

# Sign Ballasts

Electronic, Magnetic, and HID F-Can Sign Ballasts

## Experience the Howard Difference

At Howard, we understand the importance of establishing your business' identity through signs. We also understand



how critical it is to have reliable sign ballasts that are cost-effective and easy to install. For these reasons, we offer a rich portfolio

of sign ballasts that are designed to satisfy your real-world needs. Our electronic, magnetic, and HID F-Can sign ballasts meet the toughest industry standards while delivering the highest output, reliability, and durability available in the marketplace today.



LIGHTING PRODUCTS

### ELECTRONIC & MAGNETIC HIGHLIGHTS

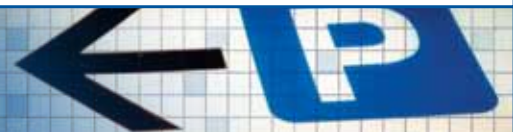
- Thermal protection that is compliant with UL, CSA, CEC and NEC
- High output with low power consumption
- Low-temp starting capabilities
- Available in a variety of input voltages for use in North America

### HID F-CAN HIGHLIGHTS

- High starting voltage with low temperature rise and low losses
- Extremely durable due to efficient operation
- Epoxy resin vacuum impregnation that is more weather resistant than traditional varnish

**HOWARD**<sup>™</sup>  
LIGHTING PRODUCTS

*Lighting for life.*



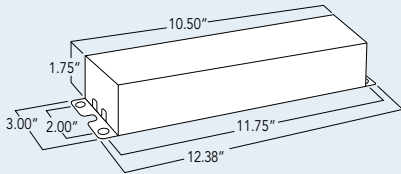
Visit us online at [HowardLightingProducts.com](http://HowardLightingProducts.com) or call 800.956.3456.

## Electronic Sign Ballasts

Our **electronic sign ballasts** are light weight, easy to install, and due to their design, can reduce your installation and replacement costs. They feature a thermally-protected class "P" ballast that automatically turns off when the ballast is hot, extending the longevity of the ballast. And with a wider, forgiving voltage range, these products provide normal lamp operation in case of voltage disruptions.

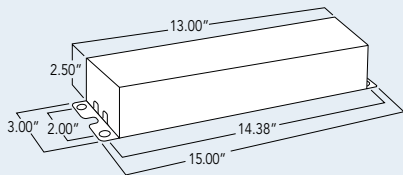
### Other features include:

- Weighs 50% less than ferromagnetic ballasts
- Heavy-duty 16 AWG lead wires that are 11 feet long
- Voltage ranges from 70 - 135 volts or 208 - 277 volts
- High power factor available



### Applies to models:

- ES3/96HO-XXX



### Applies to models:

- ES4/96HO-XXX
- ES4/120HO-XXX
- ES6/96HO-XXX

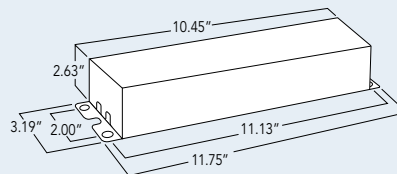
**Note:** XXX denotes the product is available in multiple voltage ranges. When ordering replace (XXX) with applicable voltage.

## Magnetic Sign Ballasts

Our **magnetic sign ballasts** are ideal for fluorescent lighting in outdoor sign applications.

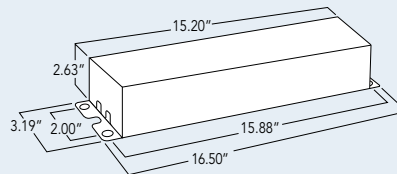
### Other features include:

- 800 mA output for high output fluorescent lamps to increase the brilliance of your electrical signs
- Thermally-protected class "P" ballast that automatically turns off when the ballast is hot, extending the longevity of the ballast
- For use with rapid start lamps (2 pins or hot cathode)
- High power factor with 277 volt models available



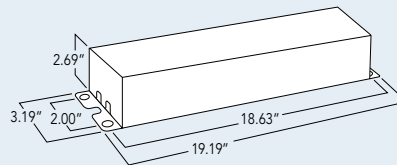
### Applies to models:

- MS1/48HO-XXX
- MS2/24HO-XXX
- MS2/96HO-XXX
- MS3/48HO-XXX
- MS3/72HO-XXX
- MS3/96HO-XXX
- MSB/0412/12/120
- MSB/0620/24/120



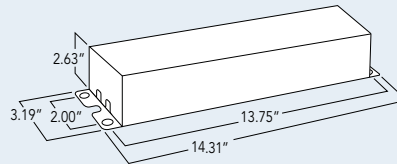
### Applies to models:

- MS4/120HO-XXX
- MS5/72HO-XXX
- MS6/48HO-XXX



### Applies to models:

- MSB/2040/24/120
- MSB/1240/46/120
- MSB/2448/46/120



### Applies to models:

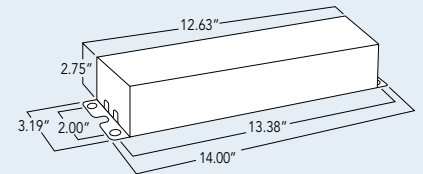
- MSB/1224/24/120

## HID F-Can Sign Ballasts

Our **HID F-Can sign ballasts** are UL & CSA listed and feature a metal halide design that supplies 80% more lumens per watt than mercury, thus resulting in a greater amount of light per energy dollar. Their lamps can start without flickering at very low ambient temperature (e.g., -30°C) thus enabling a longer lamp life.

