

MerlinGuard Gas Detection & Ventilation Control System



Product Overview:

The S&S Middle East MerlinGuard is a gas detection & ventilation panel to be used with up to sixteen (16) TFT detectors. It is intended for use in spaces that require either refrigerant, toxic or combustible gas detection and provides a pre-programmed control panel including features such as fan control options, alarm damper control, and connectivity to Building Management Systems (BMS).

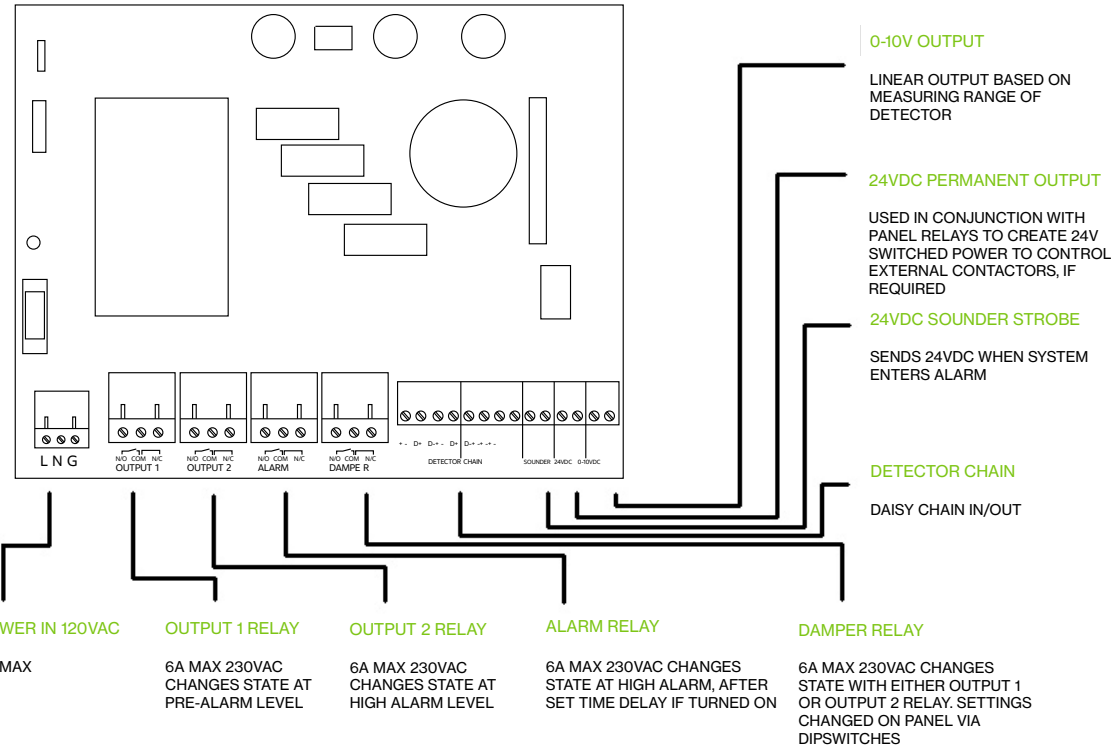
The panel has four output options for pre-alarm and high-alarm conditions, and contains a 0-10V output that can be utilized by the BMS or for fan control via VFD.

Technical Specifications

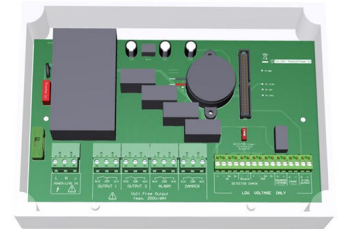
General

Model:	MerlinGuard
Capacity:	Up To 16 Channels Per Controller Unit
Size: (H x W x D)	180mm x x 255mm x 76mm
Housing Material:	ABS Polyac - PA765 / UL 94 V-1
Mounting:	Indoor Use - Wall Mounting
Weight:	1.3kg
Display:	4.3" TFT Touch Screen
Visual Indicators:	Green: Normal / Amber: Alarm Delay / Yellow: Pre-Alarm / Red: Alarm Relay Outputs ON/OFF Gas Detection Status
Audible Alarm:	>70dB @ 3.28ft (1m). Quiet conditions
Buttons:	Common for Silence/Reset operation
Power Consumptions:	14.5W Max
AC Power:	230V - 50/60Hz
Internal Fuse:	T3.15A L250V
Relay Output::	Volt Free Relay Outputs x4 (non-latching) - NO/COM/NC 6A @ 230V User Configurable - Energised/De-Energised - Time Delay - 24VDC Switching
Common Output:	24VDC Permanent / 0-10VDC Variable
Ingress Protection:	Nema 4 / IP64 (See Manual For Further Information)
Operating:	-10~50°C 30 ~ 80% RH (non-condensing)
Storage:	-25~50C° up to 95% RH (non-condensing)
Typical Wiring:	Power & Relay: ~#18-12AWG / Detector: #12-18AWG Power Pair; #18-22AWG Data Pair / Other: #18-22AWG
Electromagnetic Compatibility and Electrical Safety:	IEC 61010-1:2010 + AMD1:2016; EN 61010-1:2010 + A1:2019; UL61010-1/2012/ CAN CSA C22.2 No. 61010-1-12/ A1:2018-11 EMC EN 61326-1:2013

