

COLOR ALARM

(Shell Development Co. Design)



Model 1015

SPECIFICATIONS

Operation on 115 or 230 volts, 50/60 cycle AC. Tube complement consisting of two phototubes, one power pentode, one thyatron. Flow cell is designed for operation on pressures up to 50 psi tested at 150 psi. Provided with 1/8" NPT inlet and outlet openings. Instrument requires flow of approximately 50 cc per minute.

Model 1015—

Explosion Proof Aluminum Case

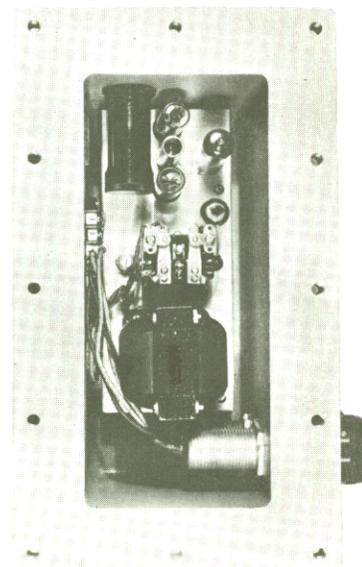
Approximate Weight—25 lbs.

Dimensions — 7" x 12 3/4" x 7 1/8"

The Color Alarm is a differential type colorimeter providing an alarm or a visual signal when a preset color limit is exceeded. It is a compact, simple and inexpensive continuous flow color indicator utilizing phototubes and an amplifier which actuates the signal device.

THEORY OF OPERATION

A low-powered radio panel lamp provides a source of light. A part of this light traverses the sample cell (shown in upper left-hand corner of lower photograph) and is then reflected by a mirror so that it again traverses the cell in the opposite direction, falling on a phototube. A second phototube, used as a reference, receives light from the same source. This reference phototube is covered by a cylindrical rotating shield having a wedge-shaped opening. The shield can be rotated externally by a knob that is fastened to a shaft which passes through the cover. A pointer on the knob and a scale on the cover permit adjustment of the wedge so that a proper amount of light is focused on the reference phototube, thus balancing the circuit for the color of the material present in the cell. A darker liquid flowing through the cell will unbalance the circuit, causing a relay to operate which de-energizes one signal light and energizes the other. One light indicates that the sample flowing through the cell is as light or lighter in color than the sample to which the instrument was adjusted. The other light indicates that it is darker. A spare set of relay contacts is provided in the instrument so that an external audible signaling device (not included with the instrument) may be used.



Other models are available for continuously indicating, recording and controlling.