



I-87046W

16-channel Non-Isolated Digital Input Module for Long Distance Measurement with 16-bit Counters

Introduction

I-87046W features long distance measurement for digital input. Its effective distance for dry contact is up to 500 meters. I-87046W supports sink type input. All of its 16 channels are also able to be used as 16-bit counters. I-87046W not only has 16 LED indicators for channel status but get qualification for 4 KV ESD protection.

Features

- Support Digital Inputs (Sink Type)
- Long Distance Measurement
- Can Be Used As Counters
- 4 kV ESD Protection
- RoHS Compliant
- Wide Operating Temperature Range: -25 ~ +75°C



Applications

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

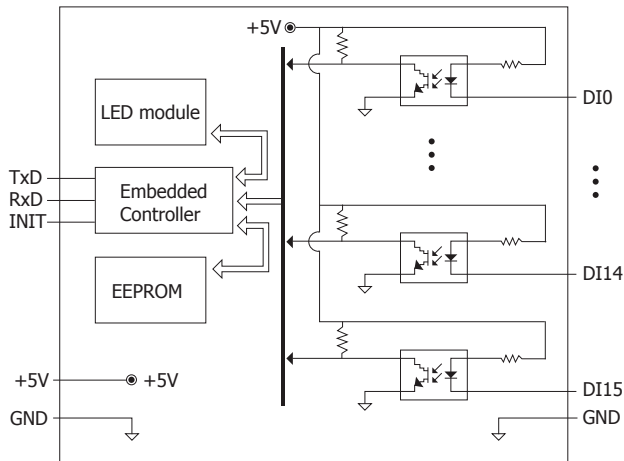
System Specifications

| 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 | 16 LEDs as High/Low Alarm Signals |
| Isolation | |
| Intra-Module Isolation, Field-to-Logic | 3000 Vdc |
| EMS Protection | |
| ESD (IEC 61000-4-2) | 4 kV Contact for Each Terminal |
| | 8 kV Air for Random Point |
| Power | |
| Power Consumption | 1.0 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 |

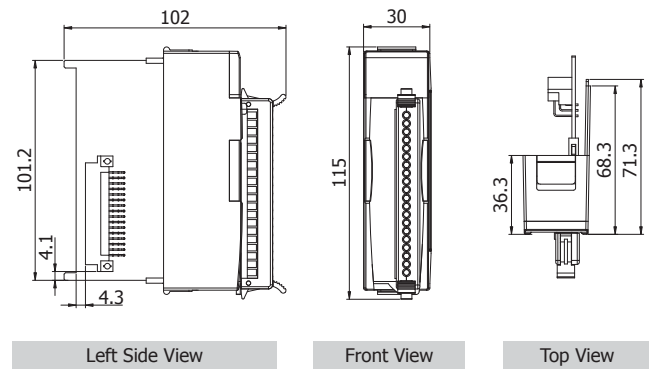
I/O Specifications

| Digital Input | | |
|------------------------------------|----------------------|-------------------|
| Channels | 16 | |
| Type | Dry+Wet | |
| Sink /Source (NPN /PNP) | Sink, Source | |
| Dry Contact | On Voltage Level | Close to GND. |
| | Off Voltage Level | Open |
| Wet contact | On Voltage Level | +1 Vdc Max. |
| | Off Voltage Level | +3.5 Vdc ~ 30 Vdc |
| Counters | Channels | 16 |
| | 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 | 500 m Max. | |

Internal I/O Structure



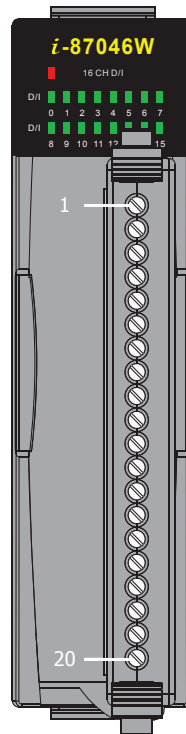
Dimensions (Units: mm)



Wire Connections

| Digital Input/Counter | ON State Readback as 1 | OFF State Readback as 0 |
|-----------------------|--|--|
| Dry Contact | Close to GND (+1 V _{DC} Max.) | OPEN (+4 V _{DC} ~ +30 V _{DC}) |
| | | |

Pin Assignments



| Terminal No. | Pin Assignment |
|--------------|----------------|
| 01 | DI0 |
| 02 | DI1 |
| 03 | DI2 |
| 04 | DI3 |
| 05 | DI4 |
| 06 | DI5 |
| 07 | DI6 |
| 08 | DI7 |
| 09 | DI8 |
| 10 | DI9 |
| 11 | DI10 |
| 12 | DI11 |
| 13 | DI12 |
| 14 | DI13 |
| 15 | DI14 |
| 16 | DI15 |
| 17 | GND |
| 18 | GND |
| 19 | GND |
| 20 | GND |

Ordering Information

| | |
|-------------------|---|
| I-87046W-G | 16-channel Non-Isolated Digital Input Module for Long Distance Measurement with 16-bit Counters (Gray Cover) (RoHS) |
|-------------------|---|

Accessories

| | | |
|--|-----------|--|
| | SG-770 CR | 7 channel differential or 14 channel single-ended surge protector (RoHS) |
|--|-----------|--|