

MM4 DUAL DIGITAL INPUT & SUPPLY VOLTAGE FAIL ALARM PCB DATA SHEET

DOCUMENT REVISION R2

Introduction

The MM4 is a PCB designed to monitor and alarm on failure of the supply voltage. MM4 also features 2 x volt-free digital inputs which raise independent alarms on contact closure. Alarms are indicated by a common sounder output and 2 x pulsing digital outputs, 1 per digital input. There are two versions **MM4-230AC** supply voltage 230VAC or **MM4-24DC** supply voltage 24V DC.

Features

- Integrated battery charger for Ni-MH rechargeable PP3 back-up battery
- Supply voltage fail alarm time using recommended battery ~ 8 weeks
- Supply voltage fail alarm: SLOW ALARM audible beep output every 30 seconds. On muting the supply voltage fail alarm both voltage alarm outputs pulse together every 30 seconds
- Digital input alarms: FAST ALARM audible beep every 2 secs plus pulsing voltage alarm output every 2 secs per output
- Combined mute input / mute time configuration digital input
- Mute mode: When in alarm closing mute contact silences the sounder, if the alarm isn't cleared within the configurable mute time the sounder will re-activate
- Configurable mute time – 1, 2, 4, 8, 12 or 24 hours, when a muted & uncleared alarm exceeds the set time the audible alarm will re-activate (default 24 hours)
- Volt-free relay (SPCO) failsafe common alarm output (de-energises on any alarm) for telemetry etc. (MAX 0.5A @ 230V AC)
- 2 year warranty
- PCB dimensions 85mm L x 80mm W x (max) 15mm D
- Approvals: CE, UL, CSA

Alarming

The MM4 will activate an alarm when the supply voltage fails or when either of the digital inputs close. If the supply voltage fail alarm is present with either (or both) digital input alarms the digital input alarm(s) take priority. If any alarm has been muted and another alarm activates it cancels the mute and the audible alarm re-activates.

When any alarm activates the on-board relay de-energises (failsafe). A volt free single pole changeover contact is provided for external use (flashing beacon, BMS, telemetry etc).

Mute Mode

When an alarm is active, closing a volt free contact connected to the mute terminals for approximately one second mutes the sounder. The MM4 sounder output will operate twice to acknowledge that the sounder output is muted. If either (or both) of the digital input alarms are active and muted their respective digital outputs will continue to pulse. The system automatically resets when all alarms are clear.

Configuring Mute Time

When there are **no alarms present**, hold down the mute button to cycle through the selectable mute times. The unit will beep according to the table below. Just hold the mute button until you hear the desired number of beeps. The selected setting are retained, even on mains fails events and changes of battery.

Mute Time Indication at Power-up

The MM4 indicates the currently stored mute time when powered up from a completely powered down state (i.e. no battery connected and no mains supply). Upon power-up the MM4 will sound the audible beep according to the table below to indicate the currently stored mute time.

1 beep = 1 hour mute time	4 beeps = 8 hours mute time
2 beeps = 2 hours mute time	5 beeps = 12 hours mute time
3 beeps = 4 hours mute time	6 beeps = 24 hours mute time DEFAULT

MM4 PCB Connections

Figure 1.

