FIRE SYSTEMS PRODUCTS

VIGILANT FIRE & EVACUATION SYSTEMS

PRODUCT BULLETIN

ZAU401 ZONE ADAPTOR UNIT

Vigilant is pleased to announce the availability of Revision 2 of the ZAU401 Zone Adaptor Unit.

This can be ordered as:

PA0838 PCB ASSY, 685052, ZAU401, ZONE ADAPTOR UNIT

The ZAU401 (Rev 2) can be thought of as a single zone circuit module that can be added to different panels to make them compatible with specific detectors. For example, it can be used with the S231i+ flame detector. (Refer PBG0080).

In addition, the AZC characteristics of the ZAU401 make it particularly suitable for Intrinsically Safe applications. (Refer PBG0081).

Do not use the Rev 1 or non-Vigilant manufactured versions of the ZAU401 in these applications, as these versions do not have the same characteristics as the Rev 2. However, the Rev 2 version can be used to replace the Rev 1 or non-Vigilant manufactured units.

The ZAU401 can support up to 2mA of quiescent detector current and uses a 3k9 5% EOL resistor. The detectors must provide current limiting in alarm, or a series resistor must be included to limit the alarm current to below 100mA or lower if the detector has a lower maximum alarm current rating. Refer to the specific details in the product bulletins.

Its output voltage in alarm (to the panel) is compatible with most panels, and the EOL used (panel side) is that from the original panel. It operates directly off the 24V panel supply, and draws approximately 20mA in the normal condition.

The ZAU401 monitors the voltage provided by the panel to its Zone+ input, and when this disappears during a reset operation the ZAU401 turns off the supply to its detectors – thus resetting them as well.

Only one ZAU401 can be connected to each circuit on the panel.

The ZAU401 is supplied as DIN rail mounting pcb, but it also has 4 x ϕ3mm holes for standoff mounting. It contains a green LED to indicate power is applied to the detection circuit, and a red LED to indicate alarm has been latched. A link allows disabling of faults on the detection circuit being coupled to the panel circuit.

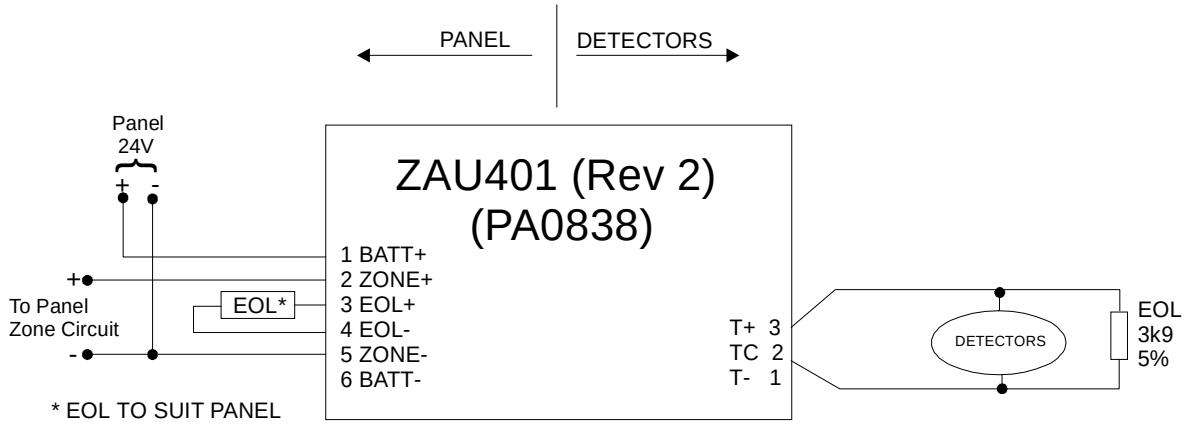

Figure 1
Panel & ZAU401 Wiring
(Detector limits < 100mA)

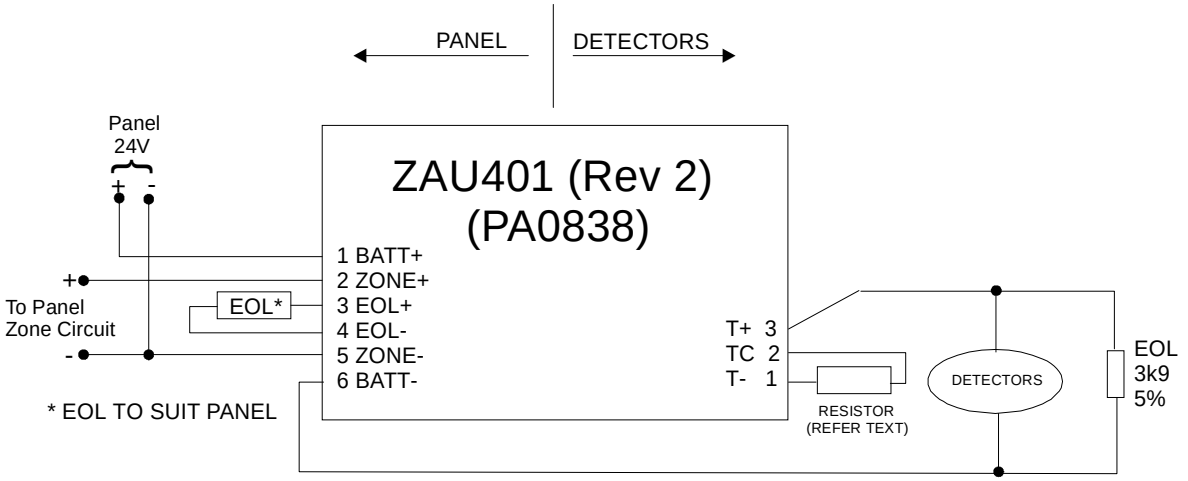

Figure 2
Panel & ZAU401 Wiring
(Resistor limits to < 100mA)

Specifications:

Physical Size	67mm x 70mm x 30mm
Mounting	4 x ϕ3mm holes for standoff mounting
Operating Voltage	18-28V (some applications may require >21V)
Current Consumption	<20mA
Alarm Voltage (to panel)	5-8V at <100mA
Reset Repeat Threshold	1.0-1.4V
Alarm Current Threshold	10.0-12.8mA
Max Alarm Current	100mA Max
Fault Current Threshold	2.5-3.3mA
Detector Current (switch on)	5.5mA max for 2 seconds
Detector Current (quiescent)	2mA max
Detector Compatibility	Requires current limiting detector or series resistor

ZAU401 Operation

The ZAU401 has an equivalent circuit of a 220E 1% resistor in parallel with a 5V1 zener diode feed from the battery voltage. Care must be taken to ensure that the minimum working voltage of each detector is met under worst case conditions.

This will be at minimum battery voltage, maximum quiescent current, and include line resistance (plus any series resistor) and any voltage drop due to isolating repeaters or the like.

The series resistor (see Figure 2) must be sufficiently high enough to ensure that the maximum alarm current of the ZAU401 and the detector is not exceeded, while ensuring the alarm current (at minimum battery voltage and maximum line resistance and detector alarm voltage) is high enough to ensure an alarm condition is detected by the ZAU401.