



# Data Sheet

## Piezo actuated switches

**RS stock numbers 665-578, 665-584, 665-590, 665-607, 665-613, 665-629, 665-635, 665-641**

The **RS** Piezo actuated switches have no conventionally moving parts and are totally sealed. They are mechanically robust having a life in excess of 15 million operations. They are suitable for use in low-supervision public-access areas, severe industrial environments involving dust and/or aggressive chemicals, areas requiring high levels of hygiene (food industry, medical, etc.). In operation they are similar in 'feel' to touch switches but they do not suffer from the false triggering to which the capacitive types are prone. In addition

they are impervious to electro-static discharge.

These switches rely for their operation on a piezo electric crystal. Pressure on the switch causes the generation of a small voltage which is internally amplified and conditioned to provide a switching function. Because of this method of operation these switches are truly momentary. The output circuit is a bi-directional FET array and is capable of switching both ac and dc. In this respect these switches perform in a conventional manner.

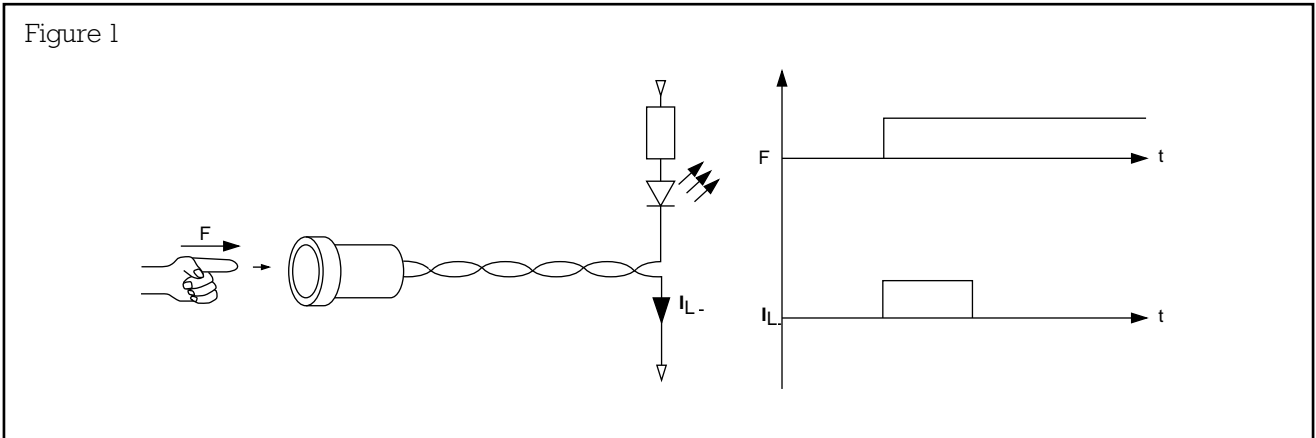
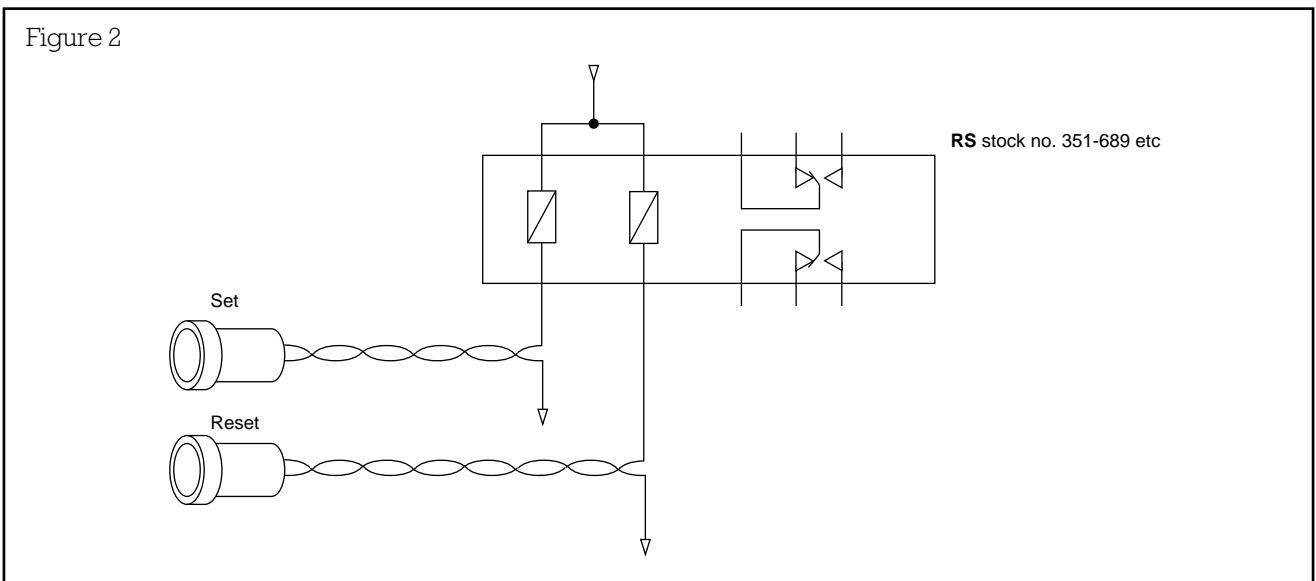
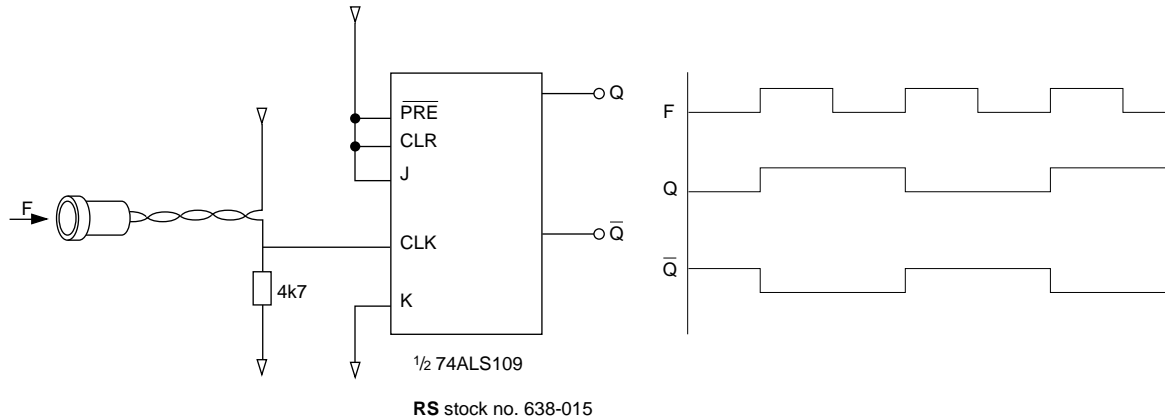


Figure 1 shows an **RS** Piezo actuated switch connected directly to a load – in this case an LED. Operating the switch causes the LED to light momentarily. The time for which the LED is on is defined by the speed and force of operation but will lie between 10 and 1000ms.



The circuit shown in Figure 2 indicates how a latching relay may be used together with two Piezo actuated switches to provide a start-stop function. The switches can operate between 3 and 35 volts and are therefore suitable for most common relay voltages.

Figure 3



The wide range of operating voltage makes direct logic interfacing possible. Figure 3 shows how the piezo actuated switch may be interfaced to a flip-flop to provide a latching switch function. The outputs toggle with every press of the switch.

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