



Gas Detection (Australia) Pty. Ltd.

AVR-20RM and MS001 Sounder/Flasher with Mute Switch Operating Manual



Manual Revision: 1.0
Hardware Version: 1.3

Thank you for purchasing this product from Gas Detection (Australia) Pty. Ltd.

This manual contains information about the method of installation, simple maintenance and troubleshooting of the Mute Switch (MS001) and Sounder/Flasher (AVR-20RM). Please read it carefully and keep it nearby for further reference.

If you have any further question about the product, please contact us.

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Note:

The Mute Switch (MS001) only resets once the active alarm has deactivated.
Certain work places are under standards which stipulate if the gas alarms can be muted.

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1 Overview

1.1 Description

The Mute Switch (MS001) receives a 24 VDC alarm signal from a gas monitoring controller and is able to mute the sounder of a connected Sounder/Flasher (AVR-20RM) via a switch. The Flasher of the AVR-20RM continues to flash until the gas alarm has deactivated at this time the Mute Switch resets.

The Mute Switch is housed in a Clipsal 2000 series enclosure for ease of installation and the AVR-20RM is mounted by 2 screws.

The AVR-20RM has three connection wires (Red, Black and Orange). The 3 main connection options are flasher only, sounder/flasher or flasher with mutable sounder via the Mute Switch.

1.2 Safe Work Standards

Certain work places are under standards which stipulate if the gas alarms can be muted. Ensure the appropriate guidelines are followed.



2 Specification

2.1 MS001 General Specifications

Table 1: Mute Switch specifications

Specification Name	Specification Value
Part Number	MS001
Function	Sounder of AVR-20RM muted on pressing Mute Switch
Operating Voltage	24 VDC
Power Consumption	< 20 mA @ 24 VDC
Connection	4 way plug
Operating Temperature	-10 - 40°C
Dimensions	Clipsal 2000 series 116 x 76 x 20 mm (L, W, D) in wall depth 21 mm
Enclosure Material	ABS Plastic
Enclosure Rating	IP50 (When Installed)
Warranty	12 months from date of dispatch

2.2 MS001 Mechanical Dimensions

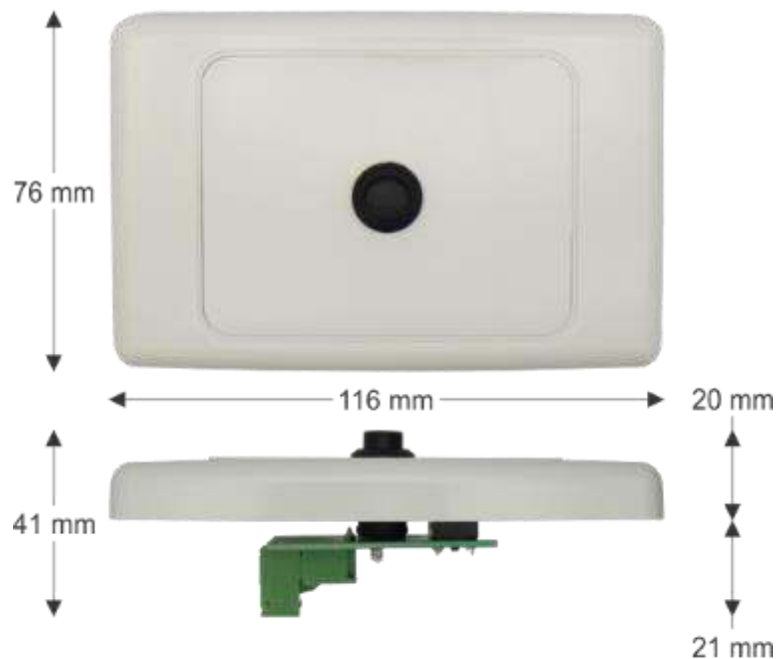


Figure 1: Mute Switch dimensions

2.3 AVR-20RM General Specifications

Table 2: AVR-20RM specifications

Specification Name	Specification Value
Part Number	AVR-20RM
Function	Sounder/Flasher
Operating Voltage	24 VDC
Power Consumption	< 100 mA @ 24 VDC
Lens Colour	Red
LED Colour	Red
Wiring	3 x lead wires (~300mm Red, Black and Orange)
Connection Details	24 VDC - Red wire - Flasher 0V - Black wire 24 VDC - Orange wire - Sounder and Flasher
Sound Output	~90 dB @ 1 m
Operating Temperature	-10 to 45°C
Enclosure Material	ABS Plastic
Dimensions	123 x 73 x 45mm (H, W, D)
Enclosure Rating	IP20
Warranty	12 months from date of dispatch

2.4 AVR-20RM Mechanical Dimensions



Figure 2: AVR-20RM dimensions

3 Application and Implementation

3.1 Application

A common application of the Mute Switch and AVR-20RM is the use of two AVR-20RMs and a Mute Switch. The Mute Switch and one AVR-20RM are mounted on the outside of a room, with a gas detector and the other AVR-20RM in the room. On gas alarm the room is evacuated and the Mute Switch is pressed in the safe environment to mute the sounder.

