HID Ballasts_HID Ballasts.qxd 12-01-18 2:38 PM Page 1

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SECTION B
ELECTRONIC HID BALLASTS

Electronic HID Ballasts

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Ballasts for High Intensity Discharge Lamps (HID)

Etlin-Daniels Electronic HID ballasts bring significant performance enhancements to every aspect of HID lighting systems, with greater energy efficiency, more consistent lamp color and maximized lumen maintenance and lamp life. Designed to provide optimal lamp performance and energy savings, we cover your HID needs with products for Metal Halide lamps ranging from 20 Watts to 150 Watts.

Why use Etlin-Daniels Electronic HID Technology?

Etlin-Daniels Electronic HID ballast technology delivers improved quality of light while substantially lowering the cost of ownership while bringing significant performance improvements to metal halide lighting systems in the form of:

1. Enhanced lumen maintenance (up to 60%), and longer dependable service life.

Improved lumen maintenance is the most fundamental and significant benefit offered by electronic HID ballasts within medium wattage quartz metal halide lighting systems. Conventional HID lighting systems (magnetic ballasts driving probe start metal halide lamps) typically experience a 50-60% fall-off in light output over the published life of the lamp. The use of solid-state electronic ballasts minimizes this issue, delivering a 20-50% improvement in lumen maintenance over conventional HID systems and up to a 20% improvement over magnetically-ballasted pulse start systems.

2. Enhanced color control (reduced color shift between lamps).

Due to their precise starting and run-up characteristics and constant wattage operation, electronic ballasts, compared to their magnetic ballast counterparts, can keep a lamp operating at a true constant wattage regardless of the age of the lamp or input voltage variations to the ballast. The result of such constant wattage operation is the most consistent color and light output possible. In other words, electronic ballasts maximize the superior color properties of metal halide and ceramic metal halide lamps over the entire life of the lamp.

3. Higher efficiency (10-15% less energy consumption vs. magnetic ballast technology).

With more maintained lumens, the use of electronic ballasts enables the overall fixture count to be significantly reduced.

4. Reduction in noise (most electronic HID lighting systems are sound class “A” [<24 db]).

Due to their solid-state nature, electronic ballasts run quieter than magnetic ballasts and are usually sound-rated “A,” the quietest rating available.

HID BALLAST PRODUCT OVERVIEW

5. Enhanced controllability (many systems are dimmable, driving additional energy savings).

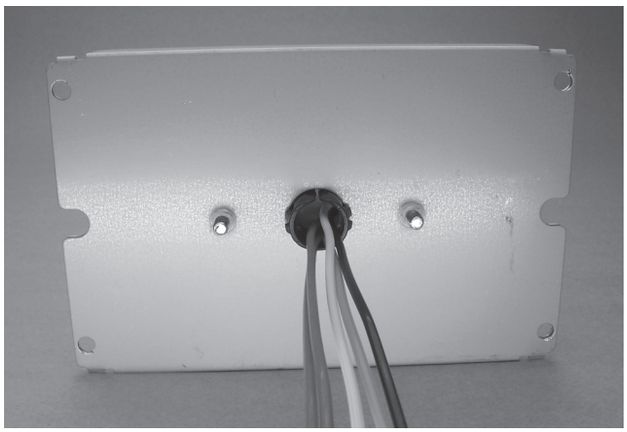
Electronic HID ballasts can also enable dimming and are compatible with lighting controls such as relays, occupancy sensors, daylight-harvesting sensors, and building management systems (BMS).

6. Smaller size and lower weight.

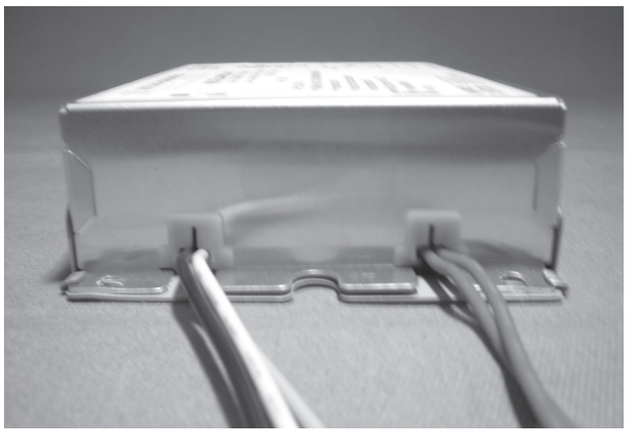
Electronic HID ballasts are significantly smaller in size and lower in weight than core and coil systems. So units can be designed to fit into more compact spaces and the reduced weight allows for less bulky designs and more cost effective shipping.

