

# Product Overview

## Core & Coil

Core & coil ballasts are used in over 90% of all HID fixtures. Universal's core & coil models are available for all HID lamp types, including single-, dual-, tri-, quad- and multi-volt designs. For added versatility and reduced inventory costs, Universal has also introduced the industry's first Multi-5™ ballast (120, 208, 240, 277, or 480 volt), featuring a 480-volt tap on a conventional quad-tap ballast.

Our core & coil models are ideal for a wide variety of lighting applications, including factories, warehouses, gymnasiums and retail stores. All these ballasts feature precision-wound coils, ensuring even heat dissipation and the highest electrical integrity.

Universal's Universal Precise™ is the next generation in core & coil technology, featuring a smaller, light-weight design and improved temperature performance. Universal Precise™ fits virtually all applications, and has no exposed live metal parts. There are no plastic extrusions, which prevents breakage during shipping. Color-coded leads make installation easy.

## 50 Hertz

Universal offers 50 Hz core & coil ballasts to meet the rapid growth in demand in international markets. Our ballasts are available for 220, 230, and 240 volt electrical systems.

## F-Can

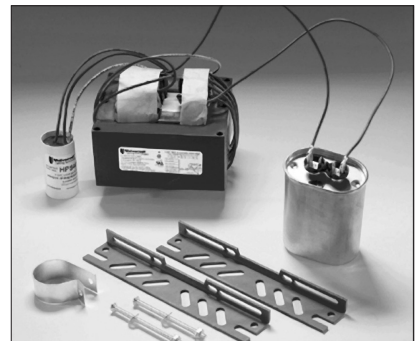
These ballasts are used primarily for indoor downlighting applications where quiet operation is essential. All the components of these ballasts are enclosed in a fluorescent-style ballast can and are thermally protected.



F-Can Ballasts



Core and Coil Ballasts



HID Ballast Kits

# Nomenclature

## UNIVERSAL PRECISE™

### ABBREVIATIONS

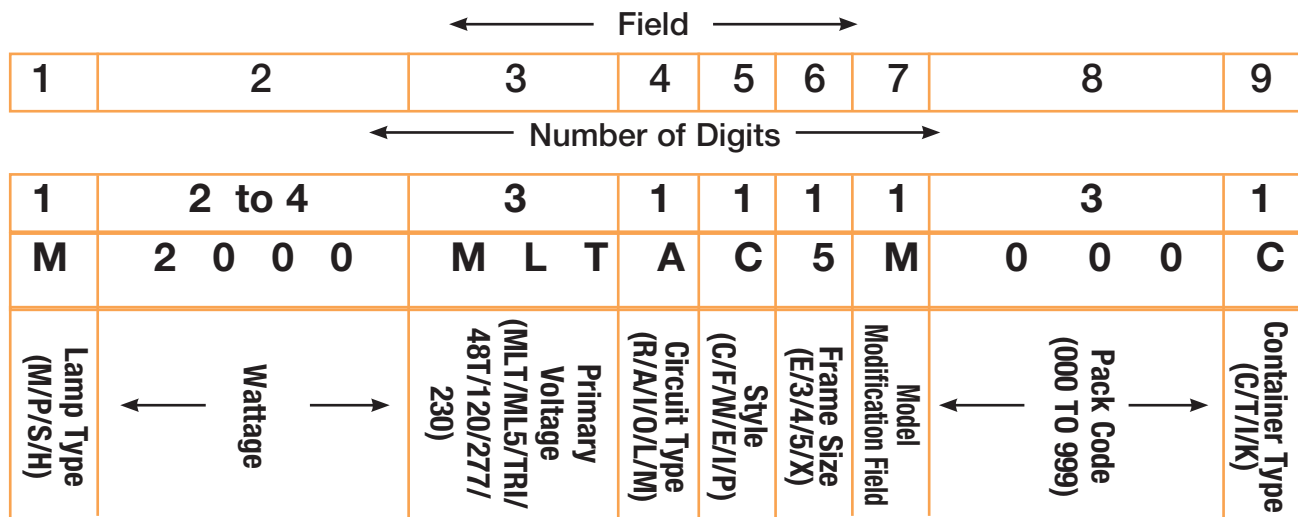
<b>CWA</b>	Constant Wattage Autotransformer
<b>CWI</b>	Constant Wattage Isolated
<b>ISO</b>	Regulated Lag
<b>R-HPF</b>	Reactor—High Power Factor
<b>R-NPF</b>	Reactor—Normal Power Factor
<b>HX-HPF</b>	Lag Type — High Reactance Autotransformer—High Power Factor
<b>HX-NPF</b>	Lag Type — High Reactance Autotransformer—Normal Power Factor