3.2 Placement

The AVR-20RM is normally mounted high on the wall typical 1.6 m to 2.4 m from the ground.

3.3 Integration/Limitations with GDA products

The combination of the Mute Switch and AVR-20RM can be connected to the GDA controller alarm and fault relays. GDA controllers and detector controllers (4012X) use volt free alarm relays which will require 24 VDC on the common connector of the relay.

The AVR-20RM can only be muted with the MS001. Products like the GDA 40125 and REP2016 cannot mute the sounder of the AVR-20RM and keep the flasher active during an alarm state.



4 Wiring Instructions

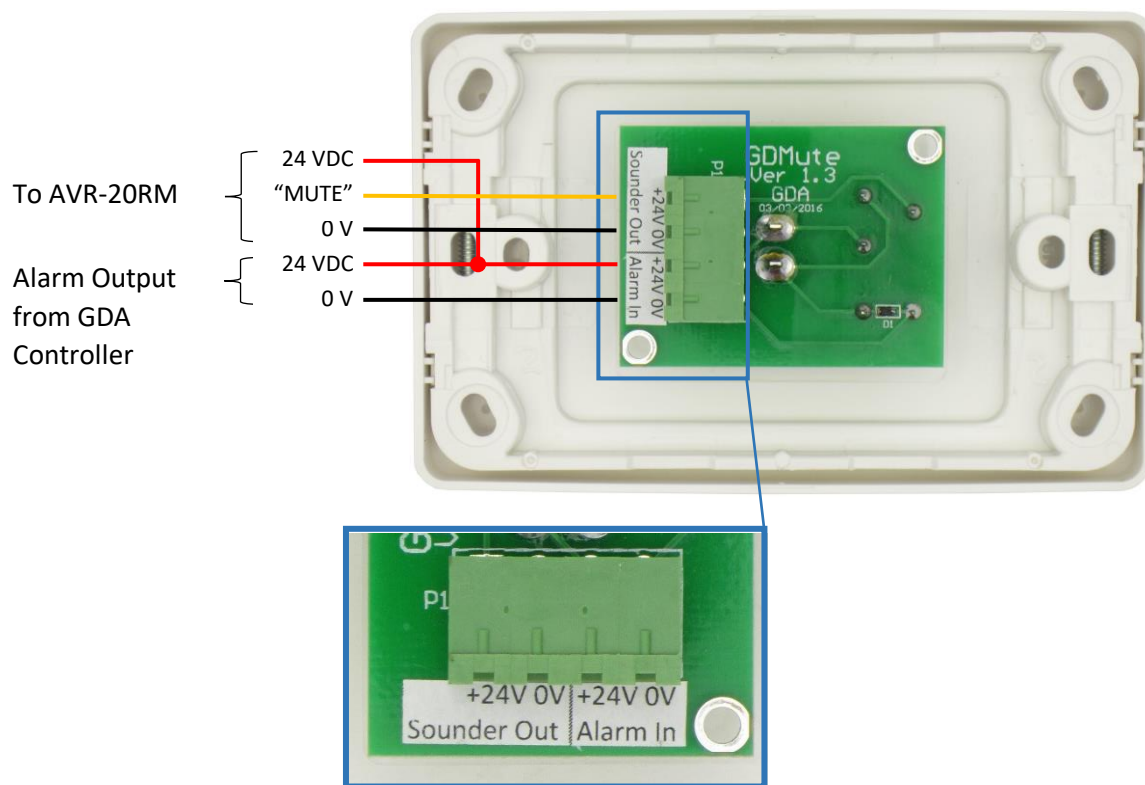


Figure 3: Mute Switch wiring

