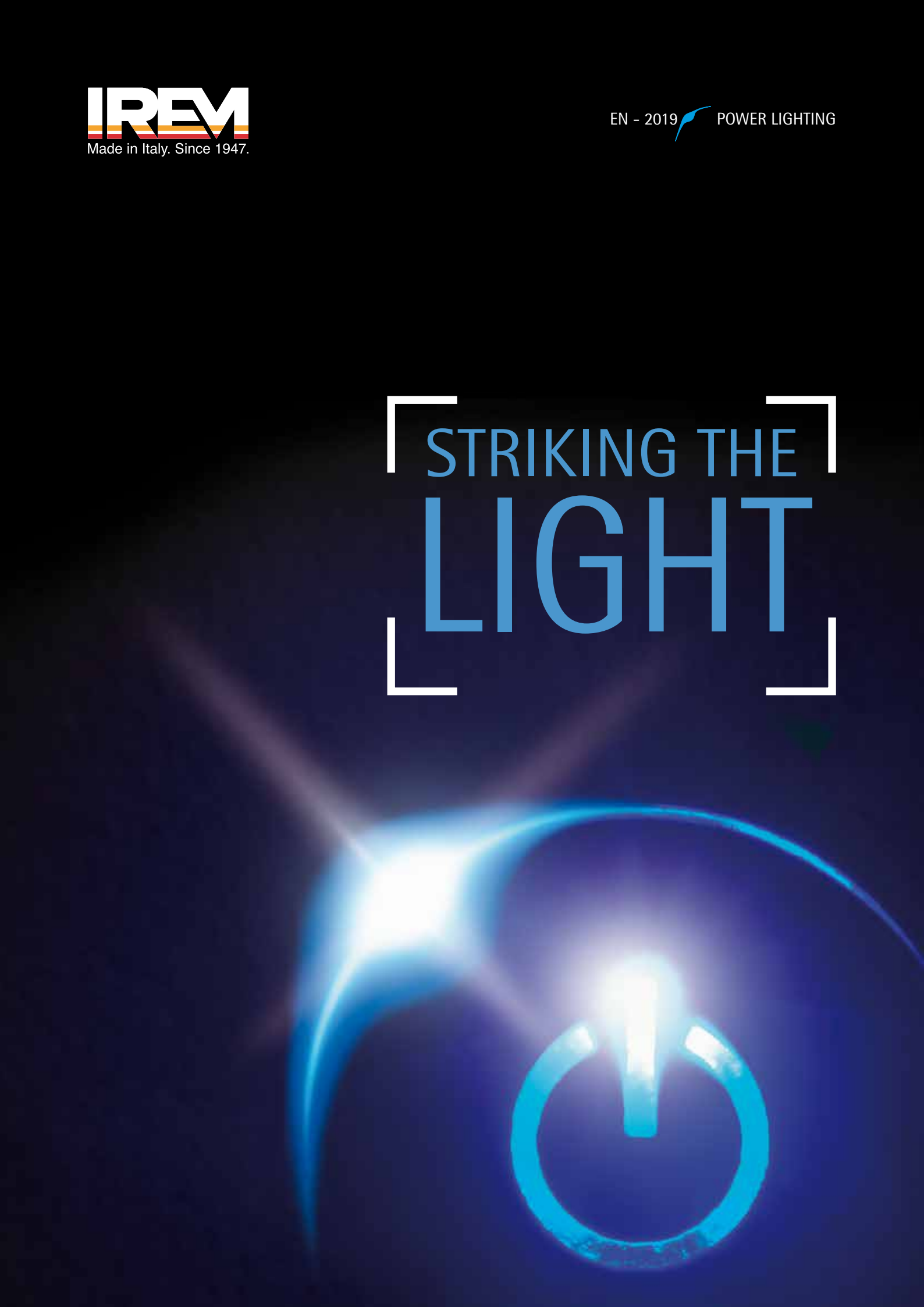
IREM
Made in Italy. Since 1947.

EN - 2019 POWER LIGHTING

STRIKING THE LIGHT



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Made in Italy. Since 1947.

www.irem.it

IREM: POSITIVE ENERGY, WITHOUT INTERRUPTION. SINCE 1947.

IREM is an Italian company specialised in designing and manufacturing electromechanical and electronic equipment for mains power control and energy generation. IREM offer is divided into three product lines:

Power Lighting:

Power supplies and Igniters for discharge lamps for professional applications.

Power Quality:

Power quality and Energy Saving;

Hydro Power:

Hydroelectric turbines, Distribution and Regulation Switchboards;

Over 70 years of experience, wo 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.

IREM products are used in various sectors such as: Power Quality, Energy Saving, Hydroelectric and Professional Lighting.

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

SUMMARY

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

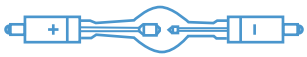
XENON
Rectifiers
and igniters

METAL HALIDE
Ballast
and hot restrike igniters

HID
Hot restrike
igniters

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

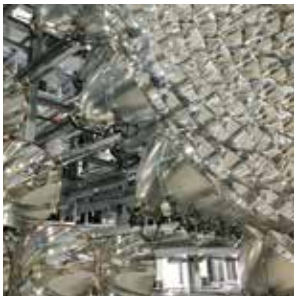
XENON LAMPS



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.

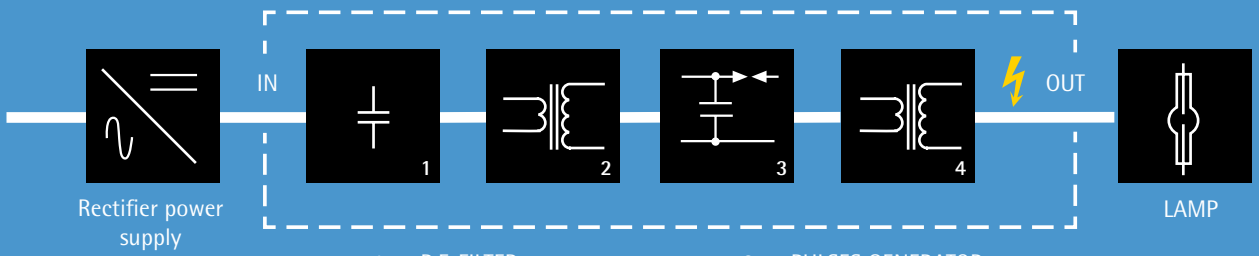
The igniters with suffix "A" are fitted with a built-in timing board for automatic and/or short-timed ignition, to avoid damaging the igniter in case of faulty lamp operation.

