



ALM-04-MRTU

MP3 Alert module with RS-485 connection, 4-ch DI and 1-ch Relay Output

Introduction

The ALM-04-MRTU module features RS-485 connection and support Modbus RTU protocol. The controller makes an easy way to incorporate RS-485 connectivity into monitoring and control systems which makes perfect integration to monitoring in SCADA software and HMI.

ALM-04-MRTU includes 4 channels Isolated DI, with 8 alarm modes, 1 channel Relay output & 1 Audio Line out. MP3 audio format (44.1kHz/128kbit/s is preferred), all files & config are stored in Micro SD (T-Flash).

System Specifications

| Communication | |
|--------------------------|---|
| Interface | RS-485 |
| Parity,Data bit,Stop bit | [None/Odd/Even], [8], [1/2] |
| Baud Rate | 300 ~ 115200 bps |
| Protocol | Modbus RTU |
| Watchdog | Yes, 1.8s |
| LED Indicators | |
| Power/Status | One 2 colors LED, Blue for System status, Red for Alarm status. |
| Protection | |
| ESD (IEC 61000-4-2) | ±8 kV Air for Random Point |
| EFT (IEC 61000-4-4) | ±2 kV for Power |
| Waterproof(IEC 60529) | IP54 (Panel Mount Upright Position) |
| Power Requirements | |
| Powered from Connector | 9 ~ 28 VDC with Reverse Protection (Vin to GND) |
| Consumption | 0.48 W Standby. |
| Mechanical | |
| Dimensions (W x L x H) | 72 mm x 72 mm x 22 mm |
| Installation | Panel Mount/Wall Mount/DIN-Rail Mounting |
| Environment | |
| Operating Temperature | -20 ~ +75°C |
| Storage Temperature | -30 ~ +85°C |
| Humidity | 10 ~ 85% RH, Non-condensing |

Features

- RS-485 Interface
- Modbus RTU protocol
- 4 x DI, 1 x Relay output
- MP3 Audio, external Line Out
- Support up to 64 audio files
- 8 Alarm modes
- 4 Single channel or 15 Binary channel support



Applications

- Building Automation
- Security Automation
- Machine Automation
- Factory Automation
- Testing Equipment
- Guest/Visitor Bell
- Fire Alarm System

Software Utility

| OS | Software |
|---------|----------------|
| Windows | Editor Utility |

I/O Specifications

| Digital Input | |
|-------------------|---|
| Channels | 4 |
| Input Type | Dry Contact: Sink |
| Dry Contact Level | Off Voltage Level: Open On Voltage Level: Close to GND |
| Photo-Isolation | 3750 VDC |
| Input Condition | Pulse Width must > 150 mSec or more |
| Digital Output | |
| Channels | 1 |
| Output Type | Form A Relay |
| Contact Rating | DC 50 V/100 mA |