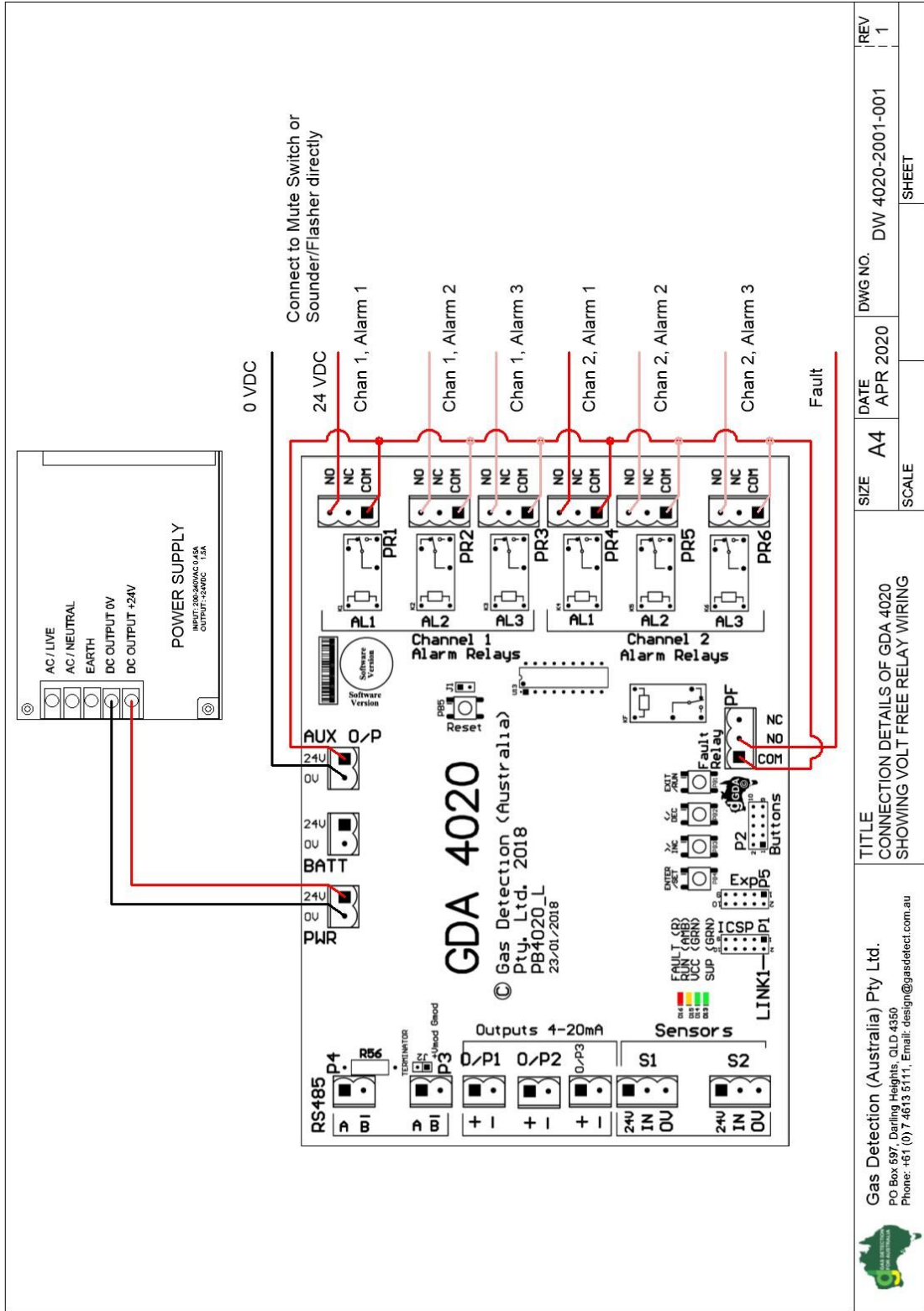
Table 3: Mute Switch wiring to AVR-20RM

Label	Wire connection	Function
Sounder Out		
+24 V	Wire to Orange (24 VDC Sounder and Flasher) wire of AVR-20RM	Mute Switch button press disconnects the 24 VDC on this connection
0V	Wire to Black (0V) wire of AVR-20RM	Pass through of 0V from controller
Alarm In		
+24 V	Wire 24 VDC from controller alarm relay and Wire to Red (24 VDC Flasher) wire of AVR-20RM	Unaffected by Mute Switch button 24 VDC remains whit in gas alarm
0V	0V from controller	0V from controller

Table 4: AVR-20RM wiring

Voltage applied to wire	Wire Colour	Function when connected
24 VDC	Red	Flasher
0V	Black	
24 VDC	Orange	Sounder and Flasher





