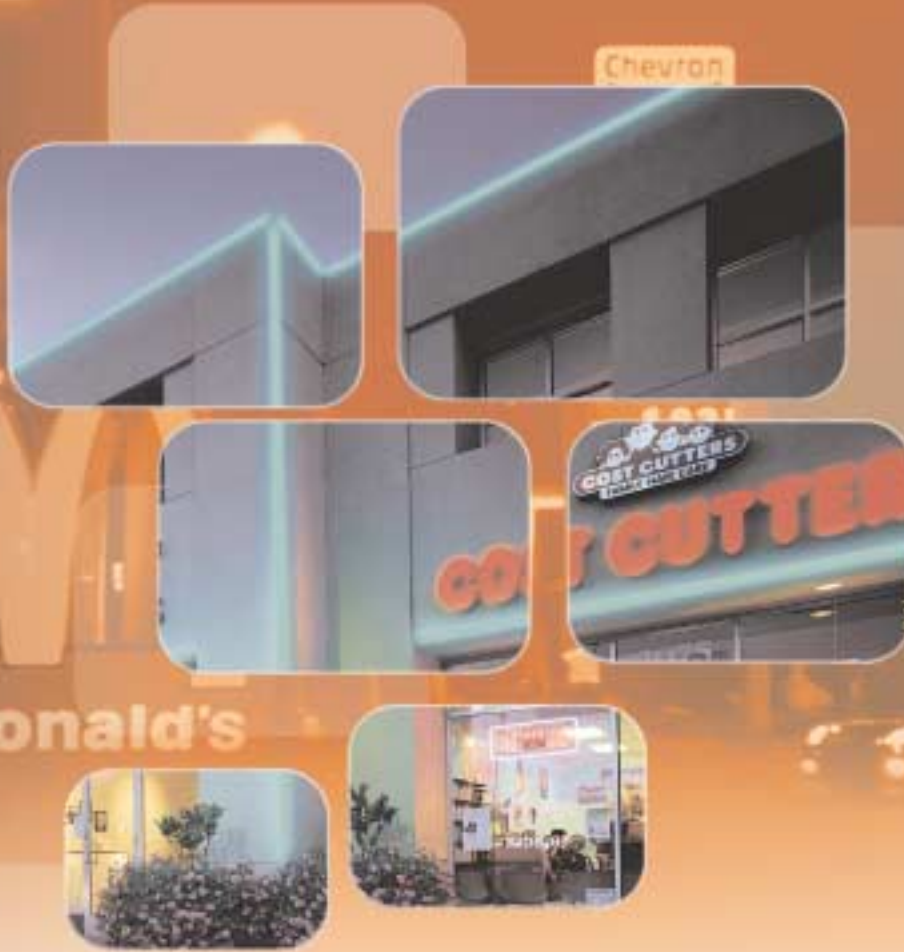



Ballasts, Power Supplies and LED Drivers

signPRO®  
for Illuminated Signs



**signPRO® Offering:**

- ▶ Neon Power Supplies 
- ▶ Electromagnetic Ballasts
- ▶ Electronic Fluorescent Ballasts
- ▶ HID Ballasts
- ▶ LED Drivers





signPRO® the complete and trusted source for all of your sign ballast, LED driver, and neon power supply needs.

Advance's **signPRO®** line...a brand name synonymous with full-line, high-quality sign ballasts, LED drivers, and neon power supplies offered exclusively to the sign industry to support the market's broad range of sign applications.

Advance's comprehensive line of signPRO products includes:

...our newest signPRO **Electronic Neon Power Supplies** - delivering continuous, consistent, and energy-efficient operation for neon signs in a variety of outdoor and indoor settings.

...signPRO **Magnetic Fluorescent Sign Ballasts** - featuring twelve "workhorse" models that deliver reliable performance and long life in a variety of outdoor conditions and indoor applications...**plus a brand new 4 x 96" sign ballast in the industry-standard can size!**

...signPRO **Electronic Fluorescent Sign Ballasts** - supporting over 200 different fluorescent lamp combinations from the convenience of just three energy-efficient and easy-to-use ballast models.

...signPRO **Magnetic HID Ballasts** - representing the ultimate in dependability and performance for the range of sign applications involving metal halide and high pressure sodium lighting technology.

...signPRO **Drivers** for LED Sign Lighting Applications - featuring a wide variety of drivers to support the market's increasingly-popular 12V and 24V LED lighting systems.

*A trusted name and a comprehensive line*

Whether indoor or outdoor, Advance's expanded signPRO family of products is proof-positive of Advance's commitment to the sign industry and to the valued community of sign distributors and manufacturers!

*Read on for more information about all of Advance's exciting signPRO products...*

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<b>Electromagnetic Fluorescent Ballasts</b> .....	4-5
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# signPRO® Electronic Neon Power Supplies

for both indoor and outdoor Neon Sign Applications



Delivering reliable and energy-efficient performance!

### The "new kid on the block"....!

Advance's popular signPRO family is proud to offer its newest addition to the marketplace - a line of energy-efficient and easy-to-use electronic neon power supplies for a broad range of indoor and outdoor neon sign applications.

### Safe and dependable

Reliable and safe, Advance's signPRO electronic neon power supplies insure continuous and consistent operation of neon signs via a range of dedicated performance and safety features, including self-adjusting output voltage, constant current output, an auto re-start circuit, and ground-fault, open circuit, and overload protection.

