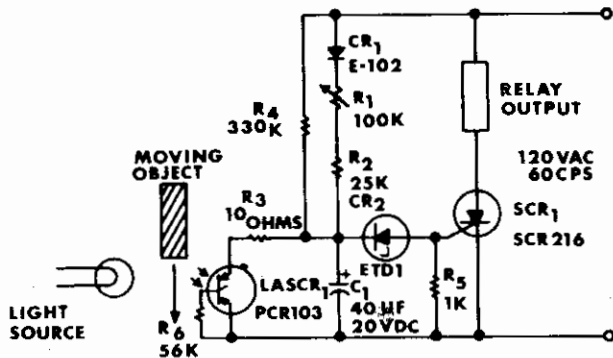
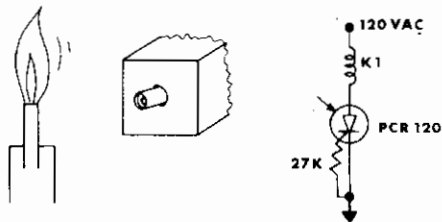


Conveyor Monitor



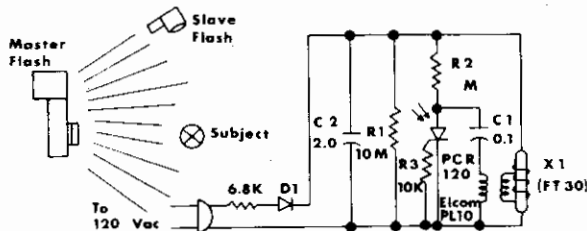
CONVEYOR MONITOR - Will shut down conveyor line rapidly to prevent catastrophic jam, while ignoring small self-clearing pile-ups. Each time light beam is interrupted, light-activated scr is briefly commutated by a-c line. C1 starts to charge but is shorted to zero as light is restored. If light path is blocked more than a few millisec, C1 continues to charge and fires SCR1 to stop conveyor.

Pilot Flame or Lamp Illumination Indicator and Warning System



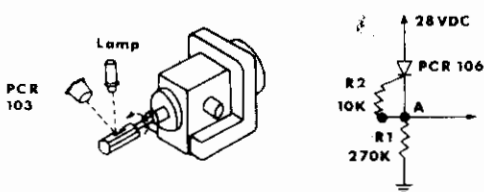
In the circuit shown, PCR120 is being used as a pilot flame sensor. As long as the flame exists, PCR120 will fire on every half cycle of the line voltage to keep K1 energized. Should the flame be extinguished, PCR120 will not fire, and K1 will de-energise, disconnecting power where necessary and activating applicable warning mechanisms.

Triggering Electronic Slave Flash Photographic Units



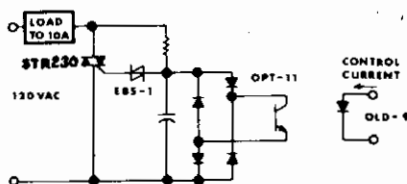
PCR120 senses the light burst from a master electronic flash which is synchronized to the camera shutter opening. Within microseconds, PCR120 fires, discharging C1 through the T1 primary. This generates a high voltage pulse to fire X1 and produce a flash at the same instant as the master flash. Operation up to several hundred feet is possible with such a system without the need for electrical connection between master and slave units.

Optical Tachometer RPM or Shaft Position Indicator



With each revolution, a narrow piece of reflective tape attached to the shaft causes a flash of light to appear as PCR106 fires and the voltage across it drops from 28 volts to about 1 volt. Each revolution then produces a pulse output as high as 28 volts at point A. The pulse can be fed to a counter or to an integrator to allow a metered RPM indication. Further rotation of the shaft removes light from PCR106, which drops out of conduction due to its not having reached a sufficient current level to "latch on" during the period light was being sensed. This "latching" level is not reached by maintaining R1 large enough (typically in excess of 100K) to limit the current to below the specified holding current I_H of the device.

Solid State 10 A. N.C. Relay



The output of the light-emitting diode increases with decreasing temperature, thus compensating for the photodarlington's temperature coefficient of photosensitivity. The circuit uses a silicon bilateral switch to trigger the triac power switch, operating as a normally closed contact. When the LED is turned on by "coil" current, the photodarlington shunts the bias current from the EBS-1 and prevents triac triggering. The four diodes provide proper polarity biasing to the transistor sensor.