

「 STRIKING THE  
LIGHT 」







[www.irem.it](http://www.irem.it)



## IREM: POSITIVE ENERGY, WITHOUT INTERRUPTION. SINCE 1947.

IREM is a worldwide leading manufacturing company of electromechanical and electronic equipment for the control of the mains power in the following sectors:

**Lighting:**

powering of discharge lamps for professional applications.

**Power:**

protection of electric users against line disturbances;

**Hydro:**

power generation by hydroelectric turbines;

Two production plants, a philosophy based on "quality upgrading" as the company's primary concern and direct export exceeding 70% of the global turnover are a warranty of continuity and development.

"Quality is our first responsibility and customer satisfaction is our pride. The environment is our social objective, the safety and health of the individual is our duty".

## OUR HISTORY



IREM is an Italian company, founded in 1947, worldwide leader in design and manufacture of equipment for the control and generation of electric energy.

Its brilliant founder, Mario Celso, as a boy passionate of electrical engineering and cinema, in the late 40's succeeded to realize his childhood dream creating the first electromechanical rectifier for carbon arcs used in cinema projection.

From this first rectifier, a comprehensive line of products dedicated to power and strike gas discharge lamps will take shape.

Soon the production is enhanced with the introduction of voltage stabilisers, starting a line of products designed to develop quickly to a full range of equipment able to solve the mains power problems.



ISO 9001  
since 1991



ISO 14001  
since 2000



BS OHSAS 18001  
since 2014

In the 50's in addition to the energy management, IREM enters the field of machines for the production of energy: the first hydroelectric turbines, capable of generating renewable energy exploiting the head and flow of water streams are designed and produced .

In 1992, Mario Celso receives the Scientific and Technical Award for his technological contribution to the development of the film industry from the Academy of Motion Picture Arts and Sciences in Los Angeles

Today, IREM is a protagonist on the international markets. The constant investments in research and development allow to maintain the highest quality standards by continuing to develop innovative products capable to meet the demands of prestigious customers.

Quality, Safety and Environment are Corporate Values that IREM has pursued since its foundation as the basis of its organization and its development.



# STRIKING THE LIGHT

Arc lamp power supplies and igniters

# SOMMARIO

**10** AS, ASD and ASC IGNITERS  
EX, PX and N3 POWER SUPPLY

**28** AD, ADC and ADN IGNITERS  
BU, CBI and BC BALLAST

**38** ADE and ADI INSTANT RESTRIKE IGNITERS



# LAMPS



## XENON LAMPS

Xenon arc lamps are gas discharge lamps that operate with continuous current (dc). An electric arc, flowing through two electrodes inside a bulb ionized with xenon gas at high pressure, produces a bright white light closely to the natural sunlight. Xenon arc lamps are used in movie projectors, in theaters, in searchlights and for specialized industry uses and in solar simulation applications.

These lamps require a very stable current and a low ripple for a long life. Several applications use xenon lamps also for the fact that the re-ignition is possible at any state of cooling. When started, also from cold state, the full light output is immediately achieved.



## METAL HALIDE LAMPS

Metal halide discharge lamps, are AC-operated lamps, which have excellent color rendering and photometric integrity throughout their life. With an extremely bright light, providing up to 100 lumens per watt, the metal halide discharge lamps generate a color temperature that closely matches sunlight. It reveals true colors and facilitates daytime filming outdoors.

Dimmable, with hot restart capability, metal halide lamps are up to five times more efficient than an incandescent light.

For these reasons Metal Halide lamps are the first choice for users in the film and TV industry.



## HID LAMPS

High-intensity discharge lamps (HID lamps) are a type of electrical gas-discharge lamp which produces light by means of an electric arc between tungsten electrodes housed inside a translucent or transparent fused quartz or fused alumina arc tube. This tube is filled with both gas and metal salts.

HID lamps are typically used when high levels of light over large areas are required, and when energy efficiency and/or light intensity are desired. These areas include gymnasiums, large public areas, warehouses, movie theaters, football stadiums, outdoor activity areas, roadways, parking lots, and pathways.



# IREM - STRIKING THE LIGHT

IREM «Striking the light» range of products includes power supplies and igniters for high pressure discharge lamps, used in cinema projection, TV and motion picture shooting, stage lighting, events, marine searchlights, solar simulation, outdoor lighting etc.

All these applications use high intensity discharge lamps (xenon short arc, compact xenon cermax®, metal halide etc.) which must be ignited by means of a high voltage discharge, generated by a high voltage igniter. After the ignition, the proper operation of the system is ensured by an electromagnetic or electronic power supply.

## TOTAL LIGHTING CONTROL



XENON  
Rectifiers  
and igniters



METAL HALIDE  
Ballast  
and hot restrike igniters



HID  
Hot restrike

We have specific products for each type of lamp. Choose a product with the best features, to perform your function.



## XENON LAMPS



### AS, ASD and ASC IGNITERS EX, PX and N3 POWER SUPPLY

The high pressure short arc Xenon lamps require a special power source to operate satisfactorily. The powering system to supply Xenon lamps is formed by a power supply and an igniter which have to match with the characteristics of the lamp and the lighting system requirements.

IREM power supply and igniters, designed to ensure correct operation and long life of short arc Xenon lamps from 150 up to 10kW, are the ideal solution for most applications.

Their sturdiness, reliability and perfect matching with the lamp characteristics made them preferred by most manufacturers of Xenon lighting systems.

IREM power supply and igniters are compliant with CE marking and several models are UL certified.



### XENON PROFESSIONAL APPLICATIONS

- ✓ Motion projection (Digital and traditional)
- ✓ Marine searchlights
- ✓ Events
- ✓ Theaters
- ✓ Architectural
- ✓ Solar simulation
- ✓ Industrial and/or scientific



## IREM PROPOSAL



A complete range of high quality high voltage igniters and electromagnetic - electronic power supplies, expressly designed to ensure correct operation and long life to short arc Xenon lamps, from 150 W to 15000 W ratings.





# H.V. IGNITERS AS SERIES



## H.V. IGNITERS FOR SHORT ARC XENON LAMPS

A complete range of high voltage igniters expressly designed to strike short arc xenon lamps from 150W to 15000W.

IREM high frequency superimposing igniters have been designed for AC mains supply to suit most applications. These asymmetrical igniters are characterized by a compact design, high thermal stability and galvanic insulation, and can be equipped with a wide range of timing boards that make them suitable for a wide variety of applications.

The igniters without suffix "A" are suitable for manual ignition.

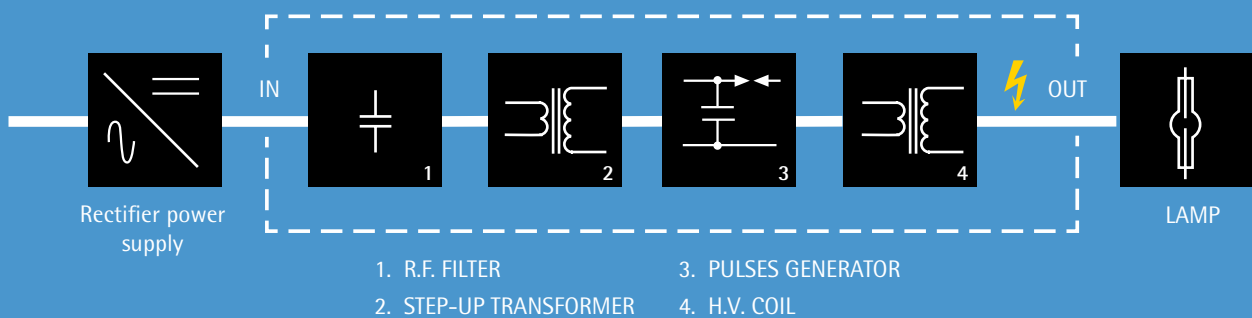
The igniters with suffix "A" are fitted with a built-in timing board for automatic and/or short-timed ignition, to avoid damaging the igniter in case of faulty lamp operation.

A short and noiseless lamp ignition can be achieved by selecting the timing board threshold voltage, as to be compatible with the electrical characteristics of every kind of rectifier. Moreover, igniters with few pulses for half cycle are available for use with sophisticated electronic appliances, in order to reduce R.F. interferences.

AS series meet the recommendations of lamp manufacturers, as they ensure immediate and correct lamp ignition in any cooling condition.

These units should be installed close to the lamp, but thermally shielded from it. The high voltage lead must be as short as possible and carefully insulated to prevent corona discharge and reduction in strike energy.

They must be grounded for proper interferences suppression.

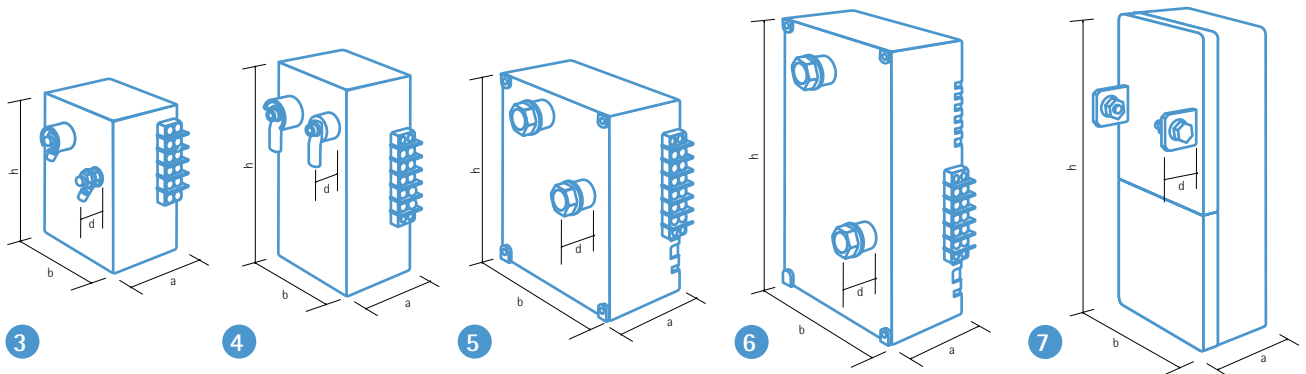


## AS SERIES H.V. IGNITERS FOR SHORT ARC XENON LAMPS



Xenon lamp power range [W]		≤ 180		≤ 500		≤ 1600	
MODEL		AS-1530		AS-3040		AS-8030	
Item number		02815010	02815011	02820010	02820011	02836080	02836081
<b>TECHNICAL DATA</b>							
AC nominal voltage <sup>1</sup>	[V]	230	115	230	115	230	115
Input voltage range	[V]	207-253	103.5-126.5	207-253	103.5-126.5	207-253	103.5-126.5
Frequency	[Hz]	50/60		50/60		50/60	
Frequency range	[Hz]	47-63		47-63		47-63	
Max. input current during ignition	[A]	0.5	0.8	0.5	0.8	1.2	1.8
H.V. pulses amplitude	[kV]	≤ 30		≤ 40		≤ 30	
No. of pulses per half cycle		≤ 8		≤ 7		≤ 16	
Lamp current at TAMB ≤ 55°C	[A]	≤ 15		≤ 30		≤ 80	
Conformity		CE		CE		CE	
Degree of protection		IP00		IP00		IP00	
Isolation class		CL1		CL1		CL1	
Storage temperature	[°C]	-20 to +60		-20 to +60		-20 to +60	
Weight	[kg]	1.3		1.3		1.5	
Dimensions AxBxHxd	[mm]	75 x 64 x 104 x 14		75 x 64 x 104 x 21		75 x 64 x 145 x 23	
Figure		3		3		4	
Time delay board	[A1]	not provided		not provided		not provided	

1) The whole range of igniters can be connected through the following mains connections: 1Ph+N+PE or 2Ph+PE  
 Different input voltage or frequency are available on demand. IREM holds the right to modify the present datasheet without any prior notice



## AS SERIES

### H.V. IGNITERS FOR SHORT ARC XENON LAMPS



Xenon lamp power range [W]		≤ 7000		≤ 7000	
MODEL		AS-16040		ASD-16040A	
Item number		02836005	02836016	02836001	02836011
TECHNICAL DATA					
AC nominal voltage <sup>1</sup>	[V]	230	115	230	115
Input voltage range	[V]	207-253	103.5-126.5	207-253	103.5-126.5
Frequency	[Hz]	50/60		50/60	
Frequency range	[Hz]	47-63		47-63	
Max. input current during ignition	[A]	3.8	10	3.8	10
H.V. pulses amplitude	[kV]	≤ 40		≤ 40	
No. of pulses per half cycle		≤ 16		≤ 16	
Lamp current at TAMB ≤ 55°C	[A]	≤ 165		≤ 165	
Conformity		CE	CE / UL	CE	CE / UL
Degree of protection		IP00		IP00	
Isolation class		CL1		CL1	
Storage temperature	[°C]	-20 to +60		-20 to +60	
Weight	[kg]	3.5		3.5	
Dimensions AxBxHxd	[mm]	130 x 83 x 150 x 30		130 x 83 x 150 x 30	
Figure		5		5	
Time delay board	[A1]	not provided		78800493	78800493

1) The whole range of igniters can be connected through the following mains connections: 1Ph+N+PE or 2Ph+PE

2) This igniter is equipped with a double input voltage tap. The nominal values are related to each tap.

