ICP Electronics
Australia Pty Ltd
TEL: 02 9457 6011
sales@icp-australia.com.au
www.icp-australia.com.au
Proudly Australian-Owned Since 1999

ALM-04-MRTU

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

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

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).

Applications

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

Software Utility

OS	Software
Windows	Editor Utility

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

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

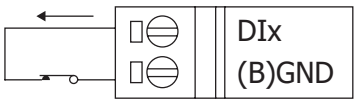
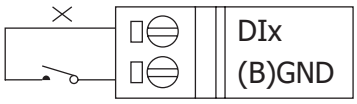
ICP Electronics
Australia Pty Ltd
TEL: 02 9457 6011
sales@icp-australia.com.au
www.icp-australia.com.au
Proudly Australian-Owned Since 1999

Pin Assignments

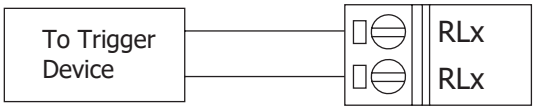
Terminal NO	Pin Name	Wire Color
1	DI1	Brown
2	DI2	Red
3	DI3	Orange
4	DI4	Yellow
5	D+	Green
6	D-	Blue
7	DI.GND	Gray
8	Vin	Red
9	Vin	Red
10	GND	Black
11	GND	Black
12	Line Out	Purple
13	RL	White
14	RL	White

Wire Connections

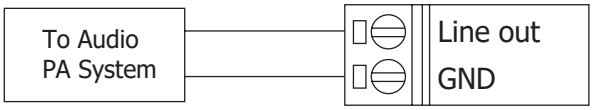
Digital Input wiring

Digital Input/Counter	ON State	OFF State
Dry Contact	Close to GND	OPEN
		

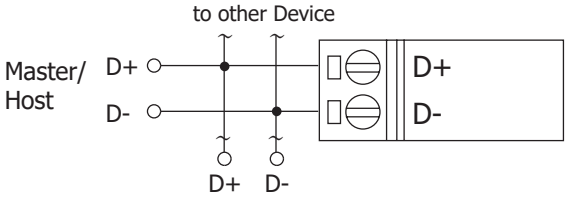
Relay Output wiring



Line out wiring

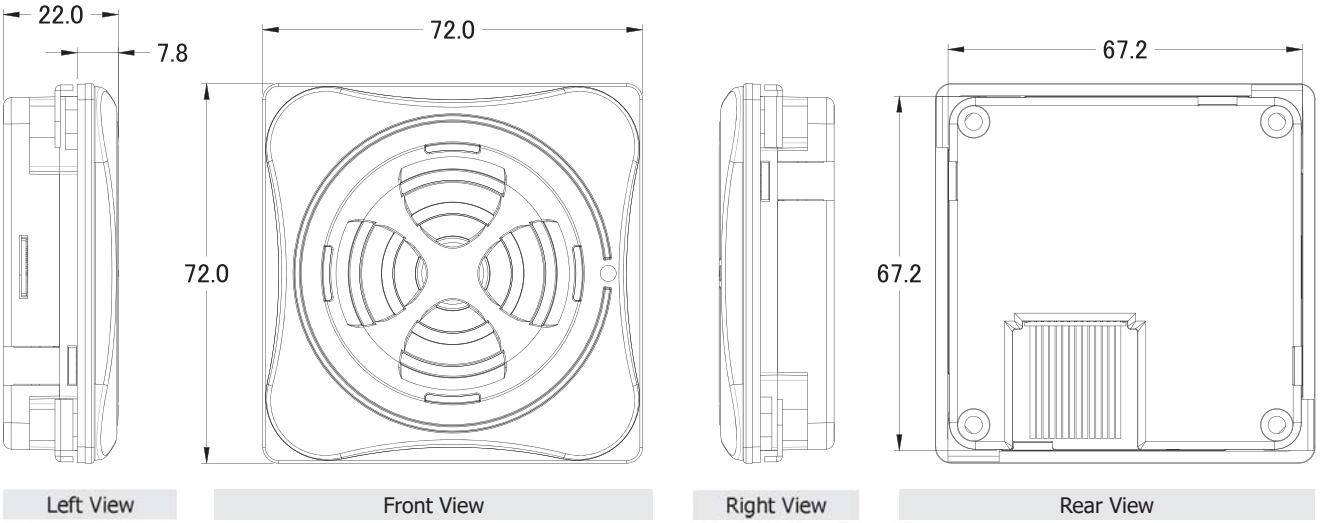


RS-485 wiring

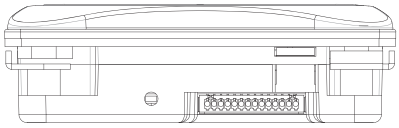


Device Photo

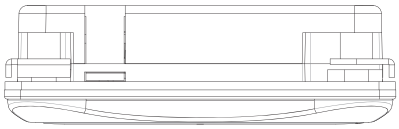
Dimensions (Units: mm)



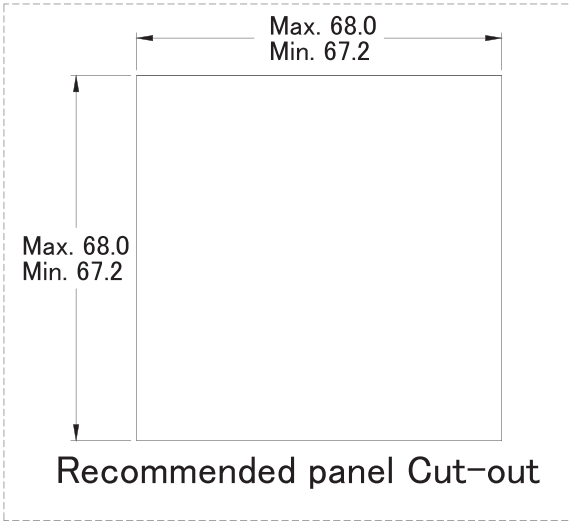
Left View | Front View | Right View | Rear View



Bottom View



Top View



Ordering Information

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