7. End of Life Circuitry.

Automatic end–of–life detection; shuts lamp down instead of trying to restart for increased safety.



This image to the left shows a HID Ballast with leads exiting from the bottom - add BM suffix to part number.



This image to the left shows a HID Ballast with leads exiting from the side - no suffix to part number.

HID BALLASTS FOR METAL HALIDE LAMPS

20W HID Metal Halide 120/277V

Universal Voltage, Extreme Temperature, Metal Halide Electronics Ballasts for 1 of these lamps: Phillips: 20W
GE: CMH20/TC/UV/C/U830G
or Approved Quartz Lamps ANSI M156

Features and Benefits:

One ballast for voltages from 120V to 277V.
Starting: Program Cold Start
Excellent line regulation
Reduction of lamp flicker
Increased lamp life
EMI/RFI complies with FCC 18C
Open/Short Circuit protection
No PCB's
Lightweight, easier to handle fixture
Auto reset
Remote wiring up to 50' away
Sound rated A for indoor applications
Hot Lamp detection/Auto shut off protection
Class P Thermally protected
Approvals: UL and cUL
50/60 Hertz
High Power Factor
Hazardous location certified
End of life protection
Surge protected, meets ANSI
Eliminates long term cycling
No need to wait for lamps to cycle to identify replacement

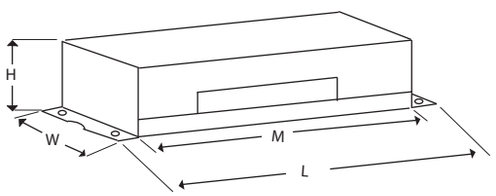
Model Number	Lamp	Lamp Watts	No. of Lamps	Input Watts	Input Current	Ballast Factor	Power Factor	Max. THD	Crest Facttor	BEF	Min. Start Temp.	Wiring Diagram	Case Style
MHSS-A20X	see above	20W	1	24.2/120V 24.3/277V	.20/120V .09/277V	1 1	0.99 0.97	10% 15%	1.7 1.7	4.13 4.13	-22F/-30C	see below	A
MHSS-A20XR	see above	20W	1	24.2/120V 24.3/277V	20/120V .09/277V	1 1	0.99 0.97	10% 15%	1.7 1.7	4.13 4.13	-22F/-30C	see below	B

CASE STYLE	DIMENSIONS IN INCHES			
	Mounting	L	W	H
A	5.63(14.3cm))	1.73(13.3cm))	1.73(4.4cm)	1.22(5.63cm))
B	4.02(10.2cm)	4.37(11.1cm)	3.2(7.7cm)	4.02(10.2cm)

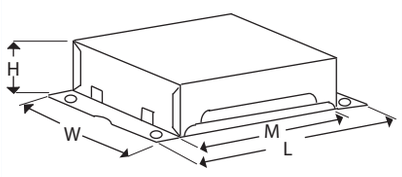
Waranty: 5 years, max. case temp < 75 / 3 years: max. case temp. < 80C.

Data is based on test performed in a controlled environment and representative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

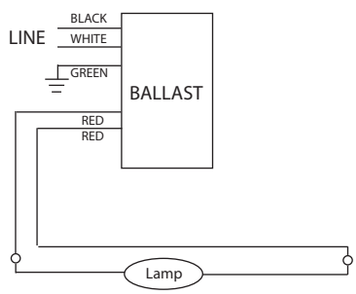
Case Style A



Case Style B



Wiring Style Single Lamp



HID BALLASTS FOR METAL HALIDE LAMPS

35W/39W HID Metal Halide 120/277V

Universal Voltage, Extreme Temperature, Metal Halide Electronics Ballasts for 1 of these lamps: Phillips: CD-R 35W/830/PAR20/M/SP CDM-R35W/830/PAR20, CDM-TC35W/830/G8.5, SDW-T35W HPS, GE:CMH35/U/PAR20E27 R35W, CMH35/T/UVC/U/830G12, UVC35W/830/G8.5, OSRAM: HCI-T35W/WDL/UVS or Approved Quartz Lamps ANSI M-130.