3) The value indicated is related to the whole range. The first input voltage range is 180-230V, the second one is 207-265V.

Different input voltage or frequency are available on demand. IREM holds the right to modify the present datasheet without any prior notice

## H.V. IGNITERS TIMING BOARDS

SUITABLE FOR IGNITERS		AS-16040A	AS-16040A	AS-16040A
Item number		788004781 <sup>1</sup>	78800489	78800490
Ignition threshold voltage	[Vdc]	up to 55	up to 98	up to 68
Rectifier min. no load voltage	[Vdc]	>55	>98	>68
Delay time after threshold	[s]	no	no	no
Delay time tolerance	[s]	-	-	-
Mains switch		relay	relay	relay
Number of cycles		without limit	1	1
Cycles length	[s]	-	2	2
Strokes cycle		OFF / ON	ON	ON
Max operating time	[s]	without limit	≤ 2	≤ 2

1) Available only as spare part

IT IS ALWAYS NECESSARY TO CHECK IF THE TIMING BOARD CHARACTERISTICS MATCH THE RECTIFIER.

## AS SERIES

## H.V. IGNITERS FOR SHORT ARC XENON LAMPS



Xenon lamp power range [W]		8000-10000				12000-15000	
MODEL		ASN-1000		ASN-1000A		AS-40045A	
Item number		028410085	model on demand	02841000	model on demand	02841020	model on demand
<b>TECHNICAL DATA</b>							
AC nominal voltage <sup>1</sup>	[V]	230	115	230	115	230	115
Input voltage range	[V]	207-253	103.5-126.5	207-253	103.5-126.5	207-253	103.5-126.5
Frequency	[Hz]	50/60		50/60		50/60	
Frequency range	[Hz]	47-63		47-63		47-63	
Max. input current during ignition	[A]	1.3	3.1	1.3	3.1	4	10
H.V. pulses amplitude	[kV]	≤ 40		≤ 40		≤ 45	
No. of pulses per half cycle		≤ 5		≤ 5		≤ 16	
Lamp current at TAMB ≤ 55°C	[A]	≤ 200		≤ 200		≤ 400 <sup>2</sup>	
Conformity		CE		CE		CE	
Degree of protection		IP00		IP00		IP00	
Isolation class		CL1		CL1		CL1	
Storage temperature	[°C]	-20 to +60		-20 to +60		-20 to +60	
Weight	[kg]	4.7		4.7		11	
Dimensions AxBxHxd	[mm]	130 x 83 x 225 x 32		130 x 83 x 225 x 32		160 x 90 x 360 x 45	
Figure		6		6		7	
Time delay board	[A1]	not provided		78800499		78800492	

1) The whole range of igniters can be connected through the following mains connections: 1Ph+N+PE or 2Ph+PE

2) The lamp current value is related to a Tamb ≤ 40°C

Different input voltage or frequency are available on demand. IREM holds the right to modify the present datasheet without any prior notice

## H.V. IGNITERS TIMING BOARDS

SUITABLE FOR IGNITERS		AS-16040A	AS-16040A	ASN-1000A	AS-16040A AS-18040A AS-40045A
Item number		78800493	78800494	78800499	78800492 <sup>1</sup>
Ignition threshold voltage	[Vdc]	up to 72	up to 100	up to 146	up to 77-92-117-146
Rectifier min. no load voltage	[Vdc]	>72	>100	>146	>77 >92 >117 >146
Delay time after threshold	[s]	2	2	2	no
Delay time tolerance	[s]	± 0.5	± 0.5	± 0.5	-
Mains switch		solid state	solid state	solid state	solid state
Number of cycles		4	4	4	1
Cycles length	[s]	4	4	4	2
Strokes cycle		OFF / ON	OFF / ON	OFF / ON	ON
Max operating time	[s]	≤ 16	≤ 16	≤ 16	≤ 2

1) This electronic timing board is fitted with a four positions setting jumper.

It is possible to adjust the ignition threshold voltage as per following indications: jumper position No.1 = 146Vdc, No.2 = 117Vdc, No.3 = 92Vdc, No.4 = 77Vdc. IT IS ALWAYS NECESSARY TO CHECK IF THE TIMING BOARD CHARACTERISTICS MATCH THE RECTIFIER.

# NEW DC H.V. IGNITERS ASC SERIES



## DC H.V. IGNITERS FOR SHORT ARC XENON LAMPS

A new concept of electronic high voltage igniters designed for DC supply directly downstream the rectifier and suitable for working in a very wide range of operating temperature.

The new ASC series completes the wide range of IREM igniters, they are expressly designed to strike short arc xenon lamps in the range from 150W up to 8kW.

These asymmetrical electronic igniters are based on the switching technology for the generation of high voltage pulses that are electronically controlled for a best and noiseless lamp ignition.

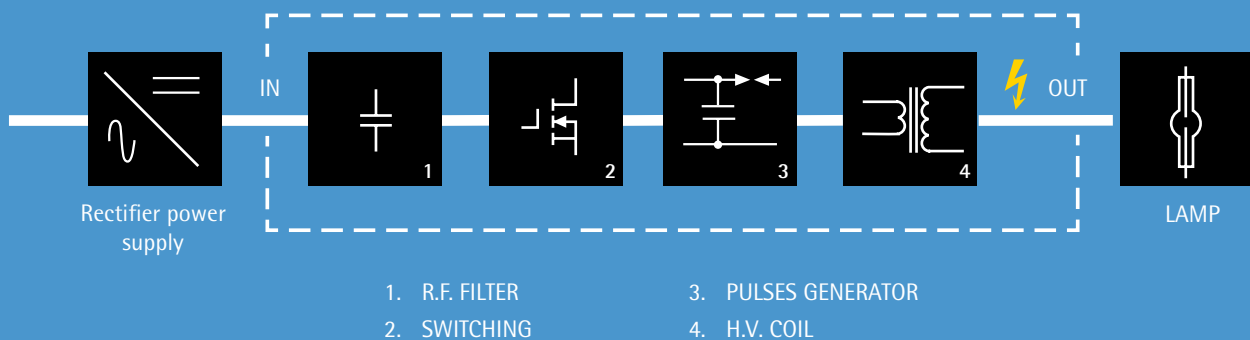
The benefits of the new DC electronic ASC igniters are:

- ✓ DC supply downstream the power supply/rectifier to reduce and simplify the number of connections on the field
- ✓ Instant and noiseless lamp ignition generated by electronic technology
- ✓ Wide operating temperature range suitable for heavy environmental conditions from  $-40^{\circ}\text{C}$  up to  $+80^{\circ}\text{C}$
- ✓ Automatic lamp ignition
- ✓ Easier and faster connections
- ✓ Lightweight than the "AS SERIES"
- ✓ External starting threshold voltage setting to fit the features of the rectifier/lamp used
- ✓ Only two models for the cold ignition and hot re-ignition of short arc xenon lamps in the range of power 150W ... 8000W

These igniters should be installed close to the lamp, but thermally shielded from it.

The high voltage lead must be as short as possible and carefully insulated to prevent corona discharge and reduction in strike energy.

They must be grounded for a proper lamp ignition and interferences suppression.





## ASC SERIES DC H.V. IGNITERS FOR SHORT ARC XENON LAMPS

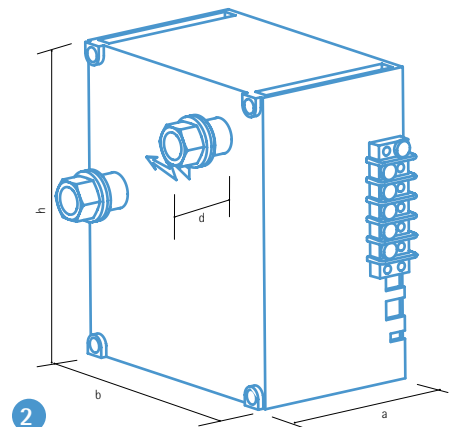
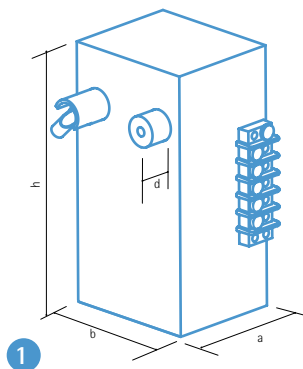


Xenon lamp power range [W]		150-1600	2000-8000
MODEL		ASC-5030	ASC-12040
Item number		02830530	02832040
<b>TECHNICAL DATA</b>			
Input voltage	[V]	DC	DC
Input voltage range	[V]	90-180	90-180
Input frequency	[Hz]	/	/
Input frequency range	[Hz]	/	/
Max. Input current absorption	[A]	0,5*	0,5*
Ignition voltage	[kV]	≤ 30	≤ 40
No. of ignition voltage pulses		≤ 5**	≤ 5**
Ignition voltage duration	[s]	max.10	max.10
Internal timing board		included	included
Lamp Current	[A]	max. 55 @ 80°C / max. 80 @ 55°C	max.120 @ 80°C / max.180 @ 55°C
Operating temperature	[°C]	-40 to +80	-40 to +80
Storage temperature	[°C]	-40 to +85	-40 to +85
Isolation class		1	1
Degree of protection		IP00	IP00
Weight	[kg]	1	2,85
Overall dimensions AxBxHxd	[mm]	75 x 64 x 145 x 23	130 x 83 x 150 x 30
Enclosure figure		1	2
Conformity		CE	CE

\* REMARK: the no-load voltage of the rectifier must be suitable for the current absorption of the ignitor

