



Core & Coil



Val-U-Pak Plus



Capacitors



Ignitors



Transformers



F-Can Ballasts



Encapsulated Core & Coil



Postline



Indoor Enclosed



Outdoor Weatherproof

HIGH INTENSITY DISCHARGE BALLASTS

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HIGH INTENSITY DISCHARGE BALLASTS

Philips Advance HID ballasts are available to operate the wide variety of metal halide, high pressure sodium and low pressure sodium lamps available in today's marketplace.

Like fluorescent, HID lamps are gas discharge lamps. Light is produced by an arc discharge between two electrodes located at opposite ends of an arc tube within the lamp's outer glass envelope. The ballast is the lamp's power supply; its purpose is to provide proper starting and operating voltage and current to initiate and sustain this arc.

Lamp Starting

Probe-Start Metal Halide Lamps

The "traditional" probe-start metal halide lamps (175 through 1500W) have an additional electrode located at one end of the arc tube to assist in lamp starting. These types of lamps require an open circuit voltage (OCV) approximately two times the lamp's operating voltage to initiate the arc.

High Pressure Sodium and Pulse-Start Metal Halide Lamps

High pressure sodium and modern metal halide lamps which include existing lamps, 150W and less, as well as the new generation of pulse-start metal halide lamps, 150W and greater, have no starting electrodes. In addition to an OCV of approximately two times the lamp voltage, these lamps utilize an "ignitor" to provide a high voltage starting pulse directly across the main electrodes. Once the lamp's arc is established, the ignitor automatically stops delivering pulses, and the lamp comes up to full brightness on its own.

Low Pressure Sodium

Because they have neither a starting electrode nor an ignitor, low pressure sodium lamps require an open circuit voltage approximately three to seven times the lamp voltage to start and sustain the lamp.

Lamp Operation

Gas discharge lamps have a negative resistance characteristic which causes them to draw an increasing amount of current leading to immediate lamp failure if operated directly from the power line. The ballast, therefore, is utilized to limit the current to the correct level for proper operation of the lamp.

Ballast factor is defined as the ratio of light output produced by a lamp operating on a commercial ballast versus the lamp's rated light output. Philips Advance HID ballasts have a nominal ballast factor of 1.0, thus providing full light output.

HID lamps take several minutes to warm-up and reach full lumen output. Additionally, an interruption in the input power or a sudden voltage drop may cause the arc to extinguish. A lamp that is hot will not restart immediately. Before the lamp will relight, it must cool sufficiently to reduce the vapor pressure within the arc tube to a point where the arc will restrike. The approximate warmup and restriking times of the HID lamp groups are as follows:

Light Source	Warm-Up Time	Restrike Time
Metal Halide (Probe Start)	5-4 minutes	10-20 minutes
Metal Halide (Pulse Start)	2 minutes	3-4 minutes
High Pressure Sodium	3-4 minutes	½-1 minute
Low Pressure Sodium	7-10 minutes	3-12 seconds

Ballast Input Voltages

Unlike fluorescent lighting which is operated on either 120V or 277V circuits, power for HID lighting in the U.S. is delivered at any one of five voltages: 120V, 208V, 240V, 277V or 480V. While 120V and 277V are the most popular, because of the heavier loads and sometimes longer runs associated with HID lighting (such as shopping mall parking lots), 208V and 240V power is often used instead of 120V, and 480V instead of 277V.

To address this multiplicity of voltages, the HID ballast industry offers ballasts with multiple input voltage taps on the primary coil. Our 4-tap design is called a Quadri-Volt ballast and operates on either 120V, 208V, 240V or 277V line voltage. There is a Philips Advance Quadri-Volt ballast for virtually every HID lamp on the market. New 5-TAP designs, which feature the same input voltages as Quadri-Volt ballasts plus 480V, are available for 250W, 400W, and 1000W metal halide and high pressure sodium applications.

Luminaires Fusing

Many HID lighting luminaires are sold with protective fuses. The purpose of the fuse is to isolate a luminaire from the lighting circuit in the event of excessive current draw, such as might be caused by a failed ballast. Unfortunately, the fuse will not protect the ballast from failure.

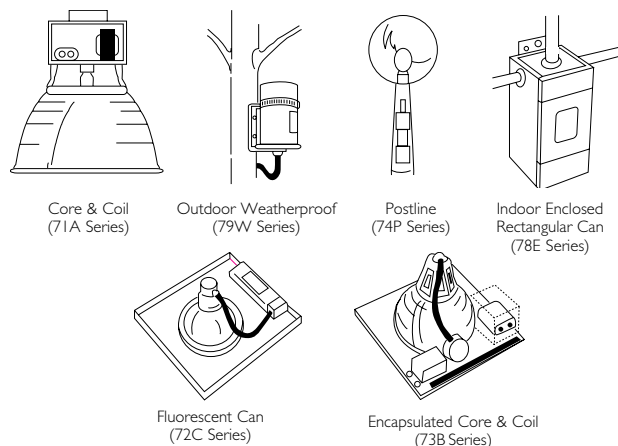
With many luminaires the fuse is physically located in the ballast compartment of the luminaire. The air temperature within this compartment can easily reach 80°C and still be within the design limitations of the luminaire.

Many fuses are temperature sensitive, meaning that the current rating goes down as the ambient temperature goes up. Fuse current ratings are based on the fuse's performance in a 25°C ambient (77°F). In an 80°C ambient, some fuses will open at half their rating.

As a result, the fuse rating shown in the HID ballast tables is calculated at 2½ to 3 times the highest current draw of the ballast: lamp operating, starting or open circuit conditions. Typically fast blow fuses should be used. It is not necessary to use current limiting fuses but some applications may require their use. Additional testing is recommended to determine appropriate fuse type.

Ballast Design Applications

HID lamp ballasts are available in a variety of shapes and sizes for the most popular lighting applications. Six basic designs are in widest use today.



HIGH INTENSITY DISCHARGE BALLASTS

Core & Coil

The basic ballast is the open core & coil which is most often used as a component within a lighting luminaire. The core & coil also forms the nucleus of the five other ballast configurations detailed in this section. It consists of either one or two copper coils on a core (or "stack") of electrical-grade steel laminations. The coils are assembled to core sections which are then surface-welded together. The assembled Philips Advance ballast is vacuum-pressure impregnated with a silica-filled polyester varnish to re-enforce the electrical insulation, preclude moisture, inhibit noise, and dissipate heat. Some HID ballast manufacturers apply varnish via a preheat-and-dip process which only puts a thin coat of varnish on the outer surface of the ballast. Philips Advance Core & Coil ballasts feature as standard an insulation system rated class H (180°C maximum coil hot spot temp.) for ballasts below 600W, and Class N (200°C maximum coil hot spot temp.) for ballasts 600W and higher. When performing in-fixture testing, the maximum allowable average coil temperature (measured by the rise-of-resistance method) is 165°C for Class H ballasts or 185°C for Class N ballasts. The maximum allowable coil face or lead wire temperature (measured by thermocouple) is 150°C for both Class H and Philips Advance Class N ballasts, 170°C for true Class N ballasts.

Encapsulated Core & Coil

Where quiet performance is required, the standard open core & coil ballasts are encapsulated (potted) in a cube-shaped steel can utilizing Class H (180°C) polyester compound. These ballasts carry a Class A noise rating up through 175W and Class B for 250 and 400W. As with the open core & coil, the capacitor (and ignitor where included) are mounted separately within the fixture.

Ballasts with Aluminum Coils

We offer a wide range of ballasts that have coils made out of copper and/or aluminum. All Philips Advance ballasts adhere to ANSI specifications and are certified by respective agencies (UL, CSA, etc.). Ballasts with aluminum coil(s) are designated by -A after ballast catalog number and/or "AL" on wiring diagram.

Fluorescent Can (F-Can)

For indoor commercial applications of HID lighting such as offices, schools and retail stores, ballast noise must be minimized. Ballasts for these luminaires are most often encased and potted in fluorescent ballast type cans and utilize Class A (90°C) asphalt insulating materials (the same as used in fluorescent lamp ballasts).

The Philips Advance line of F-can ballasts comes in two dual-voltage configurations: 120/277V for the US market, and 120/347V for the Canadian market. Each unit has built-in, automatically resetting, thermal protectors which disconnect the ballast from the power line in the event of overheating. All units are high power factor and include the capacitor within the can. All models for high pressure sodium, low-wattage metal halide, and pulse-start metal halide lamps also include the ignitor in the can.

Spacing between ballasts and the mounting surface must be considered when the ballasts are remote-mounted. Twelve inches between ballasts must be maintained and if multiple rows vertically are used, there should be at least 12 inches between rows. In addition to ballast and row spacing, the ballast must not be directly mounted to a non-metallic surface. They must be spaced with mounting brackets (see page 5-47 and 5-48 for mounting bracket details) to allow airflow under the ballast base.

Indoor Enclosed

These units are designed for use indoors where the ballast must be mounted remotely from the luminaire. They are most typically used in factories where the luminaire may be mounted in a high-bay where very high ambient temperatures may be experienced. In these instances, the remotely-mounted ballast operates cooler, subsequently providing longer life because it is away from both the heat of the ceiling ambient and lamp heat within the fixture.

The case contains the core & coil potted in a Class H (180°C) heat-dissipating resin. The capacitor(s) and ignitor are contained within a separate compartment. Knockouts in both ends of the case facilitate hook-up in the most convenient manner. Wall mounting is accomplished through flanges on the top and bottom of the case. The ballast is a UL Listed product.

Outdoor Weatherproof

Weatherproof ballasts are designed for remote, pole-mounting outdoor applications under all weather conditions. They may also be placed inside of a transformer pole base, but care must be taken to avoid areas prone to flooding because weatherproof ballasts are not water-submersible.

The core & coil with its capacitor and ignitor (where required) are firmly mounted to the heat-sink base. An aluminum cover is placed over the core-&-coil assembly and is bolted with a weather-tight gasket to the base. An integral 1" threaded nipple with locknut facilities hook-up to electrical conduit or to the mounting bracket when used on a pole. The weatherproof ballast may also be placed nipple-up, with a drip loop in the leads, inside a pole base.

Postline

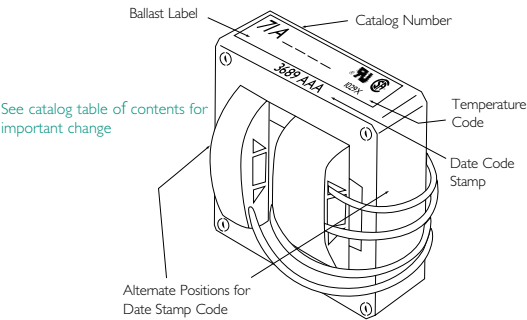
Lantern-type fixtures mounted on slender poles often require ballasts which will fit into these poles. Special, elongated core & coil ballasts are potted in resin in cylindrical cans having a 2.55" outside diameter. All include leads necessary for direct connection to a photocell.

The capacitor and ignitor (where required) are included within this can. A ½" threaded nipple is used for vertical mounting, and leads extend from both ends of the can for ease of installation. The input leads to the ballast also provide for proper connection to the photocell if such is included within the luminaire.

To help prevent overheating, one to three feet of air space should be allowed in the pole above the ballast, and the ballast should be positioned against the post interior wall to provide a heat-sink. All units rated 100W and above now include a mounting kit consisting of an 18" chain to hang the ballast within the pole and a spring clip to force the ballast's cylindrical can to make line contact with the pole's interior surface to maximize heat transfer, thus prolonging the ballast life.

HIGH INTENSITY DISCHARGE BALLASTS

Ballast Date and Temperature Codes



Philips Advance HID Core & Coil ballasts are date stamped on either the top surface or the side surface of the ballast core. The four-digit number represents the week and year of manufacture. The first two numbers indicate the week and the last two indicate the year the ballast was manufactured. The example shows a ballast manufactured during the 36th week of 1989. The three letters are a factory code.

The ballast's UL Bench Top Rise Temperature Code is shown on the label (see below).

UL Bench Top Rise Temperature Code

To facilitate UL inspection, each ballast's UL Bench Top Rise Temperature Code is shown on the Philips Advance Core & Coil ballast label as 1029X, where 1029 is the UL Standard for HID Ballasts, and the X is the temperature code: A, B, C, etc. If a fixture is UL listed for 1029C, then automatically, all ballasts with an A, B, or C temperature classification are acceptable for use within that same fixture.

UL Bench Top Rise Letter Code	Temperature Range for Class H (180°C) Ballasts	Temperature Range for Class N (200°C) Ballasts
A	less than 75°C	less than 95°C
B	75°C < 80°C	95°C < 100°C
C	80°C < 85°C	100°C < 105°C
D	85°C < 90°C	105°C < 110°C
E	90°C < 95°C	110°C < 115°C
F	95°C < 100°C	115°C < 120°C
etc.	etc.	etc.

Certifications



Indicates ballast is listed by Underwriters Laboratories, Inc. in accordance with UL 1029 Standard for HID Ballasts. Each ballast is marked appropriately. (UL File Number E94520)



Indicates ballast is component recognized by Underwriters Laboratories, Inc. in accordance with UL 1029 Standard for HID Ballasts. Each ballast is marked appropriately.



Indicates ballast is certified by Canadian Standards Association in accordance with CAN/CSA-22.2 No. 74-92. Each ballast is marked appropriately.



All HID Ballasts are designed and manufactured in accordance with the American National Standards Institute Standard for HID Ballasts, ANSI C82.4.



Indicates ballast is certified and compliant with "Norma Obligatorio Mexicana" (NOM) requirements



Indicates ballast meets the 88% efficiency requirements of EISA (Energy Independence and Security Act of 2007).

EISA requires all 150W-500W metal halide luminaires manufactured on or after January 1, 2009, to contain a ballast meeting the following levels of efficiency:

- 88% for magnetic or electronic pulse start ballasts
- 94% for magnetic probe start ballasts
- 92% for non-pulse start electronic ballasts for wattages greater than 250W, and
- 90% for non-pulse start electronic ballasts for wattages up to 250W

Please refer to the EISA brochure found on the www.philips.com/advance website for additional info on EISA-Compliant Pulse Start ballasts.



Core & Coil Replacement Kits

Distributor Kits and Replacement Ignitors

Philips Lighting furnishes 120/208/240/277 Philips Advance Quadri-Volt core & coil ballasts to allow the stocking distributor to conveniently meet the replacement and retrofit needs of customers. In addition, we now offer 120/208/240/277/480V 5-TAP core & coil ballasts for the most popular applications. 5-TAP ballasts add the 480V input lead to the Quadri-Volt designs. A Quadri-Volt or 5-TAP core & coil, along with the appropriate capacitor, ignitor (where required), mounting bracket & hardware and installation instructions are packed in a space-saving shipping carton. These "kits" eliminate the need for distributors or end-users to stock loose components of single voltage ballasts for 120, 208, 240, 277, and even some 480V applications, though single voltage kits for 480V applications will also be available.

Ignitors are also packaged in individual cartons for replacement needs. There are several different ignitors to meet the needs of the many different lamps. The appropriate ignitor for each ballast is shown in the far right column on the page in this Atlas where the ballast is listed. Additionally, this information is summarized in the tables on pages 5-41 through 5-44.



Pre-wired Ignitor

Connectors for Capacitor

Dry Capacitor
Now Rated 105°C

Dry Capacitors

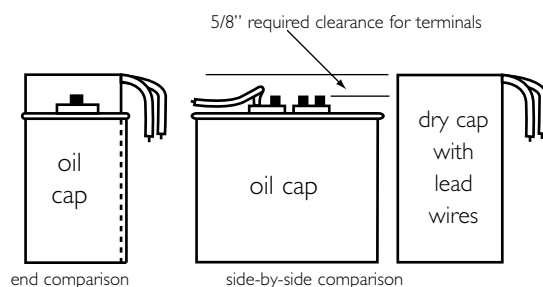
We have extended the operating voltage range of our dry capacitors from 330 to 400V. This means that our most popular HID replacement kits for 175, 250, and 400W metal halide lamps now contain dry capacitors and offer the additional benefits available only with a dry capacitor.

Those benefits are:

- Dry capacitors are typically 25 to 50% smaller than their oil-filled counterparts, allowing the Philips Advance ballast kit to fit existing fixtures.
- Dry capacitors are rated 105°C, 15°C higher than 90°C oil-filled capacitors, thus providing longer component life.
- Dry capacitors are built using a thermoplastic case, thus eliminating the need for grounding and provide a faster, easier replacement.
- Unlike oil-filled capacitors with exposed tab terminals, dry capacitors have no exposed live parts and thus protect end-users from hazardous voltages.

The bottom line is that our expanded use of dry capacitors makes the contractor's job faster and easier. Look for the "D" at the end of our catalog number, it identifies the ballast kit as one that contains a dry capacitor.

Capacitor Size Comparison Oil-Filled vs. Advance Dry Type



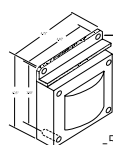


Core & Coil Replacement Kits

Pulse Start Metal Halide

Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications		
						
35W/39W Lamp, ANSI Code M130 (Pulse Start)						
120/277	71A5081-001D	HX-HPF	3.8	✓	✓	
50W Lamp, ANSI Code M110 or M148 (Pulse Start)						
120/277	71A5181-001D	HX-HPF	4.9	✓	✓	
120/208/240/277	71A5191-001D	HX-HPF	4.0	✓	✓	
70W Lamp, ANSI Code M98 or M143 (Pulse Start)						
120/208/240/277	71A5292-001D	HX-HPF	5.0	✓	✓	
100W Lamp, ANSI Code M90 or M140 (Pulse Start)						
120/208/240/277	71A5390-001D	HX-HPF	5.5	✓	✓	
150W Lamp, ANSI Code M102 or M142 (Pulse Start)						
120/208/240/277	71A5492-001D	HX-HPF	7.0	✓	✓	
120/208/240/277	71A5493-001D	Super CWA	8.5	✓	✓	
175W Lamp, ANSI Code M137 or M152 (Pulse Start)						
120/208/240/277	71A5593-001D	Super CWA	7.0	✓	✓	
200W Lamp, ANSI Code M136 (Pulse Start)						
120/208/240/277	71A5692-001D	Super CWA	8.0	✓	✓	
250W Lamp, ANSI Code M138 or M153 (Pulse Start)						
277	71A5737-001DEE*	Linear Reactor HPF	6.5	✓	✓	✓
120/208/240/277	71A5792-001D	Super CWA	9.5	✓	✓	
320W Lamp, ANSI Code M132, M154 or M170 (Pulse Start)						
277	71A5837-001DEE*	Linear Reactor HPF	9.5	✓	✓	✓
120/208/240/277	71A5892-001D	Super CWA	11.0	✓	✓	
480/120T	71A5842-001DT	Super CWA	11.0	✓	✓	
350W Lamp, ANSI Code M131 or M171 (Pulse Start)						
277	71A5937-001DEE*	Linear Reactor HPF	10.0	✓	✓	✓
120/208/240/277	71A5993-001D	Super CWA	11.0	✓	✓	
400W Lamp, ANSI Code M135 or M155 or M172 (Pulse Start)						
120/208/240/277	71A6092-001D	Super CWA	11.0	✓	✓	
480/120T	71A6042-001D	Super CWA	15.0	✓	✓	
120/208/240/277/480	71A6052001D	Super CWA	16.0	✓	✓	

* Includes -540 bracket.



Suffix -540D denotes a welded angle bracket to allow linear reactors to mount in 400W fixtures designed for standard CWA ballasts without brackets. This bracket is standard on -001DEE.

-540 Bracket Detail

Pulse Start Metal Halide

Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications		
						
750W Lamp, ANSI Code M149 (Pulse Start)						
277/347/480/120T	71A64F2-001D	Super CWA	17.0	✓	✓	
120/208/240/277/480	71A6452-001D	Super CWA	19.5	✓	✓	
1000W Lamp, ANSI Code M141 (Pulse Start)						
120/208/240/277	71A6593-001	Super CWA	21.0	✓	✓	
120/208/240/277/480	71A6553-001	Super CWA	24.0	✓	✓	
347/480/120T	71A65F3-001	Super CWA	22.0	✓	✓	

Metal Halide

Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications		
						
175/150W Lamp, ANSI Code M57/M107						
120/208/240/277	71A5570-001D	CWA	6.8	✓	✓	
480/120T	71A5540-001D	CWA	8.5	✓	✓	
250W Lamp, ANSI Code M58						
120/208/240/277	71A5770-001D	CWA 4x4 Core	9.0	✓	✓	
120/208/240/277/480	71A5750-001D		10.0	✓	✓	
120/208/240/277	71A5771-001D	CWA 3x3 Core	9.0	✓	✓	
480/120T	71A5741-001D		9.0	✓	✓	
400W Lamp, ANSI Code M59						
120/208/240/277	71A6071-001D	CWA	11.5	✓	✓	
120/208/240/277/480	71A6051-001D	CWA	14.0	✓	✓	
480/120T	71A6041-001D	CWA	12.0	✓	✓	
1000W Lamp, ANSI Code M47						
120/208/240/277	71A6572-001	CWA	21.0	✓	✓	
120/208/240/277/480	71A6552-001	CWA	22.0	✓	✓	
480/120T	71A6542-001	CWA	21.0	✓	✓	
1500W Lamp, ANSI Code M48						
120/208/240/277	71A6772-001	CWA	30.0	✓	✓	
480/120T	71A6742-001	CWA	31.0	✓	✓	



Core & Coil Replacement Kits

High Pressure Sodium

Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications	
					
35W Lamp, ANSI Code S76					
120	71A7707-001DB	R-HPF	1.5	✓	✓
50W Lamp, ANSI Code S68					
120	71A7807-001DB	R-HPF	1.9	✓	✓
120/277	71A7801-001D	HX-HPF	3.5	✓	✓
120/208/ 240/277	71A7891-001D	HX-HPF	5.6	✓	✓
70W Lamp, ANSI Code S62					
120	71A7907-001DB	R-HPF	2.5	✓	✓
120/208/ 240/277	71A7971-001D	HX-HPF	5.5	✓	✓
100W Lamp, ANSI Code S54					
120	71A8007-001DB	R-HPF	3.1	✓	✓
120/208/ 240/277	71A8071-001D	HX-HPF	7.3	✓	✓
120/208/ 240/277	71A8091-001DC	HX-HPF	7.3	✓	✓
480	71A8041-001D	HX-HPF	7.0	✓	✓
150W Lamp, ANSI Code S55					
120	71A8107-001DB	R-HPF	4.0	✓	✓
120/208/ 240/277	71A8172-001D	HX-HPF	8.0	✓	✓
120/208/ 240/277	71A8192-001DC	HX-HPF	8.0	✓	✓
480	71A8142-001D	HX-HPF	9.5	✓	✓
150W Lamp, ANSI Code S56					
120/208/ 240/277	71A8176-001D	CWA	8.5	✓	✓
480	71A8146-001D	CWA	8.5	✓	✓

HPS Kit Options

In addition to the standard kits, this and the following page include two HPS kits with special features:

HPS Reactor Kits with Integral Ignitors

"B" Suffix denotes 120V reactor circuit kits featuring single-coil reactor ballasts with integral ignitors. The kit includes a mounting bracket (PC848S) sized specifically for the small reactor ballasts.

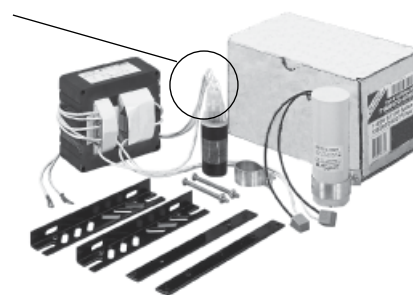
Compact Reactor Core and Bracket



HPS Kits with Plug-In Ignitors

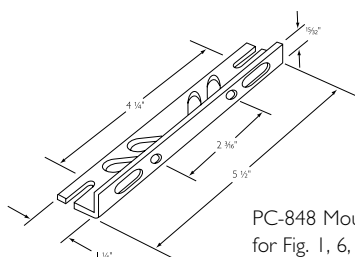
"C" Suffix (p.5-8) denotes standard HPS kit except with plug-in ignitor. A mating receptacle is attached to the core and coil lead wires, ready for immediate connection.

Connectorized ignitor and mating receptacle

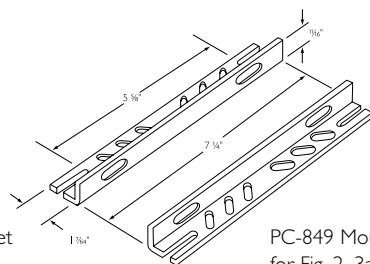


Core & Coil Mounting Brackets

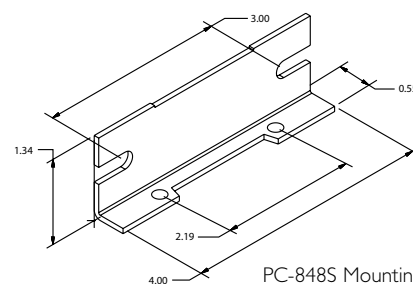
Included with all Replacement Kits



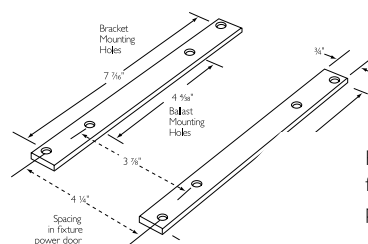
PC-848 Mounting bracket for Fig. 1, 6, 7 & 9



PC-849 Mounting bracket for Fig. 2, 3a, 8, 8a & 10.



PC-848S Mounting bracket for Fig. 9.



PC-909 Mounting bracket for Fig. 2, 3a & 8 when used with power-door roadway fixtures

- PC-848: To order individual packaged kits, specify PKG 848 (1 brackets with thru bolts).
- PC-849: To order individual packaged kits, specify PKG 849-2 (2 brackets with thru bolts).
- PC-848S: Bracket and thru bolts are included in 120V HPS Reactor Kits.



Core & Coil Replacement Kits

High Pressure Sodium

Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications	
					
200W Lamp, ANSI Code S66					
120/208/ 240/277	71A8970-001D	CWA	8.5	✓	✓
480	71A8940-001D	CWA	8.5	✓	✓
250W Lamp, ANSI Code S50					
120/208/ 240/277	71A8271-001D	CWA	11.5	✓	✓
120/208/ 240/277/ 480	71A8251-001D	CWA	12.0	✓	✓
120/208/ 240/277	71A8291-001DC	CWA	11.5	✓	✓
480	71A8241-001D	CWA	11.0	✓	✓
310W Lamp, ANSI Code S67					
120/208/ 240/277	71A8371-001D	CWA	13.8	✓	✓
400W Lamp, ANSI Code S51					
120/208/ 240/277	71A8473-001D	CWA	15.0	✓	✓
120/208/ 240/277/ 480	71A8453-001D	CWA	16.0	✓	✓
120/208/ 240/277	71A8493-001DC	CWA	15.0	✓	✓
480	71A8443-001D	CWA	15.5	✓	✓
1000W Lamp, ANSI Code S52					
120/208/ 240/277	71A8773-001	CWA	31.0	✓	✓
120/208/ 240/277/ 480	71A8753-001	CWA	29.0	✓	✓
480	71A8743-001	CWA	31.0	✓	✓

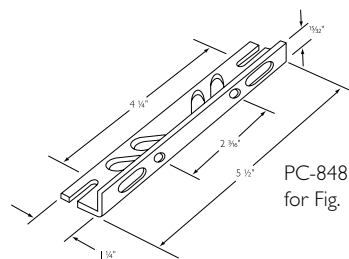
Core & Coil Mounting Brackets

Included with all Replacement Kits

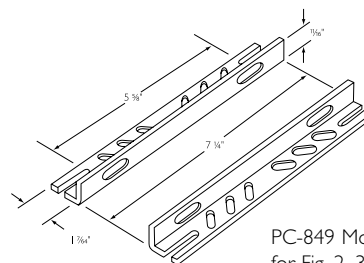
(See Page 5-7 for additional bracket diagram)

Low Pressure Sodium

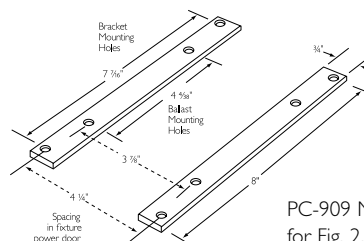
Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications	
					
35 or 55W Lamp, ANSI Code L70 or L71					
120/208/ 240/277	71A0490-001D	HX-PFC	7.5	✓	✓



PC-848 Mounting bracket for Fig. 1, 6, 7 & 9



PC-849 Mounting bracket for Fig. 2, 3a, 8, 8a & 10.



PC-909 Mounting bracket for Fig. 2, 3a & 8 when used with power-door roadway fixtures

- PC-848: To order individual packaged kits, specify PKG 848 (1 brackets with thru bolts).
- PC-849: To order individual packaged kits, specify PKG 849-2 (2 brackets with thru bolts).
- PC-848S: Bracket and thru bolts are included in 120V HPS Reactor Kits.



Tri-Tap Replacement Core & Coil Kits for Canada

Metal Halide

Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications	
					
70W Lamp, ANSI Code M98					
120/ 277/347	71A52A2-001D	HX-HPF	5.0	✓	✓
100W Lamp, ANSI Code M90					
120/ 277/347	71A53A0-001D	HX-HPF	5.5	✓	✓
175/150W Lamp, ANSI Code M57/M107					
120/ 277/347	71A55A0-001D	CWA	7.0	✓	✓
250W Lamp, ANSI Code M58					
120/ 277/347	71A57A0-001D	CWA	10.0	✓	✓
400W Lamp, ANSI Code M59					
120/ 277/347	71A60A1-001D	CWA	12.0	✓	✓
1000W Lamp, ANSI Code M47					
120/ 277/347	71A65A2-001	CWA	21.0	✓	✓
1500W Lamp, ANSI Code M48					
120/ 277/347	71A67A2-001	CWA	30.0	✓	✓

High Pressure Sodium

Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications	
					
70W Lamp, ANSI Code S62					
120/ 277/347	71A79A1-001D	HX-HPF	5.5	✓	✓
100W Lamp, ANSI Code S54					
120/ 277/347	71A80A1-001D	HX-HPF	7.5	✓	✓
150W Lamp, ANSI Code S55					
120/ 277/347	71A81A2-001D	HX-HPF	7.5	✓	✓
250W Lamp, ANSI Code S50					
120/ 277/347	71A82A1-001D	CWA	11.5	✓	✓
400W Lamp, ANSI Code S51					
120/ 277/347	71A84A3-001D	CWA	13.5	✓	✓
1000W Lamp, ANSI Code S52					
120/ 277/347	71A87A3-001	CWA	28.0	✓	✓

Pulse Start Metal Halide

Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications	
					
250W Lamp, ANSI Code M138 or M153 (Pulse Start)					
120/ 277/347	71A57A2-001D	Super CWA	9.5	✓	✓
320W Lamp, ANSI Code M132, M154 or M170 (Pulse Start)					
120/ 277/347	71A58A2-001D	Super CWA	11.0	✓	✓
400W Lamp, ANSI Code M135, M155 or M172 (Pulse Start)					
120/ 277/347	71A60A2-001D	Super CWA	11.0	✓	✓

New

New

New



HID Val-U-Pak Plus Replacement Kits

Val-U Pak Plus

HID installations just got simpler, more convenient – and significantly faster with the new Val-U-Pak Plus kits.



