



American Ultraviolet

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UV-INTENSITY MONITOR



Application

The UV Intensity Monitor Models UVM001-120 and UVM001-024 in conjunction with a UV sensor is designed for monitoring shortwave UVC lamps.

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1. Technical Description

The UVM001-120 and UVM001-24 are wall mounted devices. Terminals for power supply, UV sensor, relay contact and analog output are located on lower side of housing. The UVM001-120 is for 120vac operation and the UVM001-024 is for 24vac operation.

Three LED`s on the front side display the actual relative UV intensity in steps of "> 70%", "50-70%" and "<50%" of initial setting of 100% (new lamps).

The relay contact can be programmed to switch at UV intensities between 20% (position "0") and 95% (position "F") in 5% steps. A time delay of about 1 sec. prevents the relay contact from switching at short UV fluctuations. The switch for programming the relay contact switch point is located close to the terminal row and can be operated with a small screwdriver.

A blinking function of the LED`s indicates mal-function:

- LED <50% is blinking: sensor cable broken, UV lamp off or UV intensity below 10% of nominal.
- LED >70% is blinking: UV intensity above adjustable range.

2. Installation

The monitor is to be wall mounted using the two mounting holes (one on each side of housing). The UV sensor is to be mounted with one screw. The aperture angle of the sensor is 60 degrees. The sensor should be placed in close proximity of one lamp as to only read the output of that lamp. Connect the red wire from the sensor to the "rd" terminal and the white wire to the "wt" terminal.

The UV sensor and analog output are critical in their polarity.

The UV sensor is for monitoring one lamp not an array of lamps.

3. Operation

When initially powered on, the LED`s and relay contact will activate for a few seconds to test their operational status.

1. The Potentiometer "Adj 100%" is used to adjust the nominal value (100%) after new lamps are installed. Turn the potentiometer slowly. The green LED close to the potentiometer starts to blink when the potentiometer is near the 100% level. When the 100% level is reached the green LED is permanently on. Exceeding 100% is indicated with a blinking green LED at higher blinking rate. If permanent green LED can not be reached, change the position of the UV sensor relative to the UV lamps.
2. The switch point of the relay contact can be set with the 16 step switch using a small screwdriver. Position "0" sets the switch point to 20% of nominal. Each step increases the switch point value by 5%.

Position	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Switch point	20 %	25 %	30 %	35 %	40 %	45 %	50 %	55 %	60 %	65 %	70 %	75 %	80 %	85 %	90 %	95 %