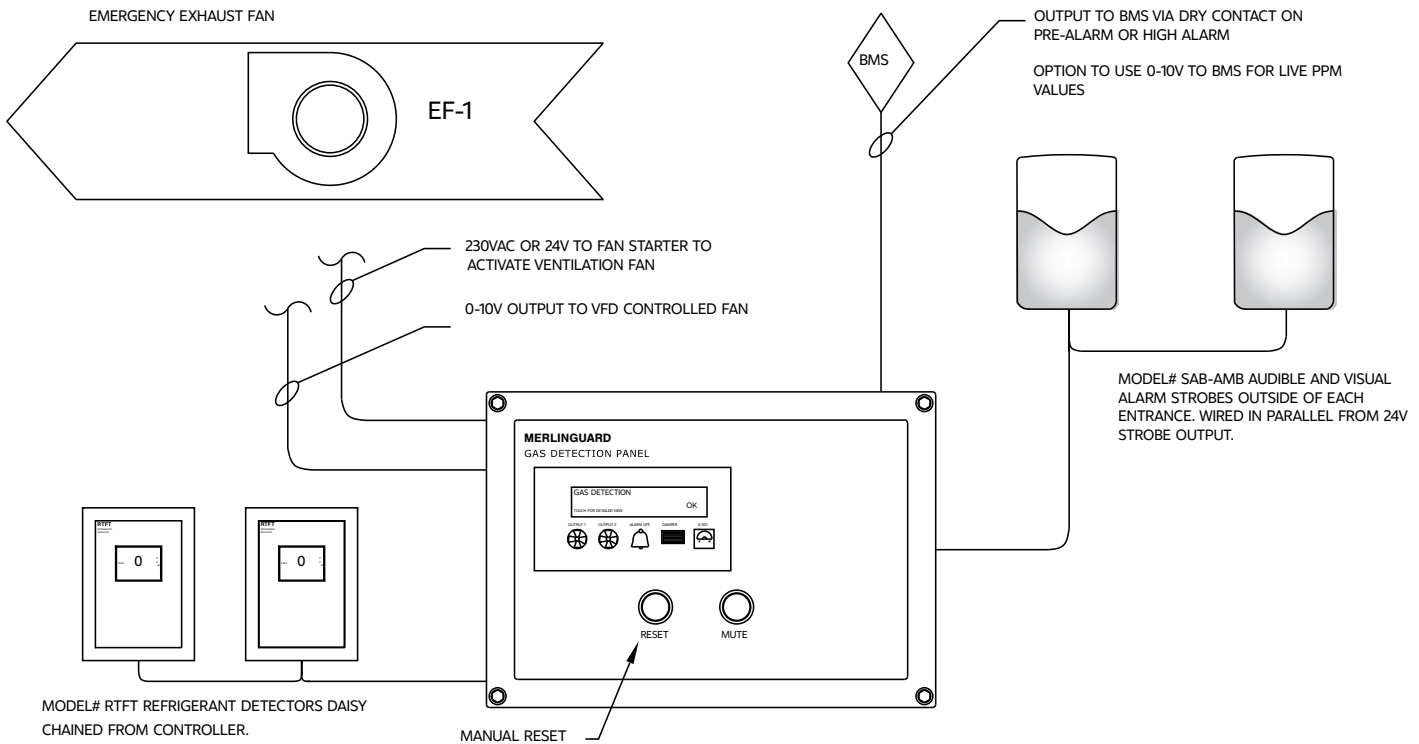
MerlinGuard PCB Overview



TFT DETECTOR



MERLINGUARD



1. Use the high alarm relay (output 2) to send 230VAC or 24VAC power to the fans to activate them. This design would require two fans. One fan would cover your standby airflow rate, and the second fan would turn on during a gas detected scenario and increase the ventilation rate to the emergency extraction rate defined by ASHRAE of 100X the standby rate. Use ASHRAE 8.9.8.1 to calculate ventilation rate.
2. Use the 0-10V output to signal a VFD control fan, and have it run at a continuous standby rate and ramp up to the emergency extraction rate upon detection. The 0-10V output will send a linear voltage signal to the VFD based on the sensing range of the detector.