Why Should You Change All the Components?

HID fixtures are generally difficult to reach and to service. Subsequently, the cost of labor can often exceed the cost of the ballast and/or lamp. When the ballast, capacitor or ignitor reach end-of-life, it is recommended that all of these components in the fixture be replaced at the same time. It is equally suggested that the lamp also be replaced, assuring optimal performance of the system and eliminating the need to re-service the fixture during the entire life-cycle of the lamp.

Metal Halide

Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications	
				UL	SP
70W Lamp, ANSI Code M98 (Med) or M143 (Pulse Start)					
120/208/240/277	77L5292-001D-MED 77L5292-001D-MOG	HX-HPF	5.0	✓	✓
100W Lamp, ANSI Code M90 or M140 (Pulse Start)					
120/208/240/277	77L5390-001D	HX-HPF	5.5	✓	✓
150W Lamp, ANSI Code M102 or M142 (Pulse Start)					
120/208/240/277	77L5492-001D	HX-HPF	7.0	✓	✓
175/150W Lamp, ANSI Code M57/M107					
120/208/240/277	77L5570-001D	CWA	9.5	✓	✓
250W Lamp, ANSI Code M58					
120/208/240/277/480	77L5750-001D	CWA	14.0	✓	✓
400W Lamp, ANSI Code M59					
120/208/240/277/480	77L6051-001D	CWA	17.0	✓	✓
1000W Lamp, ANSI Code M47					
120/208/240/277/480	77L6552-001	CWA	29.0	✓	✓

Features of Val-U-Pak Plus:

- **Added Versatility** – 5-Tap core and coil ballast for the six most popular applications
*Adds the 480V input lead to the Quadri-Volt design
- **All Inclusive** – Premium grade clear lamp supplied in kit is warranted by Philips Lighting Electronics N.A.
- **Higher Wattage Options** – Philips Advance Class N (200°C) insulation system on 1000W units provides an additional 20°C margin for high ambient applications

High Pressure Sodium

Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications	
				UL	SP
50W Lamp, ANSI Code S68					
120/208/240/277	77L7891-001D	HX-HPF	7.3	✓	✓
70W Lamp, ANSI Code S62					
120/208/240/277	77L7971-001D-MED 77L7971-001D-MOG	HX-HPF	8.5	✓	✓
100W Lamp, ANSI Code S54					
120/208/240/277	77L8071-001D-MED 77L8071-001D-MOG	HX-HPF	8.5	✓	✓
150W Lamp, ANSI Code S55					
120/208/240/277	77L8172-001D-MED 77L8172-001D-MOG	HX-HPF	9.5	✓	✓
250W Lamp, ANSI Code S50					
120/208/240/277/480	77L8251-001D	CWA	15.0	✓	✓
400W Lamp, ANSI Code S51					
120/208/240/277/480	77L8453-001D	CWA	16.0	✓	✓
1000W Lamp, ANSI Code S52					
120/208/240/277/480	77L8753-001	CWA	31.0	✓	✓

Pulse Start Metal Halide with AllStart Lamps

Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications	
				UL	SP
145 Watt Lamp, ANSI Code C192 (Pulse Start) (Replaces 175W MH)					
120/208/240/277	AS145WQUADVPK	Super CWA	12.0	✓	✓
205 Watt Lamp, ANSI Code C184 (Pulse Start) (Replaces 250W MH)					
120/208/240/277	AS205WQUADVPK	Super CWA	14.0	✓	✓
330 Watt Lamp, ANSI Code C185 (Pulse Start) (Replaces 400W MH)					
120/208/240/277	AS330WQUADVPK	Super CWA	17.0	✓	✓

HIGH INTENSITY DISCHARGE BALLASTS

Ordering Information

We have developed the industry's broadest selection of HID ballasts. More than 3000 stocking distributors nationwide. For information on the distributor best able to serve your needs, please call 800-372-3331.

Philips Advance HID Ballast Part Number Explanation

71A	60	9	2	-500DAEE
Suffix Code* (as applicable) -001DB ballast replacement kit with dry capacitor and integral ignitor -001D ballast replacement kit with dry film capacitor -001 ballast replacement kit with oil filled capacitor -500D core & coil ballast with dry film capacitor -500 core & coil ballast with oil filled capacitor -510D core & coil ballast with welded bracket and dry film capacitor -510 core & coil ballast with welded bracket and oil filled capacitor -540D core & coil ballast with welded angle bracket and dry film capacitor -600 core & coil ballast (no capacitor) -610 core & coil ballast with welded bracket (no capacitor) * Add additional feature codes to the end of suffix where applicable. i.e. -B = Integral Ignitor, -P = Thermally Protected, -J = J-Box Mounting, -A = Aluminum Coil, -ML = "NOM" (with capacitor), -T = 120V Tap -EE = EISA Compliant Ballast				
Design Code				
60 Hz Voltages 50 Hz Voltages				
Input Voltage Code 0 = 120V 1 = 208V 2 = 240V 3 = 277V 4 = 480V 5 = 120/240V or 120/208/240/277/480V 6 = 240/480V 7 = 120/208/240/277V 8 = 120/277V 9 = 120/208/240/277V A = 120/277/347V B = 347V C = 120/347V D = 120/240/347V E = 120/208/240V or 208/240V F = 277/480V, 277/347V, 277/347/480V or 347/480V H = 127/220V J = 220V or 220/240V Y = 100V or 100/200V M = 100/200V N = 120/220-240V R = 220/240V				
Lamp Type/Wattage/Ballast Circuit Code				
Ballast Type 71A = Core and Coil Ballast 72C = F-Can Ballast 73B = Encapsulated Core and Coil Ballast 74P = Postline Ballast 77L = Val-U-Pak Plus Replacement Ballast kit (includes lamp) 78E = Indoor Enclosed Ballast 79W = Outdoor Weatherproof Ballast				



60 Hz Core & Coil Ballasts

Metal Halide



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor ^{††} (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	
								Fig	A	B								
35/39W Lamp, ANSI Code M130 (Pulse Start)																		
120	71A5005-500DP	HX-HPF	55	1.1	230	3	F	6	.9	1.8	28	120	7C280M12RA	D	2.2	LI533-H4	15	A
120/277	71A5081-500D	HX-HPF	56	.9/4	230	3/1	K	1	.8	2.1	5	280	7C050L30A	D	3.5	LI533-H4	15	B/A
277	71A5037-500DP	HX-HPF	48	.6	277	2	G	9	.8	1.9	5	280	7C050L30A	D	1.8	LI533-H4	7	A
277	71A5037-500DBP	R-HPF	48	.6	277	2	H	9	1.0	2.7	5	280	7C050L30A	D	1.9	Integral Ignitor	2	A
50W Lamp, ANSI Code M110 or M148 (Pulse Start)																		
120	71A5105-600P 71A5105-500DP	HX-NPF HX-PFC	69	2.0 1.1	260	5 3	F	6	1.0	1.9	28	120	7C280M12RA	D	2.1 2.3	LI533-H4	15	A
120/277	71A5181-001D	HX-HPF	72	1.0/5	260	3/2	K	1	1.2	2.1	6	280	7C060L30RA	D	4.0	LI533-H4	10	A/A
120/208/ 240/277	71A5191-500D 71A5191-001D	HX-HPF	67	1.2/.68/ .59/.51	254	3/3/ 2/2	K	1	1.2	2.3	6	280	7C060L30RA	D	4.0	LI533-H4	10	A/A A/A
277	71A5137-510DP	R-HPF	62	.6	277	2	G	9	1.1	2.2	5	280	7C050L30A	D	2.2	LI533-H4	2	A
277	71A5137-500DBP	R-HPF	62	.6	277	2	H	9	1.1	2.6	5	280	7C050L30A	D	2.2	Integral Ignitor	2	A

[†] Ordering information:

Replacement/retrofit ballast kits – indicated by bold type and -001D or -001 suffix. Refer to pages 5-5 to 5-9 for more information on replacement kits.

Original equipment ballasts – typically ordered with capacitor (as shown).

-500D includes core & coil with dry-film capacitor.

-500 includes core & coil with oil-filled capacitor (required for higher wattage ballasts).

May also be available with welded bracket, and/or without capacitor:

-510D includes core & coil with welded bracket and dry-film capacitor.

-510 includes core & coil with welded bracket and oil-filled capacitor.

-600 core & coil only (no capacitor).

-610 core & coil with welded bracket (no capacitor).

^{††} Each ballast requiring an ignitor is furnished standard with a short-range ignitor model shown for use within fixtures. long-range ignitors are available separately if required. See pages 5-40 to 5-44 for additional information.

• **Maximum Input Current** – For HX and R circuits, value is the highest of starting, operating or open circuit current. For CWA, SCWA and CWI circuits, value is the operating current.

NOM Certified ballast available for Mexican market. Add "ML" to suffix (example -500DML). Ballast is branded Philips.

✧ Canadian replacement/retrofit ballast kit indicated by bold type. Refer to page 5-9.

✧ Includes auto-reset thermal protection.

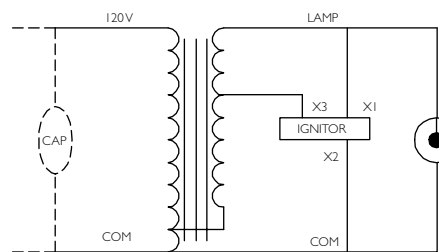


Fig. F

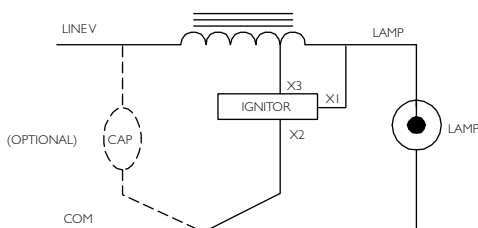


Fig. G

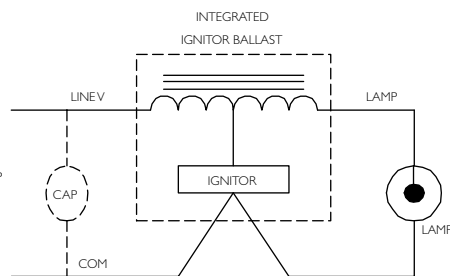


Fig. H

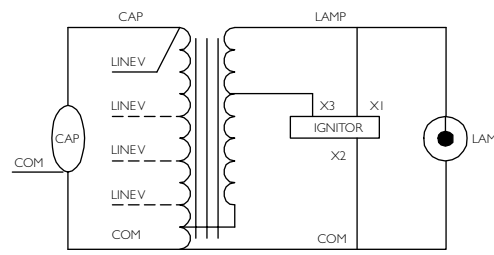


Fig. K



60 Hz Core & Coil Ballasts

Metal Halide



Input Volts	Catalog† Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)	
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)		
								Fig	A	B									
70W Lamp, ANSI Code M98 (Medium Base) or M143 (Pulse Start)																			
120	71A5205-500DP	HX-PFC	94	1.4	255	4	F	6	1.6	2.7	36	120	7C360M12RA	D	3.7	LI533-H4	10	B	✦
127/220	71A52H2-500DML	HX-HPF	90	1.9/1.9	255	4/2	K	I	1.5	2.8	8	280	7C080L30RA	D	5.0	LI533-H4	15	A/A	NOM
120/208/240/277	71A5292-500D 71A5292-001D	HX-HPF	90	1.9/1.0/.9/1.8	255	4/3/2/2	K	I	1.5	2.8	8	280	7C080L30RA	D	5.0	LI533-H4	15	A/A/A/A	NOM
120/277/347	71A52A2-500D 71A52A2-001D	HX-HPF	90	1.9/.8/1.7	255	4/2/2	K	I	1.5	2.8	8	280	7C080L30RA	D	5.0	LI533-H4	15	A/A/A	✦
277	71A5237-500DP	R-HPF	85	.8	277	2	G	9	1.6	2.7	8	280	7C080L30RA	D	2.9	LI533-H4	10	A	✦
277	71A5237-500DBP	R-HPF	85	.8	277	2	H	9	1.5	2.9	8	280	7C080L30RA	D	2.9	Integral Ignitor	2	A	✦
70W Lamp, ANSI Code M139 (Philips CDM70/T6, CDM70/TD) (Pulse Start)																			
120/277/347	71A52A1-500D	HX-HPF	94	1.9/.8/1.65	255	4/2/2	K	I	1.5	2.8	8	280	7C080L30RA	D	5.0	LI533-H4	5	A/A/A	
70W Double-ended Lamp, ANSI Code M85 (OSI Briteline/HQI, GE MQI ARC70/TD, Philips MHN70/TD) (Pulse Start)																			
120/277	71A5280-500D	HX-HPF	94	1.6/1.7	245	4/2	K	I	1.5	2.7	8	280	7C080L30RA	D	5.5	LI522-H5	30	A/A	

WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
1, 6	5.1	1.00	4.50	0.25
9	4.0	0.75	3.50	0.28

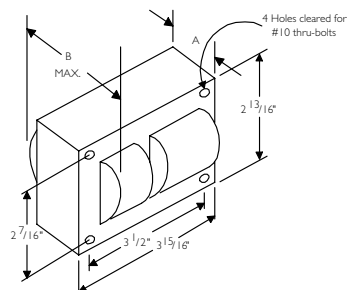
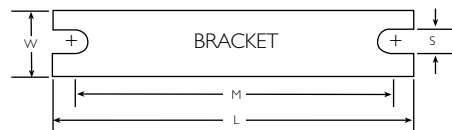


Fig. 1
(3" x 4" Core)

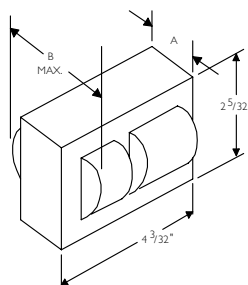


Fig. 6
(2" x 4" Core)

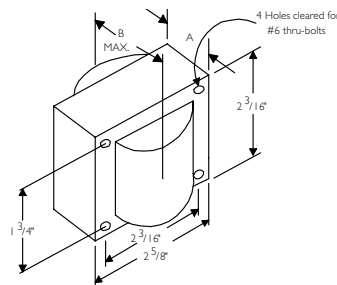


Fig. 9
(2 5/8" x 2 3/16" Reactor Core)



60 Hz Core & Coil Ballasts

Metal Halide



Input Volts	Catalog† Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	
								Fig	A	B								
100W Lamp, ANSI Code M90 or M140 (Pulse Start)																		
127/220	71A53H0-500DML	HX-HPF	129	2.2/1.3	280	5/3	K	I	1.7	2.9	12	280	7C120M30RA	D	5.5	LI533-H4	20	A/B
120/208 240/277	71A5390-500D 71A5390-001D	HX-HPF	129	2.3/1.4/ 1.2/1.0	265	6/4/ 3/3	K	I	1.5	2.8	12	280	7C120M30RA	D	5.5	LI533-H4	20	B/C/ A/A
120/ 277/347	71A53A0-500D 71A53A0-001D	HX-HPF	129	2.6/ 1.2/1.0	280	6/ 3/2	K	I	1.7	2.9	12	280	7C120M30RA	D	5.5	LI533-H4	25	B/ B/B
480/ 120T	71A5340-500DT	HX-HPF	132	.6	260	2	K	I	1.7	2.9	10	300	7C100M30RA	D	5.5	LI533-H4	25	C
120/277	71A5383-500D	SUPER CWA	128	1.1/5	222	3/2	M	I	1.6	2.8	10	330	7C100M40R	D	5.5	LI533-H4	2	C/C
277	71A5337-500DP	R-HPF	118	1.1	277	3	G	9	1.7	2.8	10	280	7C100M30RA	D	3.2	LI533-H4	2	A
277	71A5337-510DBP	R-HPF	118	1.1	277	3	H	9	1.8	3.1	10	280	7C100M30RA	D	3.2	Integral Ignitor	2	A

[†] Ordering information:

Replacement/retrofit ballast kits – indicated by bold type and -001D or -001 suffix. Refer to pages 5-5 to 5-9 for more information on replacement kits.

Original equipment ballasts – typically ordered with capacitor (as shown).

-500D includes core & coil with dry-film capacitor.

-500 includes core & coil with oil-filled capacitor (required for higher wattage ballasts).

May also be available with welded bracket, and/or without capacitor:

-510D includes core & coil with welded bracket and dry-film capacitor.

-510 includes core & coil with welded bracket and oil-filled capacitor.

-600 core & coil only (no capacitor).

-610 core & coil with welded bracket (no capacitor).

^{††} Each ballast requiring an ignitor is furnished standard with a short-range ignitor model shown for use within fixtures. long-range ignitors are available separately if required. See pages 5-40 to 5-44 for additional information.

• **Maximum Input Current** – For HX and R circuits, value is the highest of starting, operating or open circuit current. For CWA, SCWA and CWI circuits, value is the operating current.

NOM Certified ballast available for Mexican market. Add "ML" to suffix (example -500DML). Ballast is branded Philips.

✦ Canadian replacement/retrofit ballast kit indicated by **bold type**. Refer to page 5-9.

✦ Includes auto-reset thermal protection.

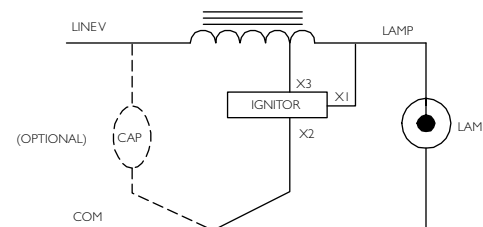


Fig. G

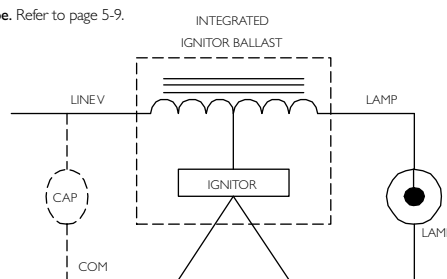


Fig. H

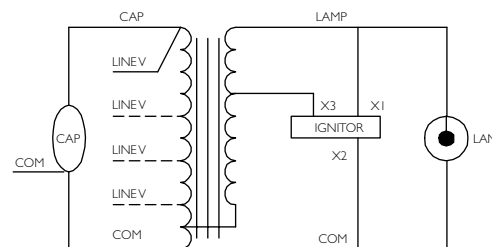


Fig. K

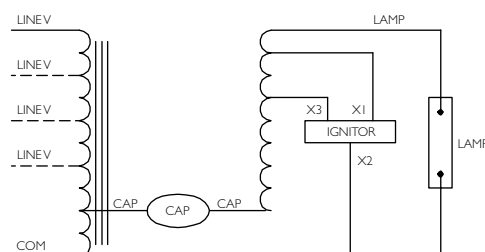


Fig. L

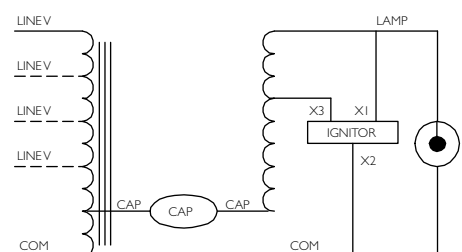


Fig. M



60 Hz Core & Coil Ballasts

Metal Halide



Input Volts	Catalog† Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	
								Fig	A	B								
145W Lamp (Pulse Start), ANSI Code C192 (Philips AllStart)																		
480/ 120T	ASI45W480T- 500D	Super CWA	180	0.48	275	I	M	I	2.2	3.5	II	400	7C110M40	D	7.4	LI533-H4	2	C
120/208 240/277	ASI45WQUAD- 500D	Super CWA	179	1.9/1.3/ .95/8	275	5/3/ 3/2	M	I	2.2	3.5	II	400	7C110M40	D	7.4	LI533-H4	2	E/E/ D/D
150W Lamp, ANSI Code M102 or M142 (Pulse Start)																		
120/208 240/277	71A5492-500D 71A5492-001D	HX-HPF	185	3.7/2.1/ 1.8/1.6	265	10/5/ 5/4	K	I	2.3	3.9	I6	280	7C160M30RA	D	7.0	LI533-H4	10	C/C/ C/C
480/ 120T	71A5442-500DT	HX-HPF	185	.9	270	3	K	I	2.8	4.0	I6	280	7C160M30RA	D	9.0	LI533-H4	10	B
120/ 277/347	71A54A2-500D	HX-HPF	185	3.7/ 1.6/1.3	265	10/ 4/3	K	I	2.3	3.9	I6	280	7C160M30RA	D	7.0	LI533-H4	10	E/ E/E
480/ 120T	71A5443-520DT	Super CWA	185	0.4	215	5	M	I	2.4	3.75	I6	300	7C160M30RA	D	7.5	LI501-J4	5	C
120/208 240/277	71A5493-500D 71A5493-001D	Super CWA	190	1.9/1/ .95/8	215	5/2.5/ 2/2	M	I	2.4	3.75	I6	300	7C160M30RA	D	8.3	LI501-J4	5	D/C/ C/C
120/ 277/347	71A54A3-500D	Super CWA	189	1.7/ .8/7	187	5/ 2/2	L	I	2.7	4.0	22	240	7C220M24RA	D	9.0	LI501-J4	15	C/ B/A
277	71A5437-500DBP	Linear Reactor HPF	173	1.5	277	4	H	9	2.5	4.0	I4	280	7C140M30RA	D	4.2	Integral Ignitor	2	B
150W Lamp, ANSI Code M81 (OSI Briteline/HQI, GE Arcstream MQI, Philips MHN-TD) (Pulse Start)																		
120/208/ 240/277	71A5490-500D	HX-HPF	185	3.6/2.1/ 1.8/1.6	240	9/6/ 5/4	K	I	2.5	3.8	I6	300	7C160M30RA	D	8.5	LI522-H5	20	C/C/ A/A

New

New

NOM

NOM

NOM

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WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
I	5.1	1.00	4.50	0.25
9	4.0	0.75	3.50	0.28

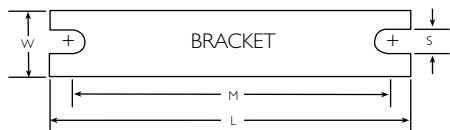


Fig. 1
(3" x 4" Core)

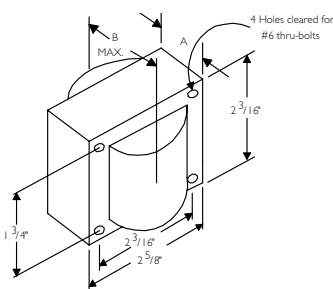
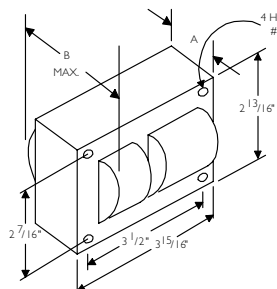


Fig. 9
(2 5/8" x 2 3/16" Reactor Core)



60 Hz Core & Coil Ballasts

Metal Halide



	Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max Input Current [*]	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor ^{††} (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)
												Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	
									Fig	A	B								
	175W Lamp, ANSI Code M57 or 150 Watt Lamp, ANSI Code M107 or 145W lamp, ANSI Code C192 (Philips AllStart)**																		
	480	71A5540-001D	CWA	210	0.5	305	2	A	I	2.5	4.0	10	400	7C100M40R	D	8.5	NA	NA	D
NOM	127/220	71A55H0-500DML	CWA	210	1.8/1.1	305	5/3	A	I	2.5	3.8	10	400	7C100M40R	D	8.0	NA	NA	B/B
NOM	120/208 240/277	71A5590-500D	CWA	210	1.8/1.1/ .9/8	305	5/3/ 3/2	A	I	2.5	3.7	10	400	7C100M40R	D	7.0	NA	NA	C/D/ D/D
	120/208 240/277	71A5570-001D	CWA	210	1.8/1.1/ .9/8	305	5/3/ 3/2	A	I	2.5	3.7	10	400	7C100M40R	D	7.5	NA	NA	C/D/ D/D
🇨🇦	120/ 277/347	71A55A0-500D 71A55A0-001D	CWA	210	1.8/ .8/7	305	5/ 2/2	A	I	2.5	3.7	10	400	7C100M40R	D	7.0	NA	NA	C/ C/D
	175W Lamp, ANSI Code M137 or M152 (Pulse Start) or 145W Lamp, ANSI Code I92 (Philips AllStart)**																		
ⓔ	480/120T	71A5541-500DTEE	Super CWA	198	.04	285	2	M	2	1.8	3.4	11	370	7C110M40	D	10.0	LI533-H4	2	A
ⓔ	120/208 240/277	71A5591-500DEE	Super CWA	198	1.7/1.0/ .8/7	285	5/3/ 3/2	M	2	1.7	3.3	11	370	7C110M40	D	10.5	LI533-H4	2	A/A/ A/A
ⓔ ◆	480/120T	71A5543-500DTEE	Super CWA	198	.04	278	2	M	I	3.1	4.2	11	370	7C110M40	D	9.4	LI533-H4	2	A
ⓔ ◆	120/208 240/277	71A5593-500DEE	Super CWA	198	1.7/1.0/ .9/8	285	5/3/ 3/2	M	I	3.2	4.4	11	370	7C110M40	D	9.7	LI533-H5	2	A/A/ A/A
NOM	120/208 240/277	71A5593-500DML 71A5593-001D	Super CWA	208	1.9/1.1/ .9/8	275	5/3/ 3/3	M	I	2.3	3.5	11	370	7C110M40	D	7.0	LI533-H4	2	C/C/ C/C
🇨🇦	120/ 277/347	71A55A3-500D	Super CWA	208	1.9/ .9/7	275	5/ 3/2	M	I	2.3	3.5	11	370	7C110M40	D	7.0	LI533-H4	2	C/ C/C

[†] Ordering information:

Replacement/retrofit ballast kits – indicated by bold type and -001D or -001 suffix. Refer to pages 5-5 to 5-9 for more information on replacement kits.

Original equipment ballasts – typically ordered with capacitor (as shown).

-500D includes core & coil with dry-film capacitor.

-500 includes core & coil with oil-filled capacitor (required for higher wattage ballasts).

May also be available with welded bracket, and/or without capacitor:

-510D includes core & coil with welded bracket and dry-film capacitor.

-510 includes core & coil with welded bracket and oil-filled capacitor.

-600 core & coil only (no capacitor).

-610 core & coil with welded bracket (no capacitor).

^{††} Each ballast requiring an ignitor is furnished standard with a short-range ignitor model shown for use within fixtures. long-range ignitors are available separately if required. See pages 5-40 to 5-44 for additional information.

• **Maximum Input Current** – For HX and R circuits, value is the highest of starting, operating or open circuit current. For CWA, SCWA and CWI circuits, value is the operating current.

^{**} The 145 Watt Lamp, ANSI Code C192, is an energy saving, screw in replacement lamp for the M57 or M152 lamps, that may reduce input watts up to 15% on existing 175W ballasts.

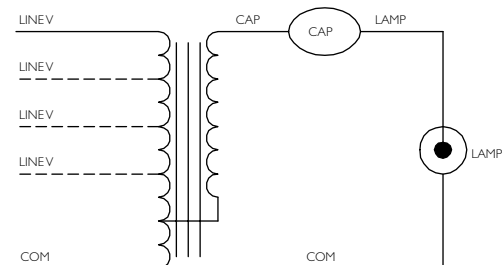


Fig. A

NOM Certified ballast available for Mexican market. Add "ML" to suffix (example -500DML). Ballast is branded Philips.

Canadian replacement/retrofit ballast kit indicated by **bold type**. Refer to page 5-9.

Includes auto-reset thermal protection.

Compact 3 x 4 core design

E Meets EISA 88% efficiency requirements.