\*\* within 10ms

IREM holds the right to modify the present datasheet without any prior notice



# ELECTRONIC POWER SUPPLIES EX SERIES



## ELECTRONIC POWER SUPPLIES FOR SHORT ARC XENON LAMPS

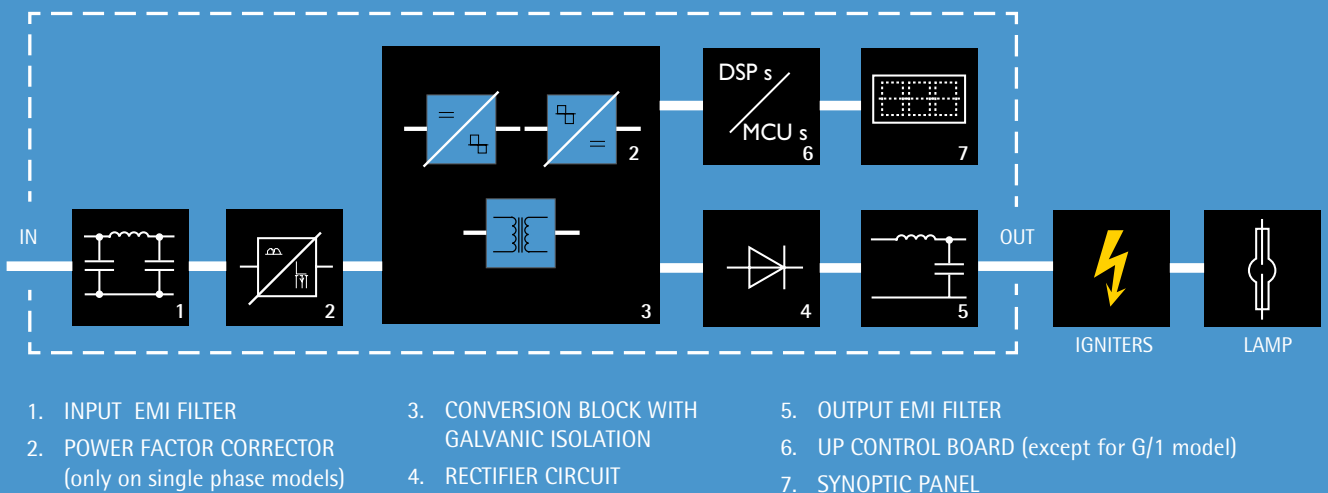
A complete range of high quality electronic power supplies expressly designed to ensure correct operation and long life to short arc xenon lamps from 150 to 10000W.

They meet all the requirements of lamp manufacturers and have been designed in compliance with the main International Standards.

The single-phase and three-phase electronic power supplies offer a wide variety of solutions. Both versions are fitted with galvanic insulation, soft inrush current, a very low ripple value, a stable output current and high efficiency. Remote control can be carried out either through analogical dry contacts, or by means of the digital interface RS 232.

The control of the most important lamp parameters, and in particular the electronic overpower control, guarantees a correct lamp operation in all aging conditions and allows long life.

Their compact design, light weight and advanced technology make the units suitable for a wide variety of applications.



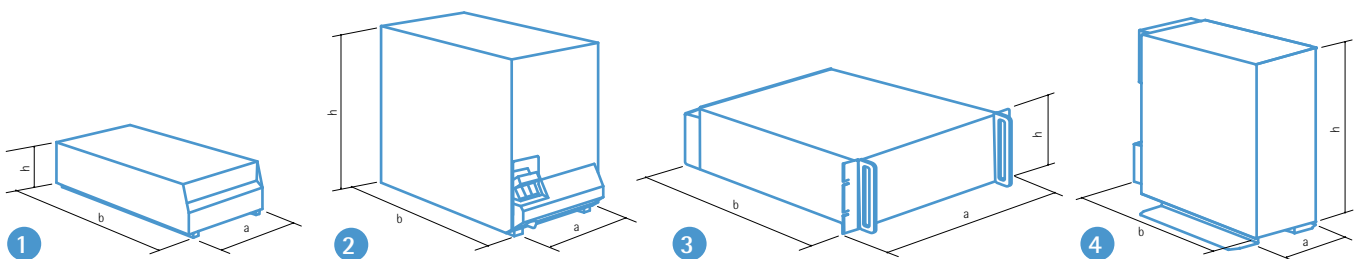
## EX SERIES ELECTRONIC POWER SUPPLIES FOR SHORT ARC XENON LAMPS



Xenon lamp power range [W]	150-500	250-500	450-2000	1000-3000
<b>MODEL</b>	EX-30G/1	EX-30G/1	EX-75D/1	EX-100D/1
<i>Item number</i>	<i>model on demand</i>	00830300	00830750	00811005
<b>INPUT DATA</b>				
<b>Mains connection</b>	1Ph+N+PE (2Ph+PE)		1Ph+N+PE (2Ph+PE)	
<b>AC nominal voltage</b> [V]	230		230	
<b>Input voltage range</b> [V]	90-265		185-265	
<b>Frequency</b> [Hz]	50/60		50/60	
<b>Frequency range</b> [Hz]	47-63		47-63	
<b>Max. input current</b> [A]	10		13	
<b>Max. power</b> [W]	625		2200	
<b>Protection device</b>	fuse		fuse	
<b>OUTPUT DATA</b>				
<b>No-load voltage at min. input voltage<sup>1</sup></b> [V]	100		125	
<b>DC output voltage range</b> [V]	11-22.5		11-30.5	
<b>DC output current range</b> [A]	6-30	12-30	17-75	40-110
<b>Peak to peak current ripple</b> [%]	<1.5		<1	
<b>Efficiency</b>	≥ 0.8		≥ 0.89	
<b>Output instruments<sup>2</sup></b> [LCD]	A [LED BAR]		A/N/W/Hours/Alarms	
<b>Output signal</b> [LED]	mains line - overtemperature		Status, Lamp selected, Alarms	
				operation mode (manual/program)
<b>ON/OFF control</b>	switch		Keyboard/ext. switch/ digital RS485 (on demand)	
<b>Lamp current adjustment</b>	potentiometer		Keyboard/0-10V signal/digital RS485 (on demand)	
<b>Remote control</b>	ON/OFF		RS-232 serial line (IREM protocol)	
<b>Output signal</b> [dry contacts]	lamp ON - ignition ready		lamp ON - alarm ON	
<b>Output overload protection</b>	electronic		electronic programmable power limiting	
<b>Control system</b>	analog		DSPs	
<b>Conformity</b>	CE	CE	CE	CE/UL <sup>3</sup>
<b>Degree of protection</b>	IP20		IP00	
<b>Isolation class</b>	CL1		CL1	
<b>Storage temperature</b> [°C]	-20 to +60		-20 to +60	
<b>Operating temperature</b> [°C]	0 to +40		-5 to +45	
<b>Cooling</b>	forced		forced	
<b>Dimensions AxBxH</b> [mm]	265 x 335 x 135		442x305x88	
<b>Figure</b>	1		3/4	
<b>Weight</b> [kg]	7.7		9,5	
<b>Mounting position</b>	horizontal / vertical		horizontal / rack	
<b>Suggested igniter</b>	AS-1530 AS-3040 AS-3040	ASN-8030, ASC-5030	AS-16040, AS-16040A	

- 1) 4s after switching on.
- 2) A = ammeter / V = voltmeter / W = power / T = internal temperature meter / HM = hour meter (partial and total)
- 3) UL compliance
- 4) UL certified

IREM holds the right to modify the present datasheet without any prior notice



## EX SERIES

## ELECTRONIC POWER SUPPLIES FOR SHORT ARC XENON LAMPS



Xenon lamp power range [W]		1000-3000	
MODEL		EX-100GM/3-E	EX-100GM/3-E
Item number		00831031	00831036
<b>INPUT DATA</b>			
Mains connection		3Ph+PE	
AC nominal voltage	[V]	400	208
Input voltage range	[V]	360-460	187-230
Frequency	[Hz]	50/60	
Frequency range	[Hz]	47-63	
Max. input current	[A]	11	15
Max. power	[W]	3400	
Protection device		fuse	
<b>OUTPUT DATA</b>			
No-load voltage at min. input voltage <sup>1</sup>	[V]	120	
DC output voltage range	[V]	17-34	
DC output current range	[A]	30-110	
Peak to peak current ripple	[%]	<1.5	
Efficiency		≥ 0.87	
Output instruments <sup>2</sup>	[LCD]	A/V/W/T/HM	
Output signal	[LED]	mains line - overtemperature operation mode (manual/program)	
ON/OFF control		Keyboard / ext. switch / serial line	
Lamp current adjustment		Keyboard / 0-10V signal / serial line	
Remote control		RS-232 serial line (IREM protocol)	
Output signal	[dry contacts]	lamp ON - alarm ON	
Output overload protection		electronic programmable power limiting	
Control system		MCUs	
Conformity		CE	CE/UL <sup>3</sup>
Degree of protection		IP20	
Isolation class		CL1	
Storage temperature	[°C]	-20 to +60	
Operating temperature	[°C]	0 to +40	
Cooling		forced	
Dimensions AxBxH	[mm]	225 x 465 x 350	
Figure		2	
Weight	[kg]	19	
Mounting position		horizontal / vertical	
Suggested igniter		AS-16040, AS-16040A	

1) 4s after switching on.

2) A = ammeter / V = voltmeter / W = power / T = internal temperature meter / HM = hour meter (partial and total)

3) UL compliance

4) UL certified

IREM holds the right to modify the present datasheet without any prior notice

## EX SERIES

## ELECTRONIC POWER SUPPLIES FOR SHORT ARC XENON LAMPS



<i>Xenon lamp power range [W]</i>		2000-7000		3600-10000	
MODEL		EX-170GM/3-E	EX-170GM/3-US	EX-200GM/3-E	EX-200GM/3-US
<i>Item number</i>		00831731	00831736	00832031	00832036
<i>INPUT DATA</i>					
Mains connection		3Ph+PE		3Ph+PE	
AC nominal voltage	[V]	400	208	400	208
Input voltage range	[V]	360-460	187-230	360-460	187-230
Frequency	[Hz]	50/60		50/60	
Frequency range	[Hz]	47-63		47-63	
Max. input current	[A]	18	23	23	36
Max. power	[W]	7300		10800	
Protection device		fuse		fuse	circuit breaker
<i>OUTPUT DATA</i>					
No-load voltage at min. input voltage <sup>1</sup>	[V]	140		145	
DC output voltage range	[V]	24-46		30-58	
DC output current range	[A]	60-170		80-210	
Peak to peak current ripple	[%]	<1		<1	
Efficiency		≥ 0.9		0.9	
Output instruments <sup>2</sup>	[LCD]	A/V/W/T/HM		A/V/W/T/HM	
Output signal	[LED]	mains line - overtemperature		mains line - overtemperature	
		operation mode (manual/program)		operation mode (manual/program)	
ON/OFF control		Keyboard / ext. switch / serial line		Keyboard / ext. switch / serial line	
Lamp current adjustment		Keyboard / 0-10V signal / serial line		Keyboard / 0-10V signal / serial line	
Remote control		RS-232 serial line (IREM protocol)		RS-232 serial line (IREM protocol)	
Output signal	[dry contacts]	lamp ON - alarm ON		lamp ON - alarm ON	
Output overload protection		electronic programmable power limiting		electronic programmable power limiting	
Control system		MCUs		MCUs	
Conformity		CE	CE/UL <sup>4</sup>	CE	CE/UL <sup>4</sup>
Degree of protection		IP20		IP20	
Isolation class		CL1		CL1	
Storage temperature	[°C]	-20 to +60		-20 to +60	
Operating temperature	[°C]	0 to +40		0 to +40	
Cooling		forced		forced	
Dimensions AxBxH	[mm]	255 x 510 x 420		255 x 510 x 420	
Figure		2		2	
Weight	[kg]	30		33	
Mounting position		horizontal / vertical		horizontal / vertical	
Suggested igniter		AS-16040, AS-16040A		ASN-1000A	

1) 4s after switching on.