TITLE CONNECTION DETAILS OF GDA 4020 SHOWING VOLT FREE RELAY WIRING			SIZE A4	DATE APR 2020	DWG NO. DW 4020-2001-001	REV 1
Gas Detection (Australia) Pty Ltd. PO Box 597, Darling Heights, QLD 4350 Phone: +61 (0) 7 4613 5111; Email: design@gasdetect.com.au			SCALE	SHEET		

Figure 4: Controller relay wiring, 24 VDC supplied to the relays common connectors



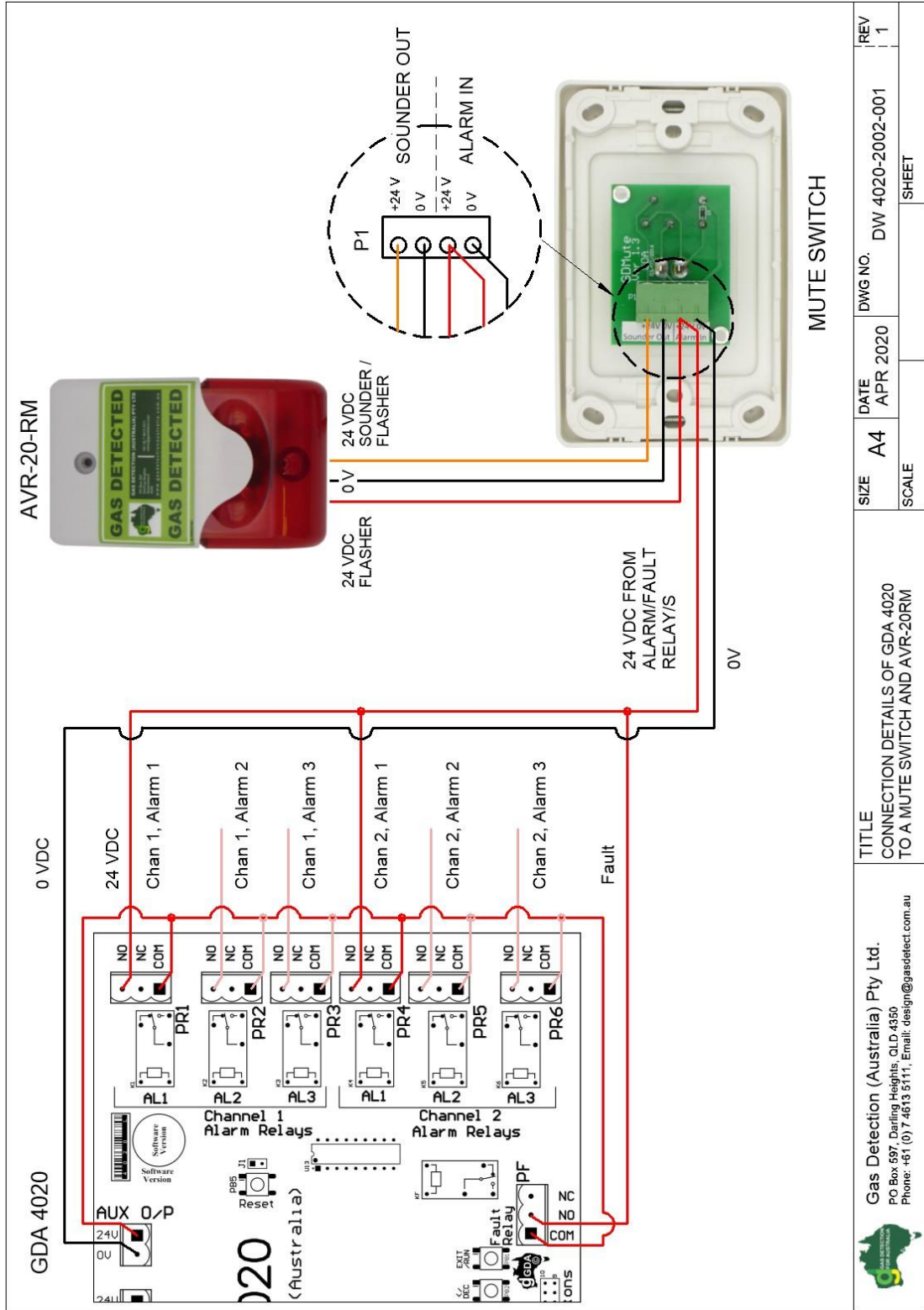


Figure 5: Mute Switch connection to GDA 4020 and AVR-20RM

TITLE		CONNECTION DETAILS OF GDA 4020 TO A MUTE SWITCH AND AVR-20RM		SCALE	SHEET		
Gas Detection (Australia) Pty Ltd. PO Box 697, Darling Heights, QLD 4350 Phone: +61 (0) 7 4613 5111; Email: design@gasdetect.com.au		SIZE	A4	DATE	APR 2020	DWG NO.	DW 4020-2002-001
REV		1		SHEET		1	



