

## Overview

The GO switch pump protection and monitoring modules are designed to provide a low-cost, flexible solution for protecting HOMA submersible sewage pumps against thermal and seal-failure conditions. Separate LED indication and relay contact outputs for each function are included. Flexible model options enable protection of any submersible sewage pump with heat sensor and/or seal-failure sensing devices installed. The GO Switch may be powered by 24 or 240 VAC, 50/60 Hz with no modifications. Standard models are available for monitoring via resistance probes, seal-failure float switches, Klixon thermal switches, RTDs and thermistors. Custom modules may also be factory configured.

## Operation Description

The GO Switch combines detection circuits for both motor and bearing over-temperature and seal-failure in a single plug-in unit. In an alert condition, the appropriate LED is illuminated and relay contacts associated with the condition toggle. Thus a load, such as the motor contactor, may be turned off, or a warning light might be turned on. Upon occurrence of the first alarm condition, the proper LED will illuminate a steady alarm indication. If the alarm is cleared automatically, the LED will then begin to flash, so that the operator will know that one or more alarm occurrences has been detected, and automatically cleared.

A low voltage supply provides power to the over-temperature and seal-failure monitoring circuits which control relay outputs based on instructions contained in a microprocessor. The microprocessor circuitry includes power-on-reset and oscillator start-up timers as well as an independent watchdog timer to ensure reliable operation. Both hardware and software filtering is implemented on the sensor inputs for reliable signal integrity in noisy environments. When properly installed, the GO Switch will function trouble-free at a distance of up to 500' from the pump. For distances longer than 100', sensor wires should be brought to a junction box as close as possible to the pump.

A Test push button simulates faults on both sensor channels, and a Reset push button clears the alert indicators after (1) The Test push button has been depressed, or (2) an actual alert has been corrected. The Reset push button performs a "hard" microprocessor reset.

To prevent dislodgement of the module it is designed to be mounted in an industrial type 12-pin socket with hold down clip.

Model	Channel A	Channel B
GS1050	100K resistance probe (seal-fail)	NC Klixon (thermal)
GS1250	NC seal chamber float switch (seal-fail)	NC Klixon (thermal)
GS1010	100K resistance probe (seal-fail)	100K resistance probe (seal-fail)
GS1212	NC seal chamber float switch (seal-fail)	NC seal chamber float switch (seal-fail)
GS5454	Thermistor DIN44082/01D463 (thermal)	Thermistor DIN44082/01D463 (thermal)
GS1052	100K resistance probe (seal-fail)	Pt100 RTD (thermal)
GS1252	NC seal chamber float switch (seal-fail)	Pt100 RTD (thermal)
GS5252	Pt100 RTD (thermal)	Pt100 RTD (thermal)
GS5452	Thermistor DIN44082/01D463 (thermal)	Pt100 RTD (thermal)

## Common Features (All Models)

- » **Auto/Manual Reset:** Channels that monitor temperature can be set for Manual or Auto reset after experiencing an alarm condition. (Seal failures automatically reset when the alarm condition is removed although the LED continues to flash until reset.)
- » **Reset Push-button:** The reset button is used to reset all alarm conditions and clear flashing LED states.
- » **Test Push-button:** The test button simulates an alarm condition in both channels until released. NOTE: In many cases, this will cause the pump to stop because of the simulated high temperature condition.



## 1. Select sensors to be provided

Available Sensors	Type	Designation
100kΩ Probe	Moisture	10
NC Float Switch*	Moisture	12
NC Thermal Switch	Thermal	50
Pt100 RTD**	Thermal	52
Thermistor	Thermal	54