### Energy-efficient and high-performing

Electronic circuitry within signPRO neon power supplies enables significant reductions in energy consumption, delivering up to 66% energy savings versus magnetic neon transformers. Safe, versatile, and easy to use, Advance's new signPRO electronic neon transformers offer the neon sign industry a powerful and energy-efficient lighting solution.

### Performance backed - satisfaction guaranteed

Fully-warranted for two years, signPRO electronic sign ballasts are supported by a team of service professionals, toll-free at 1-800-372-3331.



Application	Luminous Tube Footage	Min. Starting Temp. (°F)	Input Volts	Catalog Number	Max. Input Current (Amps)	Max. Input Power (Watts)	Output Voltage (V)	Output Current (mA)	Dimensions	Weight (lbs.)
Indoor	See Table	32°F	120	ANI-5030	0.50	60	5 kV	30 mA	N1	1.5
				ANI-7530	0.75	90	7.5 kV	30 mA	N2	1.8
				ANI-10030	1.00	120	10 kV	30 mA	N3	2.0
Outdoor		-30°F		ANO-5030	0.50	60	5 kV	30 mA	N4	1.5
				ANO-7530	0.75	90	7.5 kV	30 mA	N5	1.8
				ANO-10030	1.00	120	10 kV	30 mA	N6	2.0

Maximum Operating Temperature: 104°F / 40°C for Indoor Units, 122°F / 50°C for Outdoor Units

### Luminous Tube Footage Chart (Indoor Applications)

Catalog Number	Output Voltage	RED NEON FOOTAGE										MERCURY FOOTAGE - ALL COLORS							
		Tube Size in Millimeters																	
		8	9	10	11	12	13	14	15	16	18	22	10	11	13	14	16	18	19
ANI-5030	5 kV	8	9	11	12	14	15	16	18	22	10	11	13	14	16	18	19	21	26
ANI-7530	7.5 kV	13	15	17	19	21	23	26	28	35	15	18	20	23	25	28	30	33	41
ANI-10030	10 kV	17	20	23	26	29	32	35	38	48	21	24	27	31	34	38	41	45	56
ANO-5030	5 kV	8	9	11	12	14	15	16	18	22	10	11	13	14	16	18	19	21	26
ANO-7530	7.5 kV	13	15	17	19	21	23	26	28	35	15	18	20	23	25	28	30	33	41
ANO-10030	10kV	17	20	23	26	29	32	35	38	48	21	24	27	31	34	38	41	45	56
Recommended Gas Pressure - mmHg		15	14.5	13	12	11	10.5	10	9.5	8	15	14.5	13	12	11	10.5	10	9.5	8

- Note: 1. For outdoor applications, reduce footage by 20%
- 2. Deduct 1 foot for each pair of electrodes

### Physical Characteristics

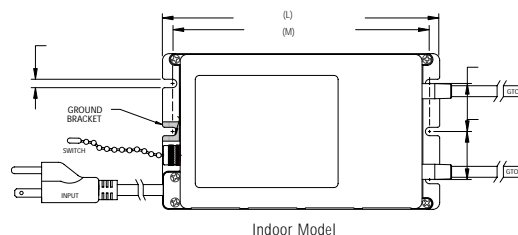
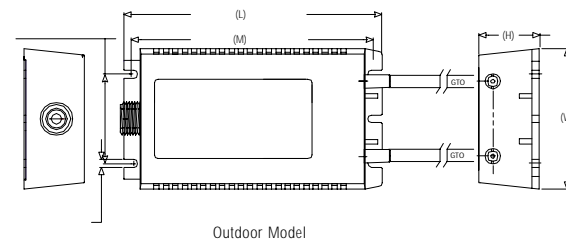
#### Indoor Models:

- 10 foot power cord (3 - conductor)
- On/Off pull-chain switch
- 24" GTO output leads

#### Outdoor Models:

- 36" input leads (Black, White, Green)
- 1/2" conduit nipple for input connections
- 24" GTO output leads

Designation	Dimensions (inches)			
	Length (L)	Width (W)	Height (H)	Mounting (M)
N1	6.50	2.07	1.42	6.00
N2	6.50	3.15	1.50	6.00
N3	6.50	3.65	1.50	6.00
N4	7.00	1.94	1.45	6.50
N5	6.55	3.00	1.55	6.12
N6	6.55	3.55	1.55	6.12





# signPRO® Magnetic Sign Ballasts

for T12/HO Rapid Start Fluorescent Lamps

The sign industry's "workhorse" -- offered in both 120V or 277V models!

### Proven Performance

The popular line of products once known as the "Magnificent Six" now boasts the signPRO product logo, but their reputation for efficient operation, long ballast life and outstanding reliability remains firmly intact.

### Built to Perform - Under All Weather Conditions

signPRO magnetic sign ballasts are designed to provide low temperature starting - down to -20°F! Their UL Type 2 Outdoor listing allows for greater flexibility in sign design and for all outdoor applications. Each model also meets UL Class P and CSA requirements for safe, reliable operation.

### Special Construction - The Secret to Long Life

signPRO magnetic sign ballasts are built using high-grade steel laminations and copper coils, which are vacuum impregnated. This impregnation process drives insulation into the ballast coils, eliminating air pockets. Air pocket elimination greatly enhances heat dissipation and moisture protection. Add to the foregoing a corrosion-resistant, white steel casing, and the secret to long, reliable ballast life is unveiled.

### Versatile Wiring Options-Ease of Installation or Replacement

signPRO magnetic sign ballasts feature special integral anchor tabs enabling the adding of optional, customized wiring compartments.