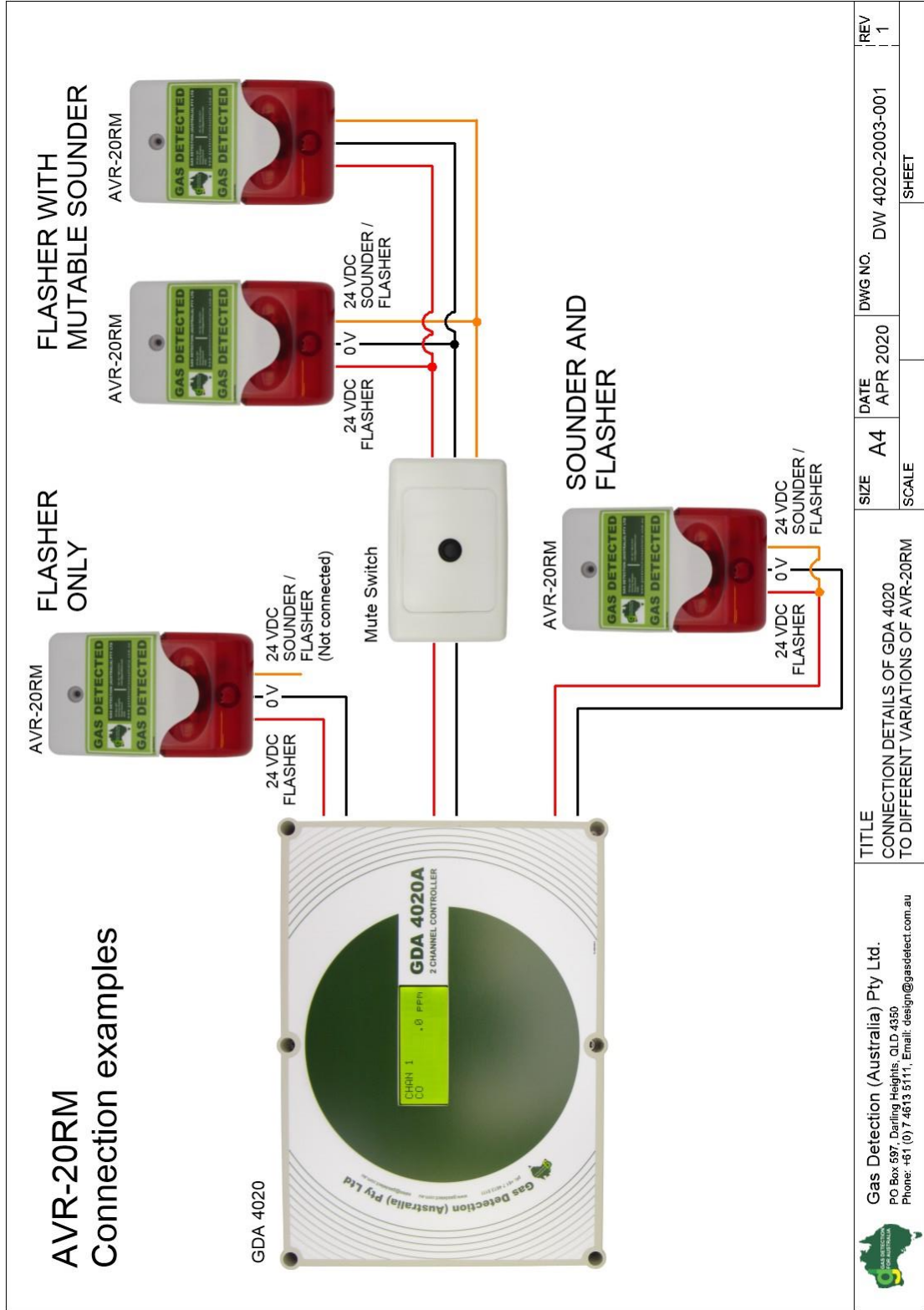


Figure 6: Different configurations of the AVR-20RM



5 Revision History

Version	Contents	Date
1.0	Initial version	16 th Apr, 2020

This product and operating manual are subject to change without prior notice for the improvement of product performance and ease of use.



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