## 2. Select GO Switches to be provided, each GO Switch can monitor up to 2 sensors

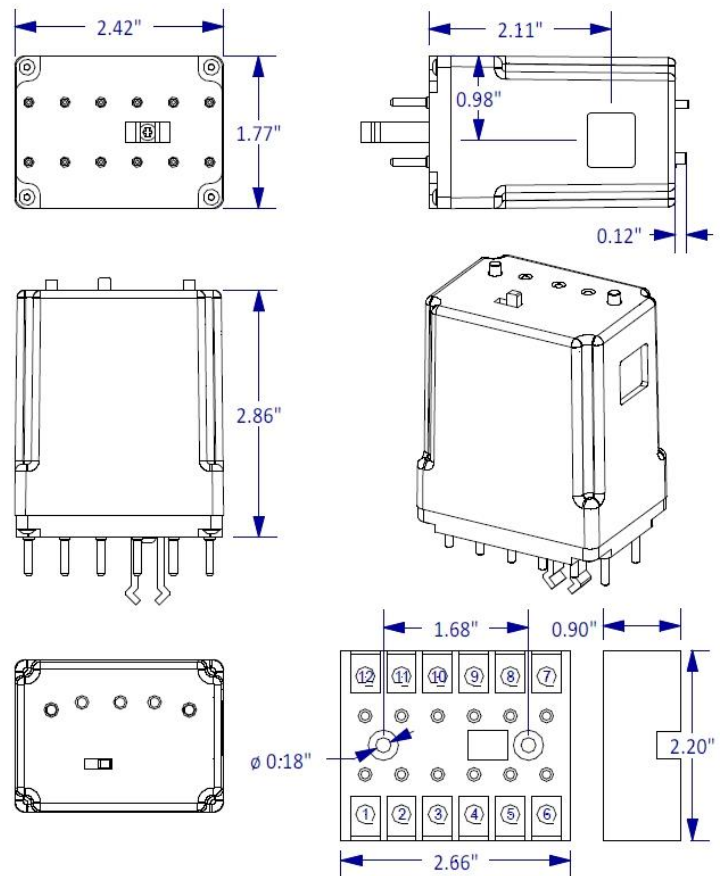
GO Switch Designation	Channel A	Channel B
GS1050	100kΩ Probe	NC Thermal Switch
GS1052	100kΩ Probe	Pt100 RTD**
GS1010	100kΩ Probe	100kΩ Probe
GS1250	NC Float Switch*	NC Thermal Switch

Note: Please consult factory for alternate configurations

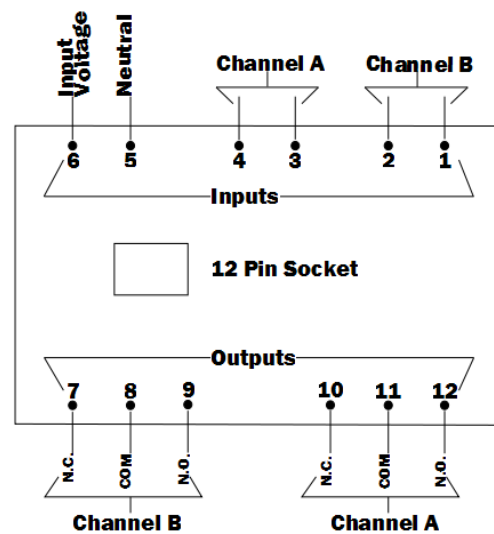
## Technical Specifications

Measurement Principle	Current Sensing
Environment	-40 to 55 °C (-40 to 131 °F)
Supply Voltage	24-240 VAC, 50-60 Hz. / 24-48 VDC
Power Consumption	24 VAC - 50/60 Hz 1.7 VA
	120 VAC - 50/60 Hz 1.9 VA
	240 VAC - 50/60 Hz 2.4 VA
	24 VDC 1.4 Watts
Relay Contact Rating	NEMA B300 Pilot Duty, 1/6th HP, 3A @240VAC; Form C
Sensor Voltage	Varies with resistance. Not to exceed 10 VDC±2%
Contact States	N.O. contact closes on fault condition or on loss of supply power.
LED States (Both Channels)	GREEN: no fault
	RED: thermal fault
	AMBER: seal-fail fault
	FLASHING: fault automatically cleared

## Relay/Socket Dimensions



## Socket Electrical Wiring



On 1-wire seal-fail circuits attach Pin 4 to COMMON GROUND point with PUMP SAFETY GROUND WIRE



PUMP TECHNOLOGY

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