Two such compartments are offered:

- > The PC161W "tepee style" lead cover, when space is at a premium.
- > The PC857W "j-box style" with five, 7/8" knockouts for maximum wiring flexibility. (See Page 8.)

It's no wonder signPRO magnetic ballasts are preferred by sign builders and contractors from coast to coast.

**NEW** And Advance continues to meet your needs with the introduction of a brand new ballast dedicated to your 4 x 96" sign applications!

### Satisfaction Guaranteed - You Can Count On It!

Warranted for a full two years, signPRO magnetic sign ballasts are supported by a team of technical professionals. Call toll-free at 1-800-372-3331.



## Magnetic Ballast Specifications

Lamp Data			Min. Starting Temp. (°F)	Input Volts	Catalog Number	Max. Line Current (Amps)	Max. Input Power (Watts)	Open Circuit Volts	Dim.	Wiring Diag.	Weight (lbs.)
No. of Lamps	Lamp Footage										
	Min	Max									
1,2	4	12	-20°F	120	ASB-0412-12-BL-TP	1.48	175	480	BL-1	21, 39	12
				277	VSB-0412-12-BL-TP	0.65					
2, 3, 4	6	20		120	ASB-0620-24-BL-TP	2.56	304	720	BL-1	5, 8, 13	12
				277	VSB-0620-24-BL-TP	1.12					
2, 3, 4	12	24		120	ASB-1224-24-BL-TP	2.70	312	785	BL-2	7, 9, 13	14
				277	VSB-1224-24-BL-TP	1.15					
2, 3, 4	20•	40•		120	ASB-2040-24-BL-TP	4.00	472	720	BL-3	5, 9, 13	21
				277	VSB-2040-24-BL-TP	1.75					
3, 4	24	32		120	ASB-2432-34-BL-TP	3.30	370	975	BL-4	8, 13	21
				277	VSB-2432-34-BL-TP	1.70					
4, 5, 6	12▼	40▼		120	ASB-1240-46-BL-TP	3.90	462	720	BL-3	14, 15, 19	21
				277	VSB-1240-46-BL-TP	1.70					
4, 5, 6	24■	48■	120	ASB-2448-46-BL-TP	5.19	604	720	BL-3	14, 15, 19	21	
			277	VSB-2448-46-BL-TP	2.25						



- Total lamp length of each circuit (A) and (B) must not be less than 10 ft. nor more than 20 ft. Circuit (A) is comprised of lamps 1,2. Circuit (B) is comprised of lamps 3,4. (See wiring diagrams)
- ▼ Total lamp length of each circuit (A) and (B) must not be less than 6 ft. nor more than 20 ft. Circuit (A) is comprised of lamps 1,2,3. Circuit (B) is comprised of lamps 4,5,6. (See wiring diagrams)
- Total lamp length of each circuit (A) and (B) must not be less than 12 ft. nor more than 24 ft. Circuit (A) is comprised of lamps 1,2,3. Circuit (B) is comprised of lamps 4,5,6. (See wiring diagrams)

Note: See Page 8 for Dimensions and Wiring Diagrams.

## Ballast Selection Guide

		Total Lamp Feet																									
		2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	
Number of Lamps per Ballast	1,2																										
	2,3,4																										
	2,3,4																										
	2,3,4																										
	3,4																										
	4,5,6																										
	4,5,6																										

To select the ballast for your particular plastic sign application:

- 1.) Determine the total number of lamp feet required (from 4 to 48 feet) and read down to select the proper Advance Catalog Number. Note that the first ballast you come to, reading down the chart, will be the most economical for your application.
- 2.) The number of lamps per ballast is shown in the left column.

## Magnetic Sign Ballast Specifications

1. The ballast shall be Advance signPRO electromagnetic core & coil design.
2. The ballast shall be provided with integral leads, color-coded to ANSI standard C82.1 (latest version).
3. The ballast shall operate from a nominal line voltage of 120 or 277 volts +/- 10%, 60 Hz.
4. The ballast shall operate the lamps at 60 Hz.
5. The ballast shall have a Power Factor greater than 90% at maximum input power.
6. The ballast shall start the lamps at a minimum temperature of -20°F/-29°C.
7. The ballast shall comply with all applicable state and federal efficiency standards.
8. The ballast shall be Underwriters Laboratories (UL) listed (Class P, Type 2 Outdoor) and CSA Certified.
9. The ballast shall be specified Advance or equal.
10. The ballast shall not contain Polychlorinated Biphenyls (PCB's).
11. The ballast shall carry a two-year warranty.
12. The manufacturer shall be a full-line ballast manufacturer with 50 years or more of ballast manufacturing experience.



# signPRO® Electronic Sign Ballasts

## for T12/HO Rapid Start Fluorescent Lamps

Three 120V models cover 200 lamp combinations!



### Now there's an energy-savings alternative

For those users looking to reduce their energy bills at every corner, signPRO electronic sign ballasts offer the solution-energy savings of up to 20% when compared to magnetic sign ballasts.

### Same mounting - same wiring as magnetic

Replacing the magnetic core is an innovative circuit board that delivers the energy efficiency and high reliability. Protecting the circuit board is the same white steel housing as their magnetic counterparts. Add to that the same wiring configurations as magnetic, and installation or replacement could not be any easier!

### Maximum performance under all weather conditions

Built tough and fully potted, signPRO electronic sign ballasts deliver dependable starting down to -20°F. Type 2 Outdoor listed, all three models carry the UL and CSA certification.