Features and Benefits:

One ballast for voltages from 120V to 277V.
Starting: Program Cold Start
Excellent line regulation
Reduction of lamp flicker
Increased lamp life
EMI/RFI complies with FCC 18C
Open/Short Circuit protection
No PCB's
Lightweight, easier to handle fixture
Auto reset
Remote wiring up to 50' away
Sound rated A for indoor applications
Hot Lamp detection/Auto shut off protection
Class P Thermally protected
Approvals: UL and cUL
50/60 Hertz
High Power Factor
Hazardous location certified
End of life protection
Surge protected, meets ANSI
Eliminates long term cycling
No need to wait for lamps to cycle to identify replacement

Model Number	Lamp	Lamp Watts	No. of Lamps	Input Watts	Input Current	Ballast Factor	Power Factor	Max. THD	Crest Facttor	BEF	Min. Start Temp.	Wiring Diagram	Case Style
MHSS-A35X	see above	35W	1	45/120V 44/277V	.38/120V .16/277V	1 1	0.99 0.98	10% 10%	1.7 1.7	2.2 2.3	-22F/-30C	see below	A
MHSS-A35R	see above	35W	1	45/120V 44/277V	.38/120V .16/277V	1 1	0.99 0.98	10% 10%	1.7 1.7	2.2 2.3	-22F/-30C	see below	B

CASE STYLE	DIMENSIONS IN INCHES			
	Mounting	L	W	H
A	5.63(14.3cm))	1.73(13.3cm))	1.73(4.4cm)	1.22(5.63cm))
B	4.02(10.2cm)	4.37(11.1cm)	3.2(7.7cm)	4.02(10.2cm)

Waranty: 5 years, max. case temp < 75 / 3 years: max. case temp. < 80C.

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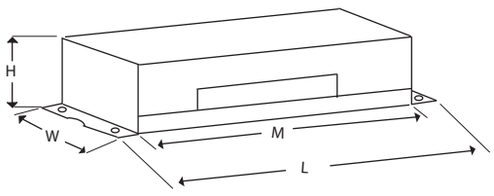
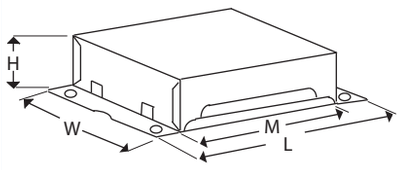
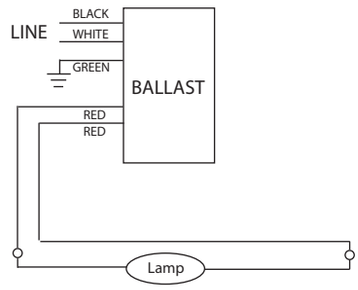
Case Style A



Case Style B

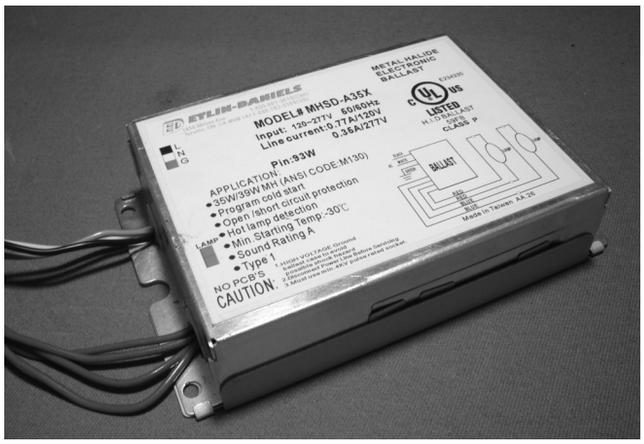


Wiring Style Single Lamp



HID BALLASTS FOR METAL HALIDE LAMPS

2 x 35W/39W HID Metal Halide 120/277V



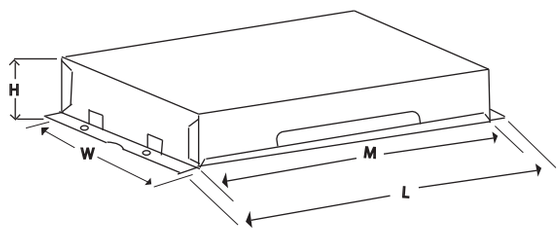
Universal Voltage, Extreme Temperature, Metal Halide Electronics Ballasts for 1 of these lamps: Phillips: CDM-R 35W/830/PAR30/M/SP, CDM-R35W/830/PAR20, CDM-TC35W/830/G8.5 SDW-T35W HPS, GE: CMH35/U/PAR@)E27 R35W, CMH35/T/UVC/U/830G12, UVC35W/830/G8.5, OSRAM: HCI-T35W/WDL/UVS or Approved Quartz Lamps ANSI M-130.

