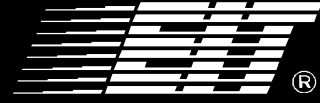


Online UV Intensity Display Module™



Features

- Continuously monitors output of a single UV lamp
- 0 to 10 volt analog output
- Relay contact provides
- Panel mount convenience
- User-Settable alarm points
- Works with EIT Compact Sensor

Applications

- Monitor UV lamp intensity
- Reliable lamp replacement indicator
- Indication of when to clean lamp irradiator
- Process control measurement
- ISO Data Collection

General Description

The Online UV Intensity Display Module, when used in conjunction with EIT Compact Sensors, forms an electro-optic system designed to track a single UV lamp. Each unit provides the user with an indication of an individual UV lamp's relative UV output as compared to new. The system consists of an electronic signal conditioning module and an EIT Compact Sensor. Each Online UV Intensity Display Module is intended for applications requiring a front panel display. Cutouts can easily be made for the monitor in the control panel of a UV curing system using the supplied drill template. One Online UV Intensity Display Module and sensor is mounted for each lamp in the system. Features for this system include:

- A 2 1/2 digit LED display – 0-199%
- 0-10 volt output – proportional to UV intensity
- User-settable low limit threshold
- Relay closure at low level threshold

The analog output provides an industry standard signal for input to Data Acquisition Systems, Integrated Control Systems and Distributed Control Systems.

Introduction

To obtain consistently good curing results, it is important to know when to perform UV system maintenance. Maintaining the cleanliness of the reflector is important in order to operate your UV system effectively and efficiently. If the lamps are only replaced at set time intervals, they may be replaced too soon or too late. This creates needless waste of both money and product. The human eye, unable to detect degradation in UV output, must rely on an instrument designed to monitor only UV within a specified bandwidth. The Online UV Intensity Display module will continuously monitor the output of a single lamp.



Operation

The signal from the EIT Compact Sensor is converted to a voltage level that is supplied to the display. The continuous 2 1/2 digit display represents the percentage of lamp output relative to the initial calibration level.

In addition, the user settable low level threshold will be monitored and a red low limit indicator light will warn the user that this threshold has been breached. Otherwise, the green above threshold light will be visible. A normally open or normally closed relay is also provided.

Configuration

Powered by 24 volts AC or DC, the unit may be mounted inside the control panel of the UV system so that its display is easily visible to the user. If space does not exist within the control panel of the UV system, it may be mounted near the control panel.

The unit includes a 0-10 volt buffered output proportional to UV intensity. This output easily interfaces the Online UV Intensity Display Module to a Programmable Logic Controller, strip chart recorder, personal computer or other data collection device capable of accepting a 0 to 10 volt analog input signal.

Installation

Online UV Intensity Display Modules are easy to install using a supplied drill template. The sensors are mounted permanently viewing a UV source and are normally equipped with 10' (3 meters) cable. Several hardware items are supplied to simplify satisfactory sensor mounting. The sensors work with arc (electrode) and microwave (electrodeless) systems equipped with a variety of lamps – mercury vapor and mercury additive lamps. Sensors are ordered in 250-260nm, 280-320nm, 320-390nm, or 395-445nm spectral ranges. Extender cables in 10' lengths are available.

Specifications

| ONLINE UV INTENSITY DISPLAY MODULE | |
|---|--|
| Power Source | 20-28V AC or DC at 500mA maximum |
| Output | 0-10 Volt DC – proportional to UV intensity; display indication of 100% = 5V |
| Accuracy | Typically within +/-3% as compared to full scale (10 volts, 200%) Relay Trip Point: Typically within +/-5% from threshold setting as compared to 200% |
| Overall Dimensions | Front Plate 6.5" x 5" (16.51cm x 12.70cm) |
| Weight | 4.60 oz. (115 grams) |
| Display | 0-199% |
| Operating Temperature Range | 0-50°C |
| Features | Green above limit indicator Red below limit indicator Relay contacts , normally open or normally closed |

| COMPACT SENSOR | | |
|-----------------------|--|--|
| Dimensions | CS-1 Type | 0.57" x 1.10" x 0.75" (1.45 x 2.78 x 1.91 cm) |
| | CS-2 Type | 0.57" x 0.60" x 0.75" (1.45 x 1.52 x 1.91 cm) |
| Spectral Range | 250-260nm; 280-320nm, 320-390nm, 395-445nm | |
| Housing Material | Aluminum | |
| Weight | CS-1 | 0.8 oz. (22.68 g) |
| | CS-2 | 0.7 oz (19.86 g) |
| Cable | Teflon Shielded, 10' (3 meters) | |
| Connector | HP-1 BNC | for Online UV Intensity Display Module or Multibrite |
| | HP-2 Tinned Leads | for DIN Rail Mount UV Intensity Monitor |
| | HP-3 3-pin Molex | for Battery Powered Display Module |
| Temperature Range | 0-100°C | |

Specifications subject to change