### Additional advantages and benefits

On top of the 20% energy savings is rapid start circuitry that promises full-rated lamp life. Then there's the matter of less weight, making handling and installation that much easier. Additionally, signPRO electronic sign ballasts offer quieter operation and operate cooler-with no sacrifice in light output.

PC161W and PC857W wiring compartments can also be added to signPRO electronic sign ballasts. (See Page 8.)

### Performance backed - satisfaction guaranteed

Fully-warranted for three years, signPRO electronic sign ballasts are supported by a team of service professionals, toll-free at 1-800-372-3331.





## Electronic Ballast Specifications

Lamp Data			Min. Starting Temp. (°F)	Input Volts	Catalog Number	Max. Line Current (Amps)	Max. Input Power (Watts)	Open Circuit Volts	Dim.	Wiring Diag.	Weight (lbs.)
No. of Lamps	Lamp Footage										
	Min	Max									
1, 2	4	16	-20°F	120	ASB-0416-12-E	1.46	175	750	BL-1	21, 39	6
2, 3, 4	12•	32•			ASB-1232-24-E	2.95	350	1000	BL-2	5, 9, 13	8
4, 5, 6	20▼	48▼			ASB-2048-46-E*	4.17	490	1000	BL-3	14, 15, 19	10

- Total lamp length of each circuit (A) and (B) must not be less than 6ft. nor more than 16ft. .  
Circuit (A) is comprised of lamps 1, 2. Circuit (B) is comprised of lamps 3, 4. (See wiring diagrams)
  - ▼ Total lamp length of each circuit (A) and (B) must not be less than 10ft. nor more than 24ft. .  
Circuit (A) is comprised of lamps 1, 2, 3. Circuit (B) is comprised of lamps 4, 5, 6. (See wiring diagrams)
  - \* ASB-2048-46-E will operate (3) 10ft. lamps. (See wiring diagram 28)
- Note: See Page 8 for Dimensions and Wiring Diagrams.

## Ballast Selection Guide

		Total Lamp Feet																											
		2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50			
Number of Lamps per Ballast	1,2			ASB-0416-12-E																									
	2,3,4																												
	4,5,6																												

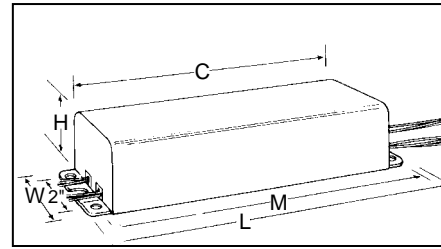
## Electronic Sign Ballast Specifications

1. The ballast shall be Advance signPRO electronic design for T12/HO lamps.
2. The ballast shall be provided with integral leads, color-coded to ANSI standard C82.11 (latest version).
3. The ballast shall operate from a nominal line voltage of 120V +/- 10%, 60 Hz.
4. The ballast shall operate the lamps above 20 KHz.
5. The ballast shall have input current Total Harmonic Distortion (THD) of less than 20% at max. load.
6. The ballast shall have a Power Factor greater than 98% at max. load.
7. The ballast shall start the lamps at a minimum temperature of -20° F / -29° C.
8. The ballast shall provide a nominal Lamp Current Crest Factor of less than 1.7.
9. The ballast shall operate the lamps in series or series parallel.
10. The ballast shall support a sustained short to ground or open circuit of any output leads.
11. The ballast shall be Underwriters Laboratories (UL) listed (Class P, Type 2 Outdoor) and CSA certified.
12. The ballast shall have an audible noise rating of Class B or better.
13. The ballast shall comply with Federal Communications Commission (FCC) Part 18 for non-consumer equipment both conducted and radiated.
14. The ballast shall meet ANSI C62.41 for transient protection.
15. The ballast shall carry a three-year warranty from the date of manufacture with a 90°C maximum case temperature.

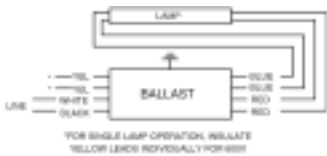


# Ballast Dimensions and Diagrams

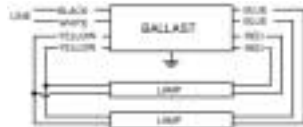
Designation	Dimension (inches)			
	Length (L)	Width (W)	Height (H)	Mounting (M)
BL-1	11.75	3.19	2.63	11.13
BL-2	14.30	3.19	2.63	13.75
BL-3	19.20	3.19	2.69	18.63
BL-4	16.70	3.19	2.63	16.13



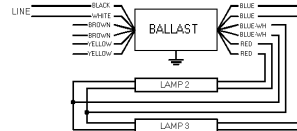
## Wiring Diagrams



Diag. 39

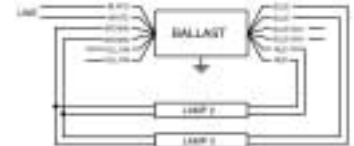


Diag. 21



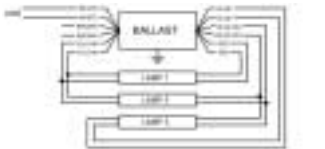
Note: Insulate unused leads individually as shown on ballast label.

Diag. 5



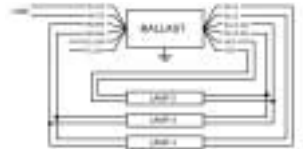
Note: Insulate unused leads individually as shown on ballast label.

Diag. 7



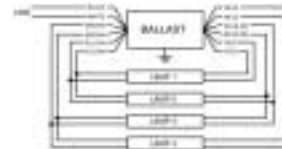
Note: Insulate unused leads individually as shown on ballast label.

