



data sheet:
**Metrolight SmartHID™
Electronic Ballast**

175/200/250/320/350/400/450 Watt- MH




Metrolight SmartHID™ Electronic Ballasts 175 watt through 450 watt lighting systems provide dramatic energy savings, drastically reduced maintenance costs, and significantly extended lamp life. The SmartHID™ Electronic Ballasts are perfect for demanding indoor and outdoor environments such as supermarkets, malls, industrial sites, parking lots, distribution centers, warehouses, and street lighting. The software embedded within the SmartHID™ Electronic Ballast system improves efficiency, reliability, size, and cost of the ballast. The SmartHID™ Ballasts perform effectively and consistently, providing excellent lumen stability, extending lamp life, and dramatically reducing the frequency of lamp replacement.

Ultimate Controllability Greater Savings

With Metrolight, you get all the energy savings of fluorescent systems plus all the benefits of HID, including greater color temperature a softer, more comfortable light, and greater performance regardless of ambient temperature. Metrolight 175 watt through 450 watt SmartHID™ Electronic Ballasts can be integrated with an existing control and communication system, such as BMS, EMS, etc. for ultimate controllability. This extends the system's energy saving capabilities, providing advanced end-of-life alerts and feedback from lamps resulting in reduced maintenance costs. In addition, the plug 'n play platform offers a Smart Grid connection option and enables tie in with demand response systems. The digital control technology is based on the industry accepted MADLI open protocol which interfaces with numerous control software applications. Field reconfiguration capabilities allow for the ballast to be easily configured as per requirements or per lamp parameters including power rating, dimming settings, and more. Metrolight's leading-edge dimming control feature provides an additional and significant energy saving advantage. Dimming can be controlled in accordance to human activity, daylight harvesting regimes, and interactive operation mode lighting systems.

Features	Benefits
Microprocessor-controlled for maximum flexibility,	Extends lamp life; greater efficiency and efficacy, low components count, higher reliability, compact size
Micro-Start™ digitally controlled ignition	Lumen consistency; color consistency; virtually eliminate lamp electrodes and "wall blackening"; longer lamp life
Control & Communication	Extends energy saving capabilities, critical parameters monitoring, control, reducing maintenance costs, advanced end of life alert
Full range analog and digital dimming	Use only the exact amount of light needed (event triggered scheduling). Significant energy saving
Automatic scheduling	Automatic control of dimming, on/off functions per lamp
Sodium lamp hot re-strike	Instant relighting after power cuts or turn-off
The most compact dimensions in the industry	Allowing for elegant applications; ability to integrate into smaller space
Remote installation	Ballast location and fixture can be separated (up to 15m as standard; above 15m and up to 25m – upon request)

Operating Specifications

Dimensions (LxWxH)	8.46" x 3.43" x 2.16" / 215mm x 87mm x 55mm
Operating temperature range	-30°C to +65°C / -22°F to 149°F
Maximum case temperature (Tc)	85°C
EMC	FCC Title 47 Part 18 C (non consumer); EN55015 (If the Smart Electronic Ballast is installed within a lighting fixture, an external dedicated Metrolight Line Adapter may be required. Contact customer support for more information.)
Regulation	UL Listed    Nr. 40026719

Input Specifications

Input values for power and current are dependent on the lamp wattage. Other input values apply across all SmartHID™ Ballasts

Lamp Power, Voltage and Current Specifications

	Input Power	Input Voltage	Power Factor (at nominal conditions and full power)
450W MH lamp	478W	277VAC (+10% to -15%)	>0.97
400W MH lamp	426W	200 – 277VAC (+10% to -15%)	>0.96
350W MH lamp	375W	200 – 277VAC (+10% to -15%)	>0.96
320W MH lamp	344W	200 – 277VAC (+10% to -15%)	>0.96
250W MH lamp	269W	120 – 277VAC (+10% to -15%)	>0.96
200W MH lamp	218W	120 – 277VAC (+10% to -15%)	>0.95
175W MH lamp	192W	120 – 277VAC (+10% to -15%)	>0.94

General Input Specifications

Continuous full range dimming	50% - 100% of full power (Optional 35% - 100% of full power subject to Metrolight approval) (Optional: Reverse dimming 100% - 50%)
Dimming options	Analog dimming by dimmer, ambient sensor, light sensor or any other compatible sensor. Digital dimming – Connection to control software's automatic dimming profile
Lumen maintenance	>90% over lamp life (dependent on lamp type)

Protections

Self-protection mechanisms:

- In the even of a short circuit, or open circuit
- If the lamp fails to light
- At the end of the lamp's life
- Input current protection by internal fuse
- Advanced surge protection between phase and neutral and between line and ground
- Advanced output protection against arcing or shorting to ground

Heat Management:

If the Tc rises beyond 91°C during use the Smart Electronic Ballast will switch itself off
If the ballast's Tc temperature reaches beyond 85°C during use, the Smart ballast will gradually reduce its output power to 50%, allowing the ballast to cool. When the Tc falls below 85°C again, the ballast will return to full output power

About Metrolight

Metrolight powers smart HID energy efficient solutions that deliver significant energy savings, a smaller carbon footprint and superior flexibility with sophisticated lighting controls. Metrolight's patented technology saves retailers, sporting venues, logistics operators, warehouses, manufacturers and municipal governments up to 65% on their energy bills while delivering spectacular light lasting up to two times longer than competitors. Metrolight provides the broadest offering of CompactHID™, SmartHID™ and SmartHID™ Plus Electronic Ballasts, with multi-voltage products ranging from 20 watts to 600 watts. The control-ready system offers connectivity with both analog and digital control devices and control and communication systems, extending the system's energy saving capabilities.

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