

Venture Lighting

Bright Ideas
Bold Innovations

Isn't it about time you took

Control

of your HID
Lighting



Ventronic

Electronic Dimmable
HID Ballast



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For High Pressure Sodium & Venture Metal Halide Lamps



Introducing Ventronic from Venture Lighting, one of the world's leading names in advanced lighting design and technology.

With the Ventronic solution, you can determine the light levels you require at any given time, either manually, automatically through the use of light meters or by programmable options.



Saves Money by Making Use of Ambient Light

With conventional control gear the light is either ON or OFF. You burn full power - even when you don't need it. However, using Ventronic, the lights can be dimmed when it's bright outside, and only reverting to a higher power when necessary. Ventronic can also be linked to a PIR sensor to produce more light when a particular area is occupied.

'Daylight Harvesting', as this technique is referred to, is an excellent way of saving energy costs and extending the life of the lamp - without compromising on light levels, because it takes into consideration - and therefore makes use of - natural ambient light - it can also make a very positive contribution to a company's environmental policies.

Ventronic Significantly Improves Lamp Life, Performance and Lumen Maintenance

Ventronic can improve the performance of lamps in a number of ways;

- Increased efficacy and efficiency
- Extending lamp life
- Improved lumen maintenance
- Completely eliminates flicker
- Produces highly consistent colour stability

The Benefits of Higher Frequency Operation

Because of the much higher frequency of operation, the lamps electrodes are kept at a constant temperature, thus providing far more Stable Colour, Longer Lamp Life AND Improved Lumen Maintenance.

Resonant Start

Ventronic's Resonant Start is 'kind' to the electrodes with no effect on lamp life by the number of switches made. The higher frequency of low voltage pulses and the gradual increase of resonant voltage prepares the electrode for a "sputter free" ignition. Unlike conventional starting methods, this Soft Start causes no damage to the electrodes and subsequently does not blacken the arc tube thus resulting in greater lumen maintenance.

Faster Means Better

With Ventronic, the Optimum Electrode Temperature is reached much faster. Typically, Ventronic offers a warm up time of 30-40 seconds rather than 2-3 minutes. Again, better Lumen Maintenance AND Longer Lamp Life.

Flicker Free

Ventronics high operating frequency totally eliminates lamp flicker to such an extent that it supports the use of high speed camera filming, including CCTV.

Enhanced Colour Performance

Ventronic helps to achieve truly outstanding colour uniformity by virtue of its high performance regulation, which is true at any dimming level.

Consistent High Performance - Even With Unstable Voltage

With Ventronic, voltage supply input can be from 185V to 254V 50/60Hz AC and offers optimum performance even with an unstable voltage supply, because it regulates the power to the lamp. Even with an unstable voltage supply, there is no change in light output or colour. Furthermore, in the event of an interruption to the mains supply, the lamp remains fully stable for up to three full cycles.

Power Factor Benefits and Harmonic Distortion

With conventional control gear, you'd expect a power factor of around 0.85. With Ventronic this is significantly improved to near unity whilst enjoying the further benefit of a low Total Harmonic Distortion (THD) of less than 10%.



Only Ventronic Offers You all These Benefits

- SIGNIFICANTLY INCREASED LUMEN MAINTENANCE
- VASTLY IMPROVED LAMP LIFE
- SUPERIOR LIGHT QUALITY
- EXCEPTIONAL ENERGY SAVINGS
- DIMMING
- DAYLIGHT HARVESTING
- ECONOMY MODE
- HIGH EFFICIENCY
- SOFT START
- NO START UP CURRENT
- CONTROLLABILITY
- SIMPLE INSTALLATION WITH REDUCED COSTS
- REDUCED MAINTENANCE
- BUILT-IN DIAGNOSTICS
- HIGH RELIABILITY



Simple Installation

Ventronic can be installed up to 30 metres from the lamp allowing much easier installation and maintenance. The unit is designed to offer special protection against shorting the output or reversed input/output lead due to incorrect installation.

Installation costs are reduced by the superior near unity power factor, which allows the use of lower-cost, smaller cable sizes.

Reduced Maintenance

Because Ventronic supports both MH and HPS lamps, this reduces the amount of parts required to be kept in stock. Ventronic's sophisticated lamp ignition algorithm enhances lamp life and has the added ability to ignite very old lamps which would not be possible with conventional control gear.

Lightweight Construction

Despite its benefits, Ventronic is actually significantly lighter than most conventional control gear, in turn making the fitting lighter. This lends itself to ceilings with lighter load-bearing or where more fittings are required in one area.

Completely Silent in Operation

Ventronic is Class A rated for noise - which means it's completely silent in operation so, there's no distracting buzz or hum, not even during start-up.



Built in Diagnostics

Using Ventronic, maintenance is greatly simplified by enhanced self-diagnostics and error reporting. A built-in LED indicator provides detailed information about both circuit status and failure conditions. Furthermore, by utilising one of the remote communications options it is possible to obtain real time reporting of circuit and lamp status.

High Reliability

Quite exceptional reliability is achieved by minimising the internal temperature rise. Ventronic benefits from a sealed IP43 enclosure which utilises a metal case that has been specifically designed to dissipate heat.

This minimises the component's ambient temperature thus providing an exceptionally long life, comparable with conventional control gear. Furthermore, sophisticated thermal protection safeguards against extreme conditions by shutting itself down.