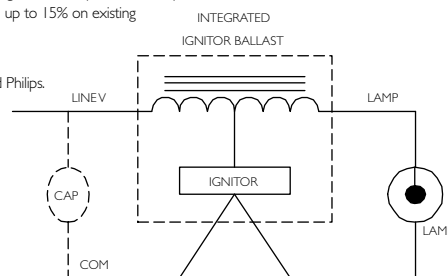


Fig. H

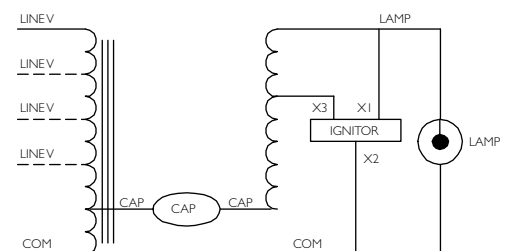


Fig. M



60 Hz Core & Coil Ballasts

Metal Halide



Input Volts	Catalog† Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)			
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)				
								Fig	A	B											
200W Lamp, ANSI Code M136 (Pulse Start)																					
480/120T	71A5642-500DTEE	Super CWA	227	0.5	242	2	M	I	2.9	4.2	15	330	7C150M33	D	8.7	LI533-H4	2	A			
120/208/240/277	71A5692-500DEE	Super CWA	227	2.2/1.3/1.1/1.0	242	6/4/3/3	M	I	3.0	4.2	15	33	7C150M33	D	8.8	LI533-H4	2	A/A/A/A			
120/208/240/277	71A5692-001D	Super CWA	232	2.0/1.2/1.0/0.9	240	6/4/3/3	M	I	2.5	3.6	15	330	7C150M33	D	8.0	LI533-H4	2	A/B/A/A			
120/277/347	71A56A2-500D	Super CWA	232	2.1/0.9/0.7	235	6/3/2	M	I	2.5	3.6	15	330	7C150M33	D	8.0	LI533-H4	2	C/A/A			
120/208/240/277	71A5693-500DEE	Super CWA	226	1.9/1.2/1.0/0.9	250	5/3/3/2	M	2	1.7	3.6	15	330	7C150M33	D	11.3	LI533-H4	2	A/A/A/A			
205W Lamp (Pulse Start), ANSI Code C184 (Philips AllStart)																					
480/120T	AS205W480T-500DEE	Super CWA	232	0.49	280	2	M	2	1.9	3.7	16	400	7C160P40	D	12.9	LI533-H4	2	A			
120/208/240/277	AS205WQUAD-500DEE	Super CWA	232	2.0/1.1/1.0/0.86	280	5/3/3/2	M	2	1.7	3.7	16	400	7C160P40	D	11.8	LI533-H4	2	A/A/A/A			



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Metal Halide

WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
1	5.1	1.00	4.50	0.25
2, 10	6.5	1.25	5.75	0.28

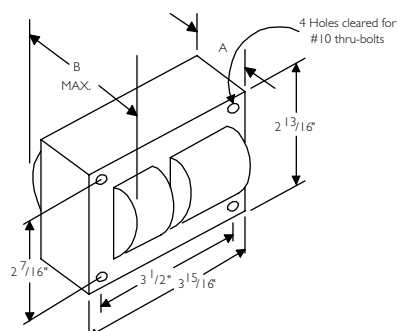
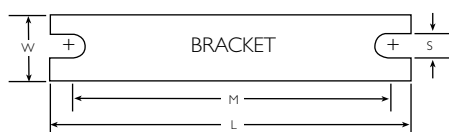


Fig. 1
(3" x 4" Core)

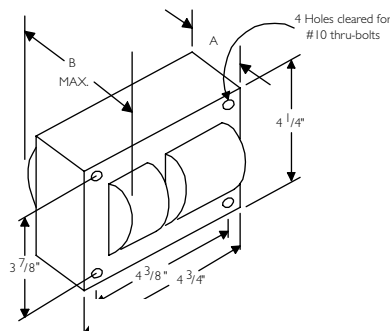


Fig. 2
(4 1/4" x 4 3/4" Core)

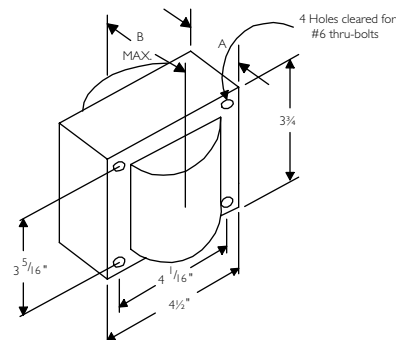


Fig. 10
(4 1/2" x 3 3/4" Reactor Core)



60 Hz Core & Coil Ballasts

Metal Halide



Input Volts	Catalog† Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	
								Fig	A	B								
250W Lamp, ANSI Code M58 or 205W Lamp, ANSI Code C184 (Philips AllStart)***																		
120/208/ 240/277/ 480	71A5750-001D	CWA	290	2.6/1.5/ 1.4/1.1/ .7	315	8/5/ 5/3/ 2	A	2	1.6	3.1	15	400	7C150P40R	D	10.0	—	—	A/A/ B/A/ B
120/208 240/277	71A5770-001D	CWA	295	2.5/1.4 1.3/1.1	300	8/5/ 5/3	A	2	1.5	3.0	15	400	7C150P40R	D	9.0	—	—	A/A B/A
120/208 240/277	71A5790-500DMLA	CWA	295	2.5/1.4 1.3/1.1	300	8/5/ 5/3	A	2	1.5	3.0	15	400	7C150P40R	D	9.0	—	—	A/A/ B/A
120/208 240/277	71A5790-500DA	CWA	298	2.5/1.5 1.3/1.1	300	8/5/ 5/3	A	2	1.5	3.15	15	400	7C150P40R	D	8.0	—	—	B/B/ B/B
120/ 277/347	71A57A0-500D 71A57A0-001D	CWA	295	2.5/ 1.1/9	315	8/ 3/3	A	2	1.7	3.1	15	400	7C150P40R	D	10.0	—	—	A/ A/A
120/ 277/347	71A57A0-600A	CWA	295	2.5/ 1.1/9	315	8/ 3/3	A	2	1.7	3.1	15	400	7C150P40R	D	9.0	—	—	A/A A/A
127/220	71A57H0-500DMLA	CWA	295	2.6/1.5	300	8/5	A	2	1.65	3.15	15	400	7C150P40R	D	10.0	—	—	A/B
480	71A5741-001D	CWA	298	.7	300	2	A	1	3.0	4.2	15	400	7C150P40R	D	9.0	—	—	H
120/208 240/277	71A5771-001D	CWA	294	2.6/1.5/ 1.3/1.1	300	8/5/ 5/3	A	1	3.0	4.2	15	400	7C150P40R	D	9.0	—	—	C/C/ D/D
120/208 240/277	71A5791-500D	CWA	294	2.6/1.5/ 1.3/1.1	300	8/5/ 5/3	A	1	3.0	4.2	15	400	7C150P40R	D	9.0	—	—	C/C/ D/D

[†] Ordering information:

Replacement/retrofit ballast kits – indicated by bold type and -001D or -001 suffix. Refer to pages 5-5 to 5-9 for more information on replacement kits.

Original equipment ballasts – typically ordered with capacitor (as shown).

-500D includes core & coil with dry-film capacitor.

-500 includes core & coil with oil-filled capacitor (required for higher wattage ballasts).

May also be available with welded bracket, and/or without capacitor:

-510D includes core & coil with welded bracket and dry-film capacitor.

-510 includes core & coil with welded bracket and oil-filled capacitor.

-600 core & coil only (no capacitor).

-610 core & coil with welded bracket (no capacitor).

^{††} Each ballast requiring an ignitor is furnished standard with a short-range ignitor model shown for use within fixtures. Long-range ignitors are available separately if required. See pages 5-40 to 5-44 for additional information.

• **Maximum Input Current** – For HX and R circuits, value is the highest of starting, operating or open circuit current. For CWA, SCWA and CWI circuits, value is the operating current.

• **The 205 Watt Lamp, ANSI Code C184** is an energy saving, screw in replacement lamp for the M58 or M138 and M153 PS lamps that may reduce input watts up to 18% on existing ballasts. This lamp requires the use of the dedicated AS205W ballast family in order to achieve the 88% efficiency requirement of EISA in new fixtures.

Certified ballast available for Mexican market.

Add "ML" to suffix (example -500DML). Ballast is branded Philips.

Canadian replacement/retrofit ballast kit indicated by **bold type**. Refer to page 5-9.

Includes auto-reset thermal protection.

Compact 3 x 4 core design

ⓔ Meets EISA 88% efficiency requirements.

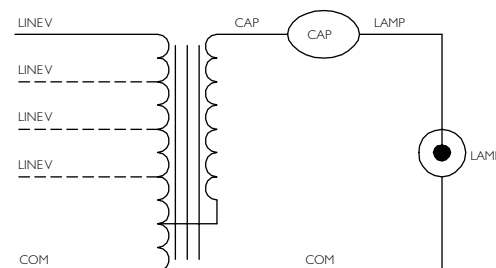


Fig. A

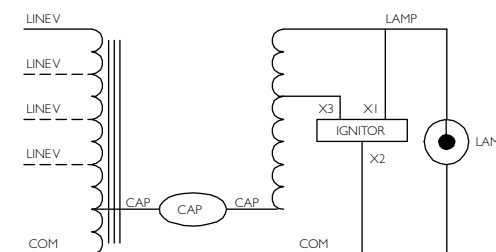


Fig. M

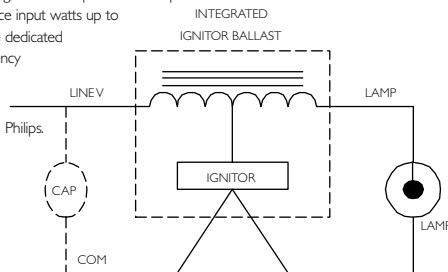


Fig. H



Ballast Dimensions Fig	L	W	M	S
1	5.1	1.00	4.50	0.25
2, 10	6.5	1.25	5.75	0.28

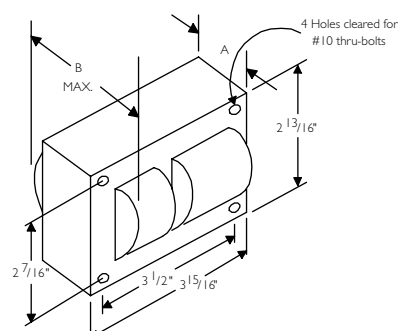
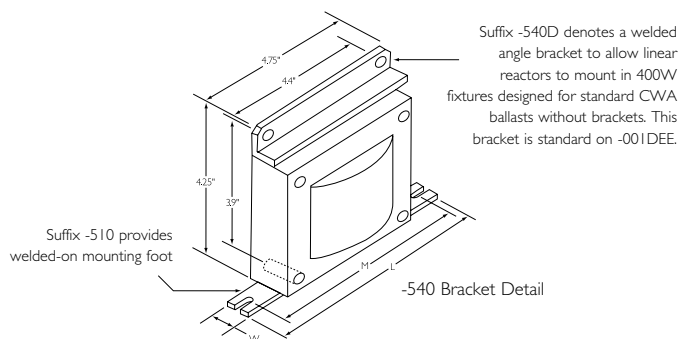
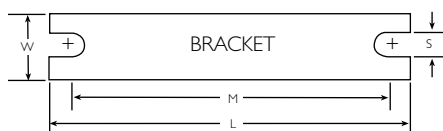


Fig. 1
(3" x 4" Core)

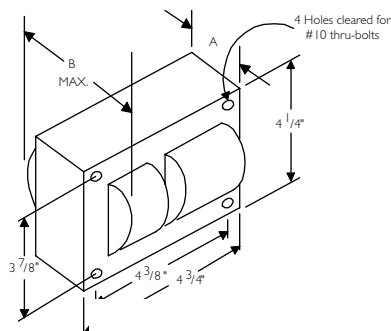


Fig. 2
(4¼" x 4¾" Core)

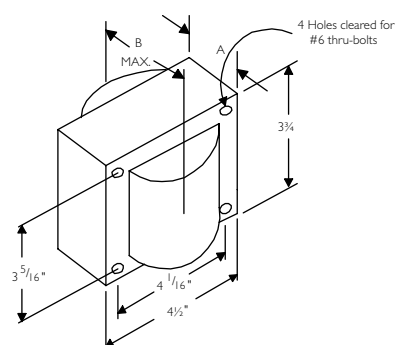


Fig. 10
(4½" x 3¾" Reactor Core)



60 Hz Core & Coil Ballasts

Metal Halide



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor ^{††} (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)	
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)		
								Fig	A	B									
320W Lamp, ANSI Code M132 or M154 or M170 (Pulse Start)																			
277	71A5837-600BP EE 71A5837-001DEE	Linear Reactor HPF	342	1.9	277	5	H	10	1.7	3.8	17.5	300	7C175M30RA	D	9.5	Integral Ignitor	15	A	
480/ 120T	71A5842-500DTAEE	Super CWA	363	0.8	275	3	M	2	2.2	4.0	21	345	7C210P40R	D	11.0	LI533-H4	2	D	
120/208/ 240/277/ 480	71A5852-500DAEE 71A5852-001D	Super CWA	363	3.3/1.9/ 1.7/1.4/ 0.8	290	10/7/ 5/5/ 5	M	2	2.2	4.2	21	345	7C210P40R	D	11.8	LI533-H4	15	A/B/ A/A/ A	
120/208/ 240/277	71A5892-500DAEE	Super CWA	363	3.3/1.9/ 1.7/1.4	280	8/6/ 5/3	M	2	2.1	3.8	21	345	7C210P40R	D	11.0	LI533-H4	2	A/A/ A/A	
480/ 120T	71A5842-001DT	Super CWA	368	0.8	270	3	M	2	1.8	3.7	21	345	7C210P40R	D	11.0	LI533-H4	2	D	
120/208/ 240/277	71A5892-500DMLA 71A5892-001D	Super CWA	368	3.3/1.9/ 1.7/1.4	270	8/6/ 5/3	M	2	1.8	3.7	21	345	7C210P40R	D	11.0	LI533-H4	2	B/B/ B/B	
120/ 277/347	71A58A2-500DA 71A58A2-001D	Super CWA	368	3.3/ 1.4/1.1	280	8/ 4/3	M	2	1.8	3.7	21	345	7C210P40R	D	10.0	LI533-H4	2	C/ C/C	
330W Lamp (Pulse Start), ANSI Code C185 (Philips AllStart)**																			
480/ 120T	AS330W480T- 500DAEE	Super CWA	374	0.8	285	3	M	2	2.5	4.3	26	330	7C260P33R	D	14.5	LI533-H4	2	A	
120/208/ 240/277	AS330WQUAD- 500DAEE	Super CWA	374	3.4/2.0/ 1.7/1.5	280	10/7/ 7/5	M	2	2.4	4.2	26	330	7C260P33R	D	14.0	LI533-H4	2	A/A/ A/A	

† Ordering information:

Replacement/retrofit ballast kits – indicated by bold type and -001D or -001 suffix. Refer to pages 5-5 to 5-9 for more information on replacement kits.

Original equipment ballasts – typically ordered with capacitor (as shown).

-500D includes core & coil with dry-film capacitor.

-500 includes core & coil with oil-filled capacitor (required for higher wattage ballasts).

May also be available with welded bracket, and/or without capacitor:

-510D includes core & coil with welded bracket and dry-film capacitor.

-510 includes core & coil with welded bracket and oil-filled capacitor.

-600 core & coil only (no capacitor).

-610 core & coil with welded bracket (no capacitor).

†† Each ballast requiring an ignitor is furnished standard with a short-range ignitor model shown for use within fixtures. long-range ignitors are available separately if required. See pages 5-40 to 5-44 for additional information.

• **Maximum Input Current** – For HX and R circuits, value is the highest of starting, operating or open circuit current. For CWA, SCWA and CWI circuits, value is the operating current.

** The 330 Watt Lamp, ANSI Code C185 is an energy saving, screw in replacement lamp for the M59 or M135 and M155 PS lamps that may reduce input watts up to 18% on existing ballasts.

NOM Certified ballast available for Mexican market. Add "ML" to suffix (example: -500DML). Ballasts are branded Philips.

⊕ Canadian replacement/retrofit ballast kit indicated by bold type. Refer to page 5-9.

⊕ Includes auto-reset thermal protection.

◆ Compact 3 x 4 core design

⊕ Meets EISA 88% efficiency requirements.

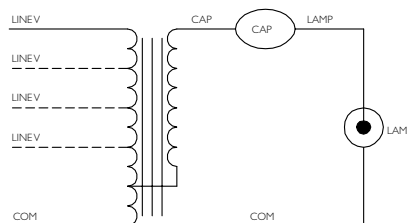


Fig. A

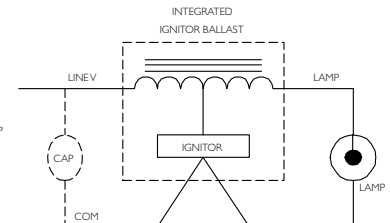


Fig. H

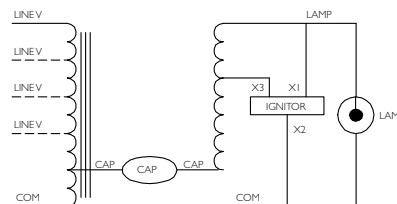


Fig. M

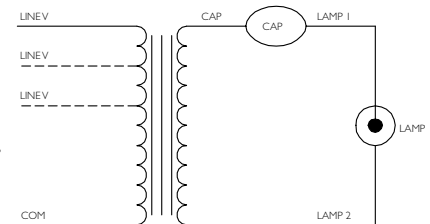


Fig. P



60 Hz Core & Coil Ballasts

Metal Halide



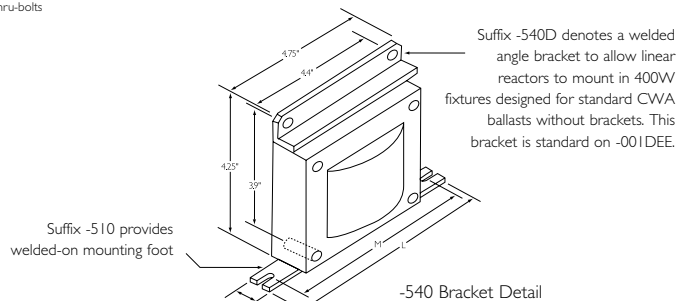
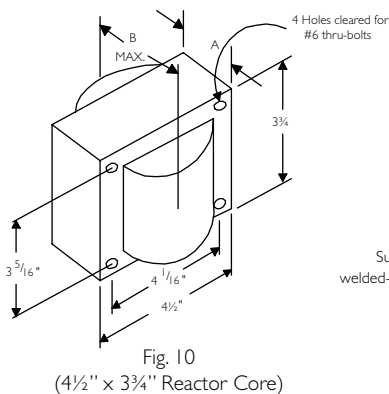
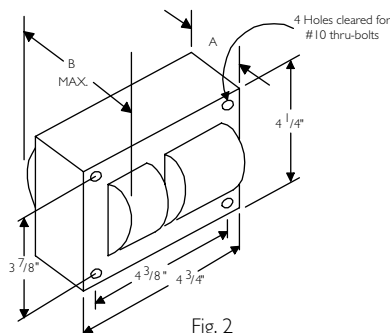
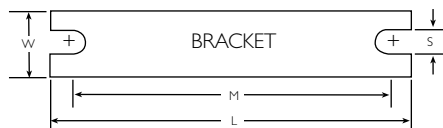
	Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)
												Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	
									Fig	A	B								
350W Lamp, ANSI Code M131 or M171 (Pulse Start)																			
ⓔ	277	71A5937-001DEE	Linear Reactor HPF	375	2.1	277	5	H	10	1.9	4.0	20	280	7C200P30RA	D	10.0	Integral Ignitor	2	A
ⓔ	480/120T	71A5943-500DTAEE	Super CWA	397	0.9	280	3	M	2	2.2	4.1	22.5	345	7C225P40	D	11.0	LI533-H4	2	B
ⓔ	120/208/240/277/480	71A5953-500DAEE 71A5953-001D	Super CWA	397	3.4/2.0/1.7/1.5/0.9	285	10/7/5/5/5	M	2	2.2	4.1	22.5	345	7C225P40	D	11.2	LI533-H4	2	B/C/B/B/B
ⓔ	120/208/240/277	71A5993-500DAEE	Super CWA	397	3.4/2.0/1.7/1.5	270	10/7/5/5	M	2	2.2	4.1	22.5	345	7C225P40	D	11.6	LI533-H4	2	D/C/C/C
NOM	120/208/240/277	71A5993-500DMLA 71A5993-001D	Super CWA	400	3.4/2.0/1.7/1.5	270	10/7/5/5	M	2	1.8	3.7	22.5	345	7C225P40	D	11.0	LI533-H4	2	D/C/C/C
	120/277/347	71A59A3-500D	Super CWA	400	3.4/1.5/1.2	280	10/5/3	M	2	1.8	3.7	22.5	345	7C225P40	D	10.5	LI533-H4	2	D/C/C
400W Lamp, ANSI Code M59, or 360W Lamp, ANSI Code M165, or 330W Lamp, ANSI Code C185 (Philips AllStart)**																			
	480	71A6041-500DMLA	CWA	462	1.0	300	4	A	2	2.1	4.0	24	400	7C240P40R	D	12.0	—	—	E
	480/120T	71A6041-001D 71A6041-500DTA	CWA	462	1.0	300	4	A	2	2.2	4.0	24	400	7C240P40R	D	12.0 11.0	—	—	E E
	120/208/240/277/480	71A6051-001D	CWA	460	4.1/2.3/2.0/1.7/1.0	300	10/7/5/5/3	A	2	2.3	4.0	24	400	7C240P40R	D	14.0	—	—	D/C/D/C/D
	120/208/240/277	71A6071-001D	CWA	458	4.0/2.3/2.0/1.7	300	10/7/5/5	A	2	2.1	4.0	24	400	7C240P40R	D	11.5	—	—	D/E/D/E
NOM	120/208/240/277	71A6091-500DA	CWA	458	4.0/2.3/2.0/1.7	300	10/7/5/5	A	2	2.1	4.0	24	400	7C240P40R	D	11.5	—	—	D/E/D/E
🇨🇦	120/277/347	71A60A1-500DA 71A60A1-001D	CWA	460	4.0/1.7/1.4	300	10/5/4	A	2	2.1	4.0	24	400	7C240P40R	D	12.0	—	—	D/D/D
NOM	127/220	71A60H1-500DMLA	CWA	458	3.9/2.2	300	10/7	A	2	2.1	4.0	24	400	7C240P40R	D	11.5	—	—	F/F
	120/208/240	71A60E6-500	CWI	465	4.2/2.5/2.1	320	10/7/5	P	2	2.4	4.0	20	425	MD2006-100	O	14.0	—	—	E/D/D

NOM

HID • Core & Coil
Metal Halide

WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
2, 10	6.5	1.25	5.75	0.28





60 Hz Core & Coil Ballasts

Metal Halide



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor ^{††} (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	
								Fig	A	B								
400W Lamp, ANSI Code M135 or M155 or M172 (Pulse Start), or 330W Lamp, ANSI Code C185 (Philips AllStart)**																		
277	71A6137-001D	Linear Reactor HPF	425	2.1	277	5	H	10	1.6	3.8	20	280	7C200P30RA	D	9.0	Integral Ignitor	2	A
480/ 120T	71A6042-500DTAE 71A6042-001D	Super CWA	452	1.0	270	3	M	2	2.1	3.9	26	330	7C260P33R	D	14.5	LI533-H4	10	D
120/208/ 240/277/ 480	71A6052-500DAEE 71A6052-001D	Super CWA	454	3.8/2.2/ 1.9/1.7/ 1.0	275	10/7/ 5/5/ 3	M	2	2.2	4.3	26	330	7C260P33R	D	14.0	LI533-H4	10	B/D/ D/B/ D
120/208/ 240/277	71A6092-500DAEE 71A6092-001DEE	Super CWA	452	3.8/2.2/ 1.9/1.7	270	10/7/ 5/5	M	2	2.2	4.2	26	330	7C260P33R	D	13.2	LI533-H4	10	C/D/ D/D
480/ 120T	71A6042-001D	Super CWA	452	1.0	270	3	M	2	2.1	3.9	26	330	7C260P33R	D	14.5	LI533-H4	10	D
120/208/ 240/277	71A6092-500DMLA 71A6092-001D	Super CWA	452	3.8/2.2/ 1.9/1.7	265	10/7/ 5/5	M	2	2.2	4.2	26	330	7C260P33R	D	11.0	LI533-H4	10	D/C/ D/D
120/ 277/347	71A60A2-500DA 71A60A2-001D	Super CWA	450	3.8/ 1.7/1.4	270	10/ 5/4	M	2	2.0	3.9	26	330	7C260P33R	D	11.0	LI533-H4	10	C/ C/C
120/ 208/240	71A61E6-500D	Super CWI	455	4.1/ 2.4/2.1	265	10/ 7/5	V	2	2.2	3.8	26	330	7C260P33R	D	13.0	LI533-H4	2	E/ C/C
450W Lamp, ANSI Code M144 (Pulse Start)																		
480/ 120T	71A6343-500DTEE	Super CWA	514	1.1	267	3	M	2	2.4	4.2	26.5	360	7C265P40R	D	14.0	LI533-H4	5	D
120/208/ 240/277	71A6393-500DEE	Super CWA	508	4.3/2.5/ 2.2/1.9	257	10/8/ 5/5	M	2	2.3	3.9	26.5	360	7C265P40R	D	13.5	LI533-H4	5	C/C/ C/C

† Ordering information:

Replacement/retrofit ballast kits – indicated by bold type and -001D or -001 suffix. Refer to pages 5-5 to 5-9 for more information on replacement kits.

Original equipment ballasts – typically ordered with capacitor (as shown).

-500D includes core & coil with dry-film capacitor.

-500 includes core & coil with oil-filled capacitor (required for higher wattage ballasts).

May also be available with welded bracket, and/or without capacitor:

-510D includes core & coil with welded bracket and dry-film capacitor.

-510 includes core & coil with welded bracket and oil-filled capacitor.

-600 core & coil only (no capacitor).

-610 core & coil with welded bracket (no capacitor).

^{††} Each ballast requiring an ignitor is furnished standard with a short-range ignitor model shown for use within fixtures. long-range ignitors are available separately if required. See pages 5-40 to 5-44 for additional information.

• **Maximum Input Current** – For HX and R circuits, value is the highest of starting, operating or open circuit current. For CWA, SCWA and CWI circuits, value is the operating current.

^{**} The 330 Watt Lamp, ANSI Code C185 is an energy saving, screw in replacement lamp for the M59 or M135 and M155 PS lamps that may reduce input watts up to 18% on existing ballasts.

(NOM) Certified ballast available for Mexican market. Add "ML" to suffix (example: -500DML). Ballasts are branded Philips.

Canadian replacement/retrofit ballast kit indicated by bold type. Refer to page 5-9.

✦ Includes auto-reset thermal protection.

◆ Compact 3 x 4 core design

(E) Meets EISA 88% efficiency requirements.

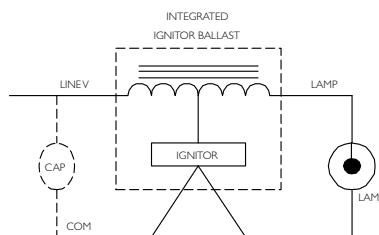


Fig. H

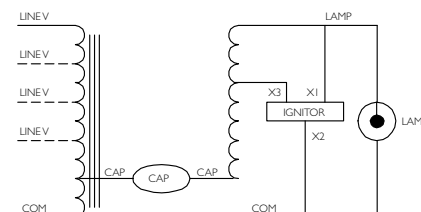


Fig. M

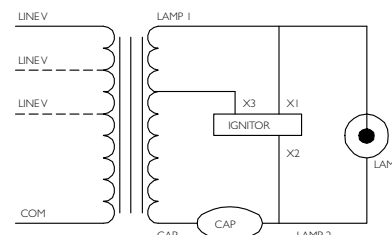


Fig. V



60 Hz Core & Coil Ballasts

Metal Halide



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max [*] Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor ^{††} (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (Pg 5-4)	
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)		
								Fig	A	B									
750W Lamp, ANSI Code M149 (Pulse Start)																			
120/208/ 240/277/ 480	71A6452-001D	Super CWA	818	7/4/ 3.5/3/ 2	355	20/10/ 10/8/ 5	M	8	2.4	4.3	28	400	7C280S40	D	18.0	LI573-H5	15	D/C/ D/D/ C	A/A/ A/A/ A
120/208/ 240/277	71A6492-500DA	Super CWA	818	6.95/3.9/ 3.5/3.0	355	20/10 10/8	M	8	3.0	5	28	400	7C280S40	D	21.0	LI573-H5	3	B/A/ A/A	A/A/ A/A/ A
120/ 208/240	71A64E2-500D	Super CWA	812	7.0/ 4.0/3.5	355	20/ 10/10	M	8	2.2	4.3	28	400	7C280S40	D	17.0	LI573-H5	15	D/ C/D	A/ A/A
277/ 347/480	71A64F2-001D	Super CWA	818	3.0/ 2.5/1.7	355	8/ 7/5	M	8	2.3	4.3	28	400	7C280S40	D	17.0	LI573-H5	15	E/ E/E	A/ A/A
277/347/ 480/120T	71A64F2-500DT	Super CWA	818	3.0/2.5/ 1.7	355	8/7/ 5	M	8	2.3	4.3	28	400	7C280S40	D	17.0	LI573-H5	15	E/ E/E	A/A/ A
120/208/ 240/277	71A6490-500D	Super CWA	820	7.0/4.0/ 3.5/3.0	340	20/10/ 10/10	M	2	3.0	4.9	28	400	7C280S40	D	17.5	LI573-H5	10	D/D/ D/D	A/A A/A
347/480/ 120T	71A64F0-600T	Super CWA	820	2.5/1.7	340	7/5	M	2	3.0	4.9	28	400	7C280S40	D	17.5	LI573-H5	10	E/E	A/A
875W Lamp, ANSI Code M166 (Pulse Start)																			
120/208/ 240/277	71A6498-500	Super CWA	940	7.8/4.3 3.9/3.4	415	20/10/ 10/8	M	2	3.0	5.0	21	480	MD2100-030	O	17.5	LI572-H5★	5	E/E/ E/E	A/A/ A/A
347/480/ 120T	71A64F8-500T	Super CWA	945	2.8/2.0	415	7/5	M	2	3.0	5.0	21	480	MD2100-030	O	17.5	LI572-H5★	5	E/E	A/A

WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
2, 10	6.5	1.25	5.75	0.28
8	7.8	2.75	6.13	0.25

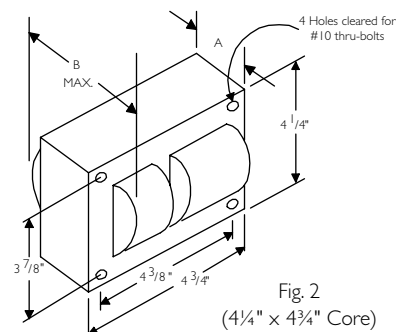
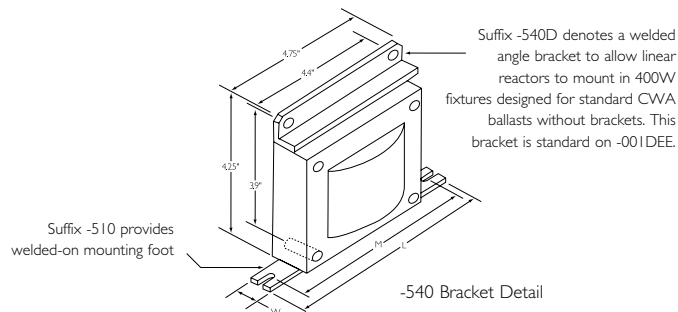
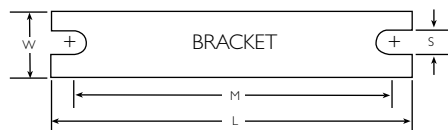


