

Radio Alarm Interface

1 DESCRIPTION

1.1 Application

The Radio Alarm Interface provides an alarm indication by means of a 'closed' switch state when there is a failure of either the radio unit power or the wireless link. Otherwise the switch is 'open'.

1.2 Interface Circuit (see Figure 1)

The interface driver comprises a bipolar transistor switch Q1, driven from radio circuitry via an opto-isolator. This allows the external interface circuit to have either a positive or negative ground. The switch is protected from transient overvoltage and reverse polarity by a shunt zener diode D1 and limited shorts by a 1W series resistor R2. The switch is self-biased from the output by resistor R1. An external current-limiting load resistor R3 is always required.

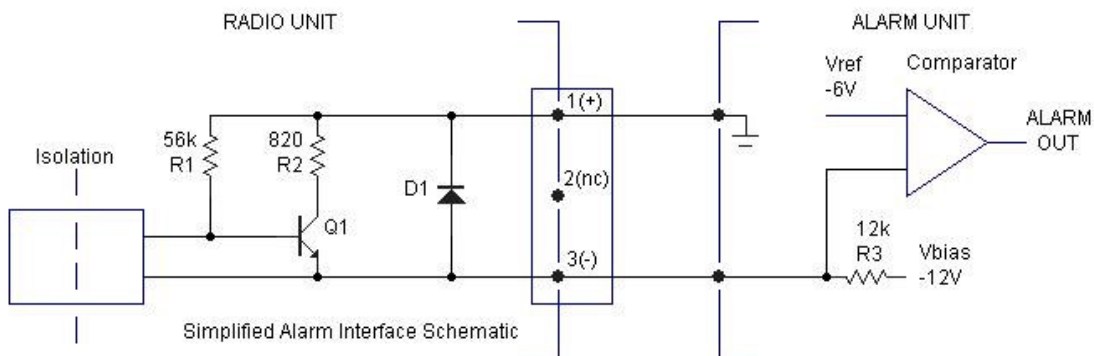


Figure 1 - Typical Interface Circuit Application

2 MAXIMUM RATINGS

Off state voltage 56V (nominal zener clamp voltage 62V)
 On state current 34mA
 Short circuits across switch or across load up to 28V bias supply – indefinite
 Short circuits across load to >28V bias supply – transient only
 Isolation >1500V rms

3 DRIVER CHARACTERISTICS

Off state resistance	min 50kΩ	typ >56kΩ	(Vbias =<56V)
On state resistance		typ 1.1kΩ	(Iswitch = 1mA)
		typ 0.95kΩ	(Iswitch = 2mA)
		typ 0.88kΩ	(Iswitch = 4mA)

4 CABLE CONNECTIONS (See Figure 2)

The isolated output of the switch driver may be connected to a sensor load having either polarity of bias supply. However, it is essential for Pin1 of the Alarm connector, which is the pin closest to the

centre of the Radio Unit housing, to be wired to the more positive side of the network, as shown in Figure 2. When using the pre-wired cable supplied, the red lead is positive.

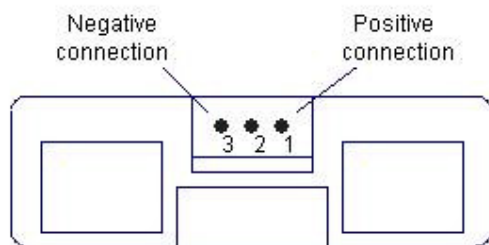


Figure 2 - Alarm Interface Connections

Alarm connector mating parts:

- Housing - JST VH Series, 3-way, VHR-3N
- Crimp terminal - 22-18AWG, SVH-21TP1.1 (2 only required)