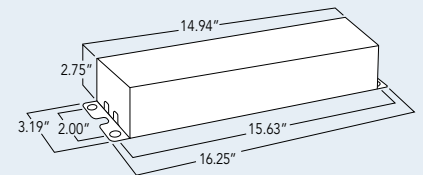
### Other features include:

- An all-in-one ballast and junction box that is pre-wired and supplied with pre-stripped leads to facilitate installation while saving material and labor costs
- Thermally-protected class "P" ballast that automatically turns off when the ballast is hot thus extending the longevity of the ballast
- Dual voltage models from 120 - 277 volts to reduce your inventory costs



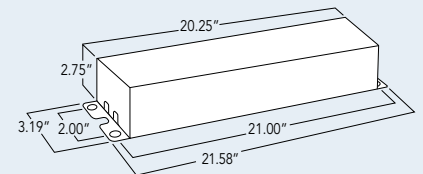
### Applies to models:

- MO175-23F-211



### Applies to models:

- MO250-23F-211



### Applies to models:

- MO400-23F-211

## Cross Reference Guide

Howard Lighting Products	Lamp-Foot	Lamps	Allanson	France	Universal LT	Advance
MS1/48HO-120	2-4	1	148-AT	-	256-148	-
MS1/48HO-277	2-4	1	148-AT-277V	-	-	-
MS2/24HO-120	2-4	2,1	224-AT	-	-	-
MS2/24HO-277	2-4	2,1	224-AT-277V	-	256-248	-
MSB/0412/12/120	4-12	2,1	272-AT	268D	256-272	ASB0412-12
MS2/72HO-277	4-12	2,1	272-AT-277V	-	-	VS0412-12
MS2/96HO-120	12-16	2	296-AT	288D	256-296	-
MS2/96HO-277	12-16	2	296-AT-277V	-	-	-
MS3/48HO-120	6-12	3,2,1	348-AT	348D	256-348	-
MS3/48HO-277	6-12	3,2,1	348-AT-277V	-	-	-
MS3/72HO-120	12-18	3,2	372-AT	368D	256-372	-
MS3/72HO-277	12-18	3,2	372-AT-277V	-	-	-
MS3/96HO-120	18-24	3,2	396-AT	388D	256-396	-
-	-	-	-	-	256-3120	-
MS3/96HO-277	18-24	3,2	396-AT-277V	-	-	-
MSB/0620/24/120	6-20	4,3,2	448-AT	448D	256-448	ASB0620-24
-	-	-	-	-	256-464	VS0620-24
MS4/48HO-277	8-18	4,3,2	448-AT-277V	-	-	-
MSB/1224/24/120	12-24	4,3,2	472-AT	468D	256-472	ASB1224-24
-	-	-	-	-	256-484	VS1224-24
MS4/72HO-277	16-24	4,3,2	472-AT-277V	-	-	-
MSB/2040/24/120	20-40	4,3,2	496-AT	488D	256-496	ASB2040-24
MS4/96HO-277	24-32	4,3,2	496-AT-277V	-	-	VS2040-24
MS4/120HO-120	20-40	4,3,2	4120-AT	4128D	256-4120	-
MS4/120HO-277	20-40	4,3,2	4120-AT-277V	-	-	-
MS5/72HO-120	20-30	5,4	572-AT	568D	-	-
MS5/72HO-277	20-30	5,4	572-AT-277V	-	-	-
MS6/48HO-120	8-24	6,5,4	648-AT	-	256-648	-
MS6/48HO-277	8-24	6,5,4	648-AT-277V	-	-	-
MSB/1240/46/120	12-40	6,5,4	672-AT	668D	256-672	ASB1240-46
MS6/72HO-277	24-36	6,5,4	672-AT-277V	-	-	VS1240-46
MSB/2448/46/120	24-48	6,5,4	696-AT	688D	256-696	ASB2448-46
MS6/96HO-277	30-48	6,5,4	696-AT-277V	-	-	VS2448-46
ES3/96HO-120	4-24	1,2,3	SS396AT	-	-	-
ES3/96HO-208-277	4-24	1,2,3	SS396AT208/347	-	-	-
ES4/96HO-120	8-32	1-6	SS496AT	-	ESB496IUNV	ASB-1232-24-E
ES4/96HO-208-277	8-32	1-6	SS496AT208/347	-	-	-
ES4/120HO-120	10-40	1-4	SS4120AT	-	-	-
ES4/120HO-208-277	10-40	1-4	SS4120AT208/347	-	-	-
ES6/96HO-120	10-48	2-6	SS696AT	-	ESB696IUNV	ASB-2048-46-E
ES6/96HO-208-277	10-48	2-6	SS696AT208/347	-	-	-
M0175-23F-211	-	-	MH175BT120/277	-	1110-245-SC-TC	72C3084NP
M0250-23F-211	-	-	MH250BT120/277	-	1110-246C-TC	72C3584NP
M0400-23F-211	-	-	MH400BT120/277	-	1110-247SC-TC	72C4083NP

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