2) A = ammeter / V = voltmeter / W = power / T = internal temperature meter / HM = hour meter (partial and total)

3) UL compliance

4) UL certified

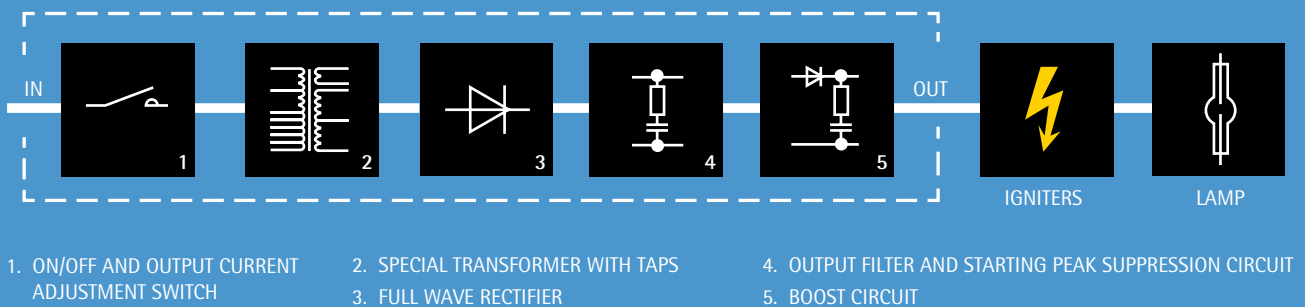
IREM holds the right to modify the present datasheet without any prior notice

# RECTIFIERS POWER SUPPLIES SINGLE-PHASE PX-50N



## RECTIFIER POWER SUPPLIES FOR SHORT ARC XENON LAMPS

This single-phase portable rectifier has been designed to ensure correct operation and long life to short arc Xenon lamps of 1000W. It is characterized by galvanic insulation, a soft inrush current, a low residual ripple value and a stable output current. The tap transformer allows to regulate the output current by changing the output current selector position, and a special circuit avoids the lamp turning off during the tap switching. A boost circuit provides the necessary no-load voltage in order to guarantee the right lamp condition for the ignition, and the output filter guarantees a low output current ripple value. Its robustness makes it particularly suitable for a wide variety of applications.

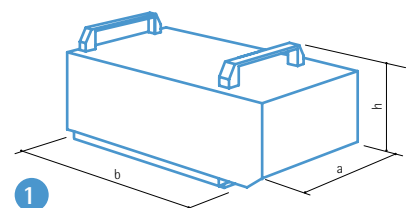


PX-50N SERIES  
RECTIFIER POWER SUPPLIES FOR SHORT ARC XENON LAMPS



<i>Xenon lamp power range [W]</i>		<i>1000</i>	
MODEL		PX-50N	PX-50N
Item number		00115000	00115004
<i>INPUT DATA</i>			
Mains connection		1Ph+N+PE (2Ph+PE)	1PH+N+PE
AC nominal voltage	[V]	230	220
Input voltage range	[V]	208-253	208-230
Frequency	[Hz]	50	60
Frequency range	[Hz]	47-53	57-63
Max. input current	[A]	11	23
Max. power	[VA]	2500	2500
Protection device		fuse	fuse
<i>OUTPUT DATA</i>			
No-load voltage at min. input voltage <sup>1</sup>	[V]	120	120
DC output voltage range	[V]	20-25	20-25
DC output current range	[A]	30-50	30-50
Peak to peak current ripple	[%]	<6	<6
Efficiency		≥ 0.75	≥ 0.75
ON/OFF control		switch	switch
Lamp current adjustment		tap selector	tap selector
Output signal	[dry contacts]	not provided	not provided
Conformity		CE	CE
Degree of protection		IP20	IP20
Isolation class		CL1	CL1
Storage temperature	[°C]	-20 to +60	-20 to +60
Operating temperature	[°C]	0 to +40	0 to +40
Cooling		free convection	free convection
Dimensions AxBxH	[mm]	250 x 600 x 258	250 x 600 x 258
Figure		1	1
Weight	[kg]	56	55
Mounting position		horizontal / vertical	horizontal / vertical
Suggested igniter		AS-16040, AS-16040A	AS-16040, AS-16040A

1) 1,5 sec. after switching on



# RECTIFIER POWER SUPPLIES THREE-PHASE N3,N3-E SERIES



## RECTIFIER POWER SUPPLIES FOR SHORT ARC XENON LAMPS

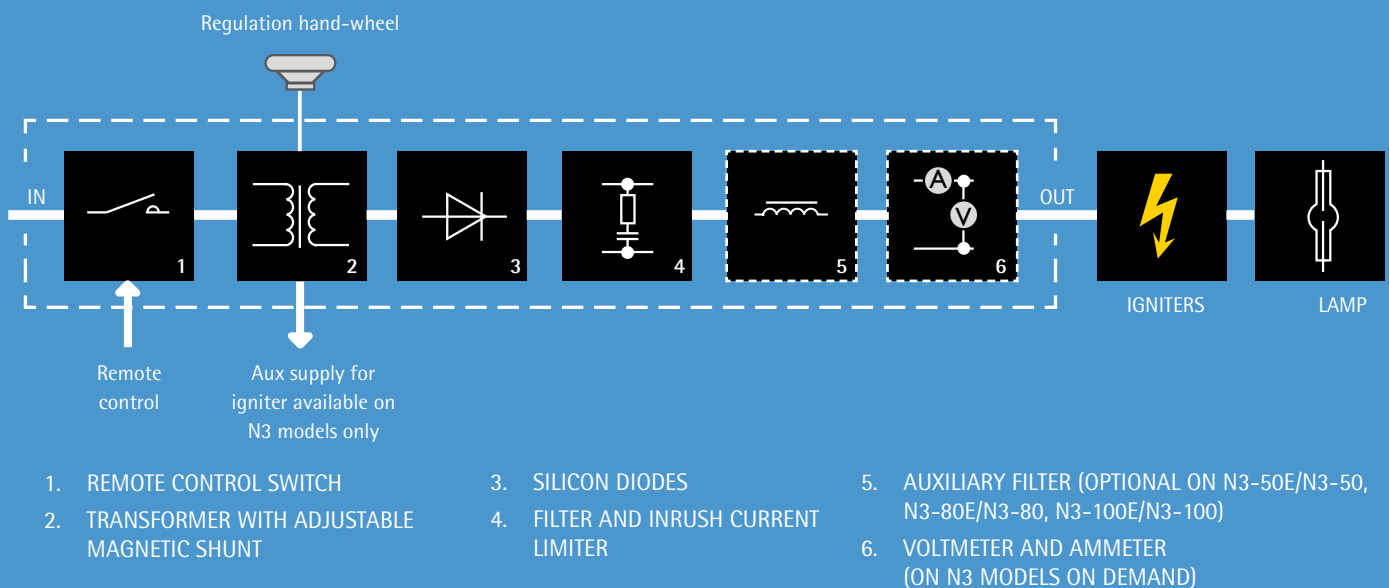
A complete range of high quality rectifier power supplies specially designed to ensure correct operation and long life to short arc xenon lamps from 700 to 15000W.

The whole range of these three-phase rectifiers is characterized by galvanic insulation, a soft inrush current, a low residual ripple value and a stable output current. These rectifiers are equipped with IREM special transformers and an exclusive magnetic shunt allowing a constant and linear regulation of the lamp output power.

Their new and peculiar design guarantees a low acoustical noise.

They are designed for continuous duty at ambient temperature up to 40°C.

They are equipped with on-off control switch and three terminals for the on-off remote control.





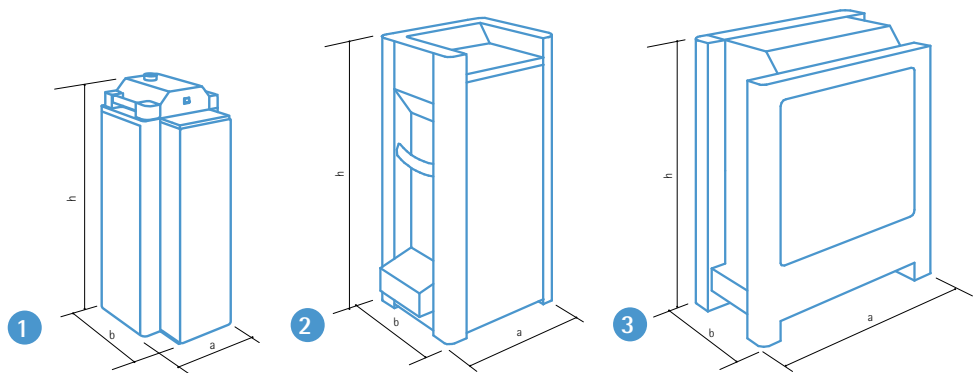
## N3/N3-E SERIES RECTIFIER POWER SUPPLIES FOR SHORT ARC XENON LAMPS



Xenon lamp power range [W]		700-1000					1600-2000				
MODEL		N3-50E				N3-50	N3-80E				N3-80
Item number		00605280	00605281	00605284	model on demand	00605208	00608080	00608081	00608084	model on demand	00608008
<b>INPUT DATA</b>											
Mains connection		3Ph+PE					3Ph+PE				
AC nominal voltage [V]		400	220	415	200	220	400	220	415	200	220
Input voltage range [V]		380-440	208-242	394-456	190-220	208-230	380-440	208-242	394-456	190-220	208-230
Frequency [Hz]		50	50/60	50/60	50/60	60	50	50/60	50/60	50/60	60
Frequency range [Hz]		48-52	48-63	48-63	48-63	57-63	48-52	48-63	48-63	48-63	57-63
Max. input current [A]		4.3	7.9	4.2	8	7.9	8.4	15.2	8.1	16.7	15.2
Max. power [VA]		3000					5800				
Protection device		-					-				
<b>OUTPUT DATA</b>											
No-load voltage at min. input voltage <sup>1</sup> [V]		87	84	84	84	84	107	109	107	109	109
DC output voltage range [V]		16-28				16-28	21-35				21-35
DC output current range [A]		30-55				30-55	43-85				43-85
Peak to peak current ripple with AF [%]		<3				<3	<3				<3
Peak to peak current ripple without AF [%]		<8				<8	<8				<8
Efficiency		≥ 0.8				≥ 0.8	≥ 0.8				≥ 0.8
Output instruments <sup>2</sup>		-				A/V	-				A/V
Aux. Supply		-				provided	-				provided
Aux. Supply protection		-				fuse	-				fuse
ON/OFF control		switch				switch	switch				switch
Lamp current adjustment		hand wheel				hand wheel	hand wheel				hand wheel
Remote control		ON/OFF				ON/OFF	ON/OFF				ON/OFF
Conformity		CE	CE	CE	CE	CE/UL <sup>6</sup>	CE	CE	CE	CE	CE/UL <sup>6</sup>
Acoustical noise <sup>3</sup> [db]		< 55				< 55	< 55				< 55
Degree of protection		IP20				IP20	IP20				IP20
Isolation class		CL1				CL1	CL1				CL1
Storage temperature [°C]		-20 to +60				-20 to +60	-20 to +60				-20 to +60
Operating temperature [°C]		0 to +40				0 to +40	0 to +40				0 to +40
Cooling		free convection				free convection	free convection				free convection
Dimensions AxBxH [mm]		320x380x770				410x350x840	320x380x770				410x350x840
Figure		1				2	1				2
Weight with AF <sup>4</sup> [kg]		85				101	105				122
Weight without AF <sup>4</sup> [kg]		70				80	90				101
Mounting position		vertical					vertical				
Suggested igniter		AS-16040, AS-16040A					AS-16040, AS-16040A				