Audio & Storage

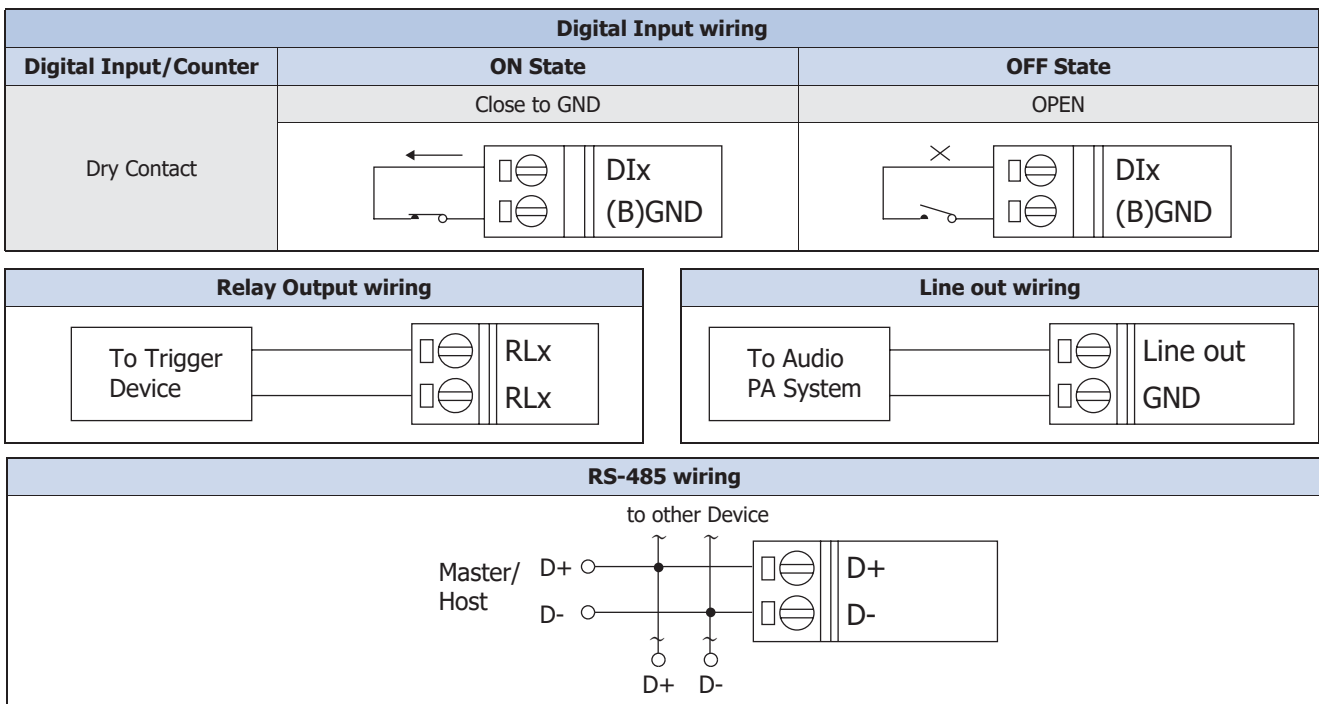
| Audio | |
|----------------------|---|
| Sound Pressure Level | 99 dB @1 KHz/1 meter |
| Volume Control | Digital Volume Control |
| Number of File | 64 (Max) |
| Audio File Format | MPEG1-Audio Layer III (MP3) |
| Sample Rate | 24/44.1 (prefer)/48 KHz |
| Bit Rate | 32 64 96 128 (prefer) 160 192 kbit/s |
| Audio Startup Time | < 150 ms |
| Audio Output | 3 W (Max) |
| Line out Impedance | 1KΩ |
| Storage | |
| Audio Files Locate | Micro SD (T-Flash) up to 32GB, bundle 4GB |
| Storage File System | Fat16/32 |
| File Transfer | PC Editor Utility, Copy to Micro SD |

Pin Assignments

| Terminal NO | Pin Name | Wire Color |
|-------------|----------|------------|
| 1 | DI1 | Brown |
| 2 | DI2 | Red |
| 3 | DI3 | Orange |
| 4 | DI4 | Yellow |
| 5 | D+ | Green |
| 6 | D- | Blue |
| 7 | DI.GND | Gray |
| 8 | Vin | Red |
| 9 | Vin | Red |
| 10 | GND | Black |
| 11 | GND | Black |
| 12 | Line Out | Purple |
| 13 | RL | White |
| 14 | RL | White |