Fig. 2
(4 1/4" x 4 3/4" Core)

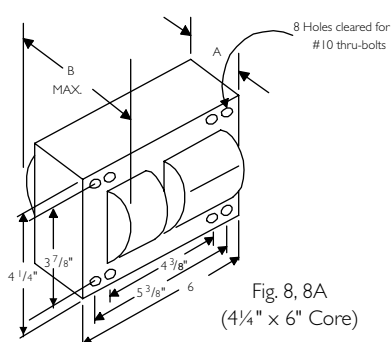


Fig. 8, 8A
(4 1/4" x 6" Core)

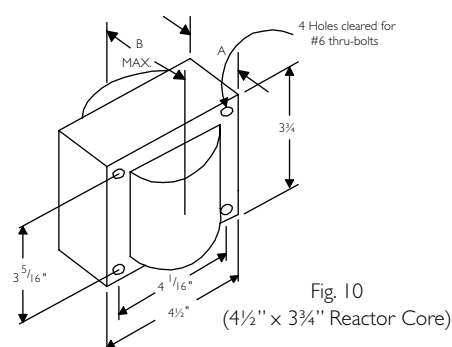


Fig. 10
(4 1/2" x 3 3/4" Reactor Core)



60 Hz Core & Coil Ballasts

Metal Halide



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max* Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (Pg 5-4)	
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)		
								Fig	A	B									
1000W Lamp, ANSI Code M47, or 830W Lamp, ANSI Code C194 (Philips AllStart)**																			
220	71A65J0-500ML	CWA	1080	4.9	415	12	A	2	3.3	5.3	24	480	MD2409-100	O	19.0	—	—	D	A
480/120T	71A6542-500T	CWA	1080	2.2	430	6	A	8	2.6	4.5	24	480	MD2409-100	O	21.0	—	—	D	A
480/120T	71A6542-500TA 71A6542-001	CWA	1080	2.3	430	6	A	8	3.1	5.0	24	480	MD2409-100	O	21.0	—	—	D	A
120/208 240/277	71A6592-500	CWA	1080	9.0/5.2/ 4.5/3.9	430	20/15/ 10/10	A	8	2.6	4.5	24	480	MD2409-100	O	21.0	—	—	D/B/ B/B	A/A/ A/A
120/208 240/277	71A6592-500A 71A6572-001	CWA	1080	9.0/5.2/ 4.5/3.9	430	20/15/ 10/10	A	8	3.1	5.0	24	480	MD2409-100	O	21.0	—	—	D/B/ B/B	A/A/ A/A
120/208/ 240/277/ 480	71A6552-500 71A6552-001CU	CWA	1080	9.0/5.6/ 4.7/4.1/ 2.4	430	22/15/ 12/10/ 6	A	8	3.1	4.7	24	480	MD2409-100	O	23.7	—	—	D/D/ D/C C	A/A/ A/A A
120/208/ 240/277/ 480	71A6552-500A 71A6552-001	CWA	1080	9.0/5.2/ 4.7/4.1/ 2.4	430	22/15/ 12/10/ 6	A	8	3.9	5.6	24	480	MD2409-100	O	22.0	—	—	D/D/ D/C C	A/A/ A/A A
120/ 277/347	71A65A2-500 71A65A2-001	CWA	1080	9.0/ 3.9/3.2	430	20/ 10/8	A	8	2.8	4.5	24	480	MD2409-100	O	21.0	—	—	D/ C/C	A/ A/A
120/208 240/277	71A6590-500	CWA	1070	9.0/5.2/ 4.5/3.9	415	20/15/ 10/10	A	2	3.4	5.3	24	480	MD2409-100	O	19.0	—	—	D/D/ D/D	A/A/ A/A
347/480/ 120T	71A65F0-600T	CWA	1070	3.1/2.2	415	8/6	A	2	3.4	5.3	24	480	MD2409-100	O	19.0	—	—	D/D	A/A
208/240 120T	71A65E6-500DT	CWI	1080	5.3/4.8	440	15/12	P	8	3.5	5.3	20	560	7C400P30RA (Two in Series)	D	25.0	—	—	C/D	A/A

† Ordering information:

Replacement/retrofit ballast kits – indicated by bold type and -001D or -001 suffix. Refer to pages 5-5 to 5-9 for more information on replacement kits.

Original equipment ballasts – typically ordered with capacitor (as shown).

-500D includes core & coil with dry-film capacitor.

-500 includes core & coil with oil-filled capacitor (required for higher wattage ballasts).

May also be available with welded bracket, and/or without capacitor:

-510D includes core & coil with welded bracket and dry-film capacitor.

-510 includes core & coil with welded bracket and oil-filled capacitor.

-600 core & coil only (no capacitor).

-610 core & coil with welded bracket (no capacitor).

†† Each ballast requiring an ignitor is furnished standard with a short-range ignitor model shown for use within fixtures. Long-range ignitors are available separately if required. See pages 5-40 to 5-44 for additional information.

• **Maximum Input Current** – For HX and R circuits, value is the highest of starting, operating or open circuit current. For CWA, SCWA and CWI circuits, value is the operating current.

** The 830 Watt Lamp, ANSI Code M194 is an energy saving, screw in replacement lamp for the M47 or M141 PS lamp that may reduce input watts up to 18% on existing ballasts.

NOM

Certified ballast available for Mexican market. Add "ML" to suffix (example: -500DML). Ballasts are branded Philips.

Canadian replacement/retrofit ballast kit indicated by **bold type**. Refer to page 5-9.

Special compact 4¼ x 4¼ core design



60 Hz Core & Coil Ballasts

Metal Halide



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max* Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor ^{††} (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (Pg 5-4)	
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)		
								Fig	A	B									
1000W Lamp, ANSI Code M14I (Pulse Start), or 830W Lamp, ANSI Code C194 (Philips AllStart)* ^{**}																			
480	71A6543-500A	Super CWA	1080	2.3	430	6	M	8	3.1	5.0	24	480	MD2409-000	○	21.0	LI572-H5★	5	D	A
120/208/240/277/480	71A6553-500	Super CWA	1080	9.1/5.6/4.7/4.1/2.4	430	22/15/12/10/6	M	8	3.0	4.7	24	480	MD2409-000	○	22.0	LI572-H5★	5	D/B/B/B	A/A/A/A
120/208/240/277/480	71A6553-500A 71A6553-001	Super CWA	1080	9.2/5.8/4.8/4.1/2.4	430	22/15/12/10/6	M	8	3.9	5.6	24	480	MD2409-000	○	25.0	LI572-H5★	5	D/D/C/C	A/A/A/A
120/208/240/277	71A6593-500	Super CWA	1080	9.0/5.2/4.5/3.9	430	22/15/10/10	M	8	2.8	4.5	24	480	MD2409-000	○	21.0	LI571-H5★	5	D/B/B/B	A/A/A/A
120/208/240/277	71A6593-500A 71A6593-001	Super CWA	1080	9.2/5.3/4.6/4.0	430	20/15/10/10	M	8	3.2	5.2	24	480	MD2409-000	○	25.0	LI571-H5★	5	D/B/B/B	A/A/A/A
347/480/120T	71A65F3-500T 71A65F3-001	Super CWA	1075	3.2/2.4	430	8/6	M	8	2.8	4.5	24	440	MD2409-000	○	21.0	LI571-H5★	5	D/D	A/A
277/347/480/120T	71A65F3-500TA	Super CWA	1080	4.0/3.3/2.3	430	10/8/6	M	8	3.3	5.3	24	440	MD2409-000	○	21.0	LI571-H5★	5	D/D/D	A/A/A
120/208/240/277	71A6591-500	Super CWA	1070	9.0/5.2/4.5/3.9	415	20/15/10/10	M	2	3.4	5.3	24	480	MD2409-000	○	19.0	LI572-H5★	5	D/D/D/D	A/A/A/A
347/480/120T	71A65F1-500T	Super CWA	1070	3.1/2.2	415	8/6	M	2	3.4	5.3	24	480	MD2409-000	○	19.0	LI572-H5★	5	D/D	A/A

WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
2	6.5	1.25	5.75	0.28
8	7.8	2.75	6.13	0.25

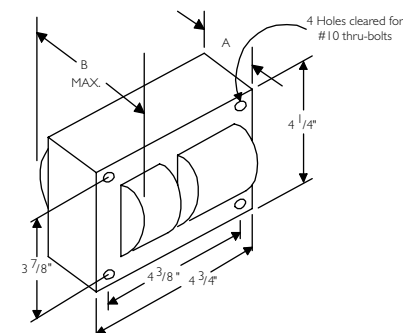
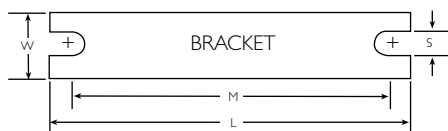


Fig. 2
(4 1/4" x 4 3/4" Core)

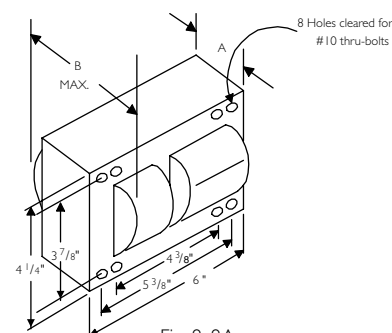


Fig. 8, 8A
(4 1/4" x 6" Core)

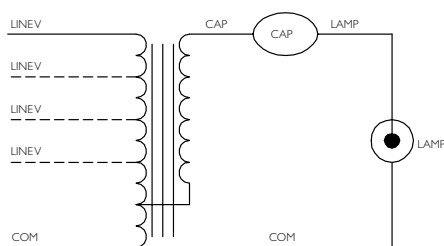


Fig. A

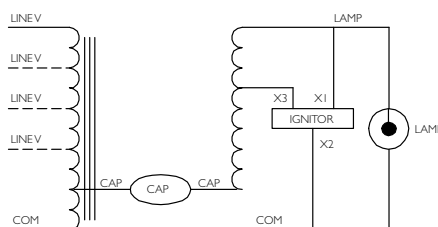


Fig. M

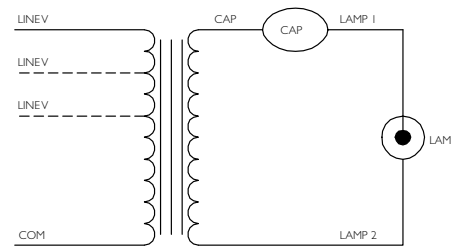


Fig. P



60 Hz Core & Coil Ballasts

Metal Halide



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max* Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (Pg 5-4)	
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)		
								Fig	A	B									
1500W Lamp, ANSI Code M48																			
480/120T	71A6742-500T	CWA	1625	3.4	450	10	A	8a	4.2	6.2	32	525	MD3202-100	O	31.0	—	—	E	A
480	71A6742-500A 71A6742-001	CWA	1610	3.5	460	10	A	8a	4.7	6.7	32	525	MD3202-100	O	30.0	—	—	E	A
120/208 240/277	71A6792-500	CWA	1605	13.5/7.8/ 6.8/5.9	450	30/25/ 20/15	A	8a	4.1	6.1	32	525	MD3202-100	O	30.0	—	—	G/E/ E/G	C/A/ A/C
120/208 240/277	71A6792-500A 71A6772-001	CWA	1610	13.5/7.8/ 6.8/5.9	460	30/25/ 20/15	A	8a	4.7	6.7	32	525	MD3202-100	O	30.0	—	—	G/E/ E/G	C/A/ A/C
120/ 277/347	71A67A2-600 71A67A2-001	CWA	1615	13.5/ 5.9/4.8	450	30/ 15/15	A	8a	4.1	6.1	32	525	MD3202-100	O	30.0	—	—	G/ G/G	C/ C/C

WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
2	6.5	1.25	5.75	0.28
8	7.8	2.75	6.13	0.25
8a	7.8	4.50	6.75	0.31

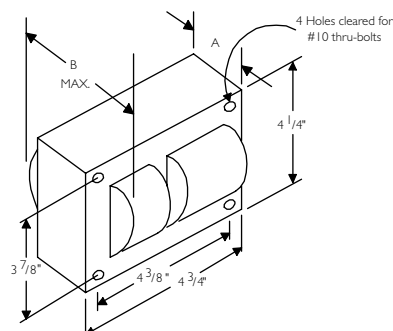
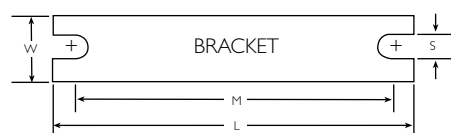


Fig. 2
(4 1/4" x 4 3/4" Core)

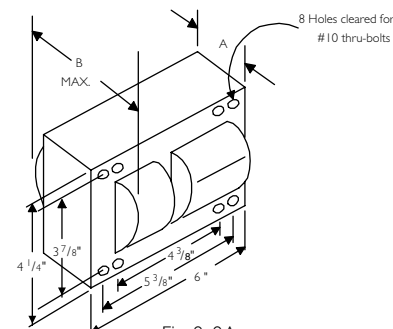


Fig. 8, 8A
(4 1/4" x 6" Core)

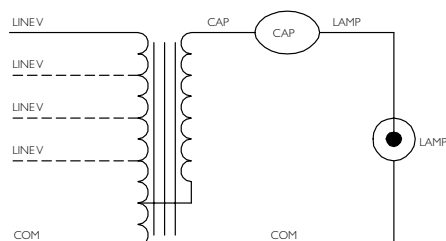


Fig. A

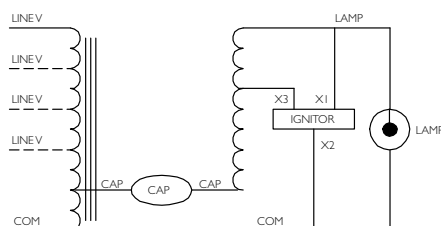


Fig. M

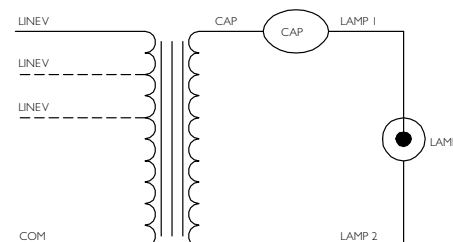


Fig. P



60 Hz Core & Coil Ballasts

High Pressure Sodium



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor ^{††} (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	
								Fig	A	B								
35W Lamp, ANSI Code S76																		
120	71A7707-600 71A7707-500D	R-NPF R-HPF	46	1.4 .8	120	3 2	G	9	.7	1.8	— 14	— 120	— 7C140L12RA	— D	1.3 1.5	LI551-H4	2	A
120	71A7707-600B 71A7707-001DB	R-NPF R-HPF	46	1.4 .8	120	3 2	H	9	.7	2.2	— 14	—120	— 7C140L12RA	— D	1.3 1.5	Integral Ignitor	2	A
50W Lamp, ANSI Code S68																		
120	71A7807-610 71A7807-500D	R-NPF R-HPF	62	1.8 1.0	120	5 3	G	9	1.0	2.3	— 20	— 120	— 7C200M12RA	— D	1.8 2.0	LI551-H4	2	A
120	71A7807-600B 71A7807-001DB	R-NPF R-HPF	62	1.8 1.0	120	5 3	H	9	1.0	2.7	— 20	— 120	— 7C200M12RA	— D	1.8 2.0	Integral Ignitor	2	A
120/277	71A7801-500D 71A7801-001D	HX-HPF	66	1.0/.5	125	3/1	K	I	1.0	2.2	5	300	7C050L33RA	D	3.5	LI551-H4	2	A/A
120/208/ 240/277	71A7891-500D 71A7891-001D	HX-HPF	66	1.0/.57/ .5/.45	125	3/2/ 2/1	K	I	1.0	2.2	5	300	7C050L33RA	D	3.5	LI551-H4	2	A/A A/A

WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
I	5.1	1.00	4.50	0.25
9	4.0	0.75	3.50	0.28

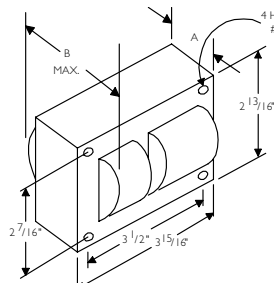
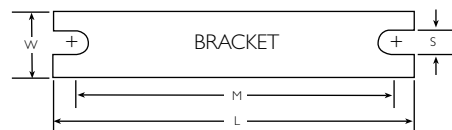


Fig. I
(3" x 4" Core)

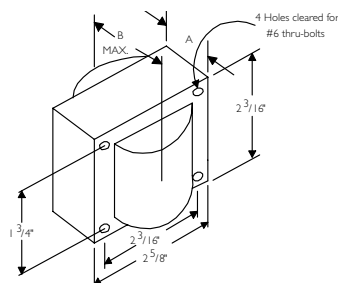


Fig. 9
(2⁵/₈" x 2³/₁₆" Reactor Core)

[†] Ordering information:
Replacement/retrofit ballast kits — indicated by bold type and -001D or -001 suffix.
Refer to pages 5-5 to 5-9 for more information on replacement kits.

Original equipment ballasts — typically ordered with capacitor (as shown).
-500D includes core & coil with dry-film capacitor.
-500 includes core & coil with oil-filled capacitor (required for higher wattage ballasts).

May also be available with welded bracket, and/or without capacitor:
-510D includes core & coil with welded bracket and dry-film capacitor.
-510 includes core & coil with welded bracket and oil-filled capacitor.
-600 core & coil only (no capacitor).
-610 core & coil with welded bracket (no capacitor).

^{††} Each ballast requiring an ignitor is furnished standard with a short-range ignitor model shown for use within fixtures. Long-range ignitors are available separately if required.
See pages 5-40 to 5-44 for additional information.

• **Maximum Input Current** — For HX and R circuits, value is the highest of starting, operating or open circuit current. For CWA, SCWA and CWI circuits, value is the operating current.

NOM

Certified ballast available for Mexican market. Add "ML" to suffix (example: -500DML).
Ballasts are branded Philips.

Canadian replacement/retrofit ballast kit indicated by **bold type**.
Refer to page 5-9.

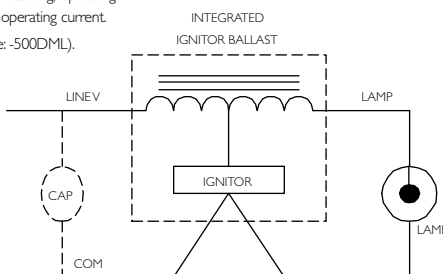


Fig. H

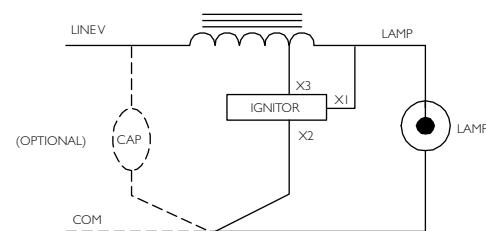


Fig. G

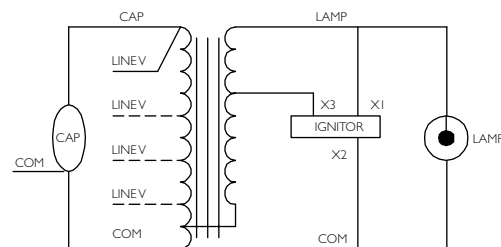


Fig. K



60 Hz Core & Coil Ballasts

High Pressure Sodium



Input Volts	Catalog† Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	
								Fig	A	B								
70W Lamp, ANSI Code S62																		
120	71A7907-600 71A7907-500D	R-NPF R-HPF	86	2.1 1.3	120	8 3	G	9	1.3	2.5	— 28	— 120	———— 7C280M12RA	— D	2.0	LI551-H4	2	A
120	71A7907-600B 71A7907-001DB	R-NPF R-HPF	86	2.1 1.3	120	8 3	H	9	1.3	2.9	— 28	— 120	———— 7C280M12RA	— D	2.0	Integral Ignitor	2	A
480	71A7941-500D	HX-HPF	93	.4	120	2	K	1	1.9	3.2	7	300	7C070L30RA	D	6.5	LI551-H4	2	A
120/208 240/277	71A7991-500D	HX-HPF	91	1.4/.9 .8/.7	120	5/3/ 2/2	K	1	1.5	3.1	7	300	7C070L30RA	D	5.5	LI551-H4	2	B/C/ B/C
120/208 240/277	71A7971-001D	HX-HPF	91	1.4/.9 .8/.7	120	5/3/ 2/2	K	1	1.5	3.1	7	300	7C070L30RA	D	5.5	LI551-H4	2	B/C/ B/C
120/ 277/347	71A79A1-500D 71A79A1-001D	HX-HPF	93	1.4/ .7/.6	120	5/ 2/2	K	1	1.5	3.1	7	300	7C070L30RA	D	5.5	LI551-H4	2	A/ B/A
127/220	71A79H8-500DMLA	CWA	95	.8/.47	108	2/2	M	1	1.9	3.2	32.5	300	7C325P30RA	D	5.8	LI551-J4	2	A/A
120/277	71A7988-500D	CWA	95	.9/.4	105	3/1	M	1	1.5	2.8	32.5	300	7C325P30-RA	D	5.5	LI551-J4	2	A/D
120/ 208/240	71A79E6-500D	CWI	95	.9/ .5/.5	110	3/ 2/2	V	1	1.6	2.9	24	300	7C240P30RA	D	5.8	LI551-J4	2	C/ C/D

[†] Ordering information:

Replacement/retrofit ballast kits – indicated by bold type and -001D or -001 suffix. Refer to pages 5-5 to 5-9 for more information on replacement kits.

Original equipment ballasts – typically ordered with capacitor (as shown).

-500D includes core & coil with dry-film capacitor.

-500 includes core & coil with oil-filled capacitor (required for higher wattage ballasts).

May also be available with welded bracket, and/or without capacitor:

-510D includes core & coil with welded bracket and dry-film capacitor.

-510 includes core & coil with welded bracket and oil-filled capacitor.

-600 core & coil only (no capacitor).

-610 core & coil with welded bracket (no capacitor).

^{††} Each ballast requiring an ignitor is furnished standard with a short-range ignitor model shown for use within fixtures. long-range ignitors are available separately if required. See pages 5-40 to 5-44 for additional information.

• **Maximum Input Current** – For HX and R circuits, value is the highest of starting, operating or open circuit current. For CWA, SCWA and CWI circuits, value is the operating current.

NOM Certified ballast available for Mexican market. Add "ML" to suffix (example: -500DML). Ballasts are branded Philips.

Canadian replacement/retrofit ballast kit indicated by **bold type**. Refer to page 5-9.

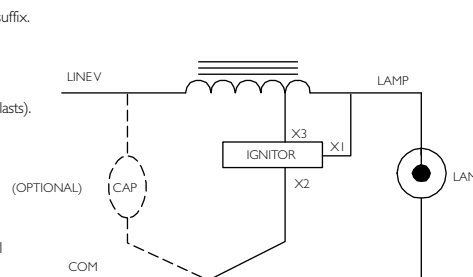


Fig. G

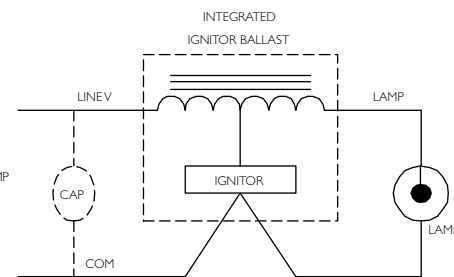


Fig. H

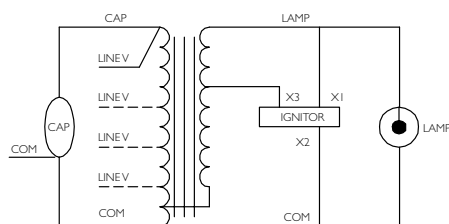


Fig. K

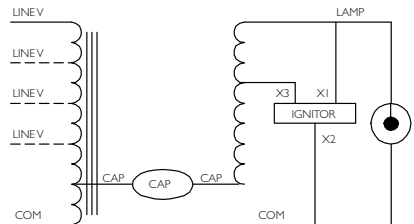


Fig. M

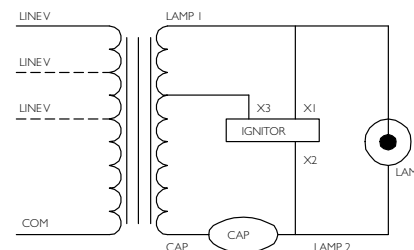


Fig. V



60 Hz Core & Coil Ballasts

High Pressure Sodium



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor ^{††} (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	
								Fig	A	B								
100W Lamp, ANSI Code S54																		
120	71A8007-500D	R-HPF	115	1.8	120	5	G	9	1.5	2.7	36	120	7C360M12RA	D	2.8	LI551-H4	2	A
120	71A8007-500DB 71A8007-001DB	R-HPF	115	1.8	120	5	H	9	1.5	2.7	36	120	7C360M12RA	D	2.8	Integral Ignitor	2	A
220	71A80J1-500D	HX-HPF	130	1.2	120	3	K	I	2.0	3.3	10	280	7C100M30RA	D	7.2	LI551-H4	2	B
480	71A8041-500D 71A8041-001D	HX-HPF	130	.6	120	3	K	I	2.3	3.6	10	280	7C100M30RA	D	7.5	LI551-H4	2	E
120/208/ 240/277	71A8091-500D	HX-HPF	130	2.2/1.3/ 1.1/9	120	7/5/ 3/3	K	I	2.0	3.6	10	280	7C100M30RA	D	7.2	LI551-H4	2	D/F/ D/D
120/208/ 240/277	71A8071-001D	HX-HPF	130	2.2/1.3/ 1.1/9	120	7/5/ 3/3	K	I	2.0	3.6	10	280	7C100M30RA	D	7.2	LI551-H4	2	D/F/ D/D
120/ 277/347	71A80A1-500D 71A80A1-001D	HX-HPF	130	2.2/ .9/7	120	7/ 3/3	K	I	2.3	3.6	10	280	7C100M30RA	D	7.5	LI551-H4	2	C/ C/D
120/277	71A8088-500D	CWA	138	1.2/5	115	3/2	M	I	2.0	3.3	34	170	7C340P24RA	D	7.5	LI551-J4	5	F/F
127/220	71A80H8-500DMLA	CWA	138	1.1/7	115	3/2	M	I	2.4	3.7	34	170	7C340P24RA	D	7.5	LI551-J4	5	E/D
230	71A80J8-500DML	CWA	136	0.7	118	2	M	I	2.0	3.3	34	170	7C350P24RA	D	7.5	LI551-J4	5	E
120/ 208/240	71A80E6-500D	CWI	130	1.2/ .7/6	110	3/ 2/2	V	I	2.1	3.4	35	170	7C350P24RA	D	6.8	LI551-J4	2	C/ C/B

WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
1	5.1	1.00	4.50	0.25
9	4.0	0.75	3.50	0.28

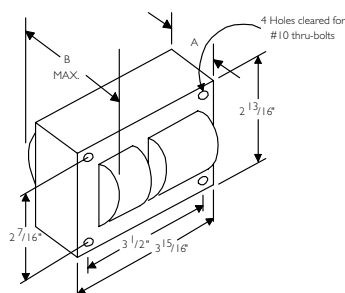
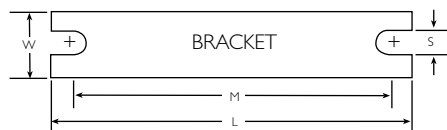


Fig. 1
(3" x 4" Core)

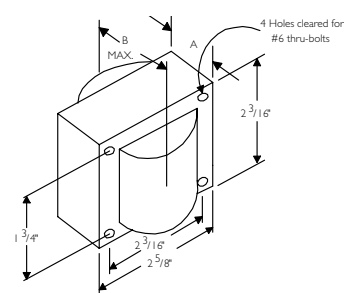


Fig. 9
(2 5/8" x 2 3/16" Reactor Core)



60 Hz Core & Coil Ballasts

High Pressure Sodium



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor ^{††} (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)	
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)		
								Fig	A	B									
150W Lamp, ANSI Code S55 (55V Arc Tube)																			
120	71A8107-600 71A8107-500D	R-NPF R-HPF	170	4.5 2.4	120	15 8	G	9	2.0	3.3	— 55	— 120	— 7C550P12RA	— D	3.5 4.0	LI551-H4	2	A	
120	71A8107-600B 71A8107-001DB	R-NPF R-HPF	170	4.5 2.4	120	15 8	H	9	2.0	3.6	— 55	— 120	— 7C550P12RA	— D	3.5 4.0	Integral Ignitor	2	A	
220	71A81J2-500D	HX-HPF	188	1.5	120	4	K	I	2.6	3.8	14	280	7C140M30RA	D	7.5	LI551-H4	2	C	
480	71A8142-510D 71A8142-001D	HX-HPF	188	0.7	120	2	K	I	3.0	4.3	14	280	7C140M30RA	D	9.0	LI551-H4	2	E	
480/120T	71A8142-500DT	HX-HPF	188	0.7	120	2	K	I	3.0	4.3	14	280	7C140M30RA	D	9.0	LI551-H4	2	E	
120/208/ 240/277	71A8192-500D 71A8192-520DML	HX-HPF	188	2.8/1.6/ 1.4/1.3	120	10/5/ 5/4	K	I	2.6	3.8	14	280	7C140M30RA	D	7.5	LI551-H4	2	E/D/ E/D	
120/208/ 240/277	71A8172-001D	HX-HPF	188	2.8/1.6/ 1.4/1.3	120	10/5/ 5/5	K	I	2.6	3.8	14	280	7C140M30RA	D	7.5	LI551-H4	2	E/D/ E/D	
120/ 277/347	71A81A2-500D 71A81A2-001D	HX-HPF	188	2.8/ 1.3/9	120	10/ 4/3	K	I	2.6	3.8	14	280	7C140M30RA	D	7.5	LI551-H4	2	D/ D/D	

[†] Ordering information:

Replacement/retrofit ballast kits — indicated by bold type and -001D or -001 suffix. Refer to pages 5-5 to 5-9 for more information on replacement kits.