- 1) 500ms after switching on.
  - 2) A = ammeter / V = voltmeter (available on demand on N3 models only).
  - 3) Measurement made in open space at 1 m distance.
  - 4) Net weight to be considered with a tolerance of ± 2,5%.
  - 5) UL compliance.
  - 6) UL certified.
- Different input voltages or frequencies are available on request

IREM holds the right to modify the present datasheet without any prior notice



## N3/N3-E SERIES

### RECTIFIER POWER SUPPLIES FOR SHORT ARC XENON LAMPS



Xenon lamp power range [W]		2000-3000					3000-5000				
MODEL	N3-100E			N3-100		N3-150E			N3-150		
Item number	00610080	00610081	00610084	model on demand	00610008	00615280	00615251	00615255	model on demand	00615208	
<b>INPUT DATA</b>											
Mains connection	3Ph+PE					3Ph+PE					
AC nominal voltage [V]	400	220	415	200	220	400	220	415	200	220	
Input voltage range [V]	380-440	208-242	394-456	190-220	208-230	380-440	208-242	394-456	190-220	208-230	
Frequency [Hz]	50	50	50/60	50/60	60	50	50	50/60	50/60	60	
Frequency range [Hz]	48-52	48-52	48-63	48-63	57-63	48-52	48-52	48-63	48-63	57-63	
Max. input current [A]	10	18.1	9.6	19.9	18.1	13.6	24.7	13.1	27.1	24.7	
Max. power [VA]	6900					9400					
Protection device	-					-					
<b>OUTPUT DATA</b>											
No-load voltage at min. input voltage <sup>1</sup> [V]	112	106	111	104	109	112	108	108	107	110	
DC output voltage range [V]	28-36			28-36		28-40			28-40		
DC output current range [A]	52-110			52-110		80-150			80-150		
Peak to peak current ripple with AF [%]	<3			<3		<3			<3		
Peak to peak current ripple without AF [%]	<8			<8		-			-		
Efficiency	≥ 0.8			≥ 0.8		≥ 0.8			≥ 0.8		
Output instruments <sup>2</sup>	-			A/V		-			A/V		
Aux. Supply	-			provided		-			provided		
Aux. Supply protection	-			fuse		-			fuse		
ON/OFF control	switch			switch		switch			switch		
Lamp current adjustment	hand wheel			hand wheel		hand wheel			hand wheel		
Remote control	ON/OFF			ON/OFF		ON/OFF			ON/OFF		
Conformity	CE	CE	CE	CE	CE/UL <sup>6</sup>	CE	CE	CE	CE	CE/UL <sup>6</sup>	
Acoustical noise <sup>3</sup> [db]	< 55			< 55		< 55			< 55		
Degree of protection	IP20			IP20		IP20			IP20		
Isolation class	CL1			CL1		CL1			CL1		
Storage temperature [°C]	-20 to +60			-20 to +60		-20 to +60			-20 to +60		
Operating temperature [°C]	0 to +40			0 to +40		0 to +40			0 to +40		
Cooling	free convection			free convection		forced			forced		
Dimensions AxBxH [mm]	320x380x770			460x410x940		320x380x770			460x410x940		
Figure	1			2		1			2		
Weight with AF <sup>4</sup> [kg]	123			148		130			154		
Weight without AF <sup>4</sup> [kg]	108			127		-			-		
Mounting position	vertical					vertical					
Suggested igniter	AS-16040, AS-16040A					AS-16040, AS-16040A					

1) 500ms after switching on.

2) A = ammeter / V = voltmeter (available on demand on N3 models only).

3) Measurement made in open space at 1 m distance.

4) Net weight to be considered with a tolerance of ± 2,5%.

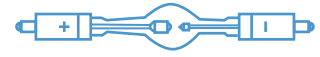
5) UL compliance.

6) UL certified.

Different input voltages or frequencies are available on request

IREM holds the right to modify the present datasheet without any prior notice

## N3/N3-E SERIES RECTIFIER POWER SUPPLIES FOR SHORT ARC XENON LAMPS



Xenon lamp power range [W]		5000-7000				7000-10000				12000-15000
MODEL	N3-180E				N3-180	N3-200				N3-400
Item number	00618250	00618251	00618255	model on demand	00618208	00620200	00620204	00620208	model on demand	00644000
<b>INPUT DATA</b>										
Mains connection	3Ph+PE					3Ph+PE				3Ph+N+PE
AC nominal voltage [V]	400	220	415	200	220	400	415	208	200	400
Input voltage range [V]	380-440	208-242	394-456	190-220	208-230	380-440	394-456	187-230	190-220	380-440
Frequency [Hz]	50	50	50/60	50/60	60	50	50/60	60	50/60	50
Frequency range [Hz]	48-52	48-52	48-63	48-63	57-63	48-52	48-63	57-63	48-63	48-52
Max. input current [A]	18.8	34.1	18.1	37.5	34.1	30.3	29.2	58.2	60.6	48
Max. power [VA]	13000					21000				33000
Protection device	-					-				thermostatic devices
<b>OUTPUT DATA</b>										
No-load voltage at min. input voltage <sup>1</sup> [V]	122	115	120	120	120	157	157	150	150	140
DC output voltage range [V]	28-48				28-48	36-55				27-40
DC output current range [A]	110-165				110-165	110-210				280-400
Peak to peak current ripple with AF [%]	<3				<3	<3				<4
Peak to peak current ripple without AF [%]	-				-	-				-
Efficiency	≥ 0.8				≥ 0.8	≥ 0.8				≥ 0.8
Output instruments <sup>2</sup>	-				A/V	A/V				A/V
Aux. Supply	-				provided	provided				provided
Aux. Supply protection	-				fuse	fuse				fuse
ON/OFF control	switch				switch	switch				switch
Lamp current adjustment	hand wheel				hand wheel	hand wheel				hand wheel
Remote control	ON/OFF				ON/OFF	ON/OFF				ON/OFF - current adj.
Conformity	CE	CE	CE	CE	CE/UL <sup>6</sup>	CE	CE	CE/UL <sup>6</sup>	CE	CE
Acoustical noise <sup>3</sup> [db]	< 55				< 55	< 55				-
Degree of protection	IP20				IP20	IP20				IP20
Isolation class	CL1				CL1	CL1				CL1
Storage temperature [°C]	-20 to +60				-20 to +60	-20 to +60				-20 to +60
Operating temperature [°C]	0 to +40				0 to +40	0 to +40 - 0 to +40 - 0 to +35 - 0 to +40				0 to +40
Cooling	forced				forced	forced				forced
Dimensions AxBxH [mm]	320x380x770				460x410x940	460x410x1040				660x530x1100
Figure	1				2	2				3
Weight with AF <sup>4</sup> [kg]	158				175	207				448
Weight without AF <sup>4</sup> [kg]	-				-	-				-
Mounting position	vertical					vertical				vertical
Suggested igniter	AS-16040, AS-16040A					ASN-1000A				AS-40045A

1) 500ms after switching on.  
 2) A = ammeter / V = voltmeter (available on demand on N3 models only).  
 3) Measurement made in open space at 1 m distance.  
 4) Net weight to be considered with a tolerance of ± 2,5%.  
 5) UL compliance.  
 6) UL certified.  
 Different input voltages or frequencies are available on request  
 IREM holds the right to modify the present datasheet without any prior notice



# METAL HALIDE LAMPS



## AD, ADC and ADN IGNITERS BU, CBI and BC BALLAST

Metal-halide lamps are electrical lamps that produce light by an electric arc through a gaseous mixture of vaporized mercury and metal halides.

The full light output is reached after a warm-up period of several minutes.

They operate at a pressure between 4 and 20 atmospheres so require special fixtures to operate safely, as well as an electrical ballast and a special ignitor to ensure a reliable and instantaneous lamp ignition. IREM offers a complete range of high quality magnetic ballasts and hot-restrike igniters specially designed to ensure correct operation, long life and instant ignition of metal halide lamps with power from 200 to 18000W. IREM ballast and igniters are compliant with CE marking and several models are UL certified



## METAL-HALIDE LAMPS APPLICATIONS

- ✓ Film and video shooting lighting (indoor and outdoor)
- ✓ TV broadcast lighting
- ✓ Events lighting
- ✓ Theatre lighting
- ✓ Underwater illumination
- ✓ Special effects
- ✓ Overhead projection

## IREM PROPOSAL



IREM products specially designed to supply the metal halide lamps (MSR, MSI, HMI), cover a wide range of powers from 200 W to 18000 W.

The perfect compatibility with the electrical characteristics of metal halide lamps, as well as the easy handling allow the IREM magnetic ballasts and hot-restrike igniters to be used in variable applications.



# H.V. IGNITERS AD SERIES



## H.V. IGNITERS FOR METAL HALIDE LAMPS

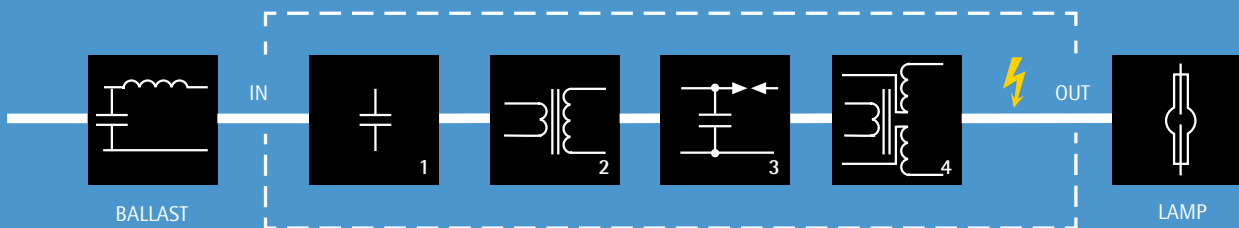
A complete range of high voltage igniters expressly designed to strike single and double ended metal halide lamps from 200 to 18000W.

These symmetrical igniters have been designed to be supplied from AC mains line and they are characterized by a compact design, high thermal stability, galvanic insulation and a low noise level.

The technical characteristics of all models comply with the specification of the different lamps manufacturers.

The igniters are available with different H.V. poles positions and they are equipped with isolated bushings that make them suitable for a wide variety of applications, including compact and portable lighting systems.

These units should be installed close to the lamp, but thermally shielded from it. The high voltage lead must be as short as possible and carefully insulated to prevent corona discharge and reduction in strike energy. They must be grounded for proper interferences suppression.