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.

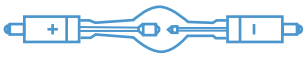
They must be grounded for proper interferences suppression.



1. R.F. FILTER
2. STEP-UP TRANSFORMER
3. PULSES GENERATOR
4. H.V. COIL

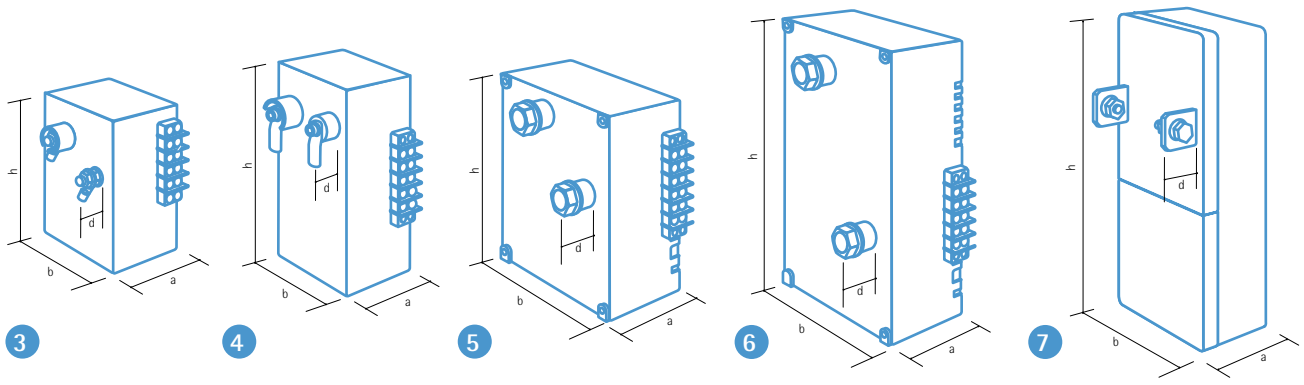
AS SERIES

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*
TECHNICAL DATA							
AC nominal voltage[1]	**[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**		**AS-16040A**		**ASD-16040A**
Item number		*02836005*	*02836016*	*02836001*	*02836011*	*02836003*
TECHNICAL DATA						
AC nominal voltage[1]	**[V]**	230	115	230	115	200-230[2]
Input voltage range	**[V]**	207-253	103.5-126.5	207-253	103.5-126.5	180-265[3]
Frequency	**[Hz]**	50/60		50/60		50/60
Frequency range	**[Hz]**	47-63		47-63		47-63
Max. input current during ignition	**[A]**	3.8	10	3.8	10	4.3
H.V. pulses amplitude	**[kV]**	≤ 40		≤ 40		≤ 40
No. of pulses per half cycle		≤ 16		≤ 16		≤ 16
Lamp current at TAMB ≤ 55°C	**[A]**	≤ 165		≤ 165		≤ 165
Conformity		CE	CE / UL	CE	CE / UL	CE / UL
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]**	3.5		3.5		3.5
Dimensions AxBxHxd	**[mm]**	130 x 83 x 150 x 30		130 x 83 x 150 x 30		130 x 83 x 150 x 30
Figure		5		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 whit 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*[1]	*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*
TECHNICAL DATA							
AC nominal voltage[1]	**[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[2]	
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*[1]
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.

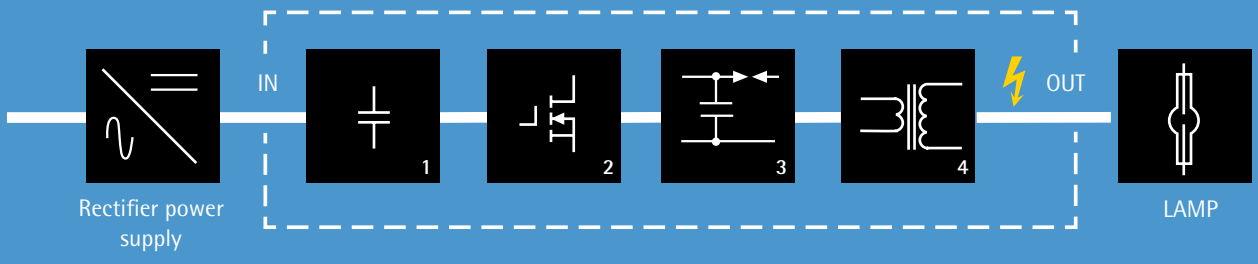
The benefits of the new DC electronic ASC igniters are:

- ✔ 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 enviromental conditions from -40°C up to +80°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 to 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.

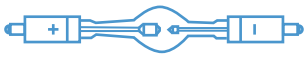
They must be grounded for a proper lamp ignition and interferences suppression.



