



**I-87057W**

**I-87057PW**

16-channel Open Collector Isolated Digital Output Module

### Introduction

I-87057W offers 16-channel sink type digital outputs. All channels features Photocouple isolation. I-87057W has 16 LED indicators for DO channel status. 4 kV ESD protection and 3750 V intra-module isolation are standard.

I-87057PW offers 16 channels for digital output, each of which features Photo-couple isolation. I-87057PW supports sink type output with short-circuits protection. There are options for power-on value and safe value for your consideration. I-87057PW has 16 LED indicators for DO channel status. 4 kV ESD protection, 3750 VDC intra-module isolation are standard.

### System Specifications

| Model                                  | I-87057W  | I-87057PW  |
|--|---|------------|
| <b>Communication</b>                   |   |            |
| Interface                              | RS-485  |            |
| Format                                 | N, 8, 1   |            |
| Baud Rate                              | 1200 to 115200 bps                                      |            |
| Protocol                               | DCON  |            |
| Dual Watchdog                          | Yes, Module (1.6 Seconds), Communication (Programmable) |            |
| <b>LED Indicators/Display</b>          |   |            |
| System LED Indicators                  | Yes, 1 as Power/Communication Indicator                 |            |
| I/O LED Indicators                     | 16 as High/Low Alarm Signals                            |            |
| <b>Isolation</b>                       |   |            |
| Intra-module Isolation, Field-to-Logic | 3750 Vrms   |            |
| <b>EMS Protection</b>                  |   |            |
| ESD (IEC 61000-4-2)                    | ±4 kV Contact for each Terminal                         |            |
|  | ±8 kV Air for Random Point                              |            |
| <b>Power</b>                           |   |            |
| Power Consumption                      | 1.0 W Max.  | 0.4 W Max. |
| <b>Mechanical</b>                      |   |            |
| Dimensions (L x W x H)                 | 115 mm x 30 mm x 102 mm                                 |            |
| <b>Environment</b>                     |   |            |
| Operating Temperature                  | -25 to +75°C  |            |
| Storage Temperature                    | -40 to +85°C  |            |
| Humidity                               | 10 to 95% RH, Non-condensing                            |            |

### Features

- Support Digital Outputs (Sink Type)
- Photocouple Isolation
- 4 kV ESD Protection
- 3750 Vdc Intra-module Isolation
- RoHS Compliant
- Wide Operating Temperature Range: -25 to +75°C