Diag. 8

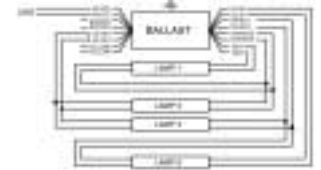


Note: Insulate unused leads individually as shown on ballast label.

Diag. 9



Diag. 13



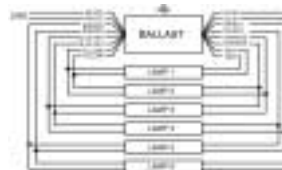
Note: Insulate unused leads individually as shown on ballast label.

Diag. 14

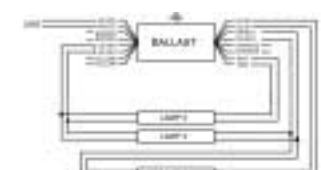


Note: Insulate unused leads individually as shown on ballast label.

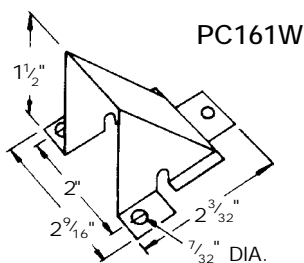
Diag. 15



Diag. 19

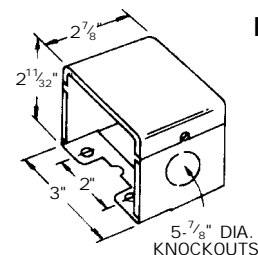


Diag. 28



PC161W

## Wiring Compartments



PC857W

# Exclusively for Indoor Applications...

## Electronic Ballasts

for T8 and T5/HO Fluorescent Lamps

Keep operating costs down!

For indoor sign applications (backlit signs and advertisements in airports and malls, menu boards, etc.), Advance offers a full range of electronic ballasts for use with T8 fluorescent lamps. Signs currently illuminated by less efficient, old-technology T12 fluorescent lamps can be easily retrofitted with new T8 lamps and Advance Standard Electronic Ballasts to provide substantial energy savings.

Advance Standard Electronic Ballasts are available for the operation of a wide range of T8 fluorescent lamp lengths and wattages. In addition to their energy saving potential, they provide quiet operation (Sound Rated A), high power factor operation, and lamp starting down to 0° F for most applications.

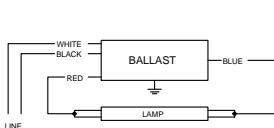


Advance also makes available a complete offering of ballasts for the operation of the new, highly efficient T5/HO fluorescent lamps - an exciting new resource for sign designers and builders.

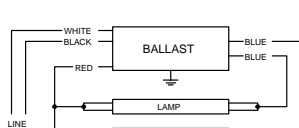


### Indoor Fluorescent Ballast Specifications

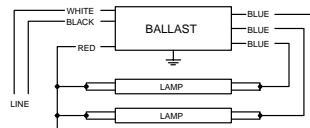
Lamp Data				Min. Starting Temp.	Input Volts	Catalog Number	Max. Input Current (Amps)	Max. Input Power (Watts)	Open Circuit Voltage	Dim.	Wiring Diagram	Weight (lbs.)
No. of Lamps	Lamp Type	Lamp Footage										
		Min	Max.									
<b>Electronic Ballasts for 2', 3' or 4' T8 Lamps (60Hz, Type I Outdoor, UL &amp; CSA)</b>												
1	F17T8 F25T8 F32T8	2	4	0°F	120	REL-1P32-SC	0.27	32	600	Fig. B	63	1.2
					277	VEL-1P32-SC	0.12					
2		4	8		120	REL-2P32-SC	0.49	58	600	Fig. B	64	1.2
					277	VEL-2P32-SC	0.21					
3		6	12		120	REL-3P32-SC	0.71	85	600	Fig. B	65	1.0
					277	VEL-3P32-SC	0.31					
4		8	16		120	REL-4P32-SC	0.94	112	600	Fig. B	66	1.0
					277	VEL-4P32-SC	0.41					
Note: All the above ballasts will operate F17T8, F25T8 or F32T8 lamps.												
<b>Electronic Ballasts for 2', 3' or 4' T5HO Lamps (60Hz, Type I Outdoor, UL &amp; CSA)</b>												
1, 2	F24T5/HO	1.92	3.84	0°F	120 - 277	ICN-2S24	0.44 - 0.19	52	600*	Fig. D	73, 74	1.0
1, 2	F39T5/HO	2.83	5.67		120 - 277	ICN-2S39	0.73 - 0.31	87	600*	Fig. D	73, 74	1.5
1, 2	F54T5/HO	3.83	7.67		120 - 277	ICN-2S54-90C	1.00 - 0.43	120	600*	Fig. D	73, 74	1.0
3, 4		7.67	15.33		120 - 277	ICN-4S54-90C-2LS	2.00 - 0.86	240	600*	Fig. D	73, 74	1.5
Note: ICN-2S24 will operate F24T5/HO lamps, ICN-2S39 will operate F39T5/HO lamps, ICN-2S54-90C and ICN-4S54-90C will operate F54T5/HO lamps. *Open circuit voltage cannot be measured due to lamp E-O-L protection circuit. Must use 600V rated wire for lamp connections.												