Features and Benefits:

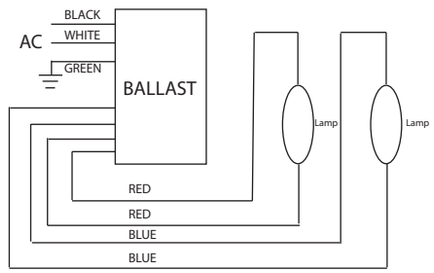
One ballast for voltages from 120V to 277V.
Starting: Program Cold Start
Excellent line regulation
Reduction of lamp flicker
Increased lamp life
EMI/RFI complies with FCC 18C
Open/Short Circuit protection
No PCB's
Lightweight, easier to handle fixture
Auto reset
Remote wiring up to 50' away
Sound rated A for indoor applications
Hot Lamp detection/Auto shut off protection
Class P Thermally protected
Approvals: UL and cUL
50/60 Hertz
High Power Factor
Hazardous location certified
End of life protection
Surge protected, meets ANSI
Eliminates long term cycling
No need to wait for lamps to cycle to identify replacement

Model Number	Lamp	Lamp Watts	No. of Lamps	Input Watts	Input Current	Ballast Factor	Power Factor	Max. THD	Crest Facttor	BEF	Min. Start Temp.	Wiring Diagram	Case Style
MHSD-A35X	see above	35W	2	93/120V 90/277V	.76/120V .33/277V	0.98 0.98	0.99 0.98	10% 10%	1.7 1.7	1.06 1.09	-22F/-30C	see below	C

Case Style C



Wiring Style Double Lamp



CASE STYLE	DIMENSIONS IN INCHES			
	Mounting	L	W	H
C	5.23(13.3cm)	5.52(14 cm))	3.58(9.1cm)	1.26(3.2cm)

Waranty: 5 years, max. case temp < 75 / 3 years: max. case temp. < 80C.

Data is based on test performed in a controlled environment and representative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

HID BALLASTS FOR METAL HALIDE LAMPS

35W/39W HID Metal Halide 347V

Universal Voltage, Extreme Temperature, Metal Halide Electronics Ballasts for 1 of these lamps: Phillips: CDM-R 35W/830/PAR30/M/SP, CDM-R35W/830/PAR20, CDM-TC35W/830/G8.5
SDW-T35W HPS, GE: CMH35/U/PAR@)E27 R35W, CMH35/T/UVC/U/830G12, UVC35W/830/G8.5, OSRAM: HCI-T35W/WDL/UVS
or Approved Quartz Lamps ANSI M-130.

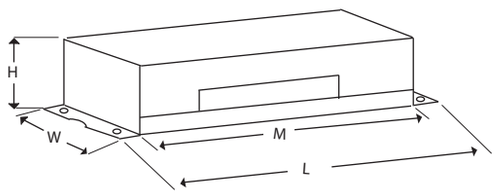
Features and Benefits:

One ballast for voltages from 120V to 277V.
Starting: Program Cold Start
Excellent line regulation
Reduction of lamp flicker
Increased lamp life
EMI/RFI complies with FCC 18C
Open/Short Circuit protection
No PCB's
Lightweight, easier to handle fixture
Auto reset
Remote wiring up to 50' away
Sound rated A for indoor applications
Hot Lamp detection/Auto shut off protection

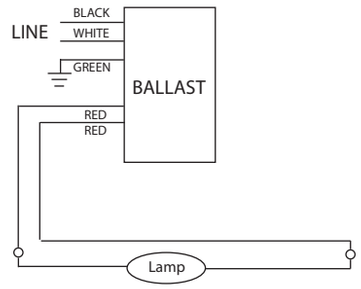
Class P Thermally protected
Approvals: UL and cUL
50/60 Hertz
High Power Factor
Hazardous location certified
End of life protection
Surge protected, meets ANSI
Eliminates long term cycling
No need to wait for lamps to cycle to identify replacement