1. R.F. FILTER
2. SWITCHING
3. PULSES GENERATOR
4. H.V. COIL

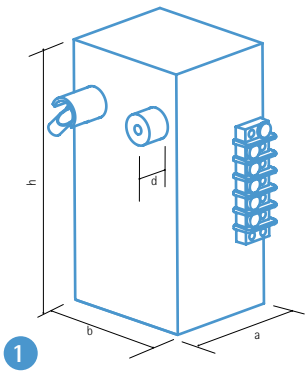
ASC SERIES

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*
TECHNICAL DATA			
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 absorbtion of the ignitor
** within 10ms
IREM holds the right to modify the present datasheet without any prior notice



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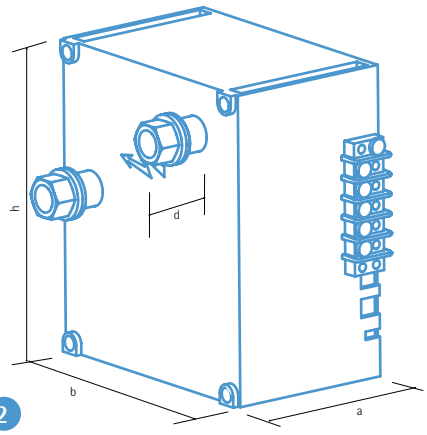


2

ELECTRONIC POWER SUPPLIES
EX SERIES

ELECTRONIC POWER SUPPLIES FOR SHORT ARC XENON LAMPS

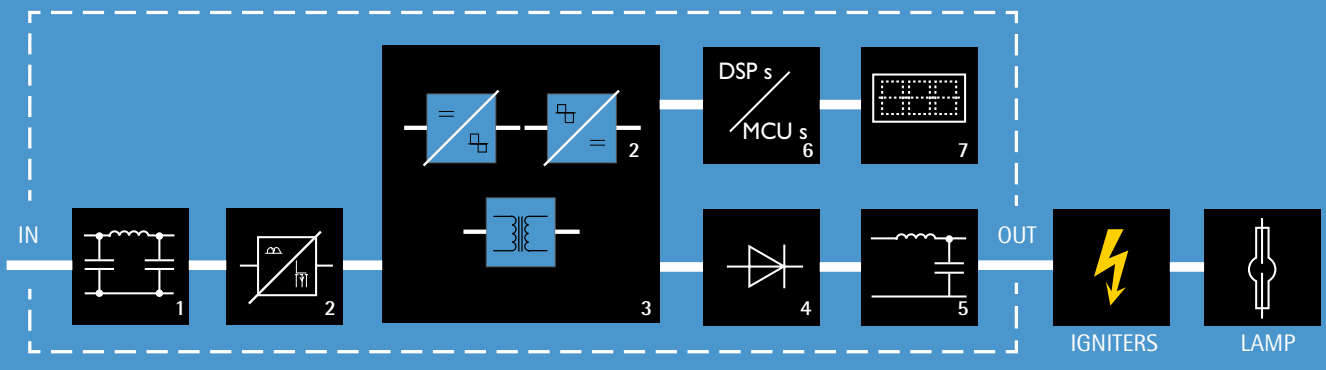
A complete range of high quality electronic power supplies expressly designed to ensure correct operation and long life to short arc xenon lamps from 150 to 10000W.

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.

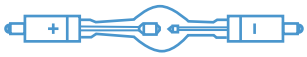
The control of the most important lamp parameters, and in particular the electronic overpower control, guarantees a correct lamp operation in all aging conditions and allows long life.

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



1. INPUT EMI FILTER
2. POWER FACTOR CORRECTOR (only on single phase models)
3. CONVERSION BLOCK WITH GALVANIC ISOLATION
4. RECTIFIER CIRCUIT
5. OUTPUT EMI FILTER
6. UP CONTROL BOARD (except for G/1 model)
7. SYNOPTIC PANEL