Original equipment ballasts — typically ordered with capacitor (as shown).

-500D includes core & coil with dry-film capacitor.

-500 includes core & coil with oil-filled capacitor (required for higher wattage ballasts).

May also be available with welded bracket, and/or without capacitor:

-510D includes core & coil with welded bracket and dry-film capacitor.

-510 includes core & coil with welded bracket and oil-filled capacitor.

-600 core & coil only (no capacitor).

-610 core & coil with welded bracket (no capacitor).

^{††} Each ballast requiring an ignitor is furnished standard with a short-range ignitor model shown for use within fixtures. long-range ignitors are available separately if required. See pages 5-40 to 5-44 for additional information.

• **Maximum Input Current** — For HX and R circuits, value is the highest of starting, operating or open circuit current. For CWA, SCWA and CWI circuits, value is the operating current.

NOM Certified ballast available for Mexican market. Add "ML" to suffix (example: -500DML).

Ballasts are branded Philips.

• Canadian replacement/retrofit ballast kit indicated by **bold type**. Refer to page 5-9.

LL. Special high efficiency/ low-loss ballast

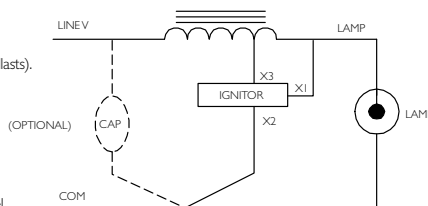


Fig. G

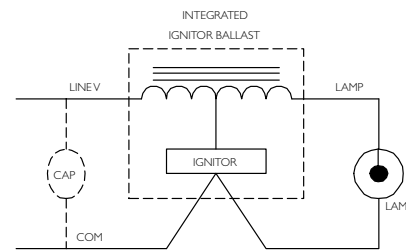


Fig. H

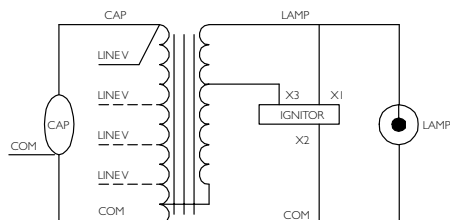


Fig. K

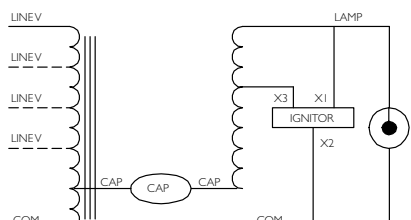


Fig. M

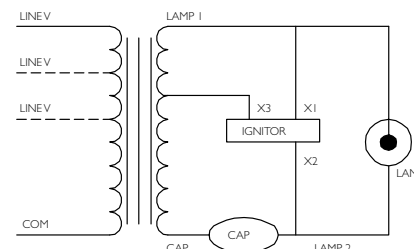


Fig. V



HID

HIGH INTENSITY DISCHARGE BALLASTS

60 Hz Core & Coil Ballasts

High Pressure Sodium



	Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max Input Current [*]	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor ^{††} (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)
												Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	
									Fig	A	B								
150W Lamp, ANSI Code S55 (55V Arc Tube)																			
NOM	120/277	71A8188-500D	CWA	190	1.7/7	110	5/3	M	I	2.8	4.1	55	170	7C550P24RA	D	8.5	LI551-J4	10	E/D
	127/220	71A81H8-500DMLA	CWA	190	1.6/9	110	4/2	M	I	3.0	4.3	55	170	7C550P24RA	D	8.5	LI551-J4	10	D/C
	480	71A8148-500D	CWA	190	0.5	110	I	M	I	2.5	3.8	55	170	7C550P24RA	D	8.0	LI551-J4	10	E
	220/240	71A81J9-500DML	CWA	170	0.8/0.7	111	2/2	M	2	2.5	3.8	60	240	7C600P24RA	D	13.5	LI551-J4	2	A/A
LL NOM	120/208/240	71A81E6-500D	CWI	190	1.7/1.1/1.8	105	5/3/3	V	I	2.6	4.0	52	240	7C520P24RA	D	8.5	LI551-J4	2	E/E/D
150W Lamp, ANSI Code S56 (100V Arc Tube)																			
	480	71A8146-500D 71A8146-001D	CWA	188	0.5	180	2	M	I	2.5	3.8	20	280	7C200P30RA	D	8.5	LI501-H4	2	B
	120/208 240/277	71A8196-500D	CWA	188	1.7/1.0 .9/8	180	5/3/3/3	M	I	2.5	4.1	20	280	7C200P30RA	D	8.5	LI501-H4	2	E/D/ C/C
	120/208 240/277	71A8176-001D	CWA	188	1.7/1.0 .9/8	180	5/3/3/3	M	I	2.5	4.1	20	280	7C200P30RA	D	8.5	LI501-H4	2	E/D/ C/C

WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
1	5.1	1.00	4.50	0.25
2	6.5	1.25	5.75	0.28
9	4.0	0.75	3.50	0.28

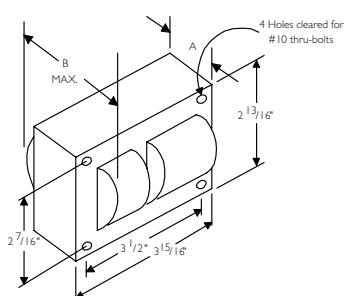
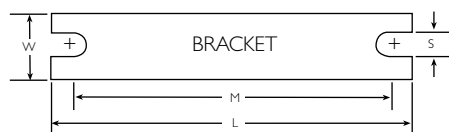


Fig. 1
(3" x 4" Core)

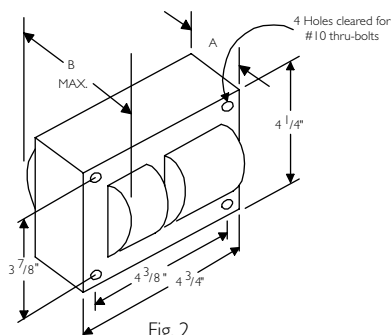


Fig. 2
(4 1/4" x 4 3/4" Core)

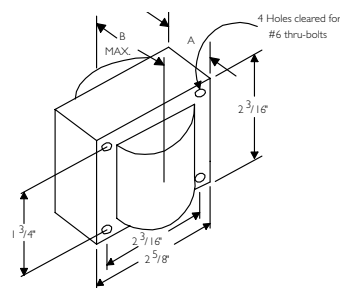


Fig. 9
(2 5/8" x 2 3/16" Reactor Core)

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HPS



60 Hz Core & Coil Ballasts

High Pressure Sodium



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max Input Current [*]	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor ^{††} (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)
											Part Number	Max Dist To Lamp (ft)						
								Fig	A	B	Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	
200W Lamp, ANSI Code S66																		
480	71A8940-500D 71A8940-001D	CWA	240	.6	185	2	M	2	1.2	3.0	28	280	7C280P30-RA	D	8.5	LI501-H4	2	C
120/208/240/277	71A8990-500D	CWA	240	2.2/1.3 1.1/1.0	185	6/4/3/3	M	2	1.2	3.0	28	280	7C280P30-RA	D	8.5	LI501-H4	2	E/D/ D/C
120/208/240/277	71A8970-001D	CWA	240	2.2/1.3 1.1/1.0	185	6/4/3/3	M	2	1.2	3.0	28	280	7C280P30-RA	D	8.5	LI501-H4	2	E/D/ D/C
120/208/240/277	71A8991-500D	CWA	250	2.4/1.4 1.2/1.0	195	8/5/5/3	M	1	3.0	4.2	24	280	7C240P30RA	D	8.5	LI501-H4	2	H/G/ H/I

[†] Ordering information:

Replacement/retrofit ballast kits – indicated by bold type and -001D or -001 suffix. Refer to pages 5-5 to 5-9 for more information on replacement kits.

Original equipment ballasts – typically ordered with capacitor (as shown).

-500D includes core & coil with dry-film capacitor.

-500 includes core & coil with oil-filled capacitor (required for higher wattage ballasts).

May also be available with welded bracket, and/or without capacitor:

-510D includes core & coil with welded bracket and dry-film capacitor.

-510 includes core & coil with welded bracket and oil-filled capacitor.

-600 core & coil only (no capacitor).

-610 core & coil with welded bracket (no capacitor).

^{††} Each ballast requiring an ignitor is furnished standard with a short-range ignitor model shown for use within fixtures. long-range ignitors are available separately if required. See pages 5-40 to 5-44 for additional information.

• **Maximum Input Current** – For HX and R circuits, value is the highest of starting, operating or open circuit current. For CWA, SCWA and CWA circuits, value is the operating current.

NOM Certified ballast available for Mexican market. Add "ML" to suffix (example: -500DML). Ballasts are branded Philips.

Canadian replacement/retrofit ballast kit indicated by **bold type**. Refer to page 5-9.

LL. Special high efficiency/ low-loss ballast

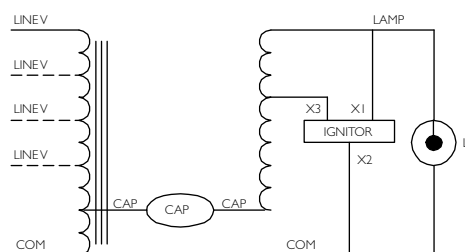


Fig. M

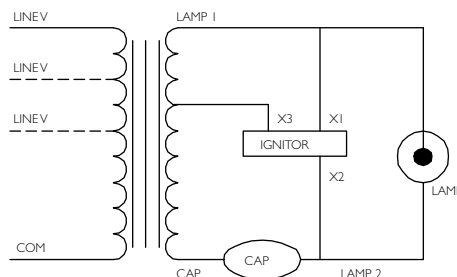


Fig. V



60 Hz Core & Coil Ballasts

High Pressure Sodium



Input Volts	Catalog† Number	Circuit Type	Input Watts	Max* Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	
								Fig	A	B								
250W Lamp, ANSI Code S50 or M168 (Philips Retro White)																		
127/220	71A82HI-500DML	CWA	295	2.5/1.5	185	7/4	M	2	1.8	3.5	35	240	7C350P24RA	D	11.0	LI501-H4	2	D/C
480	71A824I-500DA	CWA	310	.7	185	2	M	2	1.8	3.5	35	240	7C350P24RA	D	11.0	LI501-H4	2	B
480/120T	71A824I-500DTA 71A824I-001D	CWA	300	.7	185	2	M	2	1.8	3.7	35	240	7C350P24RA	D	11.0	LI501-H4	2	B
120/208/ 240/277	71A829I-500DA	CWA	295	2.5/1.5/ 1.3/1.1	185	7/4/ 4/3	M	2	1.8	3.5	35	240	7C350P24RA	D	11.0	LI501-H4	2	B/B/ B/B
120/208/ 240/277	71A827I-001D	CWA	295	2.5/1.5/ 1.3/1.1	185	7/4/ 4/3	M	2	1.8	3.5	35	240	7C350P24RA	D	11.0	LI501-H4	2	B/A/ B/B
120/208/ 240/277/ 480	71A825I-500DA 71A825I-001D	CWA	300	2.6/1.5/ 1.3/1.2/ .7	185	10/4/ 4/3/ 2	M	2	2.0	3.6	35	240	7C350P24RA	D	12.0	LI501-H4	2	C/C/ B/B/ B
120/ 277/347	71A82AI-500D 71A82AI-001D	CWA	295	2.7/ 1.2/.9	185	7/ 3/2	M	2	2.0	3.6	35	240	7C350P24RA	D	11.5	LI501-H4	2	C/ C/B
230	71A82JI-500DML	CWA	295	1.3	188	4	M	2	1.8	3.4	34	240	7C340P24RA	D	11.0	LI501-H4	2	B
220/240	71A82J9-500DML	CWA	285	1.4/1.3	188	4/4	M	2	1.8	3.4	34	240	7C340P24RA	D	11.0	LI501-H4	5	A/A
120/ 208/240	71A82E6-500D	CWI	300	2.8/ 1.6/1.4	190	8/ 5/5	V	2	1.9	3.8	28	300	7C280P30-RA	D	11.0	LI501-J4	2	D/ C/C

NOM

NOM



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WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
1	5.1	1.00	4.50	0.25
2	6.5	1.25	5.75	0.28

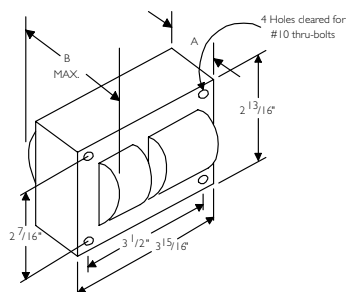
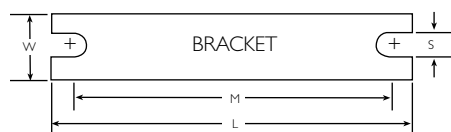


Fig. 1
(3" x 4" Core)

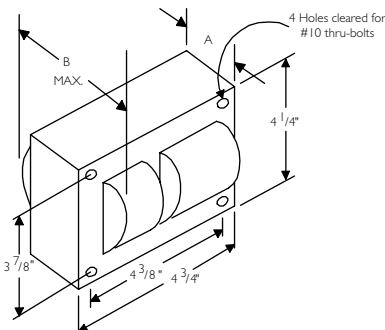


Fig. 2
(4 1/4" x 4 3/4" Core)



60 Hz Core & Coil Ballasts

High Pressure Sodium



Input Volts	Catalog† Number	Circuit Type	Input Watts	Max * Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (pg 5-4)	
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)		
								Fig	A	B									
310W Lamp, ANSI Code S67																			
120/208/240/277	71A8371-001D	CWA	365	3.4/1.9/1.7/1.4	175	8/5/5/5	M	2	2.2	4.1	45	280	7C450P30-RA	D	13.5	LI501-H4	2	D/C/D/B	
120/208/240/277/480	71A8351-500D	CWA	367	3.2/1.7/1.6/1.4/.8	183	8/5/4/4/2	M	2	2.5	4.1	45	280	7C450P30-RA	D	14.0	LI501-H4	2	C/A/B/B/B	
400W Lamp, ANSI Code S51 or M169 (Philips Retro White)																			
480/120T	71A8443-500DT	CWA	464	1.0	190	3	M	2	2.3	4.0	55	240	7C550P24RA	D	15.0	LI501-H4	2	D	
480/120T	71A8443-500DTA 71A8443-001D	CWA	464	1.0	190	3	M	2	2.8	4.3	55	240	7C550P24RA	D	16.0	LI501-H4	2	D	
120/208/240/277	71A8493-500D	CWA	464	3.8/2.2/1.9/1.7	190	10/8/5/5	M	2	2.1	4.0	55	240	7C550P24RA	D	13.5	LI501-H4	2	D/D/D/D	
120/208/240/277	71A8493-500DA 71A8473-001D	CWA	464	3.8/2.2/1.9/1.7	190	10/8/5/5	M	2	2.6	4.3	55	240	7C550P24RA	D	16.0	LI501-H4	2	D/D/D/D	
120/208/240/277/480	71A8453-500D 71A8453-001D	CWA	465	3.9/2.2/1.9/1.7/1.0	195	10/6/5/5/3	M	2	2.7	4.4	55	240	7C550P24RA	D	16.0	LI501-H4	2	C/C/D/D/C	
120/277/347	71A84A3-500D 71A84A3-001D	CWA	464	3.8/1.7/1.3	190	10/5/5	M	2	2.3	4.0	55	240	7C550P24RA	D	13.5	LI501-H4	2	D/D/D	
120/208/240	71A84E6-500D	CWI	465	4.2/2.4/2.1	190	10/7/5	V	2	2.7	4.4	48	300	7C480S30RA	D	15.5	LI501-J4	2	E/E/E	

† Ordering information:

Replacement/retrofit ballast kits – indicated by bold type and -001D or -001 suffix. Refer to pages 5-5 to 5-9 for more information on replacement kits.

Original equipment ballasts – typically ordered with capacitor (as shown).

-500D includes core & coil with dry-film capacitor.

-500 includes core & coil with oil-filled capacitor (required for higher wattage ballasts).

May also be available with welded bracket, and/or without capacitor:

-510D includes core & coil with welded bracket and dry-film capacitor.

-510 includes core & coil with welded bracket and oil-filled capacitor.

-600 core & coil only (no capacitor).

-610 core & coil with welded bracket (no capacitor).

†† Each ballast requiring an ignitor is furnished standard with a short-range ignitor model shown for use within fixtures. long-range ignitors are available separately if required. See pages 5-40 to 5-44 for additional information.

• **Maximum Input Current** – For HX and R circuits, value is the highest of starting, operating or open circuit current. For CWA, SCWA and CWI circuits, value is the operating current.

NOM Certified ballast available for Mexican market. Add "ML" to suffix (example: -500DML). Ballasts are branded Philips.

🍁 Canadian replacement/retrofit ballast kit indicated by **bold type**. Refer to page 5-9.

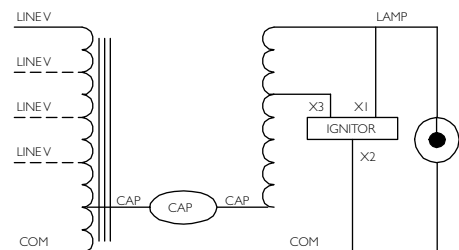


Fig. M

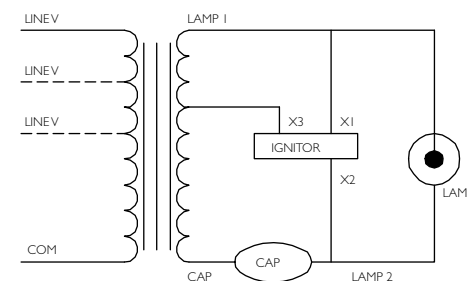


Fig. V



60 Hz Core & Coil Ballasts

High Pressure Sodium



Input Volts	Catalog† Number	Circuit Type	Input Watts	Max• Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (Pg 5-4)	
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)		
								Fig	A	B									
600W Lamp, ANSI Code S106																			
120/ 208/240	71A85E5-500D	CWA	670	5.5/ 3.3/2.9	220	15/ 9/8	M	8a	3.2	5.1	64	280	7C640S28-RA	D	22.5	LI561-H5	2	A/ A/B	A/ A/A
277/ 347/480	71A85F5-500D	CWA	665	2.5/ 2.0/1.4	230	7/ 5/4	M	8a	3.2	5.1	64	280	7C640S28-RA	D	23.0	LI561-H5	5	A/ A/A	A/ A/A
750W Lamp, ANSI Code S111																			
120/ 208/240	71A86E5-500D	CWA	840	6.8/ 4.0/3.5	220	20/ 10/10	M	8a	3.2	5.1	75	280	7C750S28-RA	D	22.5	LI561-H5	5	D/ E/E	A/ A/A
277/ 347/480	71A86F5-500D	CWA	840	3.1/ 2.5/1.8	225	10/ 10/5	M	8a	3.2	5.1	75	280	7C750S28-RA	D	23.0	LI561-H5	5	E/ D/D	A/ A/A
1000W Lamp, ANSI Code S52																			
220	71A87J3-500	CWA	1100	5.0	435	15	M	8a	3.8	5.8	26	525	MD2602-100	O	28.0	LI571-H5★	15	C	A
480	71A8743-500 71A8743-001	CWA	1100	2.3	435	6	M	8a	3.9	5.8	26	525	MD2602-100	O	28.0	LI571-H5★	15	C	A
480/120T	71A8743-600T	CWA	1100	2.3	435	6	M	8a	3.9	5.8	26	525	MD2602-100	O	28.0	LI571-H5★	15	C	A
120/208 240/277	71A8793-500	CWA	1100	9.5/5.5/ 4.8/4.2	435	25/15/ 10/10	M	8a	3.8	5.8	26	525	MD2602-100	O	28.0	LI571-H5★	15	C/B/ C/C	A/A/ A/A
120/208 240/277	71A8773-001	CWA	1100	9.5/5.5/ 4.8/4.2	435	25/15/ 10/10	M	8a	3.8	5.8	26	525	MD2602-100	O	28.0	LI571-H5★	15	C/B/ C/C	A/A/ A/A
120/208 240/277/ 480	71A8753-600 71A8753-001	CWA	1100	9.3/5.3/ 4.7/4.1/ 2.3	437	25/15/ 12/10/ 6	M	8a	4.0	6.0	26	525	MD2602-100	O	29.0	LI571-H5★	15	C/C/ C/C/ C	A/A/ A/A/ A
120/ 277/347	71A87A3-500 71A87A3-001	CWA	1100	9.5/ 4.2/3.3	435	25/ 15/10	M	8a	3.9	5.9	26	525	MD2602-100	O	28.0	LI571-H5★	15	C/ C/C	A/ A/A

NOM



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WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
2	6.5	1.25	5.75	0.28
8a	7.8	4.50	6.75	0.31

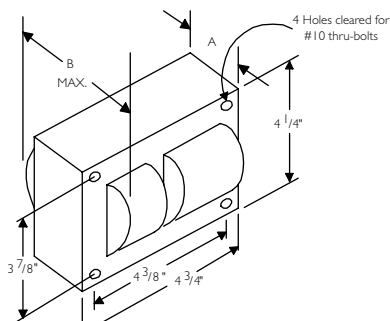
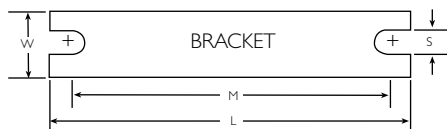


Fig. 2
(4 1/4" x 4 3/4" Core)

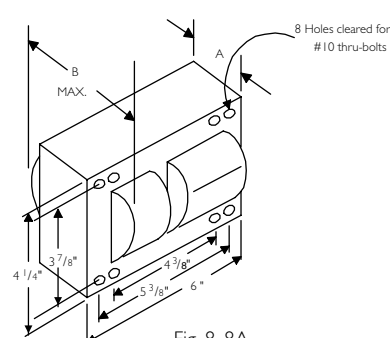


Fig. 8, 8A
(4 1/4" x 6" Core)



60 Hz Core & Coil Ballasts

Low Pressure Sodium



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max [*] Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	U.L. Bench Top Rise Code 1029 (pg 5-4)
								Fig	A	B	Mfd	Min Volt	Cap Catalog Number	Dry or Oil		
18W Lamp, ANSI Code L69																
120/277	71A0280-500D	HX-PFC	30	1.0/5	315	3/2	Q	I	1.0	2.4	5	250	7C050L30RA	D	4.5	A/A
35W Lamp, ANSI Code L70 or 55W Lamp, ANSI Code L71																
120/208/ 240/277	71A0490-500D 71A0490-001D	HX-HPF/ HX-PFC	60 or 80	2.4/1.4/ 1.2/1.0	480	6/4/ 3/3	Q	I	2.3	3.5	14	240	7C140M30RA	D	8.0	A/A/ A/A
347/480	71A04F0-500D	HX-HPF	60 or 80	0.79/0.58	480	2/2	Q2	I	2.3	3.5	14	240	7C140M30RA	D	8.0	A/A

† Ordering information:

Replacement/retrofit ballast kits – indicated by bold type and -001D or -001 suffix. Refer to pages 5-5 to 5-9 for more information on replacement kits.

Original equipment ballasts – typically ordered with capacitor (as shown).

-500D includes core & coil with dry-film capacitor.

-500 includes core & coil with oil-filled capacitor (required for higher wattage ballasts).

May also be available with welded bracket, and/or without capacitor:

-510D includes core & coil with welded bracket and dry-film capacitor.

-510 includes core & coil with welded bracket and oil-filled capacitor.

-600 core & coil only (no capacitor).

-610 core & coil with welded bracket (no capacitor).

- **Maximum Input Current** – For HX and R circuits, value is the highest of starting, operating or open circuit current. For CWA, SCWA and CWI circuits, value is the operating current.

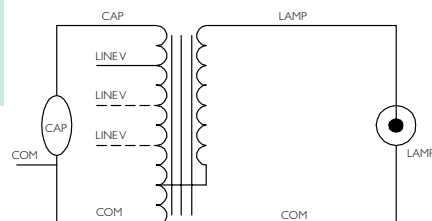


Fig. Q

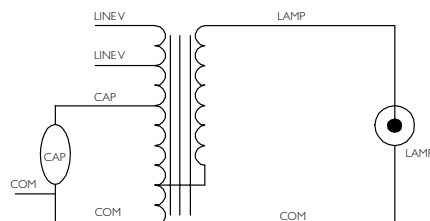


Fig. Q2

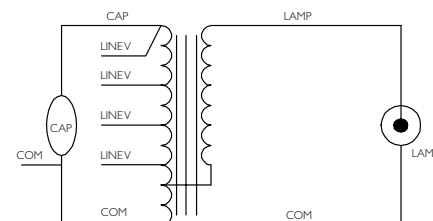


Fig. Q4



60 Hz Core & Coil Ballasts

Low Pressure Sodium



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max [*] Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	U.L. Bench Top Rise Code 1029 (pg 5-4)
								Fig	A	B	Mfd	Min Volt	Cap Catalog Number	Dry or Oil		
90W Lamp, ANSI Code L72																
120/208/240/277	71A0590-500D	HX-HPF	125	4.1/2.3/2.0/1.75	515	11/6/5/5	Q4	2	1.8	3.3	17.5	330	7C175M33-R	D	10.0	A/A/A/A
347/480	71A05F0-500D	HX-HPF	125	1.35/0.95	520	4/3	Q2	2	1.8	3.4	16.0	330	7C160P40	D	10.2	A/A
135W Lamp, ANSI Code L73 or 180W Lamp, ANSI Code L74																
120/208/240/277	71A0790-500D	HX-HPF	180 or 208	5.28/2.82/2.62/2.25	695	15/7/7/6	Q	3a	2.4	4.0	16	330	7C160P40	D	15.3	A/A/A/A
347/480	71A07F0-500D	HX-HPF	182 or 213	1.82/1.33	690	5/4	Q2	3a	2.4	4.0	16	330	7C160P40	D	15.0	A/A

WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
1	5.1	1.00	4.50	0.25
2	6.5	1.25	5.75	0.28
3a	7.8	2.75	6.13	0.25

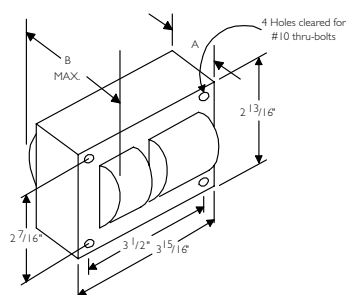
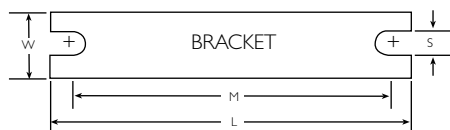


Fig. 1
(3" x 4" Core)

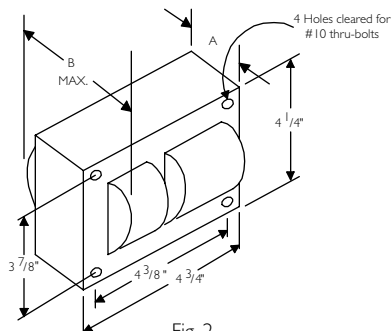


Fig. 2
(4 1/4" x 4 3/4" Core)

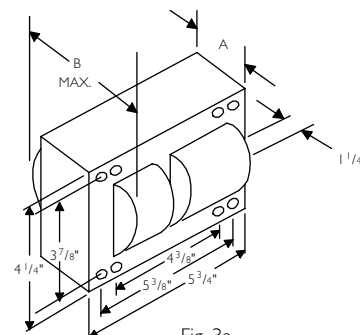


Fig. 3a
(4 1/4" x 5 3/4" Core)



Capacitor Specifications

Recommended Capacitors for Bi-level Dimming of Specified HID Lamps* on CWA Ballasts

* For Ceramic Metal Halide lamps, please consult the lamp manufacturer for the recommended dimming level.

