**PHILIPS**
**ADVANCE**

## eHID Ballasts

### e-Vision for 39W, 70W and 100W Metal Halide Lamps

# Elevating protection in recessed downlighting

Philips Advance e-Vision 39W, 70W and 100W ballasts for use with self-heating thermal protectors represent a breakthrough in recessed downlighting. With patented, self-heating thermal protector circuitry, these ballasts offer closed-loop, auto lamp shut-off technology. The e-Vision ballasts optimize lamp color over life and reduce lamp-to-lamp variations.

## Features

· Incorporates dedicated 120V output designed for use with self-heating thermal protectors

· Compact and lightweight housing (4.7" x 3.6" x 1.5")

· 90°C maximum case temperature rating

· IntelliVolt multiple-voltage technology (operates 120 to 277V, 50/60 Hz)

## Benefits

· Prevents operation of a fixture with a malfunctioning self-heating thermal protector heating element and prohibits ballast activity if the circuit is open or leads are shorted

· Reduced size and weight of e-Vision system relative to magnetic F-Can options, offering cost reduction opportunities in componentry, shipping and storage

· Provides enhanced design flexibility

· Enables long life in high-temperature applications

## Applications

· Retail, Commercial, Institutional

# e-Vision 39W, 70W and 100W Electronic Ballasts

## Ordering, Electrical and Technical Data  (Subject to change without notice)

| Lamp Data | | | | Certifications | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number | Watts | Input Volts | Catalog Number | UL | CSA | Line Current (Amps) | Input Power ANSI (Watts) | Max. Case Temp. | Wiring Diag. | Fig. | Weight (lb.) | Max. Distance to Lamp (ft.) |
| **39W Lamp, ANSI Code C130 Minimum Starting Temp. –20˚C/–4˚F** | | | | | | | | | | | | |
| 1 | 39 | 120 | IMH–39–A–BLS–ID* | ✔ | ✔ | 0.45 | 48 | 90˚C | 5 | B | 1.7 | 6 |
| | 39 | 277 | IMH–39–A–BLS–ID* | ✔ | ✔ | 0.18 | 47 | 90˚C | 5 | B | 1.7 | 6 |
| **70W Lamp, ANSI Code C98/M98 or M143 or C139/M139, Minimum Starting Temp. –20˚C/–4˚F** | | | | | | | | | | | | |
| 1 | 70 | 120 | IMH–70–A–BLS–ID* | ✔ | ✔ | 0.72 | 86 | 90˚C | 5 | B | 1.7 | 6 |
| | 70 | 277 | IMH–70–A–BLS–ID* | ✔ | ✔ | 0.31 | 84 | 90˚C | 5 | B | 1.7 | 6 |
| **100W Lamp, ANSI Code C90/M90 or M140, Minimum Starting Temp. –20˚C/–4˚F** | | | | | | | | | | | | |
| 1 | 100 | 120 | IMH–100–A–BLS–ID* | ✔ | ✔ | 0.96 | 115 | 90˚C | 5 | B | 1.7 | 6 |
| | 100 | 277 | IMH–100–A–BLS–ID* | ✔ | ✔ | 0.42 | 113 | 90˚C | 5 | B | 1.7 | 6 |

*Use with any self heating thermal protector (insulation detector) having equivalent resistive value 5k to 25k ohm (4 wire versions only)
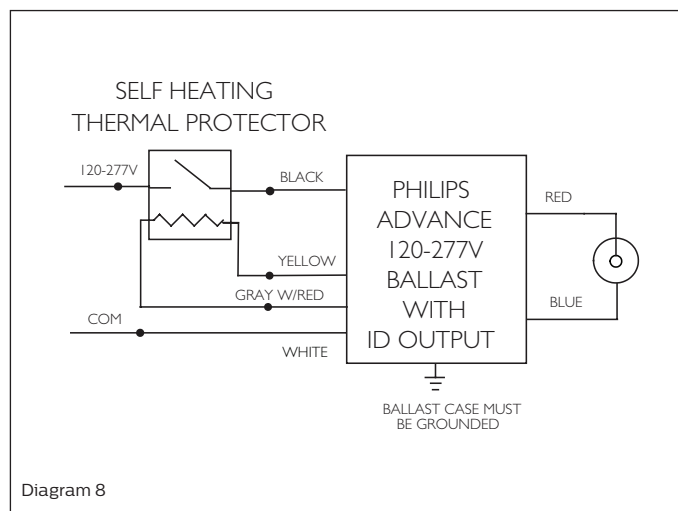
## Installation Notes

1. Use with any Thermal Protector having equivalent resistive value 5,000 to 25,000 ohm (4 wire versions only).
2. Open Circuit voltage across ID output approx 280V AC.
3. Maximum allowable case temperature is 90°C.
4. Ignition pulse is 4,000V max.
5. Lead wires exiting can: 9.0" +3.0"/–2.0".
6. Ballast output will shutdown after 20 minutes if lamp fails to ignite.
7. Power must be cycled off – then on, after replacing lamp.
8. Suitable for recessed use.  Do not install insulation above or within 3 inches of ballast sides.
9. Ballast will not operate lamp if self–heating thermal protector (insulation detector) is open circuited, absent or short circuited or if resistance value falls outside of the 5,000 to 25,000 ohm range.