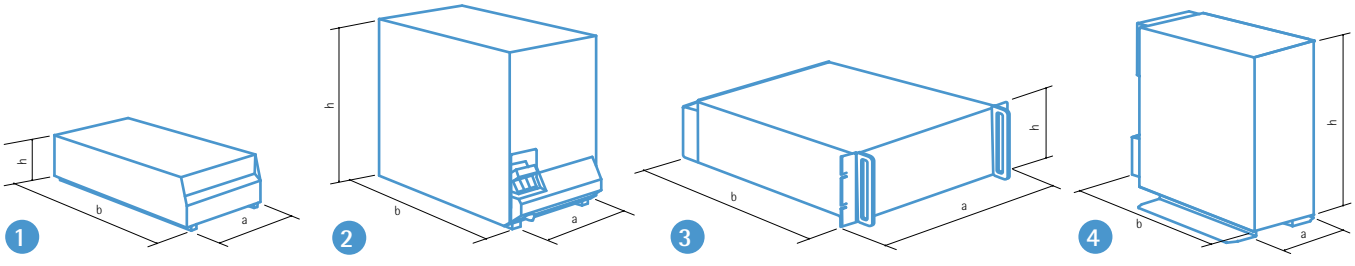
EX SERIES
ELECTRONIC POWER SUPPLIES FOR SHORT ARC XENON LAMPS



Xenon lamp power range [W]		*150-500*	*250-500*	*450-2000*	*1000-3000*
MODEL		**EX-30G/1**	**EX-30G/1**	**EX-75D/1**	**EX-100D/1**
Item number		*model on demand*	*00830300*	*00830750*	*00811005*
INPUT DATA					
Mains connection		1Ph+N+PE (2Ph+PE)		1Ph+N+PE (2Ph+PE)	1Ph+N+PE (2Ph+PE)
AC nominal voltage	**[V]**	230		230	230
Input voltage range	**[V]**	90-265		185-265	185-265
Frequency	**[Hz]**	50/60		50/60	50/60
Frequency range	**[Hz]**	47-63		47-63	47-63
Max. input current	**[A]**	10		13	22
Max. power	**[W]**	625		2200	3400
Protection device		fuse		fuse	fuse
OUTPUT DATA					
No-load voltage at min. input voltage[1]	**[V]**	100		125	130
DC output voltage range	**[V]**	11-22.5		11-30.5	15-34
DC output current range	**[A]**	6-30	12-30	17-75	40-110
Peak to peak current ripple	**[%]**	<1.5		<1	<1.5
Efficiency		≥ 0.8		≥ 0.89	≥ 0.83
Output instruments[2]	**[LCD]**	A [LED BAR]		A/V/W/Hours/Alarms	A/V/W/T/HM
Output signal	**[LED]**	mains line - overtemperature		Status, Lamp selected, Alarms	mains line - overtemperature
					operation mode (manual/program)
ON/OFF control		switch		Keyboard/ext. switch/ digital RS485	Keyboard/ext. switch/serial line
Lamp current adjustment		potentiometer		Keyboard/0-10V signal/digital RS485	Keyboard/0-10V signal/serial line
Remote control		ON/OFF			RS-232 serial line (IREM protocol)
Output signal	**[dry contacts]**	lamp ON - ignition ready		lamp ON - alarm ON	lamp ON - alarm ON
Output overload protection		electronic			electronic programmable power limiting
Control system		analog			DSPs
Conformity		CE	CE	CE	CE/UL[3]
Degree of protection		IP20		IP00	IP20
Isolation class		CL1		CL1	CL1
Storage temperature	**[°C]**	-20 to +60		-20 to +60	-20 to +60
Operating temperature	**[°C]**	0 to +40		-5 to +45	-5 to +45
Cooling		forced		forced	forced
Dimensions AxBxH	**[mm]**	265 x 335 x 135		442x305x88	132,5 x 435,5 x 440
Figure		1		3	3/4
Weight	**[kg]**	7.7		9,5	19,5
Mounting position		horizontal / vertical		horizontal / rack	horizontal / vertical / rack
Suggested igniter		AS-1530 AS-3040	ASC-5030	AS-8030, ASC-5030	AS-16040, AS-16040A, ASC-12040

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*
INPUT DATA			
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	
OUTPUT DATA			
No-load voltage at min. input voltage[1]	**[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[2]	**[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[3]
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
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EX SERIES

ELECTRONIC POWER SUPPLIES FOR SHORT ARC XENON LAMPS

Xenon lamp power range [W]		*2000-7000*		*3600-10000*	
MODEL		**EX-170GM/3-E**	**EX-170GM/3-US**	**EX-200GM/3-E**	**EX-200GM/3-US**
Item number		*00831731*	*00831736*	*00832031*	*00832036*
INPUT DATA					
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
OUTPUT DATA					
No-load voltage at min. input voltage[1]	**[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[2]	**[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[4]	CE	CE/UL[4]
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
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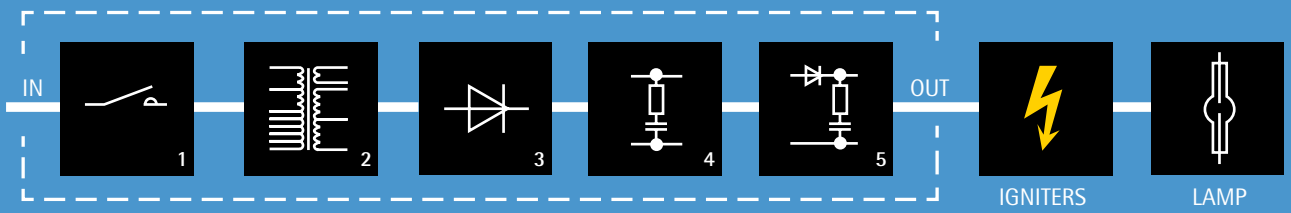
RECTIFIERS POWER SUPPLIES SINGLE-PHASE
PX-50N

RECTIFIER POWER SUPPLIES FOR SHORT ARC XENON LAMPS

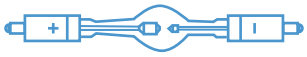
This single-phase portable rectifier has been designed to ensure correct operation and long life to short arc Xenon lamps of 1000W. It is characterized by galvanic insulation, a soft inrush current, a low residual ripple value and a stable output current. The tap transformer allows to regulate the output 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.



1. ON/OFF AND OUTPUT CURRENT ADJUSTMENT SWITCH
2. SPECIAL TRANSFORMER WITH TAPS
3. FULL WAVE RECTIFIER
4. OUTPUT FILTER AND STARTING PEAK SUPPRESSION CIRCUIT
5. BOOST CIRCUIT

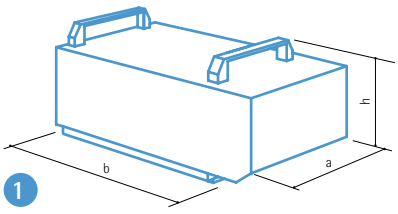
PX-50N SERIES

RECTIFIER POWER SUPPLIES FOR SHORT ARC XENON LAMPS



Xenon lamp power range [W]		*1000*		
MODEL		**PX-50N**		**PX-50N**
Item number		00115000		00115004
INPUT DATA				
Mains connection		1Ph+N+PE (2Ph+PE)		1PH+N+PE
AC nominal voltage	**[V]**	230	220	110
Input voltage range	**[V]**	208-253	208-230	100-132
Frequency	**[Hz]**	50	60	60
Frequency range	**[Hz]**	47-53	57-63	57-63
Max. input current	**[A]**	11		23
Max. power	**[VA]**	2500		2500
Protection device		fuse		fuse
OUTPUT DATA				
No-load voltage at min. input voltage[1]	**[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-8030, ASC-5030, AS-16040A		AS-8030, ASC-5030, 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