Model Number	Lamp	Lamp Watts	No. of Lamps	Input Watts	Input Current	Ballast Factor	Power Factor	Max. THD	Crest Facttor	BEF	Min. Start Temp.	Wiring Diagram	Case Style
MHSS-335X	see above	35W	1	45	.131/ 120V	1	0.99	10%	1.7	2.2	-22F/-30C	see below	A

Case Style A



Wiring Style Single Lamp



CASE STYLE	DIMENSIONS IN INCHES			
	Mounting	L	W	H
A	6.1(15.5cm)	6.46(16.4cm))	1.7(4.3cm)	1.22(3.1cm)

Waranty: 5 years, max. case temp < 75 / 3 years: max. case temp. < 80C.

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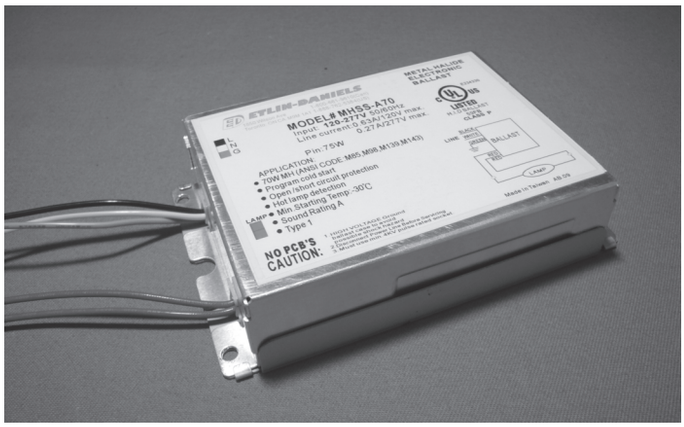
HID BALLASTS FOR METAL HALIDE LAMPS

50W HID Metal Halide 120/277V



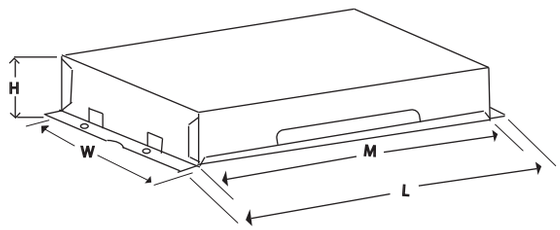
Universal Voltage, Extreme Temperature, Metal Halide Electronics Ballasts for 1 of these lamps:
Phillips: SDW-T50W HPS
Venture: EMH50W/U/PS/R KR85
or Approved Quartz Lamps

Features and Benefits:

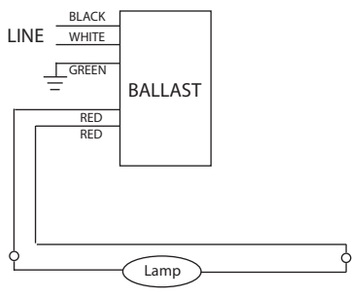
One ballast for voltages from 120V to 277V.
Starting: Program Cold Start
Excellent line regulation
Reduction of lamp flicker
Increased lamp life
EMI/RFI complies with FCC 18C
Open/Short Circuit protection
No PCB's
Lightweight, easier to handle fixture
Auto reset
Remote wiring up to 50' away
Sound rated A for indoor applications
Hot Lamp detection/Auto shut off protection
Class P Thermally protected
Approvals: UL and cUL
50/60 Hertz
High Power Factor
Hazardous location certified
End of life protection
Surge protected, meets ANSI
Eliminates long term cycling
No need to wait for lamps to cycle to identify replacement

Model Number	Lamp	Lamp Watts	No. of Lamps	Input Watts	Input Current	Ballast Factor	Power Factor	Max. THD	Crest Facttor	BEF	Min. Start Temp.	Wiring Diagram	Case Style
MHSS-A50	see above	50W	1	56/120V 55/277V	.465/120V .199/277V	1 1	0.99 0.98	10% 15%	1.7 1.7	1.79 1.83	-22F/-30C	see below	C

Case Style C



Wiring Style Single Lamp



CASE STYLE	DIMENSIONS IN INCHES			
	Mounting	L	W	H
C	5.23(13.3cm)	5.52(14 cm))	3.58(9.1cm)	1.26(3.2cm)

Waranty: 5 years, max. case temp < 75 / 3 years: max. case temp. < 80C.

