

## S312 Series Interface Relays

These transistorised relays are designed as general purpose interface devices. Double pole changeover contacts rated at 2A 30vdc 0.5A 120vac are provided. The circuit board also carries an LED to indicate when the relay coil is energised. The coil is suppressed against back emf and diode protection is given against reverse polarity.

There are three versions available for either 12 or 24v dc power.

S312 N/N24 uses a NPN transistor Fig 1

S312 P/P24 uses a PNP transistor Fig 2

S312 T/T24 as NPN with RC timing components Fig 1

A self adhesive backing is provided for rapid fixing or alternatively the four fixing holes provided can be used.

**In the examples 12vdc or 24vdc (Depending on version of product), should be applied permanently to the terminals marked +ve & -ve**

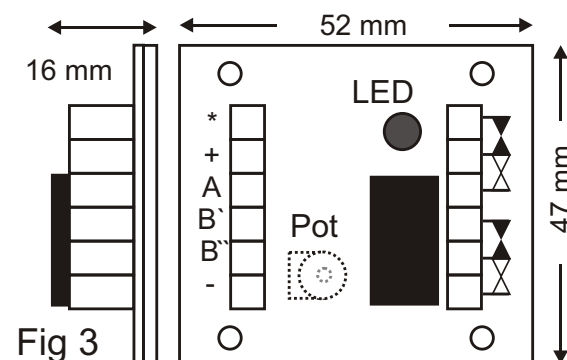
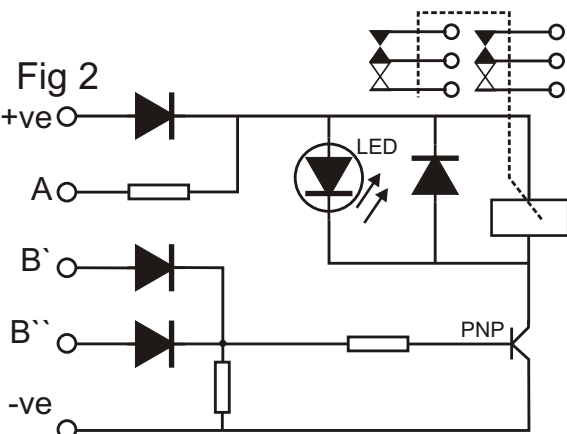
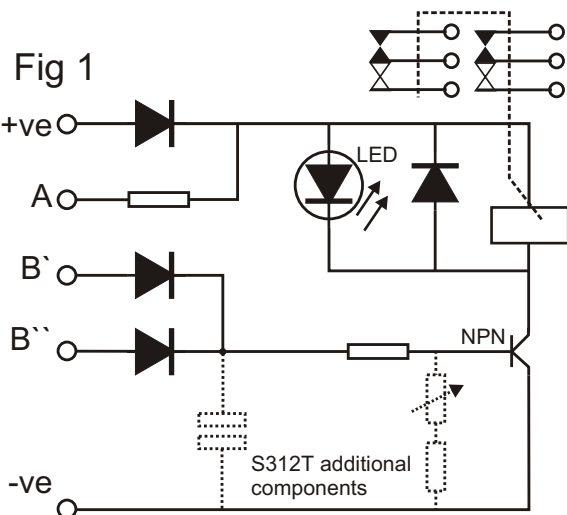
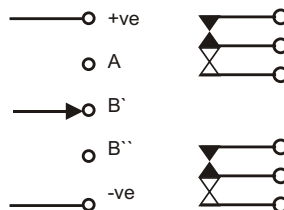


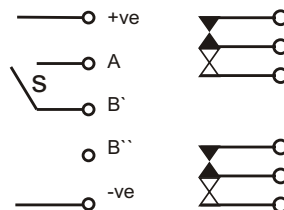
Fig 4



**S312 N/N24** Applying a +ve signal greater than 4v (eg TTL) to either B' or B'' will energise the relay. When the signal is removed the coil will de-energise.

**S312 P/P24** Applying a +ve signal greater than 8v to either B' or B'' will de-energise the relay. When both B signals are removed the relay will re-energise.

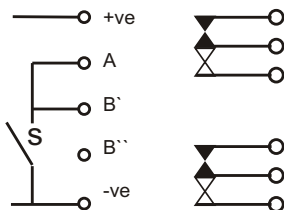
Fig 5



**S312 N/N24** Closing switch S will energise the relay. When switch S is opened the relay will de-energise.

**S312 P/P24** Closing switch S will de-energise the relay. When switch S is opened the relay will re-energise.

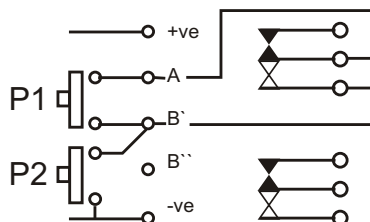
Fig 6



**S312 N/N24** Closing switch S will de-energise the relay. When switch S is opened the coil will energise.

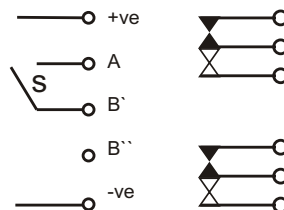
**S312 P/P24** Closing switch S will energise the relay. When switch S is opened the relay will de-energise.

Fig 7



**S312 N/N24** connected as a latching relay. P1 and P2 are Normally Open pushbuttons. When P1 is pressed the relay will energise and remains energised. To de-energise the relay press P2

Fig 8



**S312 T/T24** uses an NPN transistor and is fitted with additional components (see Fig 1). When the switch S is closed the capacitor is charged almost immediately and the relay coil energises. If switch S is then opened the voltage across the capacitor falls and eventually the coil of the relay de-energises. The discharge period can be varied by the on board potentiometer. The delay that can be achieved is from a minimum of approximately 3 seconds to a maximum of 60 seconds. **Do NOT connect B' or B'' to +ve.** The contacts should be derated by 50% because of the slow release time. Hoyles Electronic Developments also manufacture timers with better resetting accuracy and timing ranges up to 2 hours.