Diag. 63



Diag. 64



Diag. 65

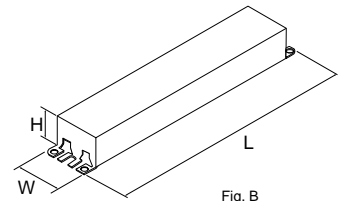
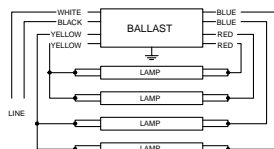
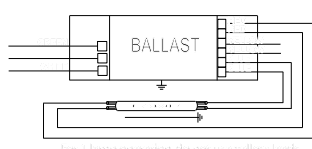


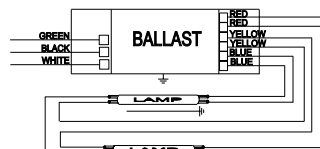
Fig. B



Diag. 66



Diag. 73



Diag. 74

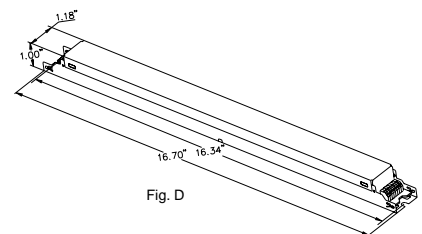


Fig. D

# BALLASTS

## signPRO® Magnetic HID Ballasts for High Intensity Discharge Lamps



Dependable performance for a variety of Metal Halide and High Pressure Sodium sign applications

As the acknowledged leader in HID ballasts, Advance offers a wide range of ballast options for the illumination of signs using HID light sources. In addition, Advance's broad HID ballast line is ideal for use with the HID fixtures often associated with illuminated signs—such as service station canopies and parking lots for retail establishments such as supermarkets and convenience stores.

When servicing signs, it makes perfect sense to service associated HID lighting at the same time to help keep maintenance costs at a minimum. And Advance HID ballasts are the industry's hands-down first choice for all HID replacement applications. Advance HID ballast options include:



### Advance "F-Can" Ballasts

Advance F-Can HID ballasts provide a compact, versatile, easy-to-install option for both sign applications and associated HID lighting needs. Special F-Can ballasts (UL Listed Type 2 for outdoor use) are specially designed for sign ballast applications utilizing 150-watt and 400-watt Metal Halide lamps. Other Advance "72C Series" F-Can HID ballasts feature dual-voltage (120V/277V) operation and thermal protection for indoor and outdoor use (UL Listed Type 1).

### Advance Core & Coil Ballast Kits

For indoor or protected outdoor applications, Advance's core & coil HID ballast kits provide options for sign illumination. They're also the industry-leading choice for all kinds of related applications, such as parking lots and utility lighting. Kits (with -001 or -001D suffix) contain everything needed for easy installation, including mounting hardware, capacitor and ignitor. Compact, thermoplastic-cased ignitors and dry

film capacitors provide long-life performance and easy installation. And Advance's "vacuum impregnation" process helps extend ballast life.

### Advance VAL-U-PAK Plus® Core & Coil Ballast Kits with Lamp

For ultimate convenience and labor-saving value in servicing HID lighting utilizing core & coil ballasts, Advance VAL-U-PAK Plus™ kits provide a new ballast and top-quality lamp in one convenient package. (Replacing a lamp and ballast at the same time is an excellent idea for keeping maintenance and labor costs under control.) VAL-U-PAK Plus kits are available for the most popular Metal Halide and High Pressure Sodium lamps. Advance 5-TAP™ ballasts (120/208/240/277/480V) are included for the six most popular applications. Included with each kit is a premium grade clear lamp, manufactured by a major lamp company and warranted by Advance. VAL-U-PAK Plus kits come packaged in an easy-carry box with a comfortable handle.

## HID Ballast Specifications

Lamp Type	Lamp Watts	ANSI Code	Input Volts	Catalog Number	Input Power (Watts)	Max. Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Wiring Diagram	Dimensions			Total Weight (lbs)
										Fig.	A	B	
<b>VAL-U-PAK PLUS Kits (60Hz., -20°F Starting Temperature, UL &amp; CSA)</b>													
Metal Halide	175/150W	M57/M107 or H39	120/208/240/277	77L5570-001D	210	1.8/1.1/0.9/0.8	305	5/3/3/2	A	1	2.5	3.7	9.5
	250W	M58 or H37	120/208/240/277/480	77L5750-001D	290	2.6/1.5/1.4/1.1/0.7	315	8/5/5/3/2	A	2	1.6	3.1	14.0
	400W	M59 or H33	120/208/240/277/480	77L6051-001D	460	4.1/2.3/2.0/1.7/1.0	300	10/7/5/5/3	A	2	2.2	4.0	17.0
	1000W	M47 or H36	120/208/240/277/480	77L6552-001	1080	9.0/5.6/4.7/4.1/2.4	430	22/15/12/10/6	A	8	3.0	4.7	29.0
High Pressure Sodium	250W	S50	120/208/240/277/480	77L8251-001D	300	2.6/1.5/1.3/1.2/0.7	185	10/4/4/3/2	M	2	2.0	3.6	15.0
	400W	S51	120/208/240/277/480	77L8453-001D	465	3.9/2.2/1.9/1.7/1.0	195	10/6/5/5/3	M	2	2.7	4.4	16.0
	1000W	S52	120/208/240/27/480	77L8753-001	1100	9.3/5.3/4.7/4.1/2.3	437	25/15/12/10/6	M	8a	4.0	6.0	31.0