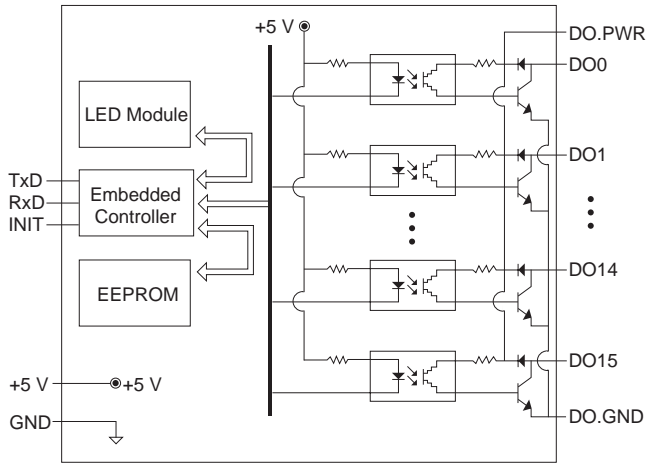
### Applications

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

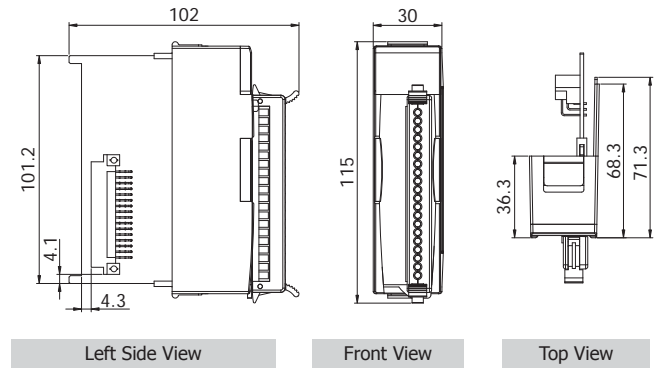
### I/O Specifications

| Model                                    | I-87057W       | I-87057PW   |
|--|----------------|---|
| <b>Digital Output</b>                    |                |   |
| Channels                                 | 16             |   |
| Type                                     | Open Collector |   |
| Sink/Source (NPN/PNP)                    | Sink           |   |
| Load Voltage                             | 5 Vdc ~ 30 Vdc | +5 Vdc ~ +50 Vdc                                    |
| Max. Load Current                        | 100 mA/channel | 700 mA/channel                                      |
| Output Voltage                           | -              | +3.5 Vdc ~ +50 Vdc                                  |
| Output Current                           | -              | 700 mA per Channel, Direct Drive Power Relay Module |
| Overvoltage Protection                   | -              | 60 Vdc  |
| Overload Protection                      | -              | Yes   |
| Short-circuit and Overcurrent Protection | -              | Yes, 1.4 A  |
| Thermal Overload Trip Temperature        | -              | 150°C   |
| Power-on Value                           | Yes            |   |
| Safe Value                               | Yes            |   |

### Internal I/O Structure



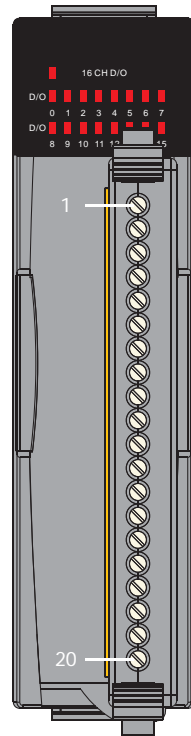
### Dimensions (Units: mm)



### Wire Connections

| Output Type                         | ON State<br>Readback as 1 | OFF State<br>Readback as 0 |
|-------------------------------------|---------------------------|----------------------------|
| Digital Output<br>(Resistance Load) |                           |                            |
| Digital Output<br>(Inductive Load)  |                           |                            |

### Pin Assignments



| Terminal No. | Pin Assignment |
|--------------|----------------|
| 01           | DO0            |
| 02           | DO1            |
| 03           | DO2            |
| 04           | DO3            |
| 05           | DO4            |
| 06           | DO5            |
| 07           | DO6            |
| 08           | DO7            |
| 09           | DO8            |
| 10           | DO9            |
| 11           | DO10           |
| 12           | DO11           |
| 13           | DO12           |
| 14           | DO13           |
| 15           | DO14           |
| 16           | DO15           |
| 17           | DO.GND         |
| 18           | DO.GND         |
| 19           | DO.PWR         |
| 20           | DO.PWR         |

### Ordering Information

|                |  |
|----------------|--|
| I-87057W-G CR  | 16-channel Open Collector Isolated Digital Output Module (Gray Cover) (RoHS) |
| I-87057PW-G CR | 16-channel Open Collector Isolated Digital Output Module (Gray Cover) (RoHS) |

### Accessories

|                |  |
|----------------|--|
| RM-104/108/116 | 4/8/16-channel 16A Power Relay Board, 1 Form C |
| RM-204/208/216 | 4/8/16-channel 8A Power Relay Board, 2 Form C  |
| DN-SSR4        | 4-channel 1A Solid-state Relay Board, 1 Form A |

|           |  |
|-----------|--|
| RM-22.22  | 1-channel 20 A Power Relay for Direct 35 mm Rail (EN 50022) Mounting, 2 Form A |
| SG-770 CR | 7-channel Differential or 14-channel Single-ended Surge Protector (RoHS)       |