Philips Advance Ballast Family	Nominal Lamp Watts	ANSI Code	Lamp Watts at Low Light	Full Light Capacitance Mfd.	Low Light Capacitance Mfd.	Primary Capacitor	Secondary Capacitor	Capacitor Connection
Quartz Metal Halide 60Hz CWA/Super CWA Ballasts								
71A53_3	100 Pulse-Start	M90/140	60	10.0	8.0	10.0 mfd, 300V (7C100M30RA)	40.0 mfd, 300V (7C400P30RA)	Series
71A54A3	150 Pulse-Start	M102/142	85	22.0	14.0	22.0 mfd, 240V (7C220M24RA)	40.0 mfd, 300V (7C400P30RA)	Series
71A5493	150 Pulse-Start	M102/142	80	16.0	12.0	16.0 mfd, 300V (72160M30RA)	40.0 mfd, 300V (7C400P30RA)	Series
71A55_0	175	M57	110	10.0	8.0	10 mfd, 400V (7C100M40-R)	40 mfd, 300V (7C400P30RA)	Series
71A55_3	175 Pulse-Start	M137 or M152	110	11.0	8.5	11 mfd, 400V (7C110M40)	40 mfd, 300V (7C400P30RA)	Series
71A56_2 or 71A56_3	200 Pulse-Start	M136	120	15.0	11.0	15 mfd, 400V (7C150P40R)	40 mfd, 300V (7C400P30RA)	Series
71A57_0 or 71A57_1	250	M58	150	15.0	11.0	15 mfd, 400V (7C150P40-R)	40.0 mfd, 300V (7C400P30RA)	Series
71A57_2	250 Pulse-Start	M138 or M153	150	17.0	12.0	17 mfd, 330V (7C170M33)	40 mfd, 300V (7C400P30RA)	Series
71A58_2	320 Pulse-Start	M132 or M154	175	21.0	14.0	21 mfd, 345V (7C210P34-R)	40 mfd, 300V (7C400P30RA)	Series
71A59_3	350 Pulse-Start	M131	205	22.5	14.5	22.5 mfd, 345V (7C225P34)	40 mfd, 300V (7C400P30RA)	Series
71A60_1	400	M59	220	24.0	17.0	24 mfd, 400V (7C240P40-R)	48 mfd, 300V (7C480P30RA)	Series
71A60_2	400 Pulse-Start	M135 or M155	210	26.0	18.0	26 mfd, 330V (7C260P33R)	48 mfd, 300V (7C480P30RA)	Series
71A63_3	450 Pulse-Start	M144	235	26.5	20.0	26.5 mfd, 400V (7C265P40R)	75.0 mfd, 280V (7C280S28RA)	Series
71A64_0 or 71A64_2	750 Pulse-Start	M149	420	28.0	18.0	28 mfd, 400V (7C280S40)	48 mfd, 300V (7C480P30RA)	Series
71A64_8	875 Pulse-Start	M166	485	21.0	14.0	21 mfd, 480V (MD2100-030)	40.0 mfd, 300V (7C400P30RA)	Series
71A65_0, 71A65_1, 71A65_2, or 71A65_3	1000 Probe or Pulse-Start	M47 or M141	575	24.0	15.0	24 mfd, 480V (MD2409-100)	40 mfd, 300V (7C400P30RA)	Series
High Pressure Sodium 60Hz CWA Ballasts								
71A80_8	100	S54	60	34.0	28.0	28.0 mfd, 300V (7C280P30RA)	6.0 mfd, 300V (7C060L30RA)	Parallel
71A81_8	150	S55	90	55.0	45.0	45 mfd, 240V (7C450P24RA)	10 mfd, 300V (7C100M30RA)	Parallel
71A82_1	250	S50	175	35.0	28.0	28 mfd, 300V (7C280P30-RA)	7 mfd, 300V (7C070L30RA)	Parallel
71A84_3	400	S51	260	55.0	40.0	40 mfd, 300V (7C400P30-RA)	15 mfd, 300V (7C150M30RA)	Parallel
71A86_5	750	S111	570	75.0	64.0	64 mfd, 280V (7C640S28RA)	11 mfd, 400V (7C110M40R)	Parallel
71A87_3	1000	S52	660	26.0	17.7	26 mfd, 525V (MD2602100)	55 mfd, 240V (7C550P24RA)	Series
71A89_1	200	S66	120	24.0	18.0	24 mfd, 280V (7C240P30RA)	72 mfd, 120V (7C720P12RA)	Series
71A89_1	200	S66	120	24.0	18.0	18 mfd, 400V (7C180P40R)	6 mfd, 300V (7C060L30RA)	Parallel

Dry-Film Capacitors

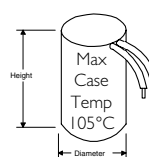


Dimensions (in)		
Letter	Diameter	Height
L	1.18	2.2 or 2.7
M	1.58	2.7 or 3.7
P	1.77	3.7 or 4.9
S	1.97	5.0

Oil-Filled Capacitors

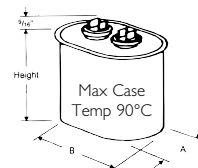


Dimensions (in)			
Oval	A	B	Height
1.25	1.30	2.15	As Shown in Tables
1.25	1.55	2.70	
1.75	1.90	2.90	
2.00	1.95	3.65	



Dry-Film Capacitors Thermal Plastic Case

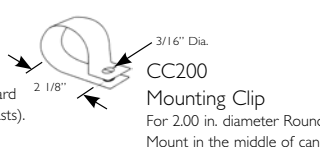
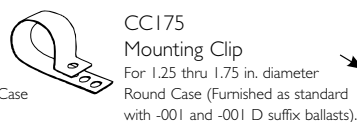
Dry-film capacitors contain no oil; are furnished with 8" leads and include integral resistor where required.



Oil-Filled Capacitor

Furnished with appropriate leads and/or resistors where required. Case must be grounded.

Note: Capacitor boots available, order catalog number CB-100.





Capacitor Specifications

HID Non-PCB Capacitors

Mfd.	Voltage	Capacitor Part Number ^{1,2}	Dia/Oval	Height	Ballast family where used
5	300	7C050L30RA	1.25	2.25	71A02x0, 5037, 5081, 5137, 78x1 (60 Hz)
6	300	7C060L30RA	1.25	2.75	71A5181, 78R1
7	300	7C070L30RA	1.25	2.75	71A1580, 50x7 (50 Hz. only), 79x1 (60 Hz)
7.5	400	7C075M40	1.50	2.90	Bi-Level, 71A5283
8	300	7C080L30RA	1.25	2.75	71A20x0, 52x0, 52x2 (60 Hz. only), 5237, 5281
8.4	300	7C084L33R	1.25	2.90	71A79x1 (50 Hz)
10	300	7C100M30RA	1.65	2.75	71A25x1 (60 Hz), 50Y1, 52Y1, 52Y2, 5337, 5340-T, 5383, 53Y3, 80x1 (60 Hz)
10	400	7C100M40R	1.40	3.75	71A55x0 (60 Hz)
11	400	7C110M40R	1.65	3.75	71A55x3
12	300	7C120M30RA	1.65	2.75	71A25x1 (50 Hz), 29D1, 50x1 (50 Hz), 53x0 (60Hz, except 5340-T), 5637, 80x1 (50 Hz)
12	450	MD1204-100	1.75	2.90	71A55x0 (50 Hz)
13	525	MD1300-100	1.75	3.90	71A57E6
14	120	7C140L12RA	1.25	2.25	71A7707
14	300	7C140M30RA	1.65	2.75	71A04x0, 29R0, 52x1 (50 Hz), 52x2 (50 Hz), 5437, 5737, 81x2 (60 Hz)
15	300	7C150M30RA	1.65	2.75	71A56x2, 56x3
15	400	7C150P40R	1.75	3.75	71A57x0 (60 Hz), 57x1
16	300	7C160M30RA	1.65	2.75	71A05F0, 54x0, 54x2, 80x0
16	400	7C160P40	1.75	3.75	71A81x0, 07x0
16	525	MD1606-000	1.75	3.90	71A57x4, 82x0
16	525	MD1606-100	1.75	3.90	71A43x0
17	400	7C170P40	1.75	3.75	71A55x4, 5634, 57x2
17	550	MD1701-000	1.75	3.90	71A83x0
17	550	MD1701-100	1.75	3.90	71A69x0 (Use one 17 mfd-550V and one 26 mfd-540V in parallel)
17.5	300	7C175M30RA	1.65	3.75	71A0590, 30x2, 53N0, 5837, 81x2 (50 Hz)
18	400	7C180P40R	1.75	3.75	56x3 (50 Hz), 71A57x0 (50 Hz), 89x4
18.5	330	7C185M33R	1.65	3.75	60x2 Bi-Level
20	120	7C200M12RA	1.25	2.75	71A0201, 7705, 7807
20	330	7C200P33R	1.75	3.75	71A57x2 (50 Hz), 53M0, 5880, 5937, 6037, 6137, 79x0, 81R6, 8146, 8176, 8196
20	450	MD2006-100	1.75	3.90	71A60x6
21	400	7C210P40R	1.75	4.80	71A58x2 (60 Hz)
21	525	MD2100-030	1.75	3.90	71A59x4, 60x4 (60 Hz), 6334, 64x8
22	240	7C220M24RA	1.65	2.75	71A54A3
22.5	300	7C225P30RA	1.65	3.75	71A35x2 (60 Hz), 5486, 6337
22.5	345	7C225P34	1.75	3.75	71A59x3
24	300	7C240P30RA	1.65	3.75	71A79x6, 89x1
24	400	7C240P40R	1.75	4.80	71A58x2 (50 Hz), 60x1 (60 Hz), 63x2
24	480	MD2409-000	1.75	3.90	71A84x0, 65x3 (60 Hz), 65x1
24	480	MD2409-100	1.75	3.90	71A50x0, 60N1, 65x2 (60 Hz), 65x0
25.5	400	7C225P40	1.75	4.80	71A59x3 (50 Hz)
26	330	7C260P33R	1.75	4.80	71A60x2 (60 Hz), 61E6
26	330	7C260S33R	2.00	4.80	Alternative to 7C260P33R
26	540	MD2602-030	1.75	5.30	71A69x0 (Uses one 17 mfd-540V and one 26 mfd-540V capacitor in parallel), 87x3 (60 Hz)
26	540	MD2602-100	1.75	5.30	71A60M2, 65x2 (50 Hz), 65x3 (50 Hz only)
26.5	400	7C265P40R	1.75	4.80	71A63x3 (60 Hz)
27.5	240	7C275P24RAT1	1.75	3.75	71A79J9
28	120	7C280M12RA	1.65	2.75	71A5005, 5105, 7805, 7907
28	300	7C280P30RA	1.75	3.75	71A35R2, 54x2 (50 Hz), 79x8, 82x6, 89x0
28	400	7C280S40R	2.00	4.80	71A64x0, 64x2 (60 Hz)
28	580	MD1408-230	1.50	3.90	71A87x3 (50 Hz only, uses two 14mfd-580 volt capacitors in parallel)
30	345	7C300S34	1.75	4.80	71A60N2
32	525	MD3202-100	2.00	3.75	71A67x2 (60 Hz)
34	240	7C340P24RA	1.65	3.75	71A80x8
35	240	7C350P24RA	1.65	3.75	71A54M2, 80x6, 82x1 (60 Hz)
35	300	7C350P30RA	1.65	4.75	71A40x1 (60 Hz)
36	120	7C360M12RA	1.65	2.75	71A5205, 8007, 50Y5
40	300	7C400P30RA	1.75	4.75	71A40R1, 65E6 (two in series), 82x1 (50 Hz only), 65Y6 (two in series)
45	120	7C450P12RA	1.65	2.75	71A8005
45	300	7C450P30RA	1.75	4.75	71A65M6, 83x1
48	300	7C480S30RA	2.00	5.00	71A84x6, 85x6
52	240	7C520P24RA	1.75	3.75	71A8156, 81E6
52	280	7C520S28RA	2.00	4.00	Bi-Level
55	120	7C550P12RA	1.65	3.75	71A8107
55	240	7C550P24RA	1.75	3.75	71A81x8, 84x3 (60 Hz)
58	240	7C580P24RA	1.75	3.75	71A8593
60	240	7C600P24RA	1.75	3.75	71A99x2, 71A9968
64	280	7C640S28RA	2.00	5.00	71A84x3 (50 Hz), 85x5
66	280	7C660S28RA	2.00	5.00	71A9942, 71A9943
75	280	7C750S28RA	2.00	5.00	71A86x5

1. "R" suffix denotes capacitors with a discharge resistor where required by UL.

2. MD_ denotes 90° Oil Filled, 7C_ denotes 105° Dry Film with leads.

Ballasts-to-Lamp Remote Mounting Distances

Ignitors

Ballasts that include an ignitor to start the HID lamp are limited in the distance which they may be mounted remotely from the lamp because the ignitor pulse attenuates as the wire length between the ballast and lamp increases. All Philips Advance open core & coil ballasts listed in this Atlas include a **standard ignitor** that provides the proper electrical pulse to start lamps when the ballast is mounted **within** the lighting fixture. For most of these ballast/ignitor combinations, the maximum ballast-to-lamp distance is listed as 2 feet. For ballast-to-lamp distances greater than the capability of the standard ignitor, a **long range ignitor** is required.

Use the tables on the following pages to find the proper long range ignitor for various metal halide and high pressure sodium ballasts. Not all ballasts listed in the Atlas have long range ignitor options. It may be necessary to use a ballast employing a different circuit to achieve the needed ballast-to-lamp distance.

Whichever ignitor is used, it must be installed with and adjacent to the core & coil, as the two components work together to deliver the proper pulse to the lamp. Do not install ignitors next to a remote lamp because the electrical pulse will be further attenuated as it first has to travel from the ignitor to the core & coil and then back to the lamp, thus doubling the actual ballast-to-lamp distance.

Metal Halide Ballasts

The distances at which most Metal Halide ballasts can be located from their respective lamps are limited by the ballast-to-lamp wire size. The exceptions being the ballasts for the new, lamps which require an ignitor for starting. The mounting distances for these are limited by the ignitor as shown on the following page.

Use this chart to determine the minimum wire size required for the Metal Halide (not requiring an ignitor) lamps shown:

Lamp		Maximum One-Way Length of Wire between Lamp and Ballast (ft) (Voltage Drop Limited to 1% of Lamp Voltage)				
Wattage	Metal Halide	#10	#12	#14	#16	#18
175	M57	425	265	165	105	65
250	M58	300	190	120	75	45
1-400 or 2-400	M59	200	125	75	50	30
1000	M47	325	205	125	80	50
1500	M48	225	140	85	55	35



Ignitor Specifications (Case Temperature Rating 105°C)

Metal Halide



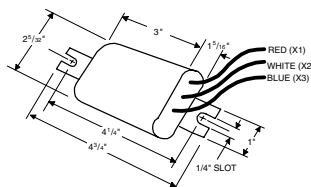
Metal Halide							Long Range Ignitor			
Ballast Data				Standard Ignitor			Long Range Ignitor			
Philips Advance Ballast Family	Lamp Watts	ANSI Code	Ballast Circuit Type	Catalog Number	Max. Dist. (ft.) To Lamp	Case Type	Catalog Number	Min. Dist. (ft) To Lamp	Max. Dist. (ft) To Lamp	Case Type
71A5005	35	M130	HX	LI533-H4-IC	15	Round	XTENZA® Long-Range Ignitor - Meets ANSI pulse requirements for all ballast to lamp distances from 0 to 50 ft. - Features 105°C case temperature rating - See Ordering Information Below LI533-LR1 0 - 50 ft Oval  LI533-LR 0 - 50 ft Oval LI533-LR3★ 0 - 50 ft Oval			
71A5105	50	M110/148	HX	LI533-H4-IC	15	Round				
71A511	50	M110/148	HX	LI533-H4-IC	10	Round				
71A5137	50	M110/148	R	LI533-H4-IC	2	Round				
71A5205	70	M98/143	HX	LI533-H4-IC	25	Round				
71A522	70	M98/143	HX	LI533-H4-IC	15	Round				
71A5237	70	M98/143	R	LI533-H4-IC	10	Round				
71A521	70	M139	HX	LI533-H4-IC	10	Round				
71A530	100	M90/140	HX	LI533-H4-IC	20	Round				
71A5383	100	M90/140	CWA	LI533-H4-IC	2	Round				
71A5337	100	M90/140	R	LI533-H4-IC	2	Round				
71A542	150	M102/142	HX	LI533-H4-IC	10	Round				
71A5437	150	M102/142	R	LI533-H4-IC	2	Round				
71A553	175	M137/152	SuperCWA	LI533-H4-IC	2	Oval				
71A562	200	M136	SuperCWA	LI533-H4-IC	2	Round				
71A563	200	M136	SuperCWA	LI533-H4-IC	5	Round				
71A572	250	M138/153	SuperCWA	LI533-H4-IC	5	Round				
71A582	320	M132/154	SuperCWA	LI533-H4-IC	2	Round				
71A593	350	M131	SuperCWA	LI533-H4-IC	2	Round				
71A602	400	M135/155	SuperCWA	LI533-H4-IC	10	Round				
71A61E6	400	M135/155	SuperCWA	LI533-H4-IC	2	Round				
71A633	450	M144	SuperCWA	LI533-H4-IC	5	Round				
71A640	750	M149	SuperCWA	LI573-H5-IC	15	Oval				
71A642	750	M149	SuperCWA	LI573-H5-IC	15	Oval				
71A648	875	M-166	SuperCWA	LI572-H5-IC★	10	Oval				
71A651	1000	M141	SuperCWA	LI572-H5-IC★	10	Oval				
71A653	1000	M141	SuperCWA	LI571-H5-IC★	5	Oval				
71A505	35	M130	HX	LI533-H4-IC	15	Round	LI561-H5★	15	50	Oval
71A5081	35	M130	HX	LI533-H4-IC	15	Round	LI561-H5★	15	50	Oval
71A5037	35	M130	R	LI533-H4-IC	10	Round	LI561-H5★	10	50	Oval
71A520	70	M85	HX	LI522-H5-IC★	30	Oval	Not Available			
71A54A3	150	M102/142	SuperCWA	LI501-J4-IC★	15	Round	Not Available			
71A540	150	M81	HX	LI522-H5-IC★	20	Oval	Not Available			
71A5486	150	M81	CWA	LI523-H5-IC★	2	Oval	Not Available			
71A5880	250	M80	HX	LI522-H5-IC★	5	Oval	Not Available			
71A865	750	**	CWA	LI561-H5-IC★	5	Oval	Not Available			

★ Equipped with an auto-rest thermal protector to help prevent ignitor from overheating in the event of lamp failure

XTENZA Ordering Information

To order in bulk, specify item no. LI533-LR, LI533-LR1 or LI533-LR3. For individual carton, add -IC to item no.

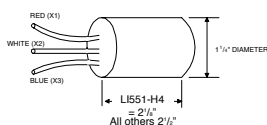
XTENZA is also available packaged with the ballasts shown at right.



Oval Case

Lamp Watts	ANSI Code	Ballast Number	No Bracket	With Welded Bracket
35	M130	71A5005		-910DP
35	M130	71A5081	-900D	
70	M98/143	71A5205		-910DP
70	M98/143	71A5292	-900D	
70	M98/143	71A52A2	-900D	-910D
100	M90/140	71A5383		-910D
100	M90/140	71A5390	-900D	

Round Case



CC125
MOUNTING CLIP for Round Case
(Furnished as standard with -001 suffix ballasts and all -IC suffix replacement ignitors.)

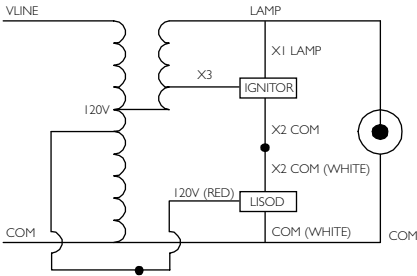
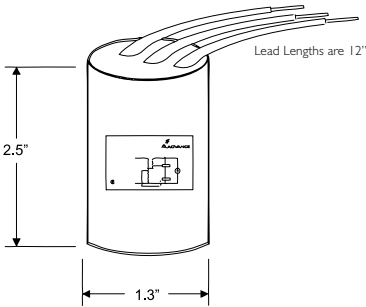
LISOD

The Philips Advance shut-off device (LISOD) enhances the reliability of High Intensity Discharge (HID) lighting systems where ignitors are utilized to start the HID lamps. This includes all high pressure sodium lamps as well as all low, medium, and high wattage pulse-start metal halide lamps. The LISOD shut-off device is used in addition to a standard ignitor.

The LISOD shut-off device increases the life of the ignitor by disabling it from the circuit and eliminating any concern over long-term ballast reliability due to continuously pulsing ignitors when a lamp is burned out. The LISOD provides a simple solution to eliminate lamp cycling typically associated with lamps that have reached their end of life. The LISOD disables the ignitor after 15 minutes of pulsing in cases when lamp is taken out of socket or lamp fails to ignite.

- Compatible with any Philips Advance Reactor (R), High-Reactance (HX), and Constant Wattage Autotransformer (CWA) ballast and ignitor circuit that includes a 120V input tap.
- Integral timer automatically disables ignitor from ballast circuit 15-minutes after power is applied to the ballast
- Extends ignitor life, which is typically rated for 10,000 hours of continuous pulsing
- Protects ballast coil insulation from potential damage due to a continuously pulsing ignitor
- Prevents cycling of end-of-life lamps making identification for lamp replacement easy
- Automatically resets/restarts itself after 0.6 second of power interruption (voltage dropout)

Catalog Number	Description	Quantity Per Carton
LISOD1-IC	Ignitor shut-off device for HID CWA, HX, and R ballasts with ignitors. Individual carton packaging	1
LISOD1	Ignitor shut-off device for HID CWA, HX and R ballasts with ignitors. Bulk packaging	50



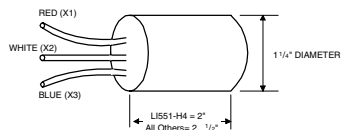


Ignitor Specifications (Case Temperature Rating 105°C)

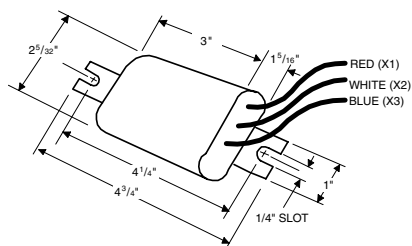
High Pressure Sodium



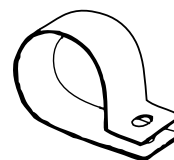
High Pressure Sodium									
Ballast Data				Standard Ignitor			Long Range Ignitor		
Philips Advance Ballast Family	Lamp Watts	ANSI Code	Ballast Circuit Type	Catalog Number	Max. Dist. (ft.) To Lamp	Case Type	Catalog Number	Max. Dist. (ft.) To Lamp	Case Type
71A7707	35	S76	R	LI551-H4-IC	2	Round	LI551-J4-IC	15	Round
71A7801	50	S68	HX	LI551-H4-IC	2	Round	LI551-J4-IC	35	Round
71A7807	50	S68	R	LI551-H4-IC	2	Round	LI551-J4-IC	15	Round
71A79_1	70	S62	HX	LI551-H4-IC	2	Round	LI551-J4-IC	35	Round
71A79_6	70	S62	CWI	LI551-J4-IC	2	Round	Not Available		
71A79_8	70	S62	CWA	LI551-J4-IC	5	Round	Not Available		
71A7907	70	S62	R	LI551-H4-IC	2	Round	LI551-J4-IC	15	Round
71A80_1	100	S54	HX	LI551-H4-IC	2	Round	LI551-J4-IC	35	Round
71A80_8	100	S54	CWA	LI551-J4-IC	5	Round	Not Available		
71A8007	100	S54	R	LI551-H4-IC	2	Round	LI551-J4-IC	15	Round
71A80_6	100	S54	CWI	LI551-J4-IC	2	Round	Not Available		
71A81_2	150	S55	HX	LI551-H4-IC	2	Round	LI551-J4-IC	35	Round
71A81_8	150	S55	CWA	LI551-J4-IC	10	Round	Not Available		
71A8107	150	S55	R	LI551-H4-IC	2	Round	LI551-J4-IC	15	Round
71A8156	150	S55	CWI	LI551-J4-IC	2	Round	Not Available		
71A85_5	150	S55	CWI	LI551-J4-IC	2	Round	Not Available		
71A81_6	150	S56	CWA	LI501-H4-IC	2	Round	LI501-J4-IC	50	Round
71A86_7	150	S56	R	LI501-H4-IC	2	Round	LI501-J4-IC	50	Round



Round Case



Oval Case



CC125

Mounting Clip for Round Case
(Furnished as standard with -001 suffix ballasts and all -IC suffix replacement ignitors.)



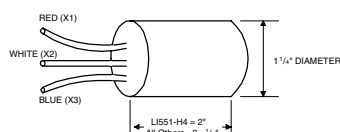
Ignitor Specifications (Case Temperature Rating 105°C)

High Pressure Sodium

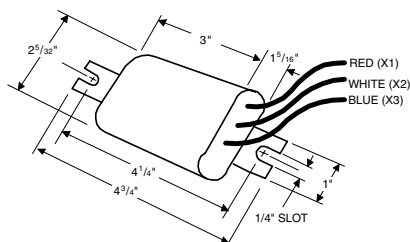


High Pressure Sodium									
Ballast Data				Standard Ignitor			Long Range Ignitor		
Philips Advance Ballast Family	Lamp Watts	ANSI Code	Ballast Circuit Type	Catalog Number	Max. Dist. (ft.) To Lamp	Case Type	Catalog Number	Max. Dist. (ft.) To Lamp	Case Type
71A89_0	200	S66	CWA	LI501-H4-IC	2	Round	LI501-J4-IC	50	Round
71A89_1	200	S66	CWA	LI501-H4-IC	2	Round	LI501-J4-IC	50	Round
71A89_7	200	S66	R	LI501-H4-IC	2	Round	LI501-J4-IC	50	Round
71A82_1	250	S50	CWA	LI501-H4-IC	2	Round	LI501-J4-IC	50	Round
71A82_6	250	S50	CWI	LI501-J4-IC	2	Round	Not Available		
71A82_7	250	S50	R	LI501-H4-IC	2	Round	LI501-J4-IC	50	Round
71A8392	250	S50	CWA	LI501-H4-IC	2	Round	LI501-J4-IC	50	Round
71A83_1	310	S67	CWA	LI501-H4-IC	2	Round	LI501-J4-IC	50	Round
71A83_7	310	S67	R	LI501-H4-IC	2	Round	LI501-J4-IC	50	Round
71A84_3	400	S51	CWA	LI501-H4-IC	2	Round	LI501-J4-IC	50	Round
71A84_6	400	S51	CWI	LI501-J4-IC	2	Round	Not Available		
71A84_7	400	S51	R	LI501-H4-IC	2	Round	LI501-J4-IC	50	Round
71A85_6	430	n/a	CWI	LI501-H4-IC	15	Round	LI501-J4-IC	35	Round
71A85_5	600	S106	CWA	LI561-H5-IC	5	Oval	Not Available		
71A85_8	600	S106	CWI	LI561-H5-IC	2	Oval	Not Available		
71A86_5	750	S111	CWA	LI561-H5-IC	5	Oval	Not Available		
71A87_3	1000	S52	CWA	LI571-H5-IC★	15	Oval	LI571-J5-IC★	75	Oval

★ Equipped with an auto-rest thermal protector to help prevent ignitor from overheating in the event of lamp failure.



Round Case



Oval Case



CC125
Mounting Clip for Round Case
(Furnished as standard with -001 suffix ballasts and all -IC suffix replacement ignitors.)

Transformers & Autotransformers

Stepdown Transformers and Autotransformers

Lamp Type	Lamp Watts	Input: Output (Volts)	Catalog † Number	Max. Input Current	Max. Input Watts	Max. V.A. Load	Wiring Diagram	Dimensions			Weight (lbs)	
								Fig	A	B		
Stepdown Transformers for 6 and 12V Halogen Lighting												
Halogen	75	120:11.5	71A9743-600C	.8	81	75	T-1	9	1.5	2.8	2.5	
	50/75	277:11.8	71A9833-600C	.3/4	60/86	75	T-1	9	1.5	2.8	2.5	
Stepdown Autotransformers for 120V Incandescent Lighting												
Incandescent	150	277:11.5	71A9749-600	.6	150	150	T-2	9	1.5	2.7	2.3	
	200		71A9839-600 (-J)	.8	199	200	T-2	9 (11)	2.2	3.8(4.2)	3.8(4.1)	
	300		71A9741-600 (-J)	1.1	300	300	T-2	9 (11)	2.0	3.5(4.0)	3.5(3.8)	
Stepdown & Step-up Autotransformers for use with HID Reactor Ballasts												
High Pressure Sodium	100/150	347:120/277	71A9862-600	1.7	200	395	T-2	9	2.7	3.9	4.5	
	100	277:120	71A9876-600 (-J)	0.47	125	130	T-2	4 (11)	1.9	2.6(3.9)	6.5(6.8)	
Metal Halide	70	120:277	71A9900-600	2.5	85	250	T-4	9	1.9	3.4	3.3	
	100/150		71A9741-600 (-J)	2.4	125	300	T-4	9 (11)	2.0	3.5(4.0)	3.5(3.8)	
	50/100/150	347:120/277	71A9862-600 (-J)	1.7	200	395	T-2	9 (11)	2.7	3.9(4.7)	4.5(4.8)	
LED*	150	480:270 or 347:190	71A9843-600	0.65	100	350	T-2	9	2.4	3.8	3.7	
eHID**	210	480:270	71A9843-600	0.47	227	350	T-2	9	2.4	3.8	3.7	
		347:277	71A9843-600 (-J)	0.65	227	396	T-2	9 (11)	2.7	3.9(4.7)	4.5(4.8)	
	315	480:270	71A9843-600	0.72	346	350	T-2	9	2.4	3.8	3.7	
		347:277	71A9843-600 (-J)	1.0	346	396	T-2	9 (11)	2.7	3.9(4.7)	4.5(4.8)	

† Ordering information:

Add proper suffix to catalog number:

-600 includes core and coil only

-J (available where shown) includes J-Box cover and auto-reset thermal protection. Refer to Figure 11.