# HID Ballasts Continued

Lamp Type	Lamp Watts	ANSI Code	Input Volts	Catalog Number	Input Power (Watts)	Max. Input Current (Amps)	Nom. Open Circuit Voltage	Fuse Rating (Amps)	Wiring Diagram	Dimensions Total			(lbs)
										Fig.	A	Weight	
<b>F-Can Ballasts (60Hz, -20°F Starting Temperature, Type I Outdoor UL &amp; CSA)</b>													
Metal Halide	150W	M102	120	ASB150M102BL*	180	3.65	240	10	F-Can	F2	-	-	13.0
	175/150W	M57/M107 or H39	120/277	72C5581NP-001	205	2.0/0.9	300	5/3	F-Can	F1	-	-	12.0
	175W Pulse-Start	M137 or M152	120/277	72C5582NP-001	205	2.2/0.9	300	5/3	F-Can	F2	-	-	15.5
	250W	M58 or H37	120/277	72C5782NP-001	290	2.6/1.1	300	8/4	F-Can	F3	-	-	16.0
	250W Pulse-Start	M138 or M153	120/277	72C5783NP-001	290	2.8/1.2	300	8/3	F-Can	F3	-	-	18.0
	320W Pulse-Start	M132 or M154	120/277	72C5882NP-001	370	3.4/1.5	270	8/3	F-Can	F4	-	-	21.0
	350W Pulse-Start	M131	120/277	72C5983P-001	410	3.9/1.7	310	10/4	F-Can	F4	-	-	24.0
	400W	M59 or H33	120/277	72C6082NP-001	460	3.9/1.7	310	10/5	F-Can	F4	-	-	-
	400W Pulse-Start	M135 or M155	120/277	72C6082NP-WC*									

\*ASB150M102BL & 72C6082NP-WC are UL Type 2 Outdoor rated in white can.

<b>Core &amp; Coil Ballast Kits (60Hz, -20°F Starting Temperature, UL &amp; CSA)</b>													
Metal Halide	175W/150W	M57/M107 or H39	120/208/240/277	71A5570-001D	210	1.8/1.1/0.9/0.8	305	5/3/3/2	A	1	2.5	3.7	6.8
	175W Pulse-Start	M137 or M152	120/208/240/277	71A5593-001D	208	1.8/1.1/0.9/0.8	275	5/3/3/2	M	1	2.3	3.4	7.0
	250W	M58 or H37	120/208/240/277/480	71A5750-001D	290	2.6/1.5/1.4/1.1/0.7	315	8/5/5/3/2	A	2	1.6	3.1	10.0
	250W Pulse-Start	M138 or M153	120/208/240/277	71A5792-001D	292	2.5/1.4/1.3/1.1	270	8/5/5/3	M	2	1.5	3.2	9.5
	320W Pulse-Start	M132 or M154	120/208/240/277	71A5892-001D	368	3.3/1.9/1.7/1.4	270	8/6/5/3	M	2	1.8	3.7	11.0
	350W Pulse-Start	M131	120/208/240/277	71A5993-001D	400	3.4/2.0/1.7/1.5	270	10/7/5/5	M	2	1.8	3.7	11.0
	400W	M59 or H33	120/208/240/277/480	71A6051-001D	460	4.1/2.3/2.0/1.7/1.0	300	10/7/5/5/3	A	2	2.2	4.0	14.0
	(2) 400W	M59 or H33	120/277	71A6382-001D	890	8.2/3.6	335	20/10	E	8a	4.0	5.8	28.0
	400W Pulse-Start	M135 or M155	120/208/240/277	71A6092-001D	452	3.8/2.2/1.9/1.7	265	10/7/5/5	M	2	1.8	3.7	11.0
	1000W	M47 or H36	120/208/240/277/480	71A6552-001	1080	9.0/5.6/4.7/4.1/2.4	430	22/15/12/10/6	A	8	3.0	4.7	22.0
High Pressure Sodium	250W	S50	120/208/240/277/480	71A8251-001D	300	2.6/1.5/1.3/1.2/0.7	185	10/4/4/3/2	M	2	2.0	3.6	12.0
	400W	S51	120/208/240/277/480	71A8453-001D	465	3.9/2.2/1.9/1.7/1.0	195	10/6/5/5/3	M	2	2.7	4.4	16.0
	1000W	S52	120/208/240/277/480	71A8753-001	1100	9.3/5.3/4.7/4.1/2.3	437	25/15/12/10/6	M	8a	4.0	6.0	29.0

Designator	Dimensions (inches)			
	Length (L)	Width (W)	Height (H)	Mounting (M)
F1	11.75	3.19	2.63	11.13
F2	14.30	3.19	2.63	13.75
F3	16.70	3.19	2.63	16.13
F4	19.20	3.19	2.69	18.63

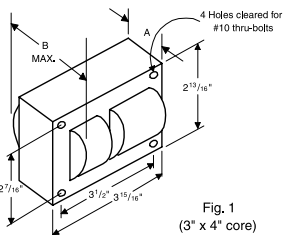
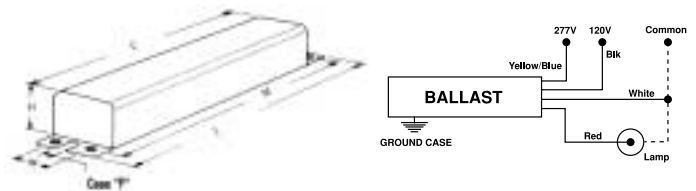


Fig. 1  
(3" x 4" core)

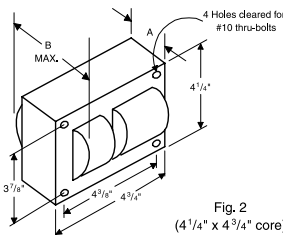


Fig. 2  
(4 1/4" x 4 3/4" core)