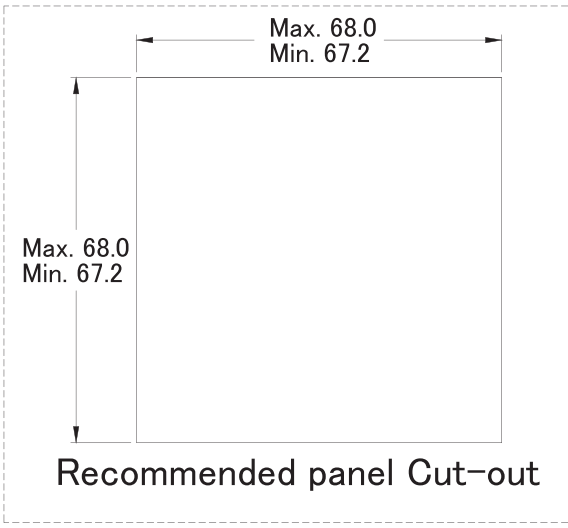
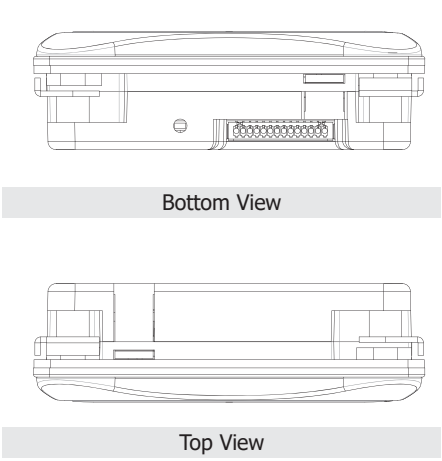
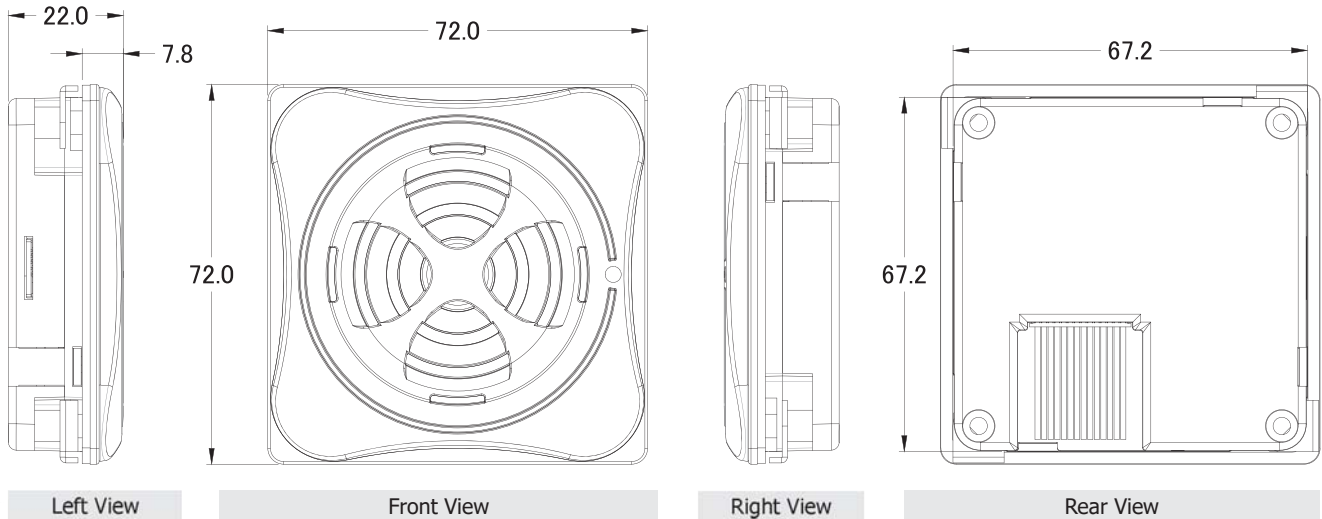
Wire Connections



Device Photo



■ Dimensions (Units: mm)



■ Ordering Information

| | |
|-----------------------|--|
| ALM-04-MRTU CR | MP3 Alert module with RS-485 connection, 4-ch DI and 1-ch Relay Output. (RoHS) |
|-----------------------|--|