Dimming and Control

Ventronic dimming is fully programmable from 100% down to 50% or better, depending on each lamp's capability. A special 'Economy' operating mode provides operation at 88% of its maximum power. Light intensity remains very close to that of full power - and yet with an energy saving of 12%

Dimming & Control is supported by a wealth of flexible options:

By use of a control signal, the ability to dim to a very low level and then to immediately revert to full power allows significant energy savings in certain applications. One example would be a warehouse or another such area, where there is no reason to have the lights at full power until an area becomes occupied and full light levels are required.

Internal Switches

Ventronic features internal switches which control the following features;

- Dimming levels
- 'Economy' mode
- Summer / Winter setting
- External control

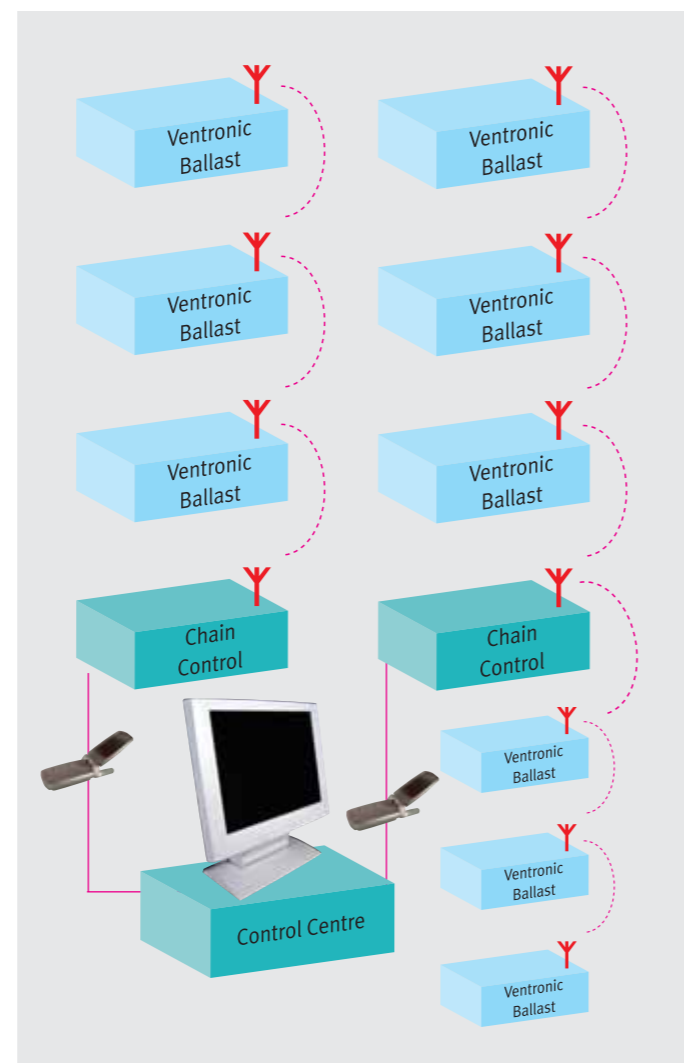
Programmable Memory Device Option Seep: Serial EEPROM

Ventronic can include an optional programmable memory device that can be installed to override the internal dimming switch set up. This device may be programmed by connection to a PC.

A SEEP support package allows the user to set up to four different switching times, each with its own dimming level.

SEEP features a sophisticated time-adjusting algorithm which calculates the dimming time, based on the previous day's lighting up times, allowing for automatic dynamic adjustments relating to seasonal changes.

Wireless System Description



RS485 Communication Option

An RS485 communications option enables remote control of Ventronic's dimming function, lamp on/off and lamp status monitoring. One central RS485 controller can control up to 100 units. Information can be conveyed either using an existing communication infrastructure or a wireless option.

Wireless Communication Option

A wireless communications option can be added to the system, with one central wireless communication controller supporting up to 100 units. This method will provide similar control and monitoring functions as with the RS485 option as detailed above - but without the need for a dedicated control line. This method is particularly recommended when enhancing an existing installation.

Ventronic Models Currently Available

Ventronic is available in the following wattages suitable to operate both HPS and Venture Metal Halide Lamps.

150W, 250W, 400W and 450W

Ordering Information

As standard, Ventronic is supplied with internal dimming control switches. A communication or control option can be ordered separately.

- SEEP module
- RS485 interface
- Wireless communication

Technical Data

| | | 450W | 400W | 250W | 150W | |
|-----------------------|--------------------------|---------------|------|------|-------|-----|
| Input | Voltage | 185V - 254V | | | | |
| | Frequency | 50/60Hz | | | | |
| | Max. Current | 2.2A | 2.0A | 1.2A | 0.75A | |
| | Power Factor | 0.98 - 1.0 | | | | |
| | THD | <10% | | | | |
| Output | Power | 450W | 400W | 250W | 150W | |
| | Frequency | >50kHz | | | | |
| | Current Crest Factor | <1.6 | | | | |
| | Max Igniter Voltage | 5kV | | | | |
| Protection | Continuous Short Circuit | Yes | | | | |
| | Continuous Open Circuit | Yes | | | | |
| | Thermal | Yes | | | | |
| | End of Lamp Life | Yes | | | | |
| Physical | Dimension mm | Width | 120 | 120 | 110 | 100 |
| | | Length | 220 | 220 | 190 | 190 |
| | | Height | 90 | 90 | 80 | 70 |
| Weight kg | | 2.2 | 2.2 | 1.7 | 1.4 | |
| Distance From lamp | | 30 Metres | | | | |
| Operating Temperature | | -40°C - +60°C | | | | |
| Max Case Temperature | | +90°C | | | | |