1. R.F. FILTER

2. STEP-UP TRANSFORMER

3. PULSES GENERATOR

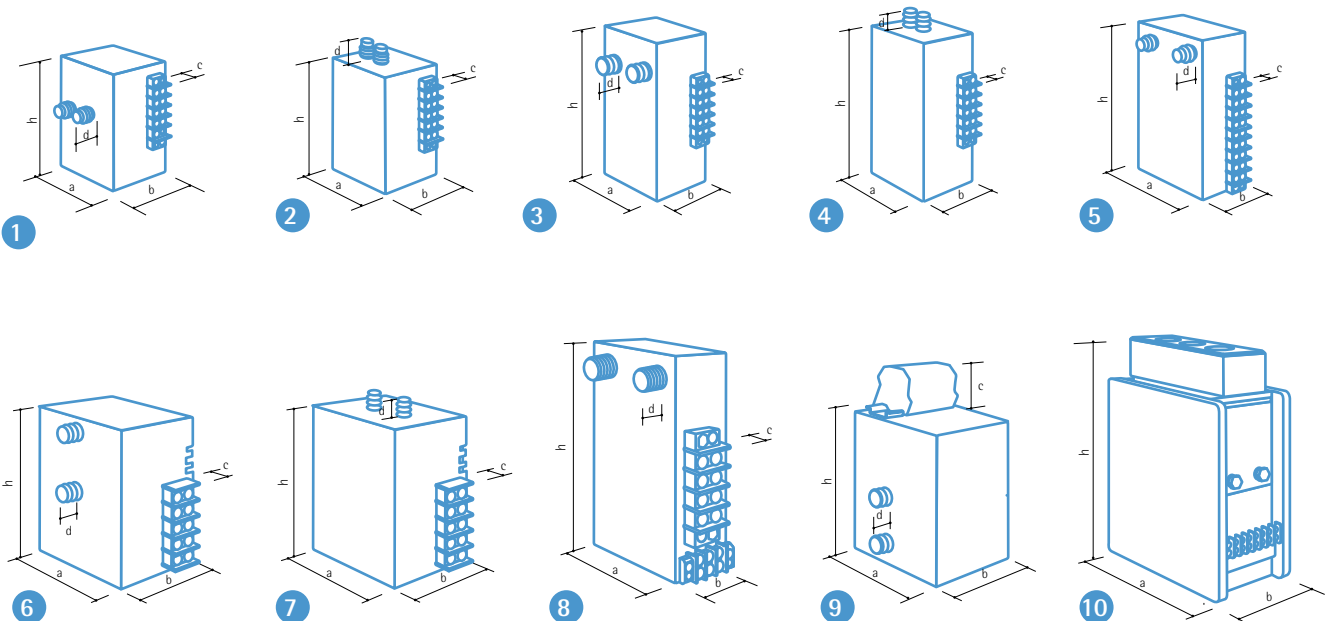
4. H.V. COIL

## AD SERIES H.V. IGNITERS FOR METAL HALIDE LAMPS



Metal halide lamp power [W]		200 - 575			1200		
MODEL		AD-825/A-US	AD-825/B	ADC-825/A-US	AD-1550/A-US	AD-1550/B	ADC-1550/A-US
Item number		02815024	02815025	02815030	02820025	02820035	02820040
<b>TECHNICAL DATA</b>							
AC nominal voltage <sup>1</sup>	[V]	230	230	230	230	230	230
Input voltage range	[V]	207-253	207-253	207-253	207-253	207-253	207-253
Frequency	[Hz]	50/60	50/60	50/60	50/60	50/60	50/60
Frequency range	[Hz]	47-63	47-63	47-63	47-63	47-63	47-63
Max. input current during ignition	[A]	1.5	1.5	1.3	1.5	1.5	1.3
H.V. pulses amplitude	[kV]	≤ 25	≤ 25	≤ 25	≤ 50	≤ 50	≤ 50
No. of pulses per half cycle		≤ 20	≤ 20	≤ 15	≤ 15	≤ 15	≤ 15
Load capacity range	[pF]	5...30	5...30	5...30	5...30	5...30	5...30
Lamp current at TAMB ≤ 50°C	[A]	≤ 8	≤ 8	≤ 8	≤ 15	≤ 15	≤ 15
Power loss at TAMB = 25°C <sup>2</sup>	[W]	1	1	1.2	5.8	5.8	6.8
Max. continuous operating time	[s]	6	6	6	6	6	6
Conformity		CE / UL	CE	CE / UL	CE / UL	CE	CE / UL
Degree of protection		IP00	IP00	IP00	IP00	IP00	IP00
Isolation class		CL1	CL1	CL1	CL1	CL1	CL1
Storage temperature	[°C]	-20 to +60	-20 to +60	-20 to +60	-20 to +60	-20 to +60	-20 to +60
Weight	[kg]	1.3	1.3	1.2	1.6	1.6	1.2
Dimensions AxBxHxd <sup>3</sup>	[mm]	75x64x104x32x10	75x64x104x32x10	90x44x130x32x10	75x64x146x48x10	75x64x146x32x10	90x44x130x32x10
Max. H.V. cable insulator Ø	[mm]	9	9	9	12.5	9	9
Figure		1	2	5	3	4	5
Timing		manual	manual	manual	manual	manual	manual

1) The igniters can be connected as follows: 1Ph+N+PE or 2Ph+PE  
 2) The power losses have been measured at nominal lamp current value  
 3) The size "d" is referred to the igniter insulating bushing  
 All igniters are equipped with isolation bushings and tin soldering contacts. They are supplied without H.V. cables.  
 Different input voltages or frequencies are available on demand.  
 IREM holds the right to modify the present datasheet without any prior notice





## AD SERIES

### H.V. IGNITERS FOR METAL HALIDE LAMPS



<i>Metal halide lamp power [W]</i>		2500 - 4000			
MODEL		AD-3050/A-US	AD-3050/B-US	ADC-3050/A-US	ADN-3050/A
<i>Item number</i>		02825049	02825050	02823050	02925049
<b>TECHNICAL DATA</b>					
AC nominal voltage <sup>1</sup>	[V]	230	230	230	230
Input voltage range	[V]	207-253	207-253	207-253	207-253
Frequency	[Hz]	50/60	50/60	50/60	50/60
Frequency range	[Hz]	47-63	47-63	47-63	47-63
Max. input current during ignition [A]		1.5	1.5	1.3	3.8
H.V. pulses amplitude	[kV]	≤ 50	≤ 50	≤ 50	≤ 50
No. of pulses per half cycle		≤ 15	≤ 15	≤ 20	≤ 20
Load capacity range	[pF]	5...30	5...30	5...30	5...30
Lamp current at TAMB ≤ 50°C	[A]	≤ 30	≤ 30	≤ 30	≤ 30
Power loss at TAMB = 25°C <sup>2</sup>	[W]	11	11	14	10
Max. continuous operating time	[s]	6	6	6	6
Conformity		CE / UL	CE / UL	CE / UL	CE
Degree of protection		IP00	IP00	IP00	IP00
Isolation class		CL1	CL1	CL1	CL1
Storage temperature	[°C]	-20 to +60	-20 to +60	-20 to +60	-20 to +60
Weight	[kg]	2.9	2.9	1.6	3
Dimensions AxBxHxdxc <sup>3</sup>	[mm]	130x83x150x48x15	130x83x150x48x15	98x46x160x48x15	130x83x150x48x15
Max. H.V. cable insulator Ø	[mm]	12.5	12.5	12.5	12.5
Figure		6	7	8	6
Timing		manual	manual	manual	manual

<i>Metal halide lamp power [W]</i>		4000		6000	12000 - 18000
MODEL		AD-3065/A	AD-3065/B	AD-6055-US	AD-9070-US
<i>Item number</i>		02825066	02825070	02825080	02825191
<b>TECHNICAL DATA</b>					
AC nominal voltage <sup>1</sup>	[V]	230	230	230	230
Input voltage range	[V]	207-253	207-253	207-253	207-253
Frequency	[Hz]	50/60	50/60	50/60	50/60
Frequency range	[Hz]	47-63	47-63	47-63	47-63
Max. input current during ignition [A]		3.8	3.8	3.8	3.8
H.V. pulses amplitude	[kV]	≤ 65	≤ 65	≤ 55	≤ 70
No. of pulses per half cycle		≤ 15	≤ 15	≤ 15	≤ 13
Load capacity range	[pF]	5...30	5...30	5...30	5...30
Lamp current at TAMB ≤ 50°C	[A]	≤ 30	≤ 30	≤ 60	≤ 90
Power loss at TAMB = 25°C <sup>2</sup>	[W]	14	14	15	17.5
Max. continuous operating time	[s]	6	6	6	6
Conformity		CE	CE	CE / UL	CE / UL
Degree of protection		IP00	IP00	IP00	IP00
Isolation class		CL1	CL1	CL1	CL1
Storage temperature	[°C]	-20 to +60	-20 to +60	-20 to +60	-20 to +60
Weight	[kg]	3	3	3.25	6.75
Dimensions AxBxHxdxc <sup>3</sup>	[mm]	130x83x150x48x15	130x83x150x48x15	130x83x150x48x44	200x100x265.5
Max. H.V. cable insulator Ø	[mm]	12.5	12.5	12.5	28
Figure		6	7	9	10
Timing		manual	manual	manual	manual

1) The igniters can be connected as follows: 1Ph+N+PE or 2Ph+PE  
 2) The power losses have been measured at nominal lamp current value  
 3) The size "d" is referred to the igniter insulating bushing  
 All igniters are equipped with isolation bushings and tin soldering contacts.  
 They are supplied without H.V. cables.

Different input voltages or frequencies are available on demand.

IREM holds the right to modify the present datasheet without any prior notice



# BALLAST

## BU, CBI and BC SERIES



### BALLAST POWER SUPPLIES FOR METAL HALIDE LAMPS

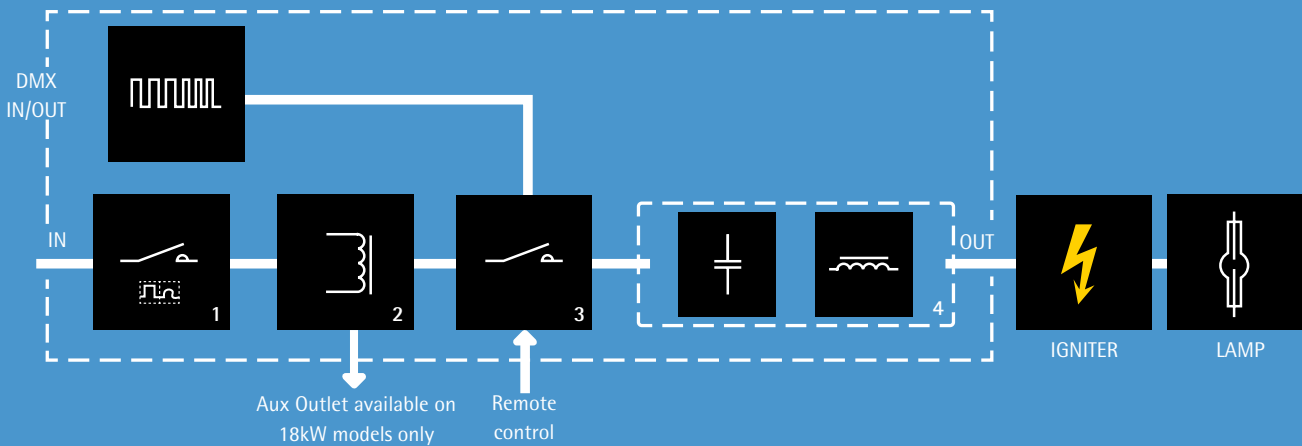
A complete range of high quality ballast power supplies specially designed to ensure correct operation and long life to metal halide lamps with power from 200 to 18000W.

They are characterized by high linearity and are made up of a reactor in series to the mains, a battery of power factor improving capacitors and a power relay for the remote ignition of the power supply (some models are equipped with a special type of L-C circuit).

Some of them are fitted with an input autotransformer to obtain the no-load voltage value required by the lamps. A main circuit breaker protects the unit against short circuits or over current phenomena.

Furthermore the models from 575 to 4000W can be remotely controlled by means of DMX-512 (on request).

Their peculiar design guarantees a low acoustical noise, a high robustness, an easy handling and makes them particularly suitable for a wide variety of applications.