Data is based on test performed in a controlled environment and representative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

HID BALLASTS FOR METAL HALIDE LAMPS

70W HID Metal Halide 120/277V and 347V

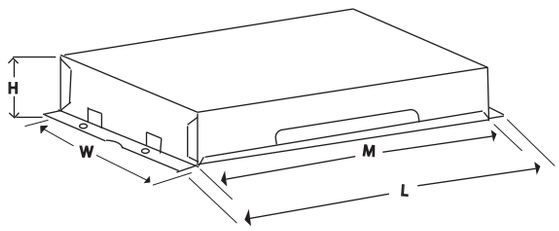
Universal Voltage, Extreme Temperature, Metal Halide Electronics Ballasts for 1 of these lamps:
Phillips: MHC70/C/U/MP/3K, CDM-TD70W/942, CDM-T70W/830, SON70W, CDM-R70W/830/PAR30L, CDM-R70W/942PAR30L, CDM-R70W/830PAR30L/M/SP
GE: CMH70/TD/UVC/830, CMH70/T/UVC/830, CMH70/U/PAR30L OSRAM: HQI-E70WNDL
IWASAKI: MT70SSD/W/MED or Approved Quartz Lamps ANSI M98, M139, M143

Features and Benefits:

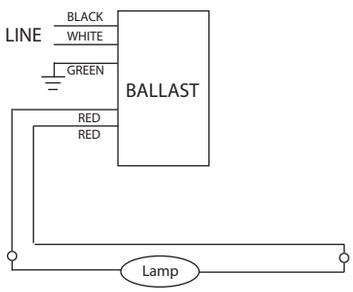
One ballast for voltages from 120V to 277V.
Starting: Program Cold Start
Excellent line regulation
Reduction of lamp flicker
Increased lamp life
EMI/RFI complies with FCC 18C
Open/Short Circuit protection
No PCB's
Lightweight, easier to handle fixture
Auto reset
Remote wiring up to 50' away
Sound rated A for indoor applications
Hot Lamp detection/Auto shut off protection
Class P Thermally protected
Approvals: UL and cUL
50/60 Hertz
High Power Factor
Hazardous location certified
End of life protection
Surge protected, meets ANSI
Eliminates long term cycling
No need to wait for lamps to cycle to identify replacement

Model Number	Lamp	Lamp Watts	No. of Lamps	Input Watts	Input Current	Ballast Factor	Power Factor	Max. THD	Crest Facttor	BEF	Min. Start Temp.	Wiring Diagram	Case Style
MHSS-A70	see above	70W	1	81/120V 79/277V	.67/120V .29/277V	1 1	0.99 0.98	10% 10%	1.7 1.7	1.25 1.27	-22F/-30C	see below	C
MHSS-370	see above	70W	1	**79.4/ 347V**	.23/347	1	0.98	10%	1.7	1.26	-22F/-30C	see below	C

Case Style C



Wiring Style Single Lamp



CASE STYLE	DIMENSIONS IN INCHES			
	Mounting	L	W	H
C	5.23(13.3cm)	5.52(14 cm))	3.58(9.1cm)	1.26(3.2cm)

Waranty: 5 years, max. case temp < 75 / 3 years: max. case temp. < 80C.

Data is based on test performed in a controlled environment and representative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

HID BALLASTS FOR METAL HALIDE LAMPS

100W HID Metal Halide 120-277V

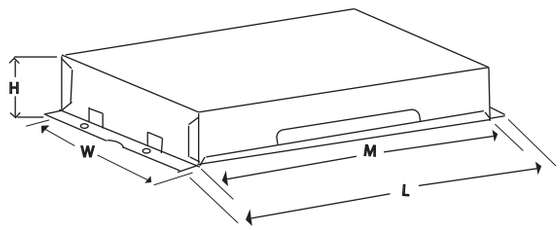
Universal Voltage, Extreme Temperature, Metal Halide Electronics Ballasts for 1 of these lamps:
Phillips: CDM100/PAR38/SP/#k, CDM-TG100W/825, SDW-T100W, enture: MH100W/U/PS R Kr85
Approved Quartz Lamps ANSI M164, M140 M90

Features and Benefits:

