UV PROCESS SUPPLY, INC.

1.8 kW Electronic ballast

Features

- Very small size, low weight
- Very wide input & load range
- Remote on /off
- PWM control of output power
- Optimised for minimum acoustic resonance's
- Power Factor Correction included.
- High efficiency
- Low input current distortion
- Opto-isolated alarms:
  open, short, temperature, fan speed

Applications

⇒ Industrial
⇒ Environmental
⇒ Lighting

Technical Data

Specifications subject to change without notice

Input		
Input line freq.	:	47 - 63 Hz
Input current	:	20 A max.
PF	:	> 0.98 at 100% power
Current THD	:	< 6% typ.
Output		
Power	:	controlled within 5% 540 – 1800 W depending on lamp
Voltage range	:	300 - 550 Vrms
Current limit	:	10 A typ.
Crest factor	:	< 1.6
Dimming	:	down to 30%
Efficiency	:	>94% typ.
Ignition voltage	:	1600 Vp (< 250 msec.) (no hot restrike)
Protections	:	output opens / short output overvoltage input under/over voltage temperature
Cooling	:	Air or liquid cooling (min. 1.25 l/min.) optional with additional heatsink and fan
Operating temp	:	0° - 50° C
Storage	:	-40° to + 85° C
Approvals	:	CE (pending)
Weight	:	3.6 kg
Dimensions	:	330 x 140 x 65 mm excl. optional heatsink

Rev. 060207/TTOK

1.8 kW Electronic Ballast

Manual

Product : Ballast 1.8 kW 110V version

Date : 24-1-2006

1.0 Introduction
Electronic Ballast to start and drive medium pressure gas discharge lamps, with dimming capability. The ballast is power controlled.

2.0 Description
The 1.8 kW ballast has a single phase mains input, output and control connector. At opposite side the cooling surface can be found.

3.0 Usage
The electronic ballast may only be installed and operated by qualified technically trained people.
This is an industrial ballast, not intended for general use.

Warning: when used with UV Lamps, protective actions should be taken as UV radiation can irreversibly damage skin and eyes.

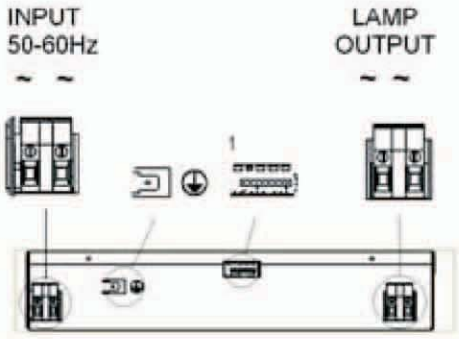
4.0 Installation

4.1 Mount Ballast on cooling surface (on total available length)
Heatsink opposite of connector side of ballast
Flatness better than .028 mm
Preferred aluminium heatsink with water (min. 1.25l/min.)or forced air cooling).
Maximum heatsink temperature: 40° C.

4.2 Connect Lamp wiring
Lamp wiring size AWG 10-14,
Phoenix FRONT 4-H-7,62

4.3 Connect control wiring
(TTL control, see 5.4)

4.4 Connect Input Wiring
Input connector L/N or L/L 90 - 145V 50-60Hz.
Grounding: wiring to ground tab 6.3mm
Input wiring AWG 10-12,
Phoenix FRONT 4-H-7,62



4.5 Control and status
Control connector, pin 1,see label

pin	description	remark
1	Pulse With Modulation control	Dimming input
2	Fan failure	Alarm output
3	Remote ON/OFF	on/off input to ballast
4	Over-Temperature	Temperature alarm output
5	Lamp Short	Short alarm output
6	Lamp Open	Open alarm output
7	n.c.	-
8	Common Return	Return from outputs

Control Inputs:

Logic level low ("0")	0.8V max.
Logic level high ("1")	4.0V min.
Input current (@ 5V input)	15mA max.

Control output (open collector type):

Logic level low ("0")	< 0.7V @ 2.5 mA_{sink}
Logic level high ("1")	< 10µA @ 4.0Vdc

Dimming input using PWM signal, to **regulate** input power to the ballast and therefore the output power to the lamp. Levels: TTL

PWM Duty cycle	Input Power to Ballast (+/-5%)	Power [%]
5	840 watts.	47 %
10	970 watts	54 %
15	1100 watts	61 %
20	1230 watts	68 %
25	1360 watts	76 %
30	1490 watts	83 %
35	1620 watts	90 %
40	1800 watts	100 %
No input (0)	1800 watts	