



control

INSTRUCTIONS

pneumatic time delay relay — CR2820B SERIES A

CONTACT RATINGS

SINGLE POLE SWITCHES			DOUBLE POLE SWITCHES		
ALTERNATING CURRENT			ALTERNATING CURRENT		
Volts	Make	Break	Volts	Make	Break
115	40 amp	15 amp	0-115	30 amp	3 amp
230	20 amp	10 amp	115-600	3450 va	345 va
460	10 amp	6 amp			
575	8 amp	5 amp			
DIRECT CURRENT-PILOT DUTY			DIRECT CURRENT-PILOT DUTY		
Volts	SPDT	SPST	Volts	DPDT	DPST
115	0.50 amp	2.0 amp	115	0.2 amp	1.0 amp
230	.20 amp	.5 amp	230	.1 amp	.3 amp
600	.02 amp	.1 amp	600	.1 amp	.1 amp

SPST forms are suitable to control 1/2 hp motors at 115/230 volt ac.

Double-pole forms are suitable for continuous 10 amperes maximum ac.

TIPS ON USE

The Pneumatic Time Delay Relay is designed for use in circuits, to introduce a time interval between the operation of an electrical contact and the actual initiation of the controlled function.

Typical applications are machine tool and automation circuits where an adjustable time delay of from 1/5 to 180 sec. is desired.

DESCRIPTION

The relay consists of an operating solenoid, pneumatic head, and snap-action timing contacts in the form of a precision snap-acting switch, all mounted on a single base. The pneumatic head contains a diaphragm and an adjustable orifice which act as the timing medium.

The Pneumatic Time Delay Relay is available for either time delay after energizing the coil or time delay after de-energizing the coil, and is designed to be easily converted, from one form to the other, in the field. (For conversion, see "OPERATION".)

For Pneumatic Time Delay Relay forms which have the time delay after energization of the coil, the relay operates in the following sequence: the solenoid is energized causing the solenoid plunger to move away from the timing stem; a spring acting on the stem causes the diaphragm to enlarge a chamber allowing air to enter at a controlled rate through an adjustable orifice. The time delay contacts are operated as the stem approaches the end of its motion. When the coil is de-energized, the solenoid plunger, timer stem, and timer contacts reset instantaneously as the air is expelled from the chamber through a check valve.

Relays are available with one or two timing circuits, and one or a maximum of two instantaneous circuits. Each of the circuits has one normally open and one normally closed double break contact. The instantaneous circuits are mechanically linked to the solenoid plunger and operate instantaneously. Auxiliary instantaneous contacts are also available as accessories for customer installation.

INSTALLATION

The relay should be solidly mounted, in a vertical plane, on a firm surface. The key-slot type mounting holes provide for ease in mounting, and it is necessary only to LOOSEN the mounting screws for removal of the relay.

All terminals are readily accessible from the front of the relay and the large panhead screws on the contact terminals (A & B), Fig. 1 as well as the saddle terminals (1 & 2) on the coil make for an easy job of wiring.

If both the NO and the NC contacts of the contact unit are used, they should be wired to the same side of the line.

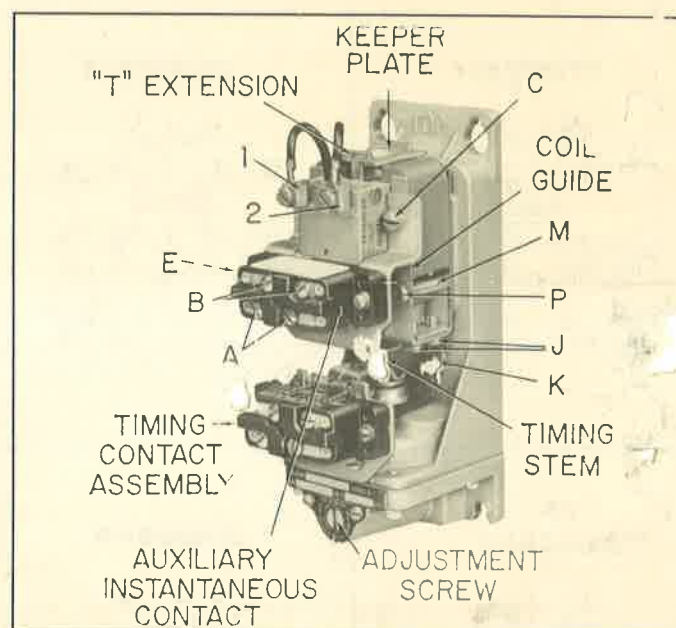


Figure 1 — Typical relay with instantaneous unit

OPERATION

The time setting is adjustable from 1/5 to 180 sec. The relay has repetitive accuracy of plus or minus 10%.