# MQ-7252M

## MQTT I/O Module with 8-ch DI, 8-ch DO

### Features

- Built-in Web Server
- Web HMI
- Support for MQTT Protocol
- 2-port Ethernet Switch for Daisy-Chain Topology
- Dual Watchdog
- Wide Operating Temperature Range: -25 ~ +75°C
- Built-in I/O
  - ☐ DI: 8 Channels
  - ☐ DO: 8 Channels

### Introduction

The MQ-7252M is an Ethernet I/O device equipped with 8-channel DI and 8-channel DO, as well as the MQTT protocol is supported for connecting with a variety of digital sensors in Industrial Internet of Things (IIoT) applications. A web-based user interface is provided to configure module, monitor the network connection status and I/O status, and control digital output channels on the module via a normal web browser on a mobile device or computer.

The MQ-7252M features optical isolation for 2500 $V_{DC}$ of transient overvoltage protection, but doesn't provide channel-to-channel isolation. Each output channel can drive up to 650 mA load, together with configurable power-on value and safe value. It can safely be used in applications where hazardous voltages are present.

### System Specifications

| Model | MQ-7252M |
|---|---|
| **Software** | |
| Built-in Web Server | Yes |
| Web HMI | Yes |
| **Communication** | |
| Ethernet Port | 2 x RJ-45, 10/100 Base-TX, Switch Ports |
| Protocol | MQTT 3.1.1 |
| Dual Watchdog | Yes, Module (0.8 seconds), Communication (Configurable) |
| PoE | - |
| **LED Indicators** | |
| for System Running | Yes |
| for Ethernet Link/Act | Yes |
| for DI/DO status | Yes |
| **2-Way Isolation** | |
| Ethernet | 1500 $V_{DC}$ |
| I/O | 2500 $V_{DC}$ |
| **EMS Protection** | |
| ESD (IEC 61000-4-2) | ±4 kV Contact for Each Terminal and ±8 kV Air for Random Point |
| EFT (IEC 61000-4-4) | ±2 kV for Power Line |
| Surge (IEC 61000-4-5) | ±2 kV for Power Line |
| **Power** | |
| Reverse Polarity Protection | Yes |
| Powered from Terminal Block | +12 ~ +48 $V_{DC}$ |
| Consumption | 3.4 W |
| **Mechanical** | |
| Dimensions (L x W x H) | 120 mm x 97 mm x 42 mm |
| Housing | Metal |
| Installation | Wall Mounting |
| **Environment** | |
| Operating Temperature | -25 ~ +75°C |
| Storage Temperature | -30 ~ +80°C |
| Humidity | 10 ~ 90% RH, Non-condensing |

## ■ I/O Specifications

| Model | MQ-7252M |
|---|---|
| **Digital Input** | |
| Channels | 8 |
| Contact | Wet |
| Sink/Source (NPN/PNP) | Sink/Source |
| ON Voltage Level | +10 V$_{DC}$ ~ +50 V$_{DC}$ |
| OFF Voltage Level | +4 V$_{DC}$ Max. |
| Input Impedance | 10 kΩ |
| Overvoltage Protection | +70 V$_{DC}$ |
| **Digital Output** | |
| Channels | 8 |
| Type | Isolated Open Collector |
| Sink/Source (NPN/PNP) | Source |
| Max. Load Current | 650 mA/channel at 25°C |
| Load Voltage | +10 V$_{DC}$~ +40 V$_{DC}$ |
| Overvoltage Protection | 47 V$_{DC}$ |
| Overload Protection | - |
| Short-circuit Protection | Yes |
| Power-on Value | Yes, Configurable |
| Safe Value | Yes, Configurable |

## ■ Pin Assignments



+12 ~ +48 V$_{DC}$
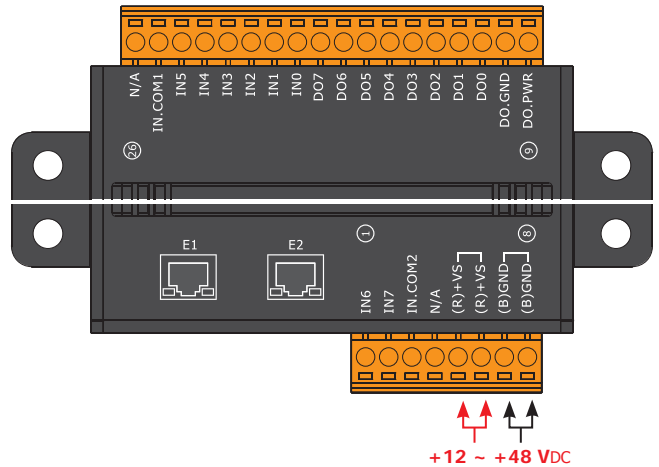
## ■ Dimensions (Units: mm)



Left View

Front View
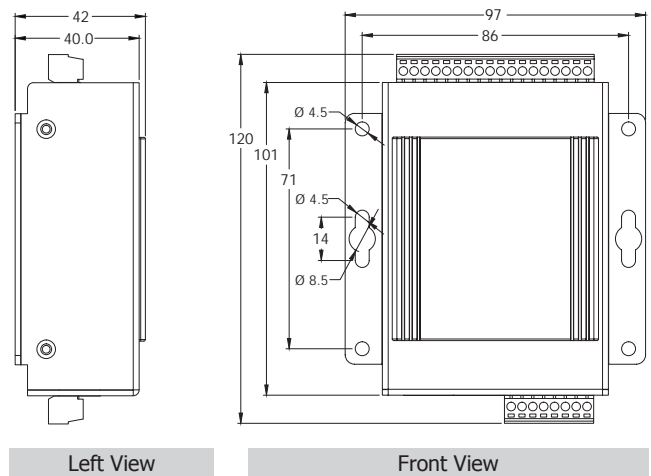
## ■ Wire Connections

| Digital Input | Readback as 1 | Readback as 0 |
|---|---|---|
| Sink | +10 ~ +50 V$_{DC}$ | OPEN or <4 V$_{DC}$ |
| |  |  |
| Source | +10 ~ +50 V$_{DC}$ | OPEN or <4 V$_{DC}$ |
| |  |  |

| Digital Output | ON State Readback as 1 |
|---|---|
| Source |  |
| | **OFF State Readback as 0** |
| |  |

## ■ Ordering Information

| MQ-7252M CR | MQTT I/O Module with 2-port Ethernet Switch, with 8-ch DI and 8-ch DO (RoHS) |
|---|---|