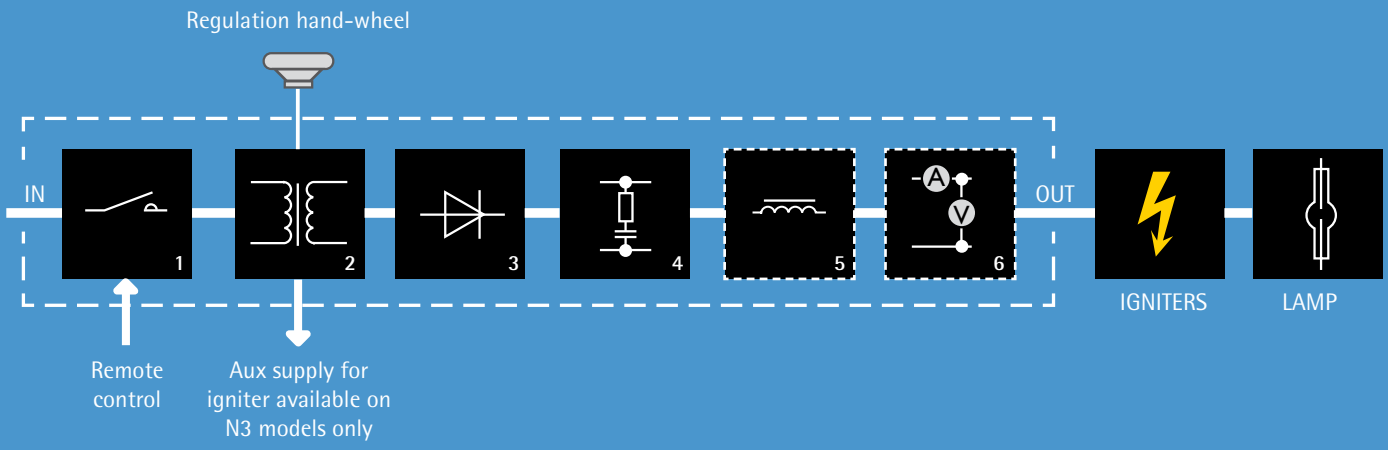
A complete range of high quality rectifier power supplies specially designed to ensure correct operation and long life to short arc xenon lamps from 700 to 15000W.

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.

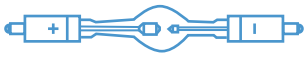
They are equipped with on-off control switch and three terminals for the on-off remote control.



1. REMOTE CONTROL SWITCH
2. TRANSFORMER WITH ADJUSTABLE MAGNETIC SHUNT
3. SILICON DIODES
4. FILTER AND INRUSH CURRENT LIMITER
5. AUXILIARY FILTER (OPTIONAL ON N3-50E/N3-50, N3-80E/N3-80, N3-100E/N3-100)
6. VOLTMETER AND AMMETER (ON N3 MODELS ON DEMAND)

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*
INPUT DATA											
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		-					-				
OUTPUT DATA											
No-load voltage at min. input voltage[1]	[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[2]		-				A/V	-				A/V
Aux. Supply		-				provided	-				provided
Aux. Supply protetcion		-				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[6]	CE	CE	CE	CE	CE/UL[6]
Acoustical noise[3]	[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[4]	[kg]	85				101	105				122
Weight without AF[4]	[kg]	70				80	90				101
Mounting position		vertical					vertical				
Suggested igniter		AS-16040A, AS-8030					AS-16040, AS-16040A, ASC-12040				

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

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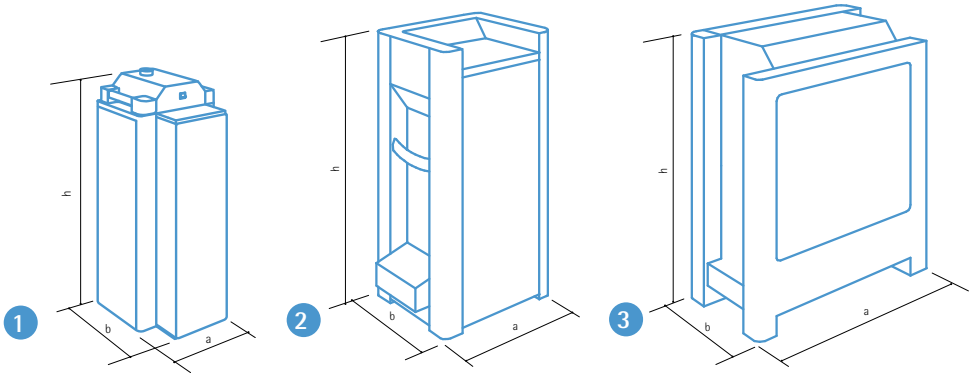
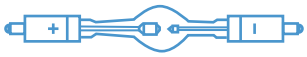


N3/N3-E SERIES
RECTIFIER POWER SUPPLIES FOR SHORT ARC XENON LAMPS



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*
INPUT DATA										
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	-					-				
OUTPUT DATA										
No-load voltage at min. input voltage[1] [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[2]	-				A/V	-				A/V
Aux. Supply	-				provided	-				provided
Aux. Supply protetcion	-				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[6]	CE	CE	CE	CE	CE/UL[6]
Acoustical noise[3] [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[4] [kg]	123				148	130				154
Weight without AF[4] [kg]	108				127	-				-
Mounting position	vertical					vertical				
Suggested igniter	AS-16040, AS-16040A, ASC-12040					AS-16040, AS-16040A, ASC-12040				

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
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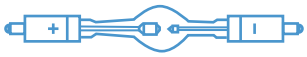
N3/N3-E SERIES

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*
INPUT DATA										
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
OUTPUT DATA										
No-load voltage at min. input voltage[1] [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[2]	-				A/V	A/V				A/V
Aux. Supply	-				provided	provided				provided
Aux. Supply protetcion	-				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[6]	CE	CE	CE/UL[6]	CE	CE
Acoustical noise[3] [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[4] [kg]	158				175	207				448
Weight without AF[4] [kg]	-				-	-				-
Mounting position	vertical					vertical				vertical
Suggested igniter	AS-16040, AS-16040A, ASC-12040					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
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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

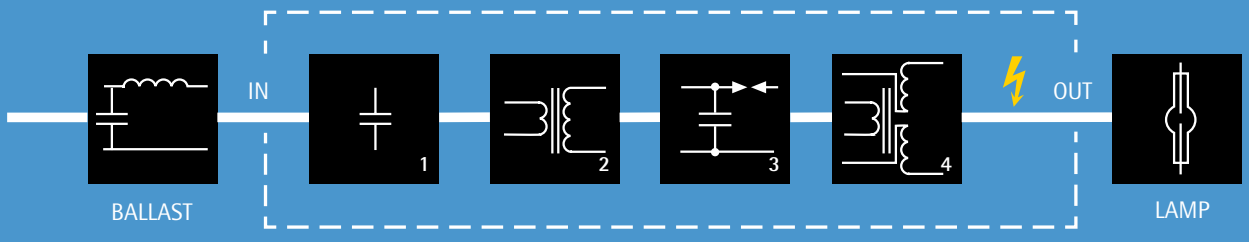
H.V. IGNITERS FOR METAL HALIDE LAMPS

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.