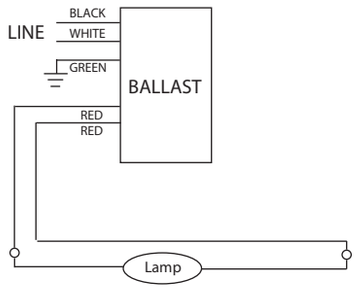
One ballast for voltages from 120V to 277V.
Starting: Program Cold Start
Excellent line regulation
Reduction of lamp flicker
Increased lamp life
EMI/RFI complies with FCC 18C
Open/Short Circuit protection
No PCB's
Lightweight, easier to handle fixture
Auto reset
Remote wiring up to 50' away
Sound rated A for indoor applications
Hot Lamp detection/Auto shut off protection
Class P Thermally protected
Approvals: UL and cUL
50/60 Hertz
High Power Factor
Hazardous location certified
End of life protection
Surge protected, meets ANSI
Eliminates long term cycling
No need to wait for lamps to cycle to identify replacement

Model Number	Lamp	Lamp Watts	No. of Lamps	Input Watts	Input Current	Ballast Factor	Power Factor	Max. THD	Crest Facttor	BEF	Min. Start Temp.	Wiring Diagram	Case Style
MHSS-A100	see above	100W	1	112/120V 110/277V	.93/120V .4/277V	1 1	0.99 0.99	10% 10%	1.7 1.7	0.89 0.91	-22F/-30C	see below	C

Case Style C



Wiring Style Sngle Lamp



CASE STYLE	DIMENSIONS IN INCHES			
	Mounting	L	W	H
C	5.52(14cm)	5.23(13.3cm))	3.58(9.1cm)	1.26(3.2cm)

Waranty: 5 years, max. case temp < 75 / 3 years: max. case temp. < 80C.

Data is based on test performed in a controlled environment and representative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

HID BALLASTS FOR METAL HALIDE LAMPS

150W HID Metal Halide 120-277V

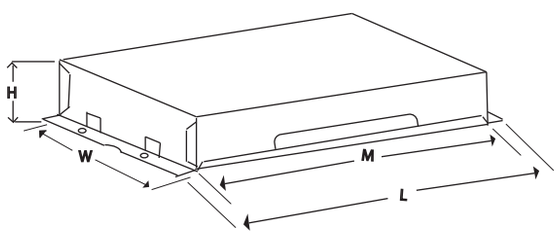
Universal Voltage, Extreme Temperature, Metal Halide Electronics Ballasts for 1 of these lamps: Phillips: CDTD150W/830, CDM-T150W/830, CMH150/TD/U/VC/830RX7- GE: CMH150/T/UVC/U/830/G12,OSRAM:CMH150/T/UVC/U/830/G12 HCI-T150W/WDL0 IIWASAKI: MT150CEW/S4300K, MT150SW4500K, MT150CEDW/S3200K
Approved Quartz Lamps ANSI M164, M140 M90

Features and Benefits:

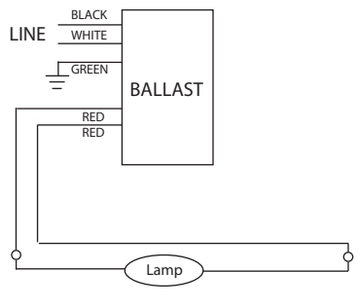
One ballast for voltages from 120V to 277V.
Starting: Program Cold Start
Excellent line regulation
Reduction of lamp flicker
Increased lamp life
EMI/RFI complies with FCC 18C
Open/Short Circuit protection
No PCB's
Lightweight, easier to handle fixture
Auto reset
Remote wiring up to 50' away
Sound rated A for indoor applications
Hot Lamp detection/Auto shut off protection
Class P Thermally protected
Approvals: UL and cUL
50/60 Hertz
High Power Factor
Hazardous location certified
End of life protection
Surge protected, meets ANSI
Eliminates long term cycling
No need to wait for lamps to cycle to identify replacement

Model Number	Lamp	Lamp Watts	No. of Lamps	Input Watts	Input Current	Ballast Factor	Power Factor	Max. THD	Crest Facttor	BEF	Min. Start Temp.	Wiring Diagram	Case Style
MHSS-1150	see above	150W	1	153/120V 168/277V	1.43/120V .61/277V	0.97 1	0.99 0.99	10% 10%	1.7 1.7	0.63 0.6	-22F/-30C	see below	C

Case Style C



Wiring Style Single Lamp



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