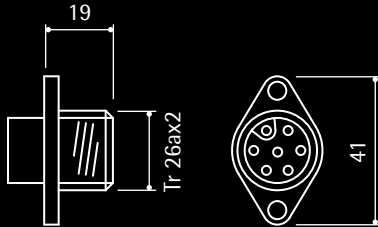


- 1. MAIN CIRCUIT BREAKER
- 2. AUTOTRANSFORMER (on some models only)
- 3. POWER RELAY
- 4. REACTOR
- 5. DMX-512 INTERFACE AND CONTROL BOARD (on request)

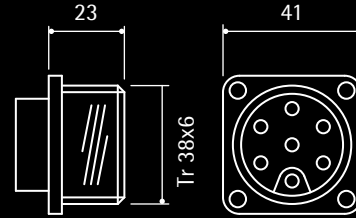


## BALLAST POWER SUPPLIES FOR METAL HALIDE LAMPS BALLAST OUTPUT CONNECTORS OUTLINE DIMENSIONS

THERMOPLASTIC Box mounting receptacles according to VDE 0110/C

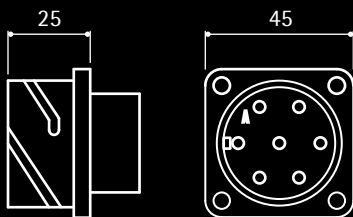


Type A IREM code 84300400-1-3-4

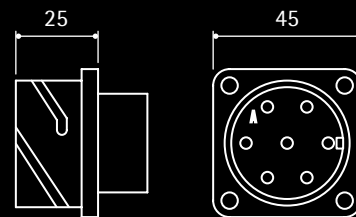


Type B IREM code 84300410-1-3-4

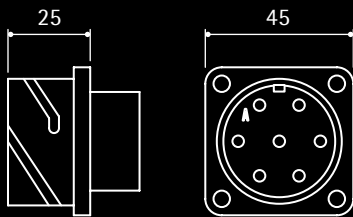
METALLIC Box mounting receptacles according to MIL C 5015 and VG 95234



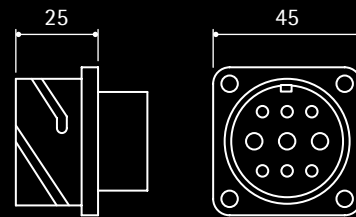
Type C IREM code 84300386



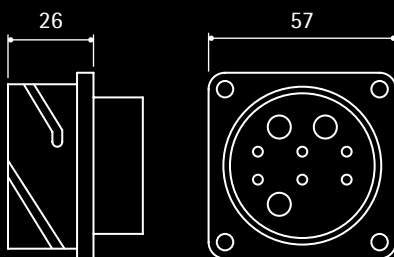
Type D IREM code 84300387



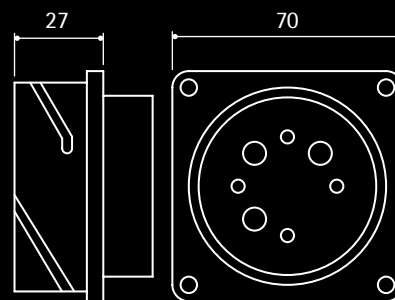
Type E IREM code 84300388



Type F IREM code 84300392



Type G IREM code 84300390



Type H IREM code 84300372

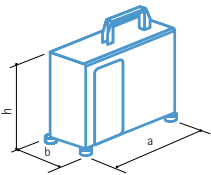
Ballast model	A	B	C	D	E	F	G	H
BU-200E	•							
CBI-575E	•		•					
CBI-1200E	•			•				
CBI-2500E					•			
BC-4000E		•				•		
BC-6000							•	
BU-12K							•	
BC-18KW/E								•

• standard • on request

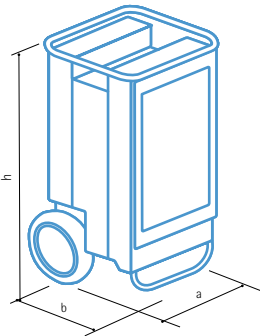
Note: the ballasts equipped with metallic connectors are supplied without the male connecting plugs.

Contact IREM Sales Dept. for further information. The ballasts equipped with thermoplastic connectors (Schaltbau models) are supplied with the male connecting plugs.

# BALLAST BU SERIES



1



5

Metal halide lamp power [W]	200	12000
<b>MODEL</b>	<b>BU-200E</b>	<b>BU-12K</b>
<i>Item number</i>	04516403	04516490
<b>INPUT DATA</b>		
<b>Mains connection</b>	1PH+N+PE (2PH+PE)	1PH+N+PE (2PH+PE)
<b>Mains voltage selector positions</b>	3	4
<b>Mains voltage on Pos. No.1</b>	230V ± 10% 50Hz	230V ± 10% 50Hz
<b>Mains voltage on Pos. No.2</b>	240V ± 10% 50Hz	240V ± 10% 50Hz
<b>Mains voltage on Pos. No.3</b>	220V ± 10% 60Hz	208V ± 10% 60Hz
<b>Mains voltage on Pos. No.4</b>	-	220V +5% -10% 60Hz
<b>Frequency range</b> [Hz]	48-52 / 57-63	48-52 / 57-63
<b>Max. input current</b> [A]	1.3	73
<b>Power factor</b>	0.95	0.8
<b>Efficiency</b>	83%	95%
<b>Earth leakage current</b> [mA]	< 0.5	< 0.5
<b>Input connection system</b>	circular connector	power cord
<b>OUTPUT DATA</b>		
<b>No-load voltage<sup>1</sup></b> [V]	230 / 240 / 220	264 / 252
<b>Nominal lamp current</b> [A]	3.3	83
<b>Power regulation<sup>2</sup></b>	± 14.5%	+24% -30%
<b>Over current protection</b>	fuse	circuit breaker
<b>ON/OFF control</b>	manual / remote	manual / remote
<b>Igniter driving board</b>	provided	provided
<b>Auxiliary outlet voltage<sup>3</sup></b>	-	-
<b>Auxiliary outlet protection</b>	-	-
<b>Earth test device</b>	-	provided
<b>Over temperature protection</b>	-	thermostat
<b>Conformity</b>	CE	CE
<b>Degree of protection</b>	IP32	IP32
<b>Isolation class</b>	CL1	CL1
<b>Storage temperature</b> [°C]	-20 +70	-20 +70
<b>Operating temperature</b> [°C]	-20 +40	-10 +40
<b>Cooling</b>	free convection	forced ventilation
<b>Outline dimensions AxBxHxd</b> [mm]	240 x 125 x 208 x 41	480 x 795 x 695
<b>Figure</b>	1	5
<b>Weight</b> [kg]	7.5	116
<b>Volume</b> [litres]	5.7	104
<b>Handling device</b>	plastic handle	metal handle - pneumatic wheels
<b>Housing material</b>	stainless steel / alluminium	stainless steel / steel
<b>Suggested igniters</b>	AD-825/A-US AD-825/B	AD-9070-US
	ADC-825/A-US	

1) Approximate value  
 2) Power regulation related to the mains voltage range  
 3) Suitable for supplying external devices  
 IREM holds the right to modify the present datasheet without any prior notice

# BALLAST CBI SERIES



Metal halide lamp power [W]	575	1200	2500
<b>MODEL</b>	<b>CBI-575E</b>	<b>CBI-1200E</b>	<b>CBI-2500E</b>
Item number	04501005	04501012	04501025
<b>INPUT DATA</b>			
<b>Mains connection</b>	1PH+N+PE (2PH+PE)	1PH+N+PE (2PH+PE)	1PH+N+PE (2PH+PE)
<b>Mains voltage selector positions</b>	3	3	3
<b>Mains voltage on Pos. No.1</b>	230V ± 10% 50Hz	230V ± 10% 50Hz	230V ± 10% 50Hz
<b>Mains voltage on Pos. No.2</b>	240V ± 10% 50Hz	240V ± 10% 50Hz	240V ± 10% 50Hz
<b>Mains voltage on Pos. No.3</b>	220V ± 10% 60Hz	220V ± 10% 60Hz	220V ± 10% 60Hz
<b>Mains voltage on Pos. No.4</b>	-	-	-
<b>Frequency range</b> [Hz]	48-52 / 57-63	48-52 / 57-63	48-52 / 57-63
<b>Max. input current</b> [A]	3.5	8	15
<b>Power factor</b>	0.95	0.95	0,9
<b>Efficiency</b>	90%	92%	94%
<b>Earth leakage current</b> [mA]	< 0.5	< 0.5	< 0.5
<b>Input connection system</b>	power cord	power cord	power cord
<b>OUTPUT DATA</b>			
<b>No-load voltage<sup>1</sup></b> [V]	230 / 240 / 220	230 / 240 / 220	230 / 240 / 220
<b>Nominal lamp current</b> [A]	7		25.6
<b>Power regulation<sup>2</sup></b>	± 17.5%	± 15%	± 18%
<b>Over current protection</b>	circuit breaker	circuit breaker	circuit breaker
<b>ON/OFF control</b>	manual / remote	manual / remote	manual / remote
<b>Igniter driving board</b>	provided	provided	provided
<b>Auxiliary outlet voltage<sup>3</sup></b>	-	-	-
<b>Auxiliary outlet protection</b>	-	-	-
<b>DMX-512 electronic board<sup>4</sup></b>	on request	on request	on request
<b>Earth test device</b>	provided	provided	provided
<b>Over temperature protection</b>	thermostat	thermostat	thermostat
<b>Conformity</b>	CE	CE	CE
<b>Degree of protection</b>	IP32	IP32	IP32
<b>Isolation class</b>	CL1	CL1	CL1
<b>Storage temperature</b> [°C]	-20 +70	-20 +70	-20 +70
<b>Operating temperature</b> [°C]	-20 +40	-20 +40	-20 +40
<b>Cooling</b>	free convection	free convection	free convection
<b>Outline dimensions AxBxHxd[mm]</b>	175 x 254 x 407	175 x 254 x 407	175 x 293 x 407
<b>Figure</b>	2	2	
<b>Weight</b> [kg]	15.2	20.3	28.3
<b>Volume</b> [litres]	16.8	16.8	19.5
<b>Handling device</b>	plastic handle	plastic handle	plastic handle
<b>Housing material</b>	stainless steel / steel	stainless steel / steel	stainless steel / steel
<b>Suggested igniters</b>	AD-825/A-US AD-825/B ADC-825/A-US	AD-1550/A-US AD-1550/B ADC-1550/A-US	AD-3050/A-US AD-3050/B-US ADC-3050/A-US ADN-3050/A

1) Approximate value

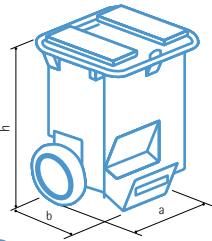
2) Power regulation related to the mains voltage range

3) Suitable for supplying external devices

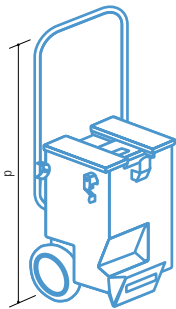
4) The ballasts equipped with DMX-512 card are indicated with the X suffix