* For use with Intellivolt LED Drivers

** For use with MasterColor MW ballast: IZTMH-210315-R-LF

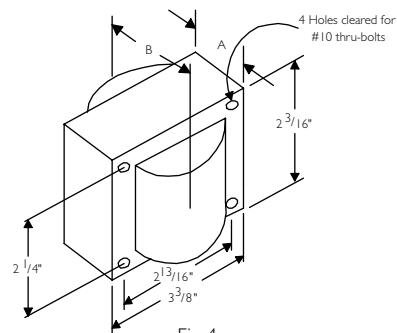


Fig 4
(2 3/16" x 3 3/8" Reactor Core)

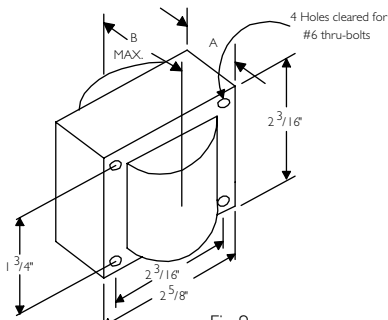


Fig 9
(2 5/8" x 2 3/16" Reactor Core)

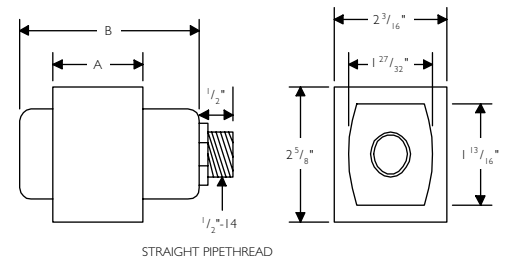


Fig 11
(J-Box Ballast)

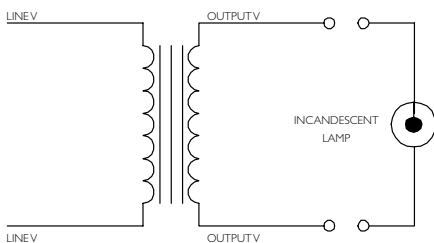


Fig T-1

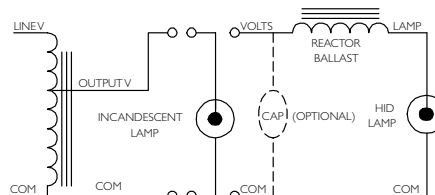


Fig T-2

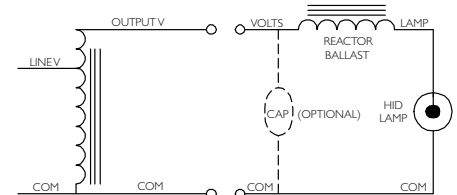


Fig T-4

60 Hz F-Can Ballasts, (Indoor, Outdoor Type I)

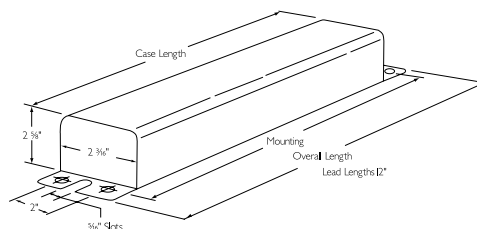
Metal Halide

Input Voltage	Catalog Number	Circuit Type	Input Amps			Input Watts	Nom. Open Circuit Voltage	Fuse Rating Amps	Over-all Length	Case Length	Mtg. Dim.	Total Wt. (lbs)	Max. Ballast to Lamp Distance (ft)	Certifications		
			Operating	Starting	Open Circuit											
35/39W Lamp, ANSI Code M130 (Pulse Start)														SOUND RATING B		
120/277	72C5081-NP	HX-HPF	.6/3	.6/3	1.0/4	56	255	3/1	11.75	10.50	11.13	9.0	10	✓	✓	
50W Lamp, ANSI Code M110 or M148 (Pulse Start)														SOUND RATING B		
120/277	72C5181-NP	HX-HPF	.7/3	.8/4	1.2/5	72	254	3/2	11.75	10.50	11.13	9.0	25	✓	✓	
	72C5181-NP-001												✓	✓		
120/347	72C51C1-NP		.6/2	.5/2	1.6/6	67	277	4/2					20	20	20	
70W Lamp, ANSI Code M85 (Double-ended lamp) (Pulse Start)														SOUND RATING B		
120/277	72C5280-NP-001	HX-HPF	.9/4	1.0/5	1.7/8	94	240	5/2	11.75	10.50	11.13	8.5	10	✓	✓	
70W Lamp, ANSI Code M98 or M143 (Pulse Start)														SOUND RATING B		
120/277	72C5282-NP	HX-HPF	.9/4	1.3/6	1.6/8	94	255	4/2	11.75	10.50	11.13	8.5	10	✓	✓	
	72C5282-NP-001															
								72C5282-NP-900*						50		✓
120/347	72C52C2-NP		.9/3	1.2/4	1.7/7			5/2					20		✓	
70W Lamp, ANSI Code M139 (Pulse Start)														SOUND RATING B		
120/277	72C5281-NP-900*	HX-HPF	.9/4	1.0/5	1.7/8	94	240	5/2	11.75	10.50	11.13	8.5	50	✓	✓	
100W Lamp, ANSI Code M90 or M140 (Pulse Start)														SOUND RATING B		
120/277	72C5381-NP	HX-HPF	1.1/5	2.2/1.0	2.4/1.1	125	277	6/3	11.75	10.50	11.13	11.0	5	✓	✓	
	72C5381-NP-001															
								72C5381-NP-900*								50
120/347	72C53C1-NP		1.1/4	2.2/8	2.4/9			6/2					15		✓	
150W Lamp, ANSI Code M81 (Double-ended lamp) (Pulse Start)														SOUND RATING B		
120/277	72C5481-NP	HX-HPF	1.6/7	1.7/8	3.7/1.6	180	240	10/4	14.30	13.13	13.75	13.0	10	✓	✓	
150W Lamp, ANSI Code M102 or M142 (Pulse Start)														SOUND RATING B		
120/277	72C5482-NP	HX-HPF	1.6/7	1.5/8	3.7/1.6	180	277	10/4	14.30	13.13	13.75	13.0	5	✓	✓	
	72C5482-NP-900*												50			
120/347	72C54C2-NP-900*		1.6/6	1.7/6	3.7/1.3	180	240	10/4	14.30	13.13	13.75	13.0	50		✓	

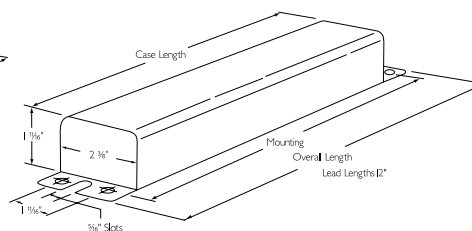
All Philips Advance dual-volt, F-can ballasts include auto-reset thermal protection for both taps.

Replacement ballasts in individual cartons indicated by **bold type** with suffix **-001**.

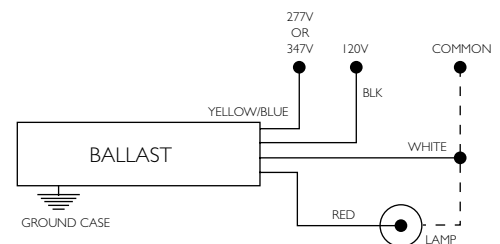
- Ballasts with suffix -900 include integral XTENXA Long-Range Ignitor for 50ft. max. ballast to lamp distance. Also suitable for shorter distances.
- All 150W thru 400W F-Can Ballasts are **not** EISA compliant.



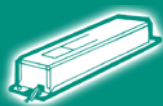
Dimensions



Dimensions
(72C5005-NP)



Wiring Diagram
All lead lengths 12"



60 Hz F-Can Ballasts, (Indoor, Outdoor Type I)

Metal Halide

Input Voltage	Catalog Number	Circuit Type	Input Amps			Input Watts	Nom. Open Circuit Voltage	Fuse Rating Amps	Over-all Length	Case Length	Mtg. Dim.	Total Wt. (lbs)	Max. Ballast to Lamp Distance (ft)	Certifications	
			Operating	Starting	Open Circuit									UL	SP
175/150W Lamp, ANSI Code M57 or M107 or 145W Lamp, ANSI Code C192 (Philips AllStart)**														SOUND RATING C	
120/277	72C5581-NP-001	CWA	2.0/9	2.0/9	1.4/7	205	300	5/3	11.75	10.50	11.13	12.0	☼	✓	✓
120/347	72C55C1-NP		1.9/7	1.9/7	1.7/5	208		5/2							✓
175W Lamp, ANSI Code M137 or M152 (Pulse Start) or 145W Lamp, ANSI Code C192 (Philips AllStart)**														SOUND RATING B	
120/277	72C5582-NP	Super CWA	1.7/8	.9/4	2.2/9	205	300	5/3	14.30	13.13	13.75	15.5	50	✓	✓
250W Lamp, ANSI Code M58 or 205W Lamp, ANSI Code C184 (Philips AllStart)***														SOUND RATING C	
120/277	72C5782-NP-001	CWA	2.6/1.1	2.1/9	2.1/9	290	300	8/4	16.70	15.50	16.13	16.0	☼	✓	✓
120/347	72C57C2-NP		2.5/9	2.0/7	2.0/7			7/3	14.30	13.13	13.75	14.0			✓
250W Lamp, ANSI Code M138 or M153 (Pulse Start) or 205W Lamp, ANSI Code C184 (Philips AllStart)*** (Pulse Start)														SOUND RATING B	
120/277	72C5783-NP	Super CWA	2.8/1.2	2.5/1.1	1.9/8	290	300	8/3	16.70	15.50	16.13	18.0	50	✓	✓
320W Lamp, ANSI Code M132 or M154 (Pulse Start)														SOUND RATING C	
120/277	72C5882-NP	Super CWA	3.4/1.5	2.8/1.2	1.6/7	370	270	8/3	19.20	18.00	18.63	21.0	50	✓	✓
350W Lamp, ANSI Code M131 (Pulse Start)														SOUND RATING C	
120/277	72C5983-NP	Super CWA	3.7/1.7	2.5/1.2	3.9/1.7	410	310	10/4	19.20	18.00	18.63	24.0	50	✓	✓
400W Lamp, ANSI Code M59 or 330W Lamp, ANSI Code C185 (Philips AllStart)****														SOUND RATING C	
120/277	72C6082-NP-001	CWA	3.9/1.7	3.3/1.4	3.9/1.7	460	310	10/5	19.20	18.00	18.63	22.5	☼	✓	✓
400W Lamp, ANSI Code M135 or M155 (Pulse Start) or 330W Lamp, ANSI Code C185 (Philips AllStart)****														SOUND RATING C	
120/277	72C6182-NP	Super CWA	4.1/1.8	2.9/1.3	3.9/1.7	465	310	10/4	19.20	18.00	18.63	24.0	50	✓	✓

All Philips Advance dual-volt, F-can ballasts include auto-reset thermal protection for both taps.

⊕ Ballast to lamp distance is only limited by the size of the conductor between the ballast and the lamp. For proper wire size, see table on page 5-40 of this catalog.

Replacement ballasts in individual cartons indicated by **bold type** with suffix **-001**.

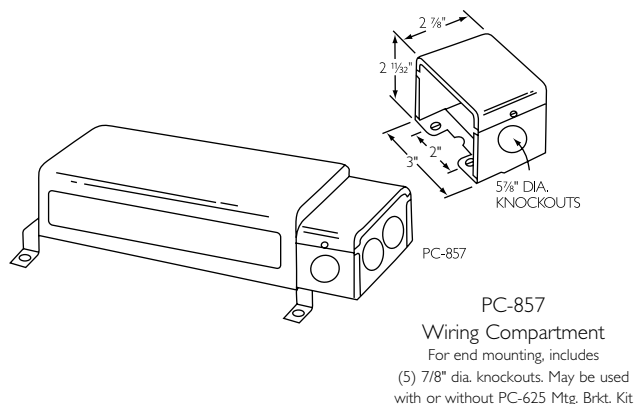
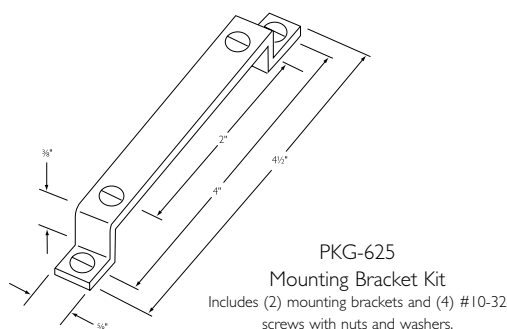
* All 150W thru 400W F-Can Ballasts are **not** EISA compliant.

** The 145 Watt Lamp, ANSI Code C192, is an energy saving, screw in replacement lamp for the M57 or M152 lamps, that may reduce input watts up to 15% on existing 175W ballasts.

*** The 205 Watt Lamp, ANSI Code C184 is an energy saving, screw in replacement lamp for the M58 or M138 and M153 PS lamps that may reduce input watts up to 18% on existing ballasts.

**** The 330 Watt Lamp, ANSI Code C185 is an energy saving, screw in replacement lamp for the M59 or M135 and M155 PS lamps that may reduce input watts up to 18% on existing ballasts.

Accessories



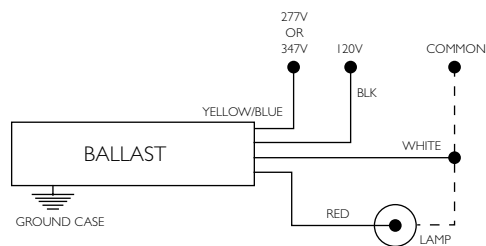
60 Hz F-Can Ballasts, (Indoor, Outdoor Type I)

High Pressure Sodium

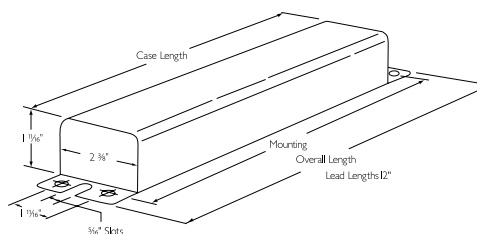
Input Voltage	Catalog Number	Circuit Type	Input Amps			Input Watts	Nom. Open Circuit Voltage	Fuse Rating Amps	Over-all Length	Case Length	Mtg. Dim.	Total Wt. (lbs)	Max. Ballast to Lamp Distance (ft)	Certifications	
			Operating	Starting	Open Circuit									UL®	SP
50W Lamp, ANSI Code S68														SOUND RATING B	
120/277	72C7884-NP-001	HX-HPF	.7/3	.7/4	1.4/7	65	120	4/2	11.75	10.50	11.13	11.0	15	✓	✓
70W Lamp, ANSI Code S62														SOUND RATING B	
120/277	72C7984-NP	HX-HPF	.9/4	1.0/5	1.4/7	90	120	5/2	11.75	10.50	11.13	10.0	7	✓	✓
	72C7984-NP-001		.8/3	.9/3	1.4/5	94		4/2							✓
120/347	72C79C4-NP														✓
100W Lamp, ANSI Code S54														SOUND RATING B	
120/277	72C8084-NP	HX-HPF	1.1/5	1.5/7	1.9/8	125	120	6/3	11.75	10.50	11.13	11.0	15	✓	✓
	72C8084-NP-001													✓	
150W Lamp, ANSI Code S55 (55V Arc Tube)														SOUND RATING B	
120/277	72C8185-NP	HX-HPF	1.7/7	2.6/1.2	2.2/1.0	185	120	8/4	14.30	13.13	13.75	14.0	5	✓	✓

All Philips Advance dual-volt, F-can ballasts include auto-reset thermal protection for both taps.

Replacement ballasts in individual cartons indicated by bold type with suffix -001.

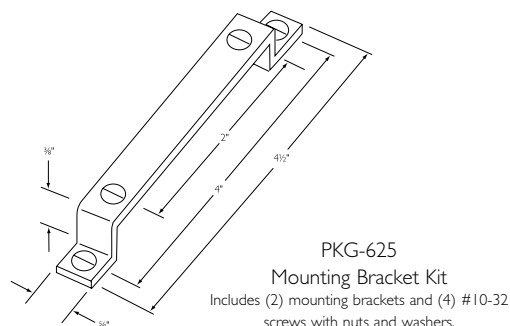


Wiring Diagram
All lead lengths 12"

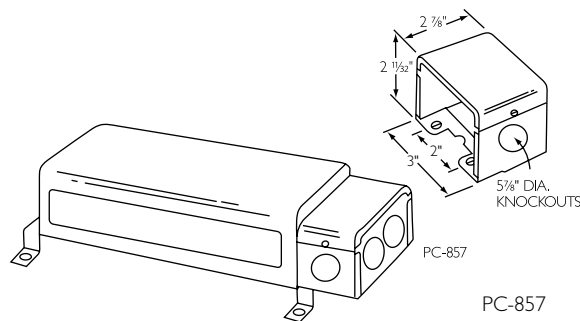


Dimensions

Accessories



PKG-625
Mounting Bracket Kit
Includes (2) mounting brackets and (4) #10-32 screws with nuts and washers.



PC-857

PC-857
Wiring Compartment
For end mounting, includes (5) 7/8" dia. knockouts. May be used with or without PC-625 Mtg. Brkt. Kit



60 Hz Encapsulated Core & Coil Ballasts

Metal Halide



Input Volts	Catalog † Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Case Style	Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)	
									Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)
70W Lamp, ANSI Code M98 Medium Base (Pulse Start)													SOUND RATING A		
120/277	73B5282-500D	HX-HPF	90	1.9/1.8	255	4/2	K	PC709-2	8	280	7C080L30RA	D	9.0	LI533-H4	15
100W Lamp, ANSI Code M90 or M140 (Pulse Start)													SOUND RATING A		
120/277	73B5383-500D	CWA	128	1.1/1.5	222	3/2	M	PC709-4	10	330	7C100M30RA	D	10.0	LI533-H4	2
150W Lamp, ANSI Code M102 (Medium Base) or M142 (Pulse Start)													SOUND RATING A		
120/277	73B5482-500D	HX-HPF	185	3.7/1.6	265	10/4	K	PC709-4	16	280	7C160M33-R	D	11.0	LI533-H4	10
175W Lamp, ANSI Code M57 or 145W Lamp, ANSI Code C192 (Philips AllStart)**													SOUND RATING A		
120/208/ 240/277	73B5590-500D	CWA	210	1.8/1.1/ .9/1.8	305	5/3/ 3/2	A	PC709-4	10	400	7C100M40-R	D	12.0	—	—
175W Lamp, ANSI Code M137 or M152 (Pulse Start) or 145W Lamp, ANSI Code C192 (Philips AllStart)**													SOUND RATING A		
120/208/ 240/277	73B5591-500DEE	Super CWA	198	1.7/1.0/ .8/1.7	285	5/3/ 3/2	M	PC767-1	11	370	7C110M40	D	15.0	LI533-H4	2
250W Lamp, ANSI Code M138 or M153 (Pulse Start) or 205W Lamp, ANSI Code C184 (Philips AllStart)***													SOUND RATING B		
120/208/ 240/277	73B5792-500DAEE	Super CWA	283	2.5/1.5/ 1.3/1.1	275	8/5 5/3	M	PC767-1	17	350	7C170P40	D	16.0	LI533-H4	2
250W Lamp, ANSI Code M58 or 205W Lamp, ANSI Code C184 (Philips AllStart)***													SOUND RATING B		
120/208/ 240/277	73B-5790-500DA	CWA	295	2.5/1.4/ 1.3/1.1	300	8/5/ 5/3	A	PC767-1	15	400	7C150P40-R	D	15.0	—	—
320W Lamp, ANSI Code M132 or M154 (Pulse Start)													SOUND RATING B		
120/208/ 240/277	73B5892-500DAEE	Super CWA	363	3.3/1.9/ 1.7/1.4	280	8/6/ 5/3	M	PC767-3	21	345	7C210P40R	D	18.0	LI533-H4	2
350W Lamp, ANSI Code M131 (Pulse Start)													SOUND RATING B		
120/208/ 240/277	73B5993-500DAEE	Super CWA	397	3.4/2.0/ 1.7/1.5	270	10/7/ 5/5	M	PC767-3	22.5	345	7C225P40	D	18.0	LI533-H4	2

† Ordering information:

Original equipment ballasts – typically ordered with capacitor (as shown)

-500D includes core & coil with dry-film capacitor

May also be available without capacitor:

-600 core & coil only (no capacitor)

- For CWA, figure is operating current. For HX circuits, figure is highest of starting, operating or open circuit currents

†† Each ballast requiring an ignitor is furnished standard with the **short-range** ignitor model shown for use within fixtures. Long-range ignitors are available separately, if required. See pages 5-40 to 5-44 for additional information.

Indicates the ballast meets the 88% efficiency requirements of EISA (Energy Independence and Security Act of 2007)

** The 145 Watt Lamp, ANSI Code C192, is an energy saving, screw in replacement lamp for the M57 or M152 lamps, that may reduce input watts up to 15% on existing 175W ballasts.

*** The 205 Watt Lamp, ANSI Code C184 is an energy saving, screw in replacement lamp for the M58 or M138 and M153 PS lamps that may reduce input watts up to 18% on existing ballasts.



60 Hz Encapsulated Core & Coil Ballasts

Metal Halide



Input Volts	Catalog † Number	Circuit Type	Input Watts	Max Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Case Style	Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)			
									Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)		
400W Lamp, ANSI Code M59 or 330W Lamp, ANSI Code C185 (Philips AllStart)**																SOUND RATING B	
120/208/ 240/277	73B6091-500DA	CWA	458	4.0/2.3/ 2.0/1.7	300	10/7/ 5/5	A	PC-767-3	24	400	7C240P40-R	D	20.0	—	—		
120/ 277/347	73B60A1-500D	CWA	460	4.0/ 1.7/1.4	300	10/ 5/4	A	PC-767-3	24	400	7C240P40-R	D	20.2	—	—		
400W Lamp, ANSI Code M135 or M155 (Pulse Start) or 330W Lamps, ANSI Code C185 (Philips AllStart)**																SOUND RATING B	
120/208/ 240/277	73B6092-500DAEE	Super CWA	454	3.8/2.2/ 1.9/1.7	270	10/7/ 5/5	M	PC-767-3	26	330	7C260P33R	D	15.0	LI533-H4	10		
120/208/ 240/277 480	73B6052-500DAEE	Super CWA	454	3.8/2.2/ 1.9/1.7/ 1	275	10/7/ 5/5/ 3	M	PC-767-3	26	330	7C260P33R	D	17.0	LI533-H4	2		
1000W Lamp, ANSI Code M47																SOUND RATING C	
120/208/ 240/277	73B6590-500	CWA	1070	9.0/5.2 4.5/3.9	415	20/15 10/10	A	PC-768-2	24	480	MD2409-100	O	28.0	—	—		
120/ 277/347	73B65A2-500	CWA	1080	9.0/ 3.9/3.2	430	20/ 10/8	A	PC-768-1	24	480	MD2409-100	O	28.0	—	—		
1000W Lamp, ANSI Code M141 (Pulse Start)																SOUND RATING C	
120/208/ 240/277	73B6593-500	Super CWA	1080	9/5.3/ 4.5/3.9	430	20/15 10/10	M	PC-768-1	24	480	MD2409-000	O	29.0	LI571-H5	5		

† Ordering information:

Original equipment ballasts - add proper suffix to catalog number:

-500D includes core & coil with dry-film capacitor

-500 includes core & coil with oil-filled capacitor

-600 core & coil only (no capacitor)

• For CWA, figure is operating current.

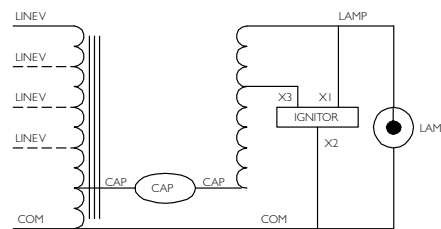
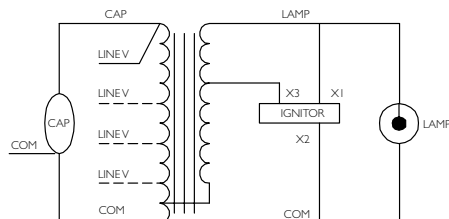
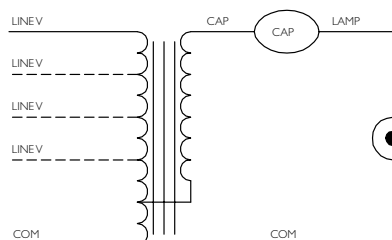
⑤ Indicates the ballast meets the 88% efficiency requirements of EISA (Energy Independence and Security Act of 2007)

** The 330 Watt Lamp, ANSI Code C185 is an energy saving, screw in replacement lamp for the M59 or M135 and M155 PS lamps that may reduce input watts up to 18% on existing ballasts.

Fig. A

Fig. K

Fig. M





60 Hz Encapsulated Core & Coil Ballasts

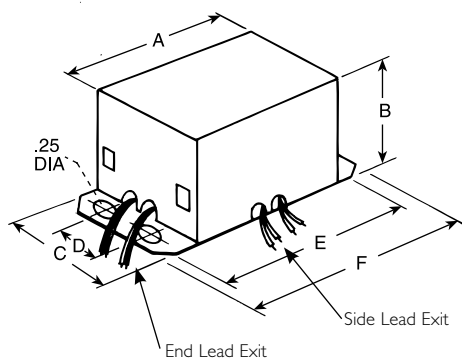
High Pressure Sodium



Input Volts	Catalog [†] Number	Circuit Type	Input Watts	Max Input Current [*]	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Case Style	Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor ^{††} (Page 5-40 to 5-44)	
									Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)
250W Lamp, ANSI Code S50														SOUND RATING B	
120/208/240/277	73B8291-500DA	CWA	295	2.5/1.5/1.3/1.1	187	7/4/4/3	M	PC-767-3	35	240	7C350P24RA	D	15.4	LI501-H4	2
400W Lamp, ANSI Code S51														SOUND RATING B	
120/208/240/277	73B8493-500D	CWA	460	3.8/2.2/1.9/1.7	190	10/8/5/5	M	PC-767-3	55	240	7C550P24RA	D	21.0	LI501-H4	2

DIMENSIONS

Case Style	Lead Exit	A	B	C	D	E	F
PC709-2	Side	4.6	3.4	3.6	2.0	5.25	6.0
PC709-4	Side	4.6	4.4	3.6	2.0	5.25	6.0
PC767-1	Side	5.4	5.0	3.8	2.0	6.0	6.75
PC767-3	Side	5.4	5.0	4.3	2.0	6.0	6.75
PC768-1	Side	6.5	5.0	5.2	2.0	7.0	7.75
PC768-2	Side	6.3	4.9	5.9	2.0	7.0	7.75





60 Hz Postline Ballasts

Metal Halide

Input Volts	Catalog Number† (P=Thermally Protected)	Circuit Type	Input Watts	Max* Input Current	Nom. Open Circuit Voltage	Fuse (amps)	Length (in)	Weight (lbs)	Spring Clip & Support Chain Kit	Max Dist To Lamp (ft)	Certifications	
												
50W Lamp, ANSI Code M110												
120	74P5104-011P	HX-PFC	69	1.1	260	3	12.0	6.0	PL-2 (Optional)	20	✓	✓

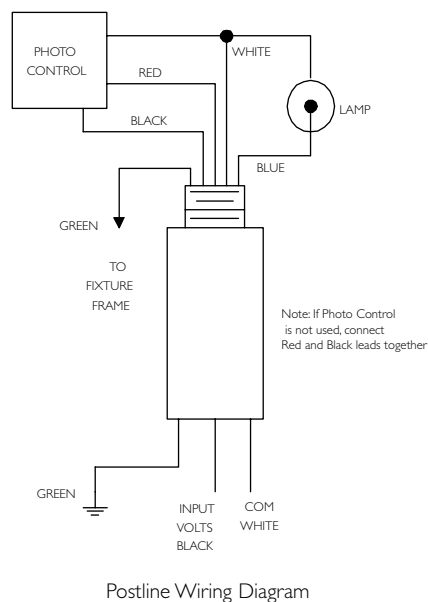
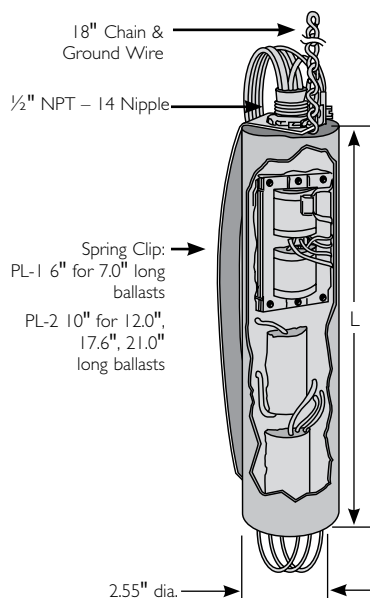
† Ordering information:

Order catalog number indicated. If spring clip and support chain kit is desired, order separately.

- For HX and R circuits, figure is highest of starting, operating or open circuit current.

PL-1 and PL-2 - Spring Clip and Support Chain Kits

Included pre-assembled with all postline ballasts rated 100 watts and above. Support chain lowers ballast 18" down post while 6" or 10" spring clip forces ballast against post's inner wall to assure proper heat dissipation away from ballast's internal components. Also includes factory-connected ground wire to provide for proper grounding of ballast case and fixture housing. Kits include instruction sheet and may be ordered separately to retrofit existing installations.





60 Hz Postline Ballasts

High Pressure Sodium



Input Volts	Catalog Number† (P=Thermally Protected)	Circuit Type	Input Watts	Max Input Current	Nom. Open Circuit Voltage	Fuse (amps)	Length (in)	Weight (lbs)	Spring Clip & Support Chain Kit	Max Dist To Lamp (ft)	Certifications		
													
35W Lamp, ANSI Code S76													
120	74P7703-01 IP	R-HPF	43	.8	120	2	7.0	3.5	PL-1 (Optional)	10	✓	✓	
50W Lamp, ANSI Code S68													
120	74P7803-01 IP	R-HPF	61	1.3	120	4	12.0	4.8	PL-2 (Optional)	10	✓	✓	
70W Lamp, ANSI Code S62													
120	74P7903-01 IP	R-PFC	84	1.6	120	4	12.0	5.0	PL-2 (Optional)	10	✓	✓	
277	74P7933-01 IP	HX-HPF	97	.7	277	2	17.6	8.5	PL-2* (Included)	10	✓		
100W Lamp, ANSI Code S54													
120	74P8003-01 IP	R-HPF	122	2.5	120	7	17.6	7.3	PL-2 (Included)	5	✓	✓	
208	74P8013-01 IP	HX-HPF	136	1.1	208	3	21.0	12.7	PL-2 (Included)	5	✓		
240	74P8023-01 IP			1.0	240	3					✓		
277	74P8033-01 IP			.9	277	3					✓		
150W Lamp, ANSI Code S55 (55V Arc Tube)													
120	74P8104-01 IP	R-HPF	178	3.6	120	9	17.6	7.8	PL-2 (Included)	5	✓	✓	

[†] Ordering information:

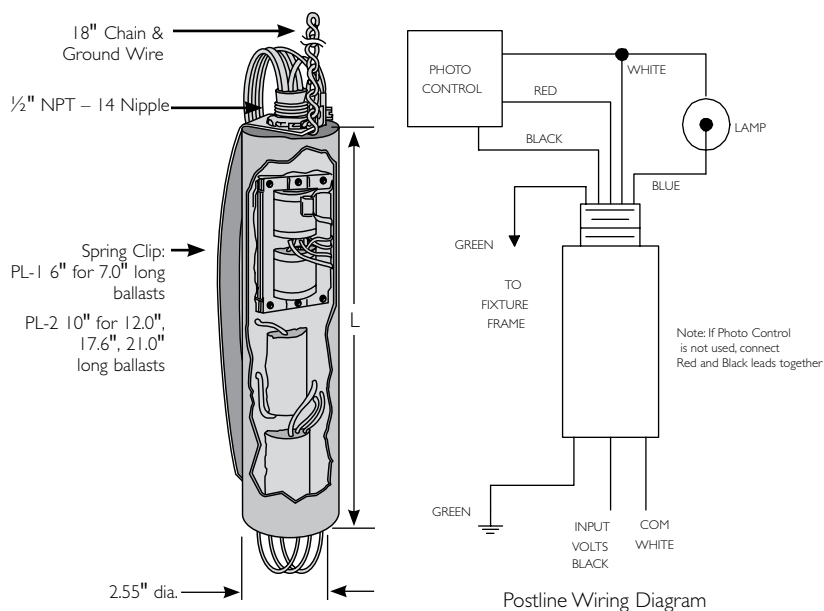
Order catalog number indicated. Ballasts rated 100W and above include pre-assembled spring clip and support chain kit. For ballasts rated less than 100W, if spring clip and support chain kit is desired, order separately.

