

Application Note: Protection for Pricy Pumps



The Slimline SP-123 Current Window Comparator, manufactured by Rhomberg Electronics, is particularly beneficial to the farming sector for the protection of submersible pumps in the event of current fluctuations. This 11-pin, plug-in unit is simple to set-up and provides a completely fail-safe operation by detecting potentially harmful current changes.

Where borehole pumps are used for land irrigation, there is always the danger that the borehole could run dry, or silt could clog the pipe and restrict the water flow. The SP-123 is a precision monitor for AC applications that detects both under-current and over-current conditions and will efficiently monitor the current flow to the submersible pump. When either the underload or overload thresholds are reached, the SP-123 automatically turns the pump off and the appropriate LED on the unit illuminates, indicating the relevant fault condition. Underload represents the borehole running dry, whereas overload represents a clogged pipe.

The undercurrent and overcurrent parameters are programmed and set separately against calibrated percentage scales. This programming is done by means of simple adjustments to the positional control knobs on the face of the unit. The control knobs can be replaced by tamperproof buttons provided with the unit, thus preventing unauthorised changes to the settings.

The SP-123 has been designed to monitor up to 5 Amps without the need for a current transformer. For currents over 5 Amps, a suitable current transformer should be incorporated.