IREM holds the right to modify the present datasheet without any prior notice

# BALLAST BC SERIES



3



4

<i>Metal halide lamp power [W]</i>		4000	6000
<b>MODEL</b>		<b>BC-4000E</b>	<b>BC-6000</b>
<i>Item number</i>		04500040	04500060
<b>INPUT DATA</b>			
<b>Mains connection</b>		1PH+N+PE	1PH+N+PE (2PH+PE)
<b>Mains voltage selector positions</b>		2	4
<b>Mains voltage on Pos. No.1</b>		220V ± 10% 50Hz	220V ± 10% 50Hz
<b>Mains voltage on Pos. No.2</b>		240V ± 10% 50Hz	240V -5% +10% 50Hz
<b>Mains voltage on Pos. No.3</b>		-	208V -5 +10% 60Hz
<b>Mains voltage on Pos. No.4</b>		-	220V ± 10% 60Hz
<b>Frequency range</b>	[Hz]	48-52	48-52 / 57-63
<b>Max. input current</b>	[A]	24	37
<b>Power factor</b>		0.9	0.92
<b>Efficiency</b>		93%	95%
<b>Earth leakage current</b>	[mA]	< 0.5	< 0.5
<b>Input connection system</b>		power cord	power cord
<b>OUTPUT DATA</b>			
<b>No-load voltage<sup>1</sup></b>	[V]	380	208 / 220 / 240
<b>Nominal lamp current</b>	[A]	24	55
<b>Power regulation<sup>2</sup></b>		+ 19% -13%	+20%
<b>Over current protection</b>		circuit breaker	circuit breaker
<b>ON/OFF control</b>		manual / remote	manual / remote
<b>Igniter driving board</b>		provided	provided
<b>Auxiliary outlet voltage<sup>3</sup></b>		-	-
<b>Auxiliary outlet protection</b>		-	-
<b>DMX-512 electronic board<sup>4</sup></b>		on request	-
<b>Earth test device</b>		provided	provided
<b>Over temperature protection</b>		thermostat	-
<b>Conformity</b>		CE	CE
<b>Degree of protection</b>		IP32	IP32
<b>Isolation class</b>		CL1	CL1
<b>Storage temperature</b>	[°C]	-20 +70	-20 +70
<b>Operating temperature</b>	[°C]	-20 +40	-20 +40
<b>Cooling</b>		free convection	free convection
<b>Outline dimensions AxBxHxd [mm]</b>		388 x 635 x 488 x 920	388 x 635 x 488 x 920
<b>Figure</b>		3 / 4	3 / 4
<b>Weight</b>	[kg]	61	60
<b>Volume</b>	[litres]	51	51
<b>Handling device</b>		metal handle - pneumatic wheels	metal handle - pneumatic wheels
<b>Housing material</b>		stainless steel / steel	stainless steel / steel
<b>Suggested igniters</b>		AD-3050/A-US AD-3050/B-US ADC-3050/A-US ADN-3050/A	AD-6055-US
		AD-3065/A AD-3065/B (only for double ended lamps only)	

1) Approximate value  
 2) Power regulation related to the mains voltage range  
 3) Suitable for supplying external devices  
 4) The ballasts equipped with DMX-512 card are indicated with the X suffix  
 IREM holds the right to modify the present datasheet without any prior notice



HID  
LAMPS



## ADE and ADI INSTANT RESTRIKE IGNITERS

Metal halide lamps with quartz technology are the best solution for the lighting of large areas or specific application like sport lighting where the quality of the light is a main requirement.

On the other side HID lamps require long restrike times, in some cases up to 15 minutes.

In some applications, like sport and security installations, jails, airports, harbors, tunnels and TV shootings, a prolonged lack of lighting is not permitted.

The know-how and the experience gained over the years on the discharge lamps and lighting systems have allowed IREM to develop a new electronic hot restrike igniter ADE series for the ignition and instant re-ignition of 1000W and 2000W HID lamps.

The IP65 protection degree allow to use this compact and reliable electronic ignitor suitable for indoor and outdoor applications.



## HID LAMPS APPLICATIONS

- ✓ sport lighting
- ✓ wide areas lighting
- ✓ security lighting,
- ✓ industrial plant, jails, airports, harbors, tunnels lighting
- ✓ TV shootings



## IREM PROPOSAL



The newest ADI and ADE series represent a compact and complete range of high voltage igniters expressly designed to strike both single-ended and double-ended metal halide lamps and high pressure sodium lamps. These symmetrical igniters have been designed to reduce and simplify the installation through the connection downstream from the ballast.

They are characterized by electronic control, internal timing, very wide operating temperature ( $-30^{\circ}\text{C} \dots +70^{\circ}\text{C}$ ), compact design, robustness and high reliability.

The characteristics of these igniters comply with the specifications of the most important lamp manufacturers.





# INSTANT RESTRIKE IGNITERS

## ADE SERIES



### ADE-1550 110V-480V 50/60HZ

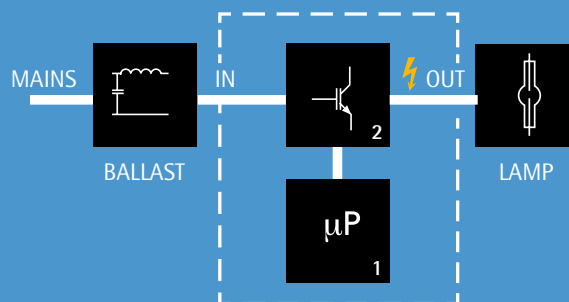
NEWS The ADE electronic igniter represents the last innovative solution for the ignition of hot restrikeable HID lamps.

Thanks to the digital technology, an integrated microprocessor manages the most important functions for a best and quick lamp ignition in both cold and hot conditions.

The major important innovations and advantages are:

- ✓ design suitable for the newest high flux / high current lamps;
- ✓ just one model for all hot-restrikeable lamps in the range of power 1000W...2000W, both 230V and 400V models (including 2000W single-ended short-arc and 2000W double-ended long-arc);
- ✓ fast and easy connections downstream from the ballast by means of two only wires (PHb-N or PHb-PH);
- ✓ free from wrong connections thanks to the input terminal blocks without polarity;
- ✓ universal input voltage range suitable for all AC mains (starting from 110V up to 480V, 50/60 Hz);
- ✓ high voltage pulses generated and controlled by means of totally electronic technology without spark-gap;

For all these reasons, they can be installed on already existing plants and also as replacement of the previous series ADI-1540 (230V & 400V).



Connection for 1000W...2000W, 230V and 400V lamps

1. MICROPROCESSOR CONTROL UNIT

2. ELECTRONIC IGNITION UNIT



# INSTANT RESTRIKE IGNITERS ADI SERIES

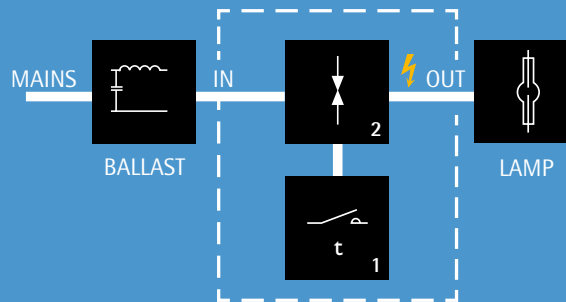


## ADI-1560 230V 50/60HZ

Just one model, based on the switching technology, for the ignition of double-ended metal halide lamps and high pressure sodium lamps in the range of power from 150W up to 1800W.

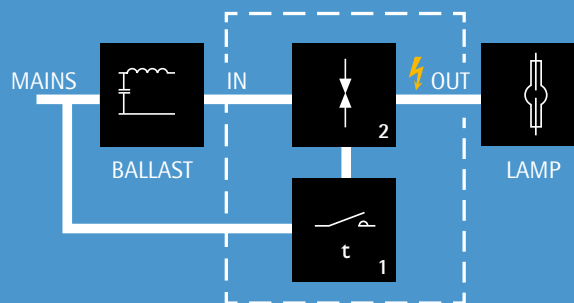
The igniter is made up of a stabilized charging electronic circuit, a H.F. pulse generator (i.e. H.V. capacitors and spark gap) and a H.V. coil. Moreover, a built-in TSCs control circuit (Timing-Sensor-Control system) ensuring a constant control of power supply, lamp status, number of pulses and ignition duration.

The ADI igniter has been designed to be connected downstream from the ballast, for 1000W...1800W lamps by means of three wires and for lamps in the power range from 150W to 400W by means of four wires.



Connection for 1000W...1800W 230V lamps

- 1. INTEGRATED TIMING UNIT
- 2. INTEGRATED IGNITION UNIT



Connection for 150W...400W 230V lamps

## ADE, ADI SERIES INSTANT RESTRIKE IGNITERS



SERIES		ADE	ADI
MODEL		ADE-1550	ADI-1560
ITEM NUMBER		02826150	02825260
<b>TECHNICAL DATA</b>			
AC nominal voltage <sup>1</sup>	[V]	110...480	230
Input voltage range	[V]	95...530	207...253
Frequency	[Hz]	50/60	50/60
Frequency range	[Hz]	47...63	47...63
Max. input current during ignition	[A]	0,3	0,9
H.V. pulses amplitude	[kV]	up to 50	up to 60
No. of pulses per half cycle		single pulse	8...12
Load capacity range	[pF]	5...30	5...30
Max. lamp current	[A]	15	18
Max. power loss at Tamb. = 25°C	[W]	4,5 @ 12,2A	2,5 @ 11,3A
Max. ignition time	[s]	30	3
Typical ignition time	[s]	≈ 0,2	≈ 1
Timing unit		integrated	
Compliance CE		2014/35/EU, 2014/30/EU	
Insulation class		II	I
Operating temperature*	[°C]	-30...+70	
Storage temperature	[°C]	-30...+80	
Weight	[kg]	2,2	1,8
Type of installation		fixed	
<b>ENCLOSURE</b>			
Overall dimensions AxBxH <sup>2</sup>	[mm]	237 x 132 x 111	
Figure		1	
Enclosure material		polyamide reinforced fiber glass	
Enclosure colour		black	
Degree of protection <sup>3</sup>		IP65	
Cable glands <sup>3</sup>		not included	
<b>CONNECTIONS</b>			
Input connections		terminal blocks	
Input wiring		not included	
Output connections		terminal blocks	
Output wiring <sup>4</sup>		2 x included (size 4mm <sup>2</sup> , insulation Ø12 mm)	
<b>LAMPS</b>			
Power and models <sup>5</sup>		HQI-TS 1000W/.../S 230V	HQI-TS 150W/... 230V
		HQI-TS 2000W/.../S 400V	NAV-TS 150W 230V
		HQI-TS 2000W/D/S High Flux 400V	HQI-TS 250W/... 230V
		HQI-TS 2000W/N/L 400V	MHN-TD 250W 230V
		MHN-SA 1800W 400V	HQI-TS 400W/... 230V
		MHN-SA 2000W 400V	HQI-TS 1000W/.../S 230V
		MHN-SB 2000W 400V	MHN-LA 1000W 230V
		MHN-SE 2000W 400V	MHN-SA 1800W 230V
		MHN-LA 2000W 400V	

1) See the product wiring diagram.

2) The overall dimensions does not take into consideration the cable glands.

3) according to IEC 60529 once the igniter is fitted with IP65 cable glands and properly installed. The igniter is supplied without cable glands. The cable glands have to be installed by the customer. Be careful to use appropriate cable glands in order to get a degree of protection IP65 at least.

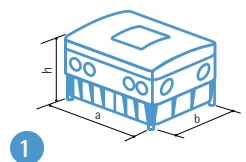
4) The high voltage cable supplied with the igniter is a single core silicone cable suitable for high temperature up to 250°C. The cable is properly cured to reduce the degassing phenomenon. On the high voltage cables a conduit or protective covering shall be installed by the customer. Once fitted, the conduit or protective covering shall provide a proper degree of protection and class of insulation in accordance with the rules of the final installation.

The output wiring standard length is 500mm, other lengths are available on demand.

5) Indicative lamp models' list, not exhaustive.

\* Tested by TÜV Italia laboratories

Contact IREM Sales Department for further information. IREM holds the right to modify the present datasheet without any prior notice.



1





A GLOBAL LEADING PLAYER



SINCE 1947 MORE THAN 800.000 LAMPS HOT RESTRIKED  
ALL OVER THE WORLD



IREM SpA a socio unico

Via Abegg 75 - 10050 Borgone - Torino - ITALY

Tel. +39 011 9648211 - Fax +39 011 9648222

[www.irem.it](http://www.irem.it) - e-mail: [irem@irem.it](mailto:irem@irem.it)