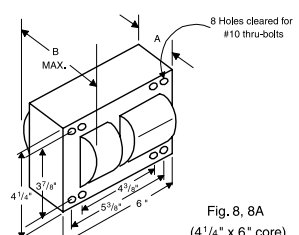


Fig. 8, 8A  
(4 1/4" x 6" core)



Fig. A

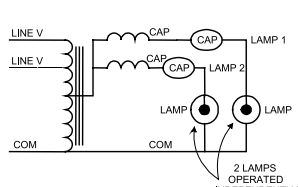


Fig. E  
2 LAMPS OPERATED INDEPENDENTLY

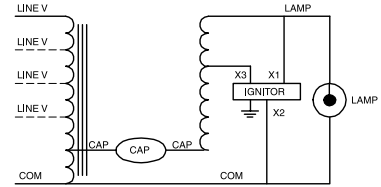


Fig. M



# signPRO<sup>®</sup> LED Drivers

## for Sign and Contour LED Lighting Systems

### Taking LED lighting to a new level

Using state-of-the-art technology, signPRO LED Drivers deliver solid performance, high reliability, and full compatibility with a variety of 12 and 24 volt LED lighting systems as well as the latest systems using Luxeon technology. And now, signPRO LED Drivers also feature Advance's exclusive IntelliVolt™ multiple-voltage technology, enabling the drivers to operate at any input voltage from 120 to 277 volts, 50/60 Hz, marking the industry's first "intelligent" sign driver!

### Standing up to adverse weather conditions

Fully potted and meeting IP66 damp-location rating, signPRO LED Drivers are ideally suited for

self-contained signs and raceways subjected to damp conditions. Their special electronic circuitry enables unprecedented performance in extreme low-temperature settings- operating down to where Centigrade equals Fahrenheit at -40°.

### Compact, lightweight, modular designs

Sized for tight spaces and ease-of-handling, signPRO LED Drivers facilitate versatile sign designs. Their lightweight construction adds to the ease-of-handling, while making the finished signs lighter and easier to manage.

### Enhanced safety and wiring simplicity

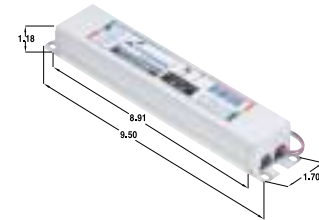
UL Class 2 rated, signPRO LED Drivers operate at safe, low DC voltage and current levels to

reduce hazards. Inherent short-circuit protection eliminates nuisance fuse-blowing.

### Peace-of-mind reliability

signPRO LED Drivers are backed by Advance's 5-year warranty and Advance's team of service professionals at 1-800-372-3331.

*Be sure to specify signPRO LED Drivers when ordering your complete LED lighting systems. Contact your system provider today!*



## LED Driver Specifications

LED Data			Min/Max Ambient Temp.	Input Volts	Catalog Number	Max. Input Current (Amps)	Max. Input Power (Watts)	Output Volts (VDC)	Max. Output Current (Amps)	Dimensions (in.)			Weight (lbs)	Figure
LED Voltage	Output Power (Watts)									L	W	H		
	Min.	Max.												
<b>12 &amp; 24 VDC LED Systems</b>														
12 VDC	2.0	12.0	-40°C 60°C	120	LED-120A-0012V-10F	0.13	15.0	12	1.0	5.2	1.3	1.0	0.30	D
12 VDC	10.0	60.0		120	LED-120A-0012V-50F	0.63	75.0	12	5.0	9.5	1.7	1.2	1.40	D
12 VDC	0.1	60.0		120	LEDINTA-0012V-50FO	0.61	73.0	12	5.0	9.5	1.7	1.2	1.40	D
				230		0.32								
				277		0.26								
24 VDC	10.0	80.0		120	LED-120A-0024V-33F	0.83	100.0	24	3.3	9.5	1.7	1.2	1.40	D
24 VDC	0.1	100.0	120	LEDINTA-0024V-41FO	0.98	117.0	24	4.1	9.5	1.7	1.2	1.40	D	
			230		0.51									
277	0.42													
<b>Luxeon Driver Systems</b>														
Luxeon 350mA	2.0	10.0	-40°C 60°C	120	LED-120A-0350C-28FO	0.10	12.5	2.8-28.0	0.35	5.2	1.3	1.0	0.30	A
Luxeon 700mA	2.0	17.0		120	LED-120A-0700C-24FO	0.18	21.5	2.8-24.0	0.70	5.2	1.3	1.0	0.30	B, C



### AC Input

6-inch 18 AWG leads  
Line (black)  
Neutral (white)

### DC Output

6-inch 18 AWG leads  
Positive (red)  
Negative (blue)

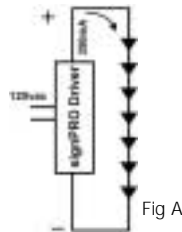


Fig A

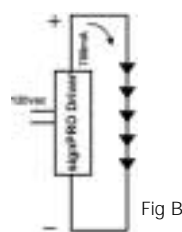


Fig B

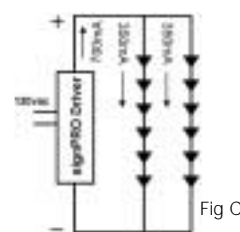


Fig C

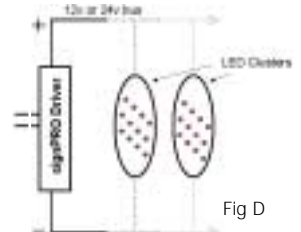


Fig D



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