### UL Bench Top Rise Temperature Code

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

### UL Bench Top Rise Letter Code Temperature Range for Class H (180° C) Ballasts

A < 75°C	B 75°C < 80°C	C 80°C < 85°C
D 85°C < 90°C	E 90°C < 95°C	F 95°C < 100°C



Field	Description
1	(M) Metal Halide, (P) Pulse Start Metal Halide, (S) High Pressure Sodium
2	35 to 1500 Watts (Varies from two to four digits)
3	(MLT) Quad, (ML5) Multi-5, (TRI) TriVolt, (48T) 480/120, (120) 120, (277) 277, (230) 230V/50Hz
4	(R) Reactor, (A) CWA, (I) CWI, (O) IsoReg, (L) High Reactance/Lag, (M) MagLag
5	(C), C&C, (F) F-Can, (W) Weatherproof, (E) Encased/Potted C&C (I) Indoor Encased
6	(E) E&I, (3) 3x4, (4) 4-3/4, (5) 5-3/4, (X) Non Core and Coil
7	Model Modification Field
8	Pack Code (000 to 999, per pack code listing)
9	(C) Carton, (T) Tray, (I) Individual, (K) Kit

# Distributor Replacement Kits

## Quad, 480 Volt, Multi-5™ and Multi-5™ Uni-Pak™ Distributor Replacement Kits

LampType	Wattage	Voltage	Frame Size	Old Part Number	New Part Number
H.P.S.	50	120/208/240/277	3 x 4	12310-95-500K	S50MLTLC3M500K
	70	120/208/240/277	3 x 4	12310-153-500K	S70MLTLC3M500K
	70	480-120	3 x 4	12310-148R-500K	S7048TLC3M500K
	100	120/208/240/277	3 x 4	12310-90-500K	S100MLTLC3M500K
	100	480-120	3 x 4	12310-30R-500K	S10048TLC3M500K
	150	120/208/240/277	3 x 4	S150MLTLC3M	S150MLTLC3O500K
	150	480-120	3 x 4	12310-160S-500K	S15048TLC3M500K
	200	120/208/240/277	4.25 x 4.75	New	S200MLTAC4M500K
	200	480-120	4.25 x 4.75	New	S20048TAC4M500K
	250	Multi-5	4.25 x 4.75	S250ML5AC4M	S250ML5AC4O500K
	250	120/208/240/277	4.25 x 4.75	1230-92S-500K	S250MLTAC4M500K
	250	480-120	4.25 x 4.75	1230-32S-500K	S25048TAC4M500K
	250	Multi-5™ Uni-Pak™	4.25 x 4.75	New	S250ML5AC4M555K
	400	Multi-5	4.25 x 4.75	New	S400ML5AC4M500K
	400	120/208/240/277	4.25 x 4.75	1230-93U-500K	S400MLTAC4M500K
	400	480-120	4.25 x 4.75	1230-33U-500K	S40048TAC4M500K
	400	Multi-5	4.25 x 5.75	New	S400ML5AC5M500K
	400	120/208/240/277	4.25 x 5.75	1230-93S-500K	S400MLTAC5M500K
	400	480-120	4.25 x 5.75	1230-33S-500K	S40048TAC5M500K
	400	Multi-5™ Uni-Pak™	4.25 x 4.75	New	S400ML5AC4M555K
	400	Multi-5™ Uni-Pak™	4.25 x 4.75	New	S400ML5AC5M555K
	600	120/208/240/277	4.25 x 5.75	New	S600MLTAC5M500K
	1000	120/208/240/277	4.25 x 5.75	1230-97S-500K	S1000MLTAC5M500K
	1000	Multi-5	4.25 x 5.75	New	S1000ML5AC5M500K
	1000	Multi-5™ Uni-Pak™	4.25 x 5.75	New	S1000ML5AC5M555K
	1000	480-120	4.25 x 5.75	1230-57S-500K	S100048TAC5M500K