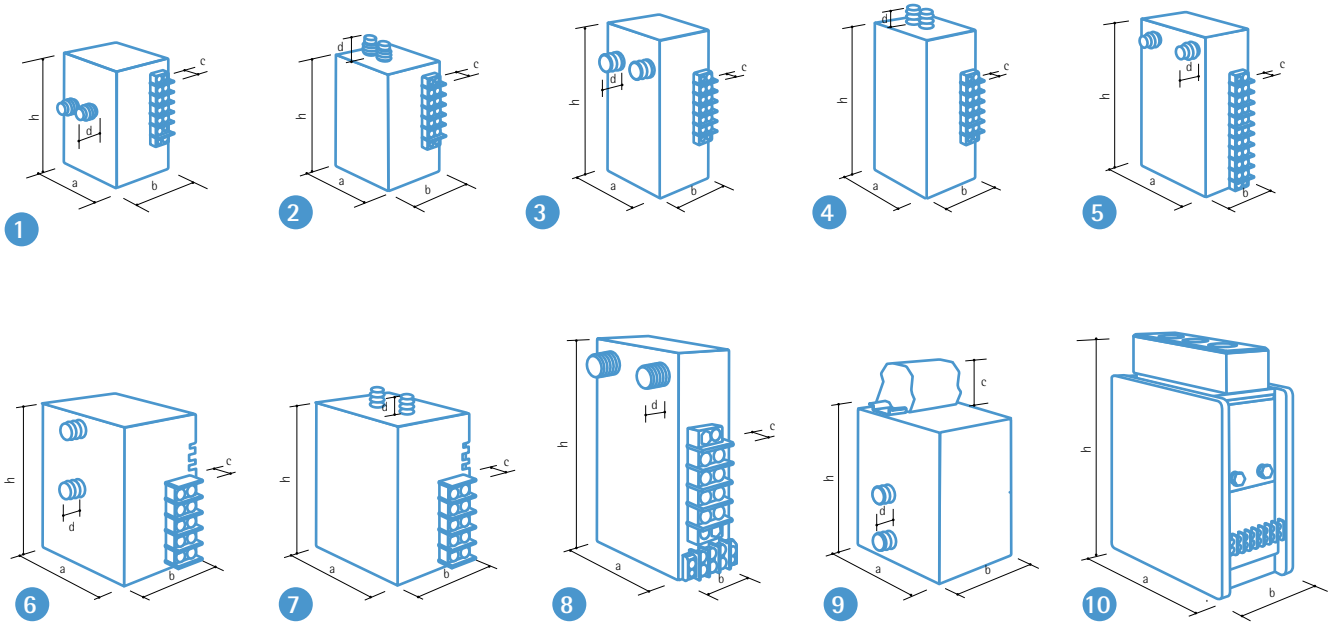


1. R.F. FILTER
2. STEP-UP TRANSFORMER
3. PULSES GENERATOR
4. H.V. COIL

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*
TECHNICAL DATA							
AC nominal voltage[1]	**[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[2]	**[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 AxBxHxdxc[3]	**[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

Metal halide lamp power [W]		*2500 - 4000*			
MODEL		**AD-3050/A-US**	**AD-3050/B-US**	**ADC-3050/A-US**	**ADN-3050/A**
Item number		*02825049*	*02825050*	*02823050*	*02925049*
TECHNICAL DATA					
AC nominal voltage[1]	[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[2]	**[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[3]	[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

Metal halide lamp power [W]		*4000*		*6000*	*12000 - 18000*
MODEL		**AD-3065/A**	**AD-3065/B**	**AD-6055-US**	**AD-9070-US**
Item number		*02825066*	*02825070*	*02825080*	*02825191*
TECHNICAL DATA					
AC nominal voltage[1]	[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[2]	**[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[3]	[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

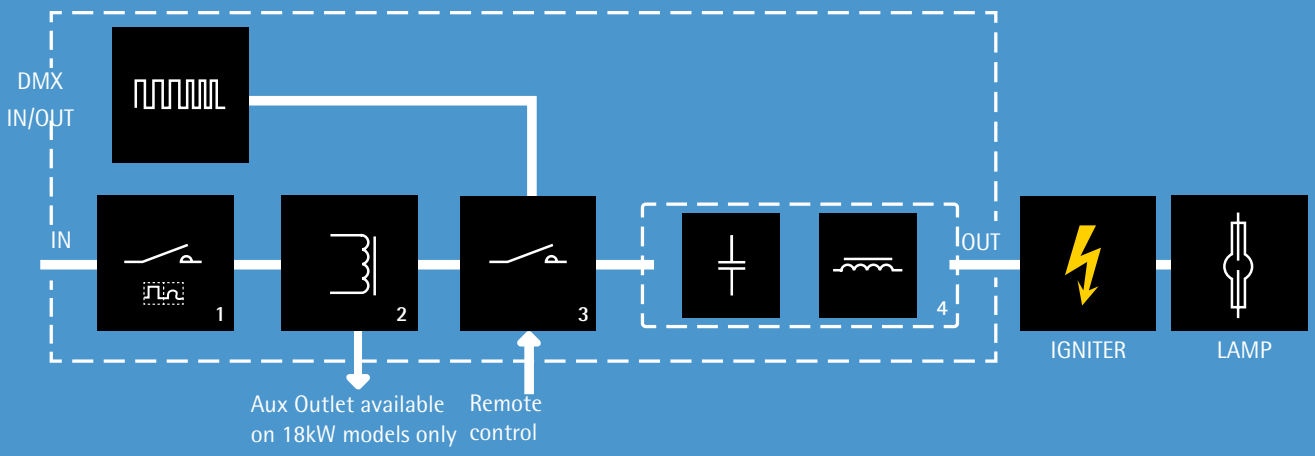
A complete range of high quality ballast power supplies specially designed to ensure correct operation and long life to metal halide lamps with power from 200 to 18000W.

