 05 | DI4 |
| 06 | DI5 |
| 07 | DI6 |
| 08 | DI7 |
| 09 | GND |
| 10 | GND |
| 11 | GND |
| 12 | DO0 |
| 13 | DO1 |
| 14 | DO2 |
| 15 | DO3 |
| 16 | DO4 |
| 17 | DO5 |
| 18 | DO6 |
| 19 | DO7 |
| 20 | DO.PWR |

## ■ Ordering Information

| I-87055 CR | 8-ch Non-isolated DI (Dry) and 8-ch Non-isolated DO (Sink, NPN) Module (Blue Cover) (RoHS) |
|---|---|
| I-87055-G CR | 8-ch Non-isolated DI (Dry) and 8-ch Non-isolated DO (Sink, NPN) Module (Gray Cover) (RoHS) |