* 70W High Pressure Sodium ballasts with 208, 240, or 277V inputs will always be supplied with the spring clip and chain kit.

HID • Postline
HPS

PL-1 and PL-2 - Spring Clip and Support Chain Kits

Included pre-assembled with all postline ballasts rated 100 watts and above. Support chain lowers ballast 18" down post while 6" or 10" spring clip forces ballast against post's inner wall to allow for proper heat dissipation away from ballast's internal components. Also includes factory-connected ground wire to provide for proper grounding of ballast case and fixture housing. Kits include instruction sheet and may be ordered separately to retrofit existing installations.





60 Hz Indoor Enclosed Ballasts

High Pressure Sodium

Input Volts	Catalog Number	Circuit Type (Maximum Ambient Temp.)	Input Watts	Max* Input Current	Nom. Open Circuit Voltage	Fuse (amps)	Wiring Dia.	Case Style	Weight (lbs)	Certification	
											
400W Lamp, ANSI Code S51											
120/208/240/277	78E8493-001	CWA (40°C)	464	3.8/2.2/1.9/1.7	190	10/8/5/5	IE-2	PC-724	38	✓	✓
480	78E8443-001			1.0		3	IE-1			✓	
1000W Lamp, ANSI Code S52											
120/208/240/277	78E8793-001	CWA★ (40°C)	1100	9.5/5.5/4.8/4.2	435	25/15/10/10	IE-2	PC-746	60	✓	✓
480	78E8743-001			2.3		6	IE-1			✓	

Note: Ballasts must be mounted at least 12" apart. All indoor enclosed high pressure sodium and pulse-start metal halide lamp ballasts are furnished with an Philips Advance long range ignitor built into the ballast enclosure. Maximum lamp-to-ballast distance is 50 ft. (Except 1000 watt ballasts which are 75 ft). For ballasts not requiring ignitors, see page 5-44 for remote mounting considerations.

• For CWA circuits, figure is operating current.

★ Equipped with an auto-reset thermal protector to prevent ignitor from overheating in the event of lamp failure.

◇ White can typically used for indoor tennis courts.

** The 145 Watt Lamp, ANSI Code C192, is an energy saving, screw in replacement lamp for the M57 or M152 lamps, that may reduce input watts up to 15% on existing 175W ballasts.

*** The 205 Watt Lamp, ANSI Code C184 is an energy saving, screw in replacement lamp for the M58 or M138 and M153 PS lamps that may reduce input watts up to 18% on existing ballasts.

**** The 330 Watt Lamp, ANSI Code C185 is an energy saving, screw in replacement lamp for the M59 or M135 and M155 PS lamps that may reduce input watts up to 18% on existing ballasts.

DIMENSIONS

Case Style	A	B	C	D	E	F	G
PC-723	11 ³ / ₈	12	12 ³ / ₄	13 ³ / ₄	3 ⁵ / ₁₆	6 ⁹ / ₁₆	4 ³ / ₄
PC-724	12 ¹ / ₁₆	12 ¹¹ / ₁₆	13 ⁷ / ₁₆	14 ⁷ / ₁₆	3 ⁵ / ₁₆	7 ¹¹ / ₁₆	5 ³ / ₄
PC-746	17 ³ / ₈	18	18 ³ / ₄	19 ³ / ₄	3 ⁵ / ₁₆	7 ¹¹ / ₁₆	5 ³ / ₄

78E INDOOR ENCLOSED DIMENSIONS

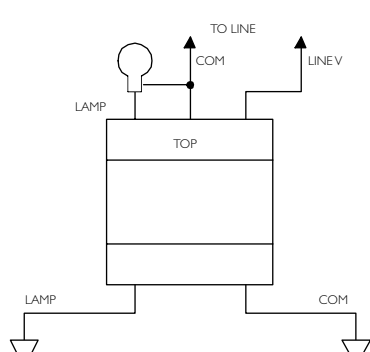
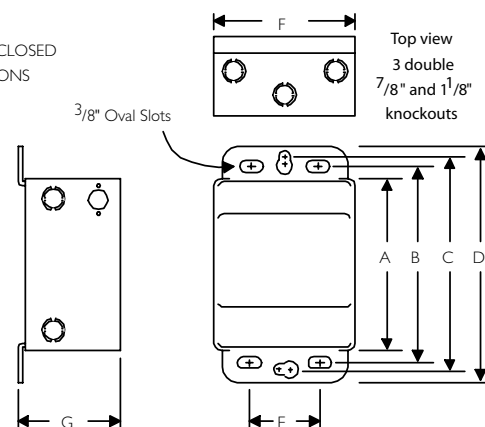


Fig IE-1

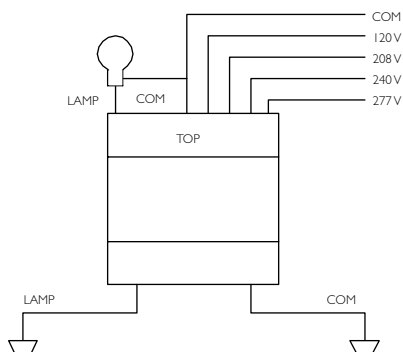


Fig IE-2



60 Hz Indoor Enclosed Ballasts

Metal Halide

Input Volts	Catalog Number	Circuit Type (Maximum Ambient Temperature)	Input Watts	Max* Input Current	Nom Open Circuit Voltage	Fuse (amps)	Wiring Dia.	Case Style	Weight (lbs)	Certification	
										UL	CSA
175/150W Lamp, ANSI Code M57/M107 or 145W Lamp, ANSI Code C192**											
120/208/ 240/277	78E5590-001	CWA (65°C)	210	1.8/1.1/ 0.9/0.8	305	5/3/ 3/2	IE-2	PC-723	22	✓	✓
250W Lamp, ANSI Code M58 or 205W Lamp, ANSI Code C184***											
120/208/ 240/277	78E5790-001	CWA (65°C)	285	2.5/1.5/ 1.3/1.1	310	8/5/ 5/3	IE-2	PC-723	24	✓	✓
250W Lamp, ANSI Code M138/M153 or 205W Lamp, ANSI Code C184*** (Pulse Start)											
120/208/ 240/277/ 480	78E5752-001EE	Super CWA (55°C)	284	2.4/1.4/ 1.2/1.1 .6	280	8/5/ 5/3/ 2	IE-2	PC-723	23	✓	✓
400W Lamp, ANSI Code M59 or 330W Lamp, ANSI Code C185****											
120/208/ 240/277	78E6091-001	CWA (55°C)	458	4.0/2.3/ 2.0/1.8	300	10/7/ 5/5	IE-2	PC-724	32	✓	✓
480	78E6041-001		462	1.0		3	IE-1			✓	
400W Lamp, ANSI Code M135 or 330W Lamp, ANSI Code C185**** (Pulse Start)											
120/208/ 240/277/ 480	78E6052-001EE	Super CWA (55°C)	454	3.8/2.3/ 1.9/1.7/ 1	265	10/7/ 5/5/ 3	IE-2	PC-724	32.8	✓	✓
Two 400W Lamps, ANSI Code M59 or 330W Lamp, ANSI Code C185****											
120/240	78E6351-001	CWA-ILO (40°C)	890	8.4/4.2	330	20/10	IE-3	PC-746	58	✓	
120/277	78E6381-001			8.4/3.6		20/10				✓	
480	78E6341-001			2.1		5				✓	
1000W Lamp, ANSI Code M47											
120/208/ 240/277	78E6592-WC1◇ 78E6592-001	CWA (55°C)	1080	9.0/5.2/ 4.5/3.9	430	20/15/ 10/10	IE-2	PC-724	42	✓	✓
480	78E6542-001			2.3		6	IE-1			✓	
120/ 277/347	78E65A2-001	CWA (55°C)	1080	9.0/ 3.9/3.2	430	20/ 10/8	IE-4	PC-724	42.2	✓	✓
1000W Lamp, ANSI Code M141 (Pulse Start)											
120/208/ 240/277	78E6593-WC1◇	Super CWA (50°C)	1080	9.0/5.2/ 4.5/3.2	430	20/15/ 10/10	IE-2	PC-724	43.2	✓	✓
277/ 347/480	78E65F3-WC1◇	Super CWA (40°C)	1075	3.8/ 3.2/2.4	430	10/ 8/5	IE-2	PC-724	42	✓	✓

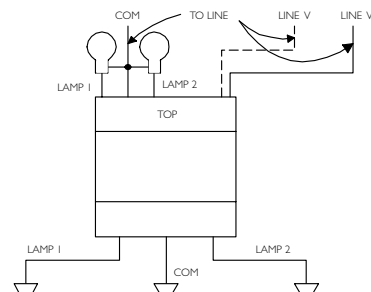


Fig IE-3

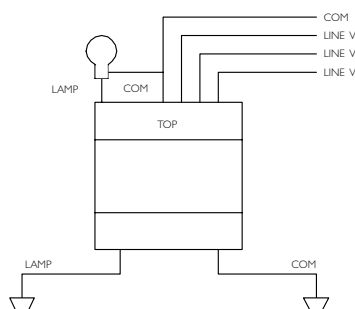


Fig IE-4



60 Hz Outdoor Weatherproof Ballasts

Metal Halide

Input Volts	Catalog Number	Circuit Type	Input Watts	Max * Input Current	Nom Open Circuit Voltage	Fuse (amps)	Wiring Dia.	Height (in)	Weight (lbs)	Certification		
												
175/150W Lamp, ANSI Code M57/M107 or 145W Lamp, ANSI Code C192**												
120/208/ 240/277	79W5590-001	CWA	210	1.8/1.1/ .9/.8	305	5/3/ 3/2	OW-2	6.6	15	✓	✓	
250W Lamp, ANSI Code M58 or 205W Lamp, ANSI Code C184***												
120/208/ 240/277	79W5790-001	CWA	285	2.5/1.5/ 1.3/1.1	310	8/5/ 5/3	OW-2	8.6	18	✓	✓	
400W Lamp, ANSI Code M59 or 330W Lamp, ANSI Code C185****												
120/208/ 240/277	79W6091-001	CWA	458	4.0/2.3/ 2.0/1.8	300	10/7/ 5/5	OW-2	8.6	21	✓	✓	
480	79W6041-001		462	1.0		4	OW-1			✓	✓	
Two 400W Lamps, ANSI Code M59 or two 330W Lamp, ANSI Code C185****												
120/240	79W6351-001	CWA (ILO)	890	8.4/4.2	330	25/15	OW-3	13.8	43	✓	✓	
480	79W6341-001			2.1		7				✓	✓	
1000W Lamp, ANSI Code M47												
120/208/ 240/277	79W6592-001	CWA	1080	9.0/5.2/ 4.5/3.9	430	20/15/ 10/10	OW-2	11.3	33	✓	✓	
480	79W6542-001			2.3		6	OW-1			✓	✓	

* For CWA circuits, figure is operating current.

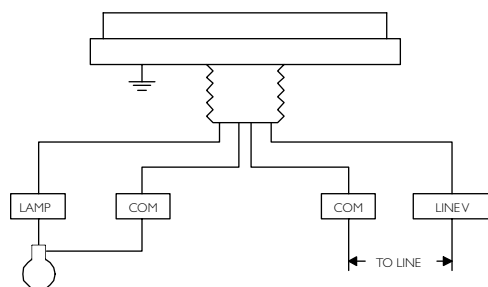


Fig OW-1

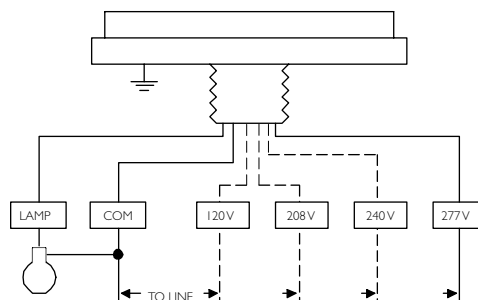


Fig OW-2

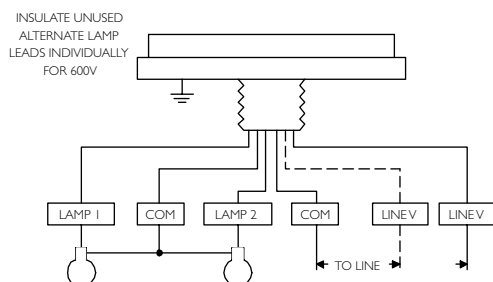
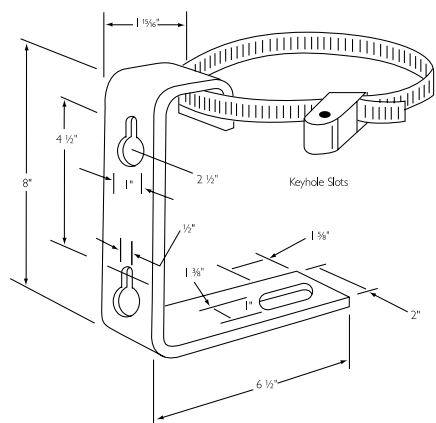


Fig OW-3

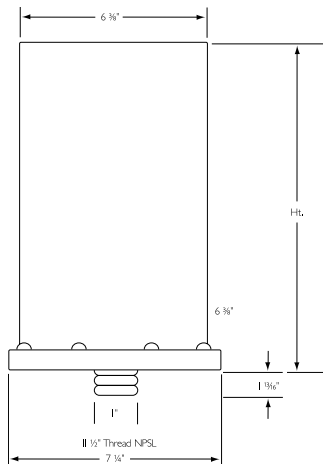


Input Volts	Catalog Number	Circuit Type	Watts Input	Max * Input Current	Nom Open Circuit Voltage	Fuse (amps)	Wiring Dia.	Height (in)	Weight (lbs)	Certification	
400W Lamp, ANSI Code S51											
120/208/ 240/277	79W8493-001	CWA	464	3.8/2.2 1.9/1.7	430	10/8/ 5/5	OW-2	11.3	20		
480	79W8443-001			1.0		3	OW-1				
1000W Lamp, ANSI Code S52											
120/208/ 240/277	79W8793-001	CWA*	1100	9.5/5.5/ 4.8/4.2	435	25/15/ 10/10	OW-2	13.8	34		
480	79W8743-001			2.3		6	OW-1				

**** The 330 Watt Lamp, ANSI Code C185 is an energy saving, screw in replacement lamp for the M59 or M135 and M155 PS lamps that may reduce input watts up to 18% on existing ballasts.



SH-I Mounting Bracket Kit
(includes bracket & band clamp,
order separately)



INTERNATIONAL ELECTROMAGNETIC HID BALLASTS

We offer an extensive range of High Intensity Discharge ballasts to run ANSI specification (U.S. style) lamps. These ballasts are suitable for International markets and range in voltage from 120 through 240V, 50 Hz.

Philips Advance HID Ballasts are available to operate the wide variety of mercury, metal halide, high pressure sodium and low pressure sodium lamps available in today's marketplace.

Like fluorescent, HID lamps are electric discharge lamps. Light is produced by an arc discharge between two electrodes located at opposite ends of an arc tube within the lamp's outer glass envelope. The ballast is the lamp's power supply; its purpose is to provide proper starting and operating voltage and current to initiate and sustain this arc.

Core & Coil

The basic ballast is the open core & coil which is most often used as a component within a lighting fixture. The core & coil also forms the nucleus of the five other ballast configurations detailed in this section. It consists of either one, two or three copper coils on a core (or "stack") of electrical-grade steel laminations. The coils are assembled to core sections which are then surface-welded together. The assembled Philips Advance ballast is vacuum impregnated with a silica-filled polyester varnish to re-enforce the electrical insulation, preclude moisture, inhibit noise, and dissipate heat. Some HID ballast manufacturers apply varnish via a preheat-and-dip process which only puts a thin coat of varnish on the outer surface of the ballast.

Encapsulated Core & Coil

Where quiet performance is required, the standard open core & coil ballasts are encapsulated (potted) in a cube-shaped steel can utilizing Class H (180°C) polyester compound. These ballasts carry a Class A noise rating up through 175W and Class B for 250 and 400W. As with the open core & coil, the capacitor (and ignitor where included) are mounted separately within the fixture.

EPAct 2005

The Energy Policy Act of 2005 (EPACT 2005) requires that mercury vapor lamp ballasts shall not be manufactured in or imported into the United States after January 1, 2008. With regard to imported ballasts, the standard applies to both the importing of ballasts as well as the importing of mercury vapor lamp luminaires with ballasts, since importing a mercury vapor lamp luminaire with a mercury vapor lamp ballast would be the same as importing a mercury vapor lamp ballast. Therefore, as of January 1, 2008, luminaires cannot be imported with mercury vapor lamp ballasts.

Replacements

For capacitors, see pages 5-38 & 5-39

For ignitors, see pages 5-40 & 5-44

Special Voltages

For voltage and frequencies not shown in the charts of the following pages, please contact your Philips Lighting Sales Representative.

CERTIFICATIONS



Indicates ballast is listed by Underwriters Laboratories, Inc. in accordance with UL 1029 Standard for HID Ballasts. Each ballast is marked appropriately.



All HID Ballasts are designed and manufactured in accordance with the American National Standards Institute Standard for HID Ballasts, ANSI C82.4.



Norma Obligatoria Mexicana.
(contact your local salesperson for availability)

50 HZ Core & Coil Ballasts

Mercury

Ballasts for operating Mercury lamps are for use outside the USA ONLY are for use outside the USA ONLY

Input Volts	Catalog [†] Number	Circuit Type	Watts Input	Max* Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	U.L. Bench Top Rise Code 1029 (Pg 5-4)
								Fig	A	B	Mfd	Min Volt	Cap Catalog Number	Dry or Oil		
175W Lamp, ANSI Code H39																
120/220/240	See 175W Metal Halide CWA 71A55N0-500 (page 5-60)															
250W Lamp, ANSI Code H37																
120/220/240	See 250W Metal Halide CWA 71A57N0-500D (page 5-60)															
400W Lamp, ANSI Code H33																
120/220/240	See 400W Metal Halide CWA 71A60N1-500 (page 5-60)															
1000W Lamp, ANSI Code H36																
120/220/240	See 1000W Metal Halide CWA 71A65N2-500 (page 5-60)															

† Ordering information:

Original equipment ballasts - add proper suffix to catalog number:

- 500D includes core & coil with dry-film capacitor
- 510D includes core & coil with welded bracket and dry-film capacitor
- 600 core & coil only (no capacitor)

• For CWA circuits, figure is operating current.

WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
1	5.1	1.00	4.50	0.25
2	6.5	1.25	5.75	0.28

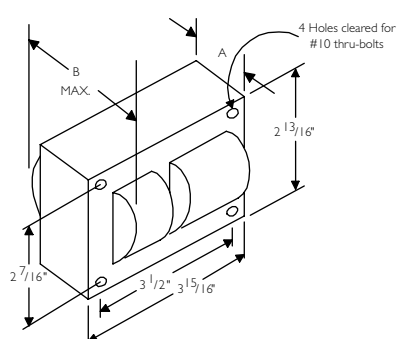
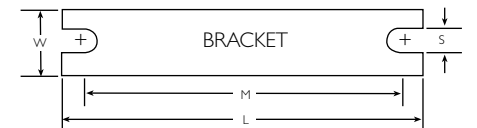


Fig. 1
(3" x 4" Core)

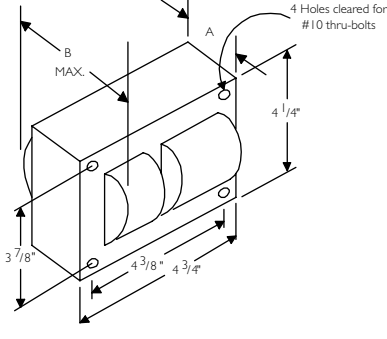


Fig. 2
(4 1/4" x 4 3/4" Core)

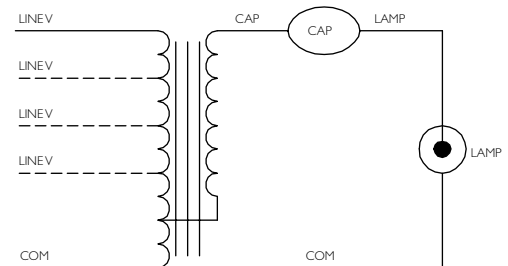


Fig. A

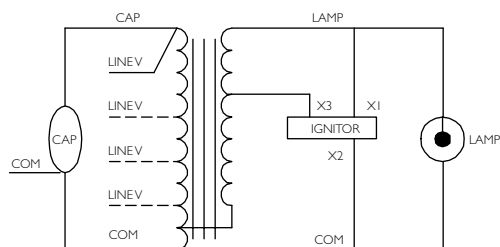


Fig. K

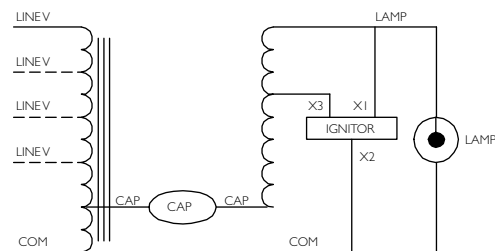


Fig. M

50 HZ Core & Coil Ballasts

Metal Halide

Input Volts	Catalog† Number	Circuit Type	Watts Input	Max* Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (Pg 5-4)		
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)	Class H (180°C)	Philips Advance Class N (200°C)	
								Fig	A	B										
70W Lamp, ANSI Code M98 or M143 (Pulse Start)																				
120/ 220/240	71A52N2-500D	HX-HPF	95	1.7/ 1.0/9	256	5/ 3/3	K	I	1.5	2.8	14	280	7C140M30RA	D	5.0	LI533-H4	15	B/ A/B	–	
100W Lamp, ANSI Code M90 or M140 (Pulse Start)																				
120/ 220/240	71A53N0-500D	HX-HPF	129	2.2/ 1.2/1.1	266	6/ 3/3	K	I	1.9	3.2	17.5	300	7C175M30RA	D	6.0	LI533-H4	15	A/ A/A	–	
150W Lamp, ANSI Code M102 or M142 (Pulse Start)																				
120/ 220/240	71A54N2-500D	HX-HPF	187	3.7/ 2.0/1.8	248	10/ 5/5	K	I	2.5	4.1	28	240	7C280P30RA	D	7.5	LI533-H4	5	C/ C/D	–	
175W Lamp, ANSI Code M57 or H39; or 150 Watt Lamp, ANSI Code M107																				
120/ 220-240	71A55N0-500	CWA	210	2.0/ 1.0	310	5/ 3	A	I	2.8	4.0	12	450	MD1204-100	O	9.0	–	–	C/ C	–	
250W Lamp, ANSI Code M58 or H37																				
120/ 220-240	71A57N0-500D	CWA	290	2.5/ 1.3	315	7/ 4	A	2	1.9	3.4	18	400	7C180P40-R	D	11.5	–	–	D/ A	–	
250W Lamp, ANSI Code M138 or M153 (Pulse Start)																				
120/ 220-240	71A57N2-500D	Super CWA	294	2.6/ 1.4	280	6/ 3	M	2	1.8	3.3	20	330	7C200P33-R	D	11.5	LI533-H4	5	C/ C	–	
320W Lamp, ANSI Code M132 or M154 (Pulse Start)																				
120/ 220-240	71A58N2-500D	Super CWA	365	3.1/ 1.6	280	10/ 5	M	2	2.1	3.8	24	400	7C240P40-R	D	12.5	LI533-H4	2	A/ A	–	
400W Lamp, ANSI Code M59 or H33																				
120/ 220-240	71A60N1-500	CWA	462	4.1/ 2.1	320	10/ 6	A	2	2.2	3.7	24	450	MD2409-100	O	14.0	–	–	D/ D	–	
400W Lamp, ANSI Code M135 or M155 (Pulse Start)																				
120/ 220-240	71A60N2-500D	Super CWA	454	3.9/ 2.0	270	10/ 5	M	2	2.1	3.8	30	345	7C300P34	D	12.3	LI533-H4	2	C/ E	–	
1000W Lamp, ANSI Code M47 or H36																				
120/ 220/240	71A65N2-500	CWA	1090	9.3/ 5.0/4.5	450	24/ 13/13	A	8	3.0	5.0	26	525	MD2602-100	O	23.0	–	–	D/ C/C	A/ A/A	
1500W Lamp, ANSI Code M48																				
220/240	71A67R2-510	CWA	1605	7.5/6.9	450	20/20	A	8a	4.4	6.4	36	540	2 Capacitor Set: MD1802-200 (2) 18mFd Caps [Connected in Parallel]	O	32.0	–	–	E/E	A/A	

50 HZ Core & Coil Ballasts

High Pressure Sodium

Input Volts	Catalog† Number	Circuit Type	Watts Input	Max. • Input Current	Nom Open Circuit Voltage	Fuse Rating (Amps)	Wiring Dia	Dimensions			Non-PCB Capacitor (Page 5-38 & 5-39)				Total Weight (lbs)	Ignitor †† (Page 5-40 to 5-44)		U.L. Bench Top Rise Code 1029 (Pg 5-4)			
											Mfd	Min Volt	Cap Catalog Number	Dry or Oil		Part Number	Max Dist To Lamp (ft)				
								Fig	A	B											
70W Lamp, ANSI Code S62																					
120/ 220/240	71A79N1-500D	HX-HPF	94	1.4/ 0.8/7	125	4/ 2/2	K	I	1.9	3.1	8.4	280	7C084L30RA	D	6.0	LI55 I-H4	2	A/ A/A	—		
100W Lamp, ANSI Code S54																					
120/ 220/240	71A80N1-500D	HX-HPF	130	2.4/ 1.3/1.2	120	6/ 4/4	K	I	2.4	3.7	12	280	7C120M30RA	D	8.0	LI55 I-H4	2	A/ A/A	—		
150W Lamp, ANSI Code S55																					
120/ 220/240	71A81N2-500D	HX-HPF	188	3.0/ 1.7/1.6	120	8/ 5/4	K	I	3.0	4.2	17.5	260	7C175M30RA	D	7.5	LI55 I-H4	2	C/ B/B	—		
250W Lamp, ANSI Code S50																					
120/ 220-240	71A82N1-500D	CWA	300	2.8/ 1.4	190	7/ 4	M	2	2.1	3.7	40	240	7C400P30-RA	D	12.0	LI50 I-H4	2	D/ C	—		
400W Lamp, ANSI Code S51																					
120/ 220-240	71A84N3-500D	CWA	465	4.0/ 2.0	190	10/ 6	M	2	2.5	4.1	64	280	7C640S28-RA	D	15.0	LI50 I-H4	2	D/ D	—		
1000W Lamp, ANSI Code S52																					
220/240	71A87R3-500	CWA	1100	6.0/5.6	435	15/15	M	8a	4.3	6.3	28	580	2 Capacitor Set: MD1408-230 (2) 14mFd Caps [Connected in Parallel]	O	35.5	LI571-H5★	2	E/E	A/A		

[†] Ordering information:

Original equipment ballasts - add proper suffix to catalog number:

- 500D includes core & coil with dry-film capacitor
- 510D includes core & coil with welded bracket and dry-film capacitor
- 500 includes core & coil with oil-filled capacitor
- 510 includes core & coil with welded bracket and oil-filled capacitor
- 600 core & coil only (no capacitor)

^{††} Each ballast requiring an ignitor is furnished as standard with the Short Range ignitor model shown for use within fixtures. If a Long Range ignitor is required for remote mounting, specify on order. See pages 5-40 to 5-44 for additional information.

- For HX and R circuits, figure is highest of starting, operating or open circuit current. For CWA circuits, figure is operating current.

★ Equipped with an auto-reset thermal protector to prevent ignitor from overheating in the event of lamp failure.

WELDED BRACKET DIMENSIONS

Ballast Dimensions Fig	L	W	M	S
1	5.1	1.00	4.50	0.25
2	6.5	1.25	5.75	0.28
8	7.8	2.75	6.13	0.25
8a	7.8	4.50	6.75	0.31

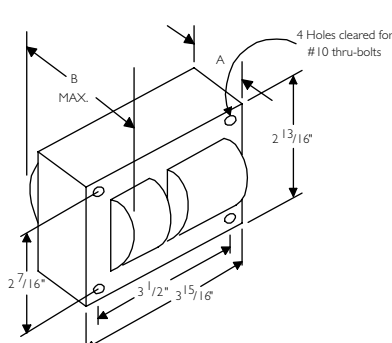
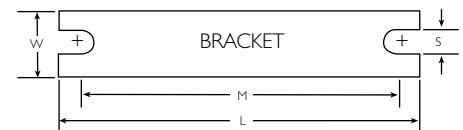


Fig. 1
(3" x 4" Core)

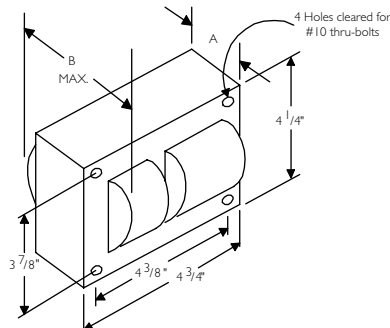


Fig. 2
(4 1/4" x 4 3/4" Core)

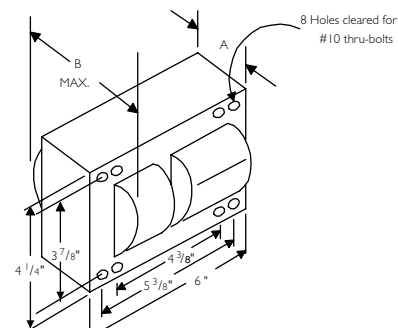


Fig. 8 and 8a
(4 1/4" x 6" core)