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 noload 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 2500W can be remotely controlled by means of DMX-512 (on request).

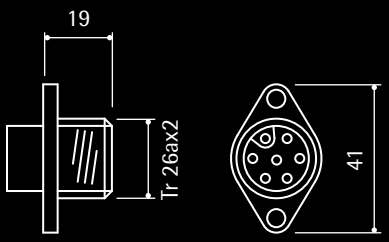
Their peculiar design guarantees a low acoustical noise, a high robustness, an easy handling and makes them particularly suitable for a wide variety of applications.



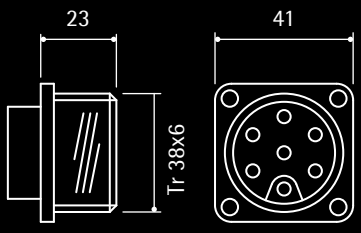
1. MAIN CIRCUIT BREAKER
2. AUTOTRANSFORMER (on some models only)
3. POWER RELAY
4. REACTOR
5. DMX-512 INTERFACE AND CONTROL BOARD (on request)

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

THERMOPLASTIC Box mounting receptacles according to VDE 0110/C

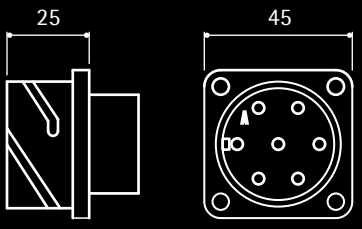


Type A IREM code 84300400-1-3-4

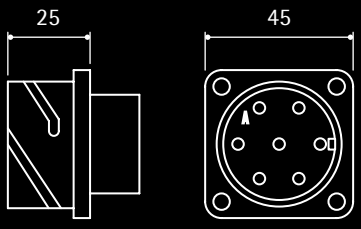


Type B IREM code 84300410-1-3-4

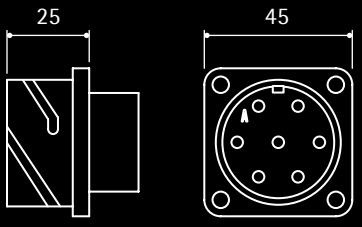
METALLIC Box mounting receptacles according to MIL C 5015 and VG 95234



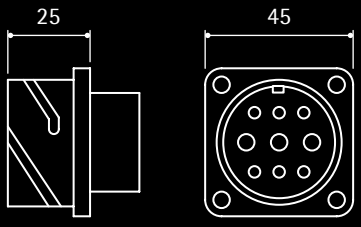
Type C IREM code 84300386



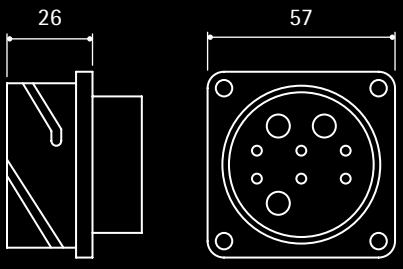
Type D IREM code 84300387



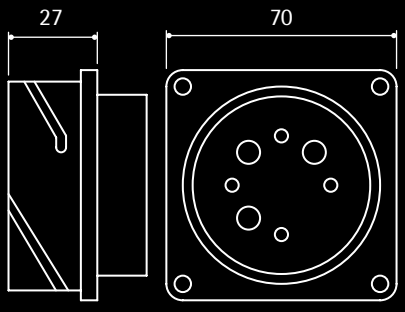
Type E IREM code 84300388



Type F IREM code 84300392



Type G IREM code 84300390



Type H IREM code 84300372

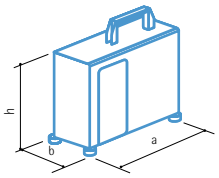
Ballast model	A	B	C	D	E	F	G	H
BU-200E	•							
CBI-575E	•		•					
CBI-1200E	•			•				
CBI-2500E		•			•			
BC-4000E		•				•		
BC-6000							•	
BU-12K							•	
BC-18KW/E								•

• standard • on request 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



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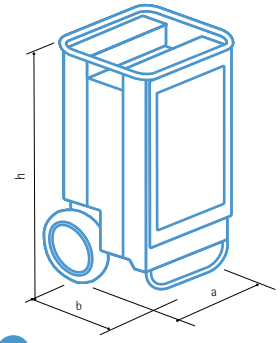


5

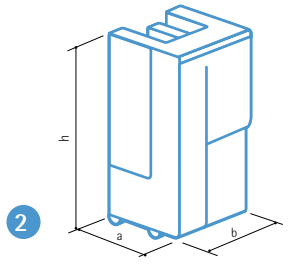
Metal halide lamp power [W]		*200*	*12000*
MODEL		**BU-200E**	**BU-12K**
Item number		*04516403*	*04516490*
INPUT DATA			
Mains connection		1PH+N+PE (2PH+PE)	1PH+N+PE (2PH+PE)
Mains voltage selector positions		3	4
Mains voltage on Pos. No.1		230V ± 10% 50Hz	230V ± 10% 50Hz
Mains voltage on Pos. No.2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