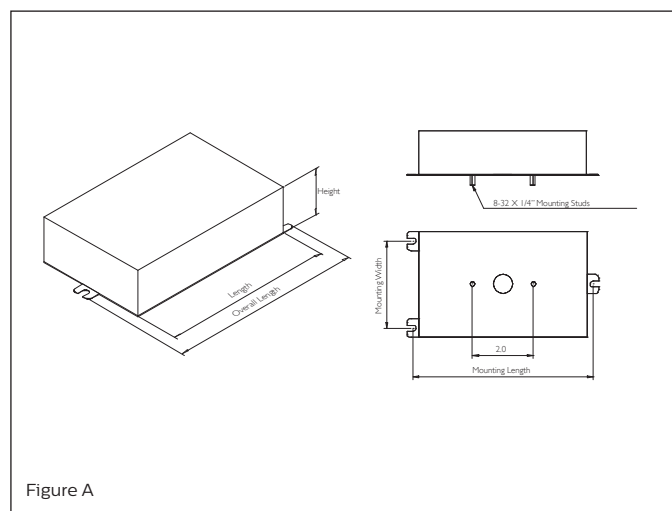# e–Vision 39W, 70W and 100W Electronic Ballasts

## Ballast Thermal Measurement Location

Case temperature measurement locations differ with each ballast model and are designated on the individual ballast labels. Consult ballast labels and ballast specification sheets for measurement locations.

## Wiring Diagram

SELF HEATING
THERMAL PROTECTOR

120-277V

BLACK

YELLOW

GRAY W/RED

COM

WHITE

PHILIPS
ADVANCE
120-277V
BALLAST
WITH
ID OUTPUT

RED

BLUE

BALLAST CASE MUST
BE GROUNDED

Diagram 8

## Dimensions

Height

8-32 X 1/4" Mounting Studs

Length
Overall Length

Mounting Width

2.0

Mounting Length

Figure A

| Case Figure | Overall Length | Case Length | Case Width | Case Height | Mounting Length | Mounting Width |
|---|---|---|---|---|---|---|
| A | 140mm [5.5"] | 120mm [4.7"] | 92mm [3.6"] | 38mm [1.5"] | 132mm [5.2"] | 73mm [2.9"] |

# e-Vision 39W, 70W and 100W Electronic Ballasts

## Philips Advance Ballast Specifications

### Section I – Physical Characteristics

1.0 The electronic ballast shall be furnished with integral, color-coded leads.

### Section II – Performance Requirements

2.0 The electronic ballast shall operate from a nominal line voltage range of 120-277V, +/-10%, 50/60 Hz.

2.1 The electronic ballast input current shall have Total Harmonic Distortion (THD) of less than 15%.

2.2 The electronic ballast shall have a Power Factor greater than 90%.

2.3 The electronic ballast shall have a lamp end-of-life detection and shutdown circuit.

2.4 The electronic ballast shall be Sound Rated A.

2.5 The electronic ballast output frequency to the lamps shall be less than 200 Hz to prevent acoustic resonance inside the lamp arc tube and to minimize visible flicker.

2.6 The electronic ballast shall provide a "Lamp Current Crest Factor" of less than 1.5.

2.7 The electronic ballast shall be thermally protected to shut off when operating temperatures reach unacceptable levels.

2.8 Ballast shall be required to only operate when equipped with a 120V 4-wire self-heating thermal protector.

2.9 Ballast shall automatically shut down when operating a malfunctioning self-heating thermal protector and will prohibit operation if the thermal protection circuit is open or if the leads are shorted.

### Section III – Regulatory Requirements

3.0 The electronic ballast shall meet the requirements of the Federal Communications Commission rules and regulations, Title 47 CFR part 18, for Non-Consumer equipment.

3.1 The electronic ballast shall be Underwriters Laboratories (UL) Listed and CSA Certified where applicable.

3.2 Ballast shall comply with ANSI C62.41 Category A for transient protection.

### Section IV – Other

4.0 The electronic ballast shall not contain Polychlorinated Biphenyl (PCB's).

4.1 The electronic ballast shall carry a three-year warranty from the date of manufacture for operation at marked maximum case temperature or less. View limited warranty at http://www.usa.lighting. philips. com/connect/tools_literature/warranties.wpd for details and restrictions.

4.2 The manufacturer shall have a twenty-five year history of producing HID lamp ballasts for the North American market.

4.3 The electronic ballast shall be produced in a factory certified to ISO 9001 Quality System Standards.