



## Features

- Support AC Digital Inputs
- Photocouple Isolation
- Can Be Used As Counters
- 4 kV ESD Protection
- 5000 V<sub>dc</sub> Intra-module Isolation
- RoHS Compliant
- Wide Operating Temperature Range: -25 ~ +75°C



## Introduction

I-87058W features AC digital inputs with isolation. Its on voltage level lies in 80V ~ 250 V<sub>AC</sub>. All DI channels are also able to be used as 16-bit counters. I-87058W has 8 LED indicators for DI channel status. 4 kV ESD protection and 5000 V intra-module isolation are standard.

## Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote Diagnosis, Testing Equipment.

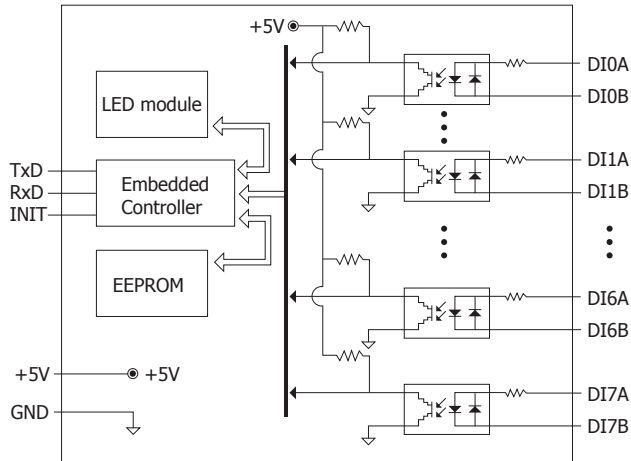
## System Specifications

| Communication                          |   |
|--|---|
| Interface                              | RS-485  |
| Format                                 | N, 8, 1   |
| Baud Rate                              | 1200 ~ 115200 bps                                       |
| Protocol                               | DCON  |
| Dual Watchdog                          | Yes, Module (1.6 Seconds), Communication (Programmable) |
| LED Indicator/Display                  |   |
| System LED Indicator                   | 1 LED as Power/Communication Indicator                  |
| I/O LED Indicator                      | 8 LEDs as Digital Input Indicators                      |
| Isolation                              |   |
| Intra-Module Isolation, Field-to-Logic | 5000 V <sub>rms</sub>                                   |
| EMS Protection                         |   |
| ESD (IEC 61000-4-2)                    | 4 kV Contact for Each Terminal                          |
|  | 8 kV Air for Random Point                               |
| Power                                  |   |
| Power Consumption                      | 0.3 W Max.  |
| Mechanical                             |   |
| Dimensions (W x L x H)                 | 30 mm x 102 mm x 115 mm                                 |
| Environment                            |   |
| Operating Temperature                  | -25 ~ +75°C   |
| Storage Temperature                    | -40 ~ +85°C   |
| Humidity                               | 10 ~ 95% RH, Non-condensing                             |

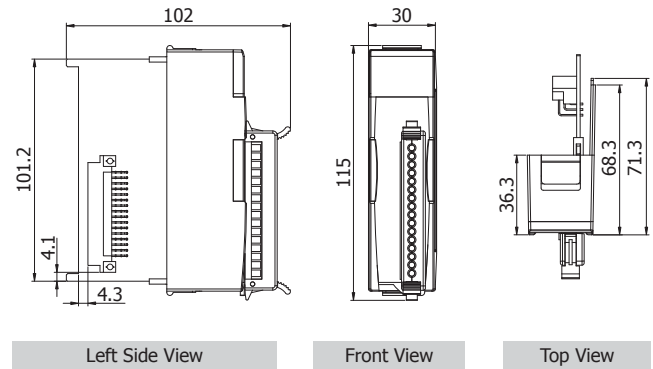
## I/O Specifications

| Digital Input                      |                         |                |
|------------------------------------|-------------------------|----------------|
| Channels                           | 8 Differential          |                |
| Type                               | Differential            |                |
| Sink /Source (NPN /PNP)            | -                       |                |
| On Voltage Level                   | 80 ~250 V <sub>AC</sub> |                |
| Off Voltage Level                  | 30 V <sub>AC</sub> Max. |                |
| AC Frequency                       | 50 ~ 400 Hz             |                |
| Input Impedance                    | 68 KΩ, 1 W              |                |
| Counters                           | Channels                | 8              |
|                                    | Max. Counts             | 16-bit (65535) |
|                                    | Max. Input Frequency    | 100 Hz         |
|                                    | Min. Pulse Width        | 5 ms           |
| Channel to Channel Isolation       | Yes                     |                |
| Low Pass Filter                    | Yes                     |                |
| Effective Distance for Dry Contact | -                       |                |

## Internal I/O Structure



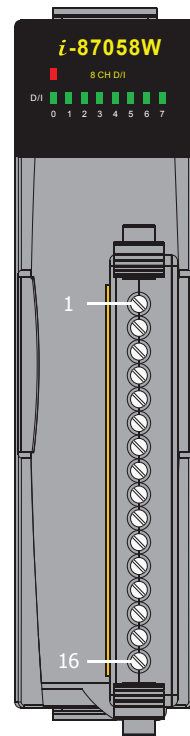
## Dimensions (Units: mm)



## Wire Connections

| Digital Input/Counter | ON State<br>Readback as 1                | OFF State<br>Readback as 0         |
|-----------------------|--|------------------------------------|
|                       | 80 V <sub>AC</sub> ~ 250 V <sub>AC</sub> | OPEN or < +30 V <sub>AC</sub> Max. |
| AC Digital Input      |  |                                    |

## Pin Assignments



| Terminal No. | Pin Assignment |
|--------------|----------------|
| 01           | DI0A           |
| 02           | DI0B           |
| 03           | DI1A           |
| 04           | DI1B           |
| 05           | DI2A           |
| 06           | DI2B           |
| 07           | DI3A           |
| 08           | DI3B           |
| 09           | DI4A           |
| 10           | DI4B           |
| 11           | DI5A           |
| 12           | DI5B           |
| 13           | DI6A           |
| 14           | DI6B           |
| 15           | DI7A           |
| 16           | DI7B           |

## Ordering Information

I-87058W-G CR

8-channel 80-250 V<sub>AC</sub> Isolated Digital Input Module with 16-bit Counters (Gray Cover) (RoHS) (5ft) (Bc) (%%) (-)

## Accessories



SG-770 CR

7 channel differential or 14 channel single-ended surge protector (RoHS)