

AUTOMATED

Tower Light Monitoring with the **PC2000** by CNC Systems



One of the new urgencies is the compliance of Federal Regulations pertaining to automatic monitoring of Tower Light integrity and date/time stamping of their operation. We are offering this solution as a turnkey hardware package accomplishing the following main objectives:



1) Automatically **logging** and (digitally) storing the exact time and date when each of your light(s) are on and off. This event of monitoring has been mandated to occur at least once every 24 hours. At the Tower Site; the event of lights On or Off are usually reported via dry contact relay movements. These relays might already exist in the control box; or may be added later (see CSR-220).

2) **Immediate alerting of personnel** upon bulb outage during *Night Mode*. Night mode is defined as a low threshold of available daylight – as in an overcast day or actual nightfall. Failure of the bulbs to come on during an overcast day (night mode) would cause an Alert condition as well as a bulb-out condition during the evening. This event(s) would also need to be Date & Time archived.

Informing (& logging) of Alert Conditions is accomplished by any combination of *automated* phone alerting via digitized voice, pager, e-mail and/or fax via an electronic front-end located at each tower.. Phonetics, a manufacturer of electronic monitoring equipment since 1983, produces a product that has successfully been used to “connect” engineers to their Tower Sites

The Hardware of Tower Light Monitoring

The 2000 System: 8 circuit inputs, faxes, e-mails, alpha-pager, numeric pager, e-mail (via phone portal). Also – 32,000 record data-logger, power sensor, 500 event memory, internal modem, and auto polling. Includes PC based software for totally automatic logging retrieval. Connects directly to a Tower Sites’ existing control box relay outputs or use the CSR220 relay modules. Included PC software archives multiple 2000 Systems and further allows remote access for maintenance of remote tower units and auto-polling/archiving of light activity and Alert Events.

Existing OEM Relay Modules – A large percentage of Tower Control Boxes contain relay sets that alternately open and close with bulb activity along with an overriding

“Day” and “Night “ mode qualifier. A bulb out condition during “Night” mode would prompt an Alert response by the front-end 2000 System.

When these relays exist, a 2000 system with the proper Tower Light Monitoring software configuration is all that is needed.

CSR220 Relay Module – In the absence of relays in Control Boxes, CSR220 relay modules may be added in each circuit. This kit measures the load level in Bulb-On conditions for each circuit and holds a relay open during load. When load drops, this relay closes and is reacted to and/or logged by the 2000 System. Each circuit needs an individual CSR220 relay kit:

I.e.: Top Steady Incandescent Bulb = One Circuit average 630 watt
 Two side marker lights = One circuit average 67 watts ea
 Top Flashing Beacon = One Circuit

A Photo-Eye Interrupt Module – may be needed to qualify the no-load condition as a normal daylight condition or an Alert Night Mode condition. This will be installed between the relays (OEM or CSR220) and the reporting front-end (2000).

It is to be noted that a licensed electrical contractor familiar with Tower Control Boxes should install photo eye & relay products. The 2000 product may be user-installed according to the Tower Light Monitoring Treatise included. NEMA 4 weatherproof boxes are available when required.

| Part# | Description | |
|---------|---|--|
| PC2000 | Electronic Monitoring & Alerting System. Inc. 8 Input channels, power sensor, internal modem NiCads, PC Windows Software for remote programming access & data logging, Tower Light Monitoring Treatise. | |
| NEMA4 | Wxproof enclosure for the PC2000..inc AC & phone rept | |
| CSR220 | Relay Kit for measuring load. Delay POT included for flashing <i>incandescent</i> bulbs. One needed for each circuit. 1-10 amp, 2-20 amp, 3-50 amp ratings | |
| CSR-PHO | Photo-Eye Interrupt Module – Kit to be placed between active front-end (2000) and load relays (CSR220). Will qualify if load drop is normal or alert condition. Not needed if all circuits are on (load applied) 24/7 | |
| CSR-SBE | Flashing <i>Strobe</i> Light Adaptor – Will allow the CSR220 to recognize a Strobe Light delay | |

For More Information Contact:

CHAMPION™


 A CNC Systems Product

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