red lion

APPLICATION SOLUTION LD2T #01

HOSPITAL PREP TIMER APPLICATION

Surgeons need to known how much time they are scrubbing in the prep room preparing for an operation. Certain operations require specific scrubbing times. There is a floor mat with a switch to start the timing. The timer must be able to ignore any multiple mat switch closures during the time up period. The hospital staff wants the display digits to be at least two inches in height.

PRODUCTS USED: LD2T06P0

The Large Display Timer, LD2T06P0 was chosen because the digit height is 2.25". The timer is housed in a lightweight aluminum enclosure that can be hung from the ceiling or mounted against the wall.

HOW IT WORKS

When a person steps on the mat, the mat switch will reset and start the timer. When the preset value (required scrubbing time) is reached the time will stop and latch. When the mat switch is closed again, after the time is stopped, the timer and output will reset and start again.

To ignore false mat resets during time up, the mat switch is wired thought the timer's normally open relay terminals. These terminals are open during time up and will not allow a signal from the mat to reset the timer until the programmed value is reached.

By timing up and programming in the maximum required prep time, the persons or procedures needing less time can still see their time accumulate on the timer without making changes. In this case, a separate button that will both reset and start can be used if a new person is on the mat before the previous time stopped. This separate button or a removable jumper will be needed for the first Start-up of the timer.

DESIGN ADVANTAGES

This now takes the guesswork out of the surgeons and assistants time in preparing for an operation. At quick glace, they can tell if they have filled the requirements to insure proper cleanliness.

ADDITIONAL CAPABILITIES

The LD2T06P0 has serial communications that would allow the changing of the setpoint value by a computer. The serial communications will also allow for remote display of the time. A security code could be programmed to allow quick changing of the setpoint value from the front buttons or to allow complete program lock out. The display intensity can be adjusted for various lighting conditions. It is possible to wire an external light to the timer's normally closed relay terminals and when the light goes out the time period is up.

DIP SWITCH SETTING

All dipswitches are in the off position.

PROGRAMMING (ONLY NONFACTORY SETTINGS SHOWN)

1-INP
rANGE : NNNN.SS (Minutes.seconds)
INP OP : ErSt-2
Usr INP : rESEt (If external reset is needed.)

3-dSP
CodE : xxx (If lockout is desired.)

4-SPt
SP-ON : VALUE
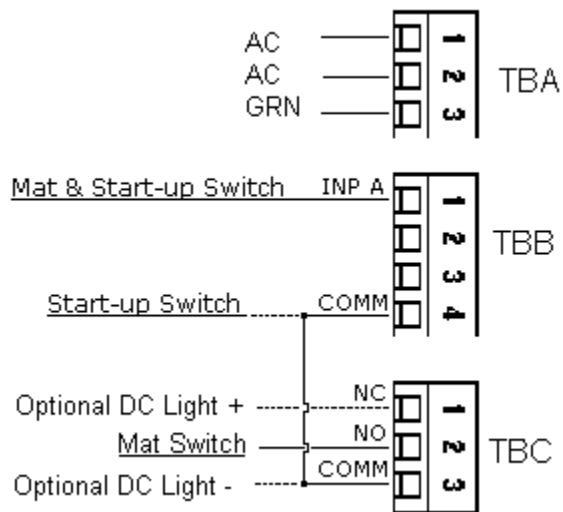ON-VALUE : xx.xx (maximum timing period)
StOP-t : O-ON (Stops the timer at ON-VALUE)
OrSt-r : YES (Resets output when timer is reset.)
O P-UP : SAVE (Saves the status of the output.)

WIRING DIAGRAM

All wiring must be according to the installation guidelines listed in the product's specifications. For the setpoint outputs to function an external isolated voltage source (not shown below) must be connected in series.

This application note is intended to be an example. Your specific application may require changes in products, programming and/or wiring. For specific assistance, you may contact your local Red Lion products supplier or Red Lion Controls Technical Support.