BALLAST CBI SERIES

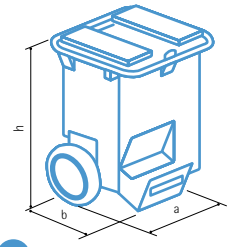
Metal halide lamp power [W]		*575*	*1200*	*2500*
MODEL		CBI-575E	CBI-1200E	CBI-2500E
Item number		*04501005*	*04501012*	*04501025*
INPUT DATA				
Mains connection		1PH+N+PE (2PH+PE)	1PH+N+PE (2PH+PE)	1PH+N+PE (2PH+PE)
Mains voltage selector positions		3	3	3
Mains voltage on Pos. No.1		230V ± 10% 50Hz	230V ± 10% 50Hz	230V ± 10% 50Hz
Mains voltage on Pos. No.2		240V ± 10% 50Hz	240V ± 10% 50Hz	240V ± 10% 50Hz
Mains voltage on Pos. No.3		220V ± 10% 60Hz	220V ± 10% 60Hz	220V ± 10% 60Hz
Mains voltage on Pos. No.4		-	-	-
Frequency range	[Hz]	48-52 / 57-63	48-52 / 57-63	48-52 / 57-63
Max. input current	[A]	3.5	8	15
Power factor		0.95	0.95	0,9
Efficiency		90%	92%	94%
Earth leakage current	[mA]	< 0.5	< 0.5	< 0.5
Input connection system		power cord	power cord	power cord
OUTPUT DATA				
No-load voltage[1]	[V]	230 / 240 / 220	230 / 240 / 220	230 / 240 / 220
Nominal lamp current	[A]	7	13.8	25.6
Power regulation[2]		± 17.5%	± 15%	± 18%
Over current protection		circuit breaker	circuit breaker	circuit breaker
ON/OFF control		manual / remote	manual / remote	manual / remote
Igniter driving board		provided	provided	provided
Auxiliary outlet voltage[3]		-	-	-
Auxiliary outlet protection		-	-	-
DMX-512 electronic board[4]		on request	on request	on request
Earth test device		provided	provided	provided
Over temperature protection		thermostat	thermostat	thermostat
Conformity		CE	CE	CE
Degree of protection		IP32	IP32	IP32
Isolation class		CL1	CL1	CL1
Storage temperature	[°C]	-20 +70	-20 +70	-20 +70
Operating temperature	[°C]	-20 +40	-20 +40	-20 +40
Cooling		free convection	free convection	free convection
Outline dimensions AxBxHxd[mm]		175 x 254 x 407	175 x 254 x 407	175 x 293 x 407
Figure		2	2	2
Weight	[kg]	15.2	20.3	28.3
Volume	[litres]	16.8	16.8	19.5
Handling device		plastic handle	plastic handle	plastic handle
Housing material		stainless steel / steel	stainless steel / steel	stainless steel / steel
Suggested igniters		AD-825/A-US AD-825/B	AD-1550/A-US AD-1550/B	AD-3050/A-US AD-3050/B-US
		ADC-825/A-US	ADC-1550/A-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



2

BALLAST BC SERIES



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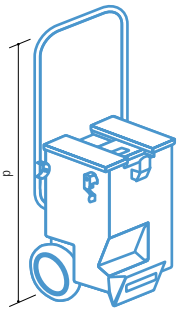

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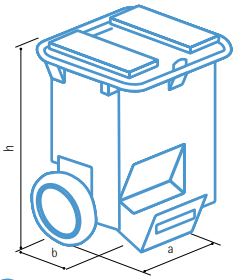

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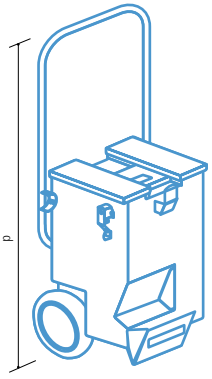


7

Metal halide lamp power [W]		*4000*	*6000*	*18000*
MODEL		**BC-4000E**	**BC-6000**	**BC-18K/E**
Item number		*04500040*	*04500060*	*04500090*
INPUT DATA				
Mains connection		1PH+N+PE	1PH+N+PE (2PH+PE)	1PH+N+PE
Mains voltage selector positions		2	4	2
Mains voltage on Pos. No.1		220V ± 10% 50Hz	220V ± 10% 50Hz	230V -10% +5% 50Hz
Mains voltage on Pos. No.2		240V ± 10% 50Hz	240V -5% +10% 50Hz	240V -10% +5% 50Hz
Mains voltage on Pos. No.3		-	208V -5 +10% 60Hz	-
Mains voltage on Pos. No.4		-	220V ± 10% 60Hz	-
Frequency range	**[Hz]**	48-52	48-52 / 57-63	48-52
Max. input current	**[A]**	24	37	92
Power factor		0.9	0.92	0.9
Efficiency		93%	95%	95%
Earth leakage current	**[mA]**	< 0.5	< 0.5	< 0.5
Input connection system		power cord	power cord	circular connector
OUTPUT DATA				
No-load voltage[1]	**[V]**	380	208 / 220 / 240	383
Nominal lamp current	**[A]**	24	55	88
Power regulation[2]		+ 19% -13%	+20%	+11% -18%
Over current protection		circuit breaker	circuit breaker	circuit breaker
ON/OFF control		manual / remote	manual / remote	manual / remote
Igniter driving board		provided	provided	provided
Auxiliary outlet voltage[3]		-	-	230V
Auxiliary outlet protection		-	-	circuit breaker
DMX-512 electronic board[4]		-	-	-
Earth test device		provided	provided	provided
Over temperature protection		-	-	thermostat
Conformity		CE	CE	CE
Degree of protection		IP32	IP32	IP32
Isolation class		CL1	CL1	CL1
Storage temperature	**[°C]**	-20 +70	-20 +70	-20 +70
Operating temperature	**[°C]**	-20 +40	-20 +40	-10 +40
Cooling		free convection	free convection	free convection
Outline dimensions AxBxHxd	**[mm]**	388 x 635 x 488 x 920	388 x 635 x 488 x 920	835 x 502 x 630 x 1180
Figure		3 / 4	3 / 4	6 / 7
Weight	**[kg]**	61	60	150
Volume	**[litres]**	51	51	130
Handling device		metal handle - pneumatic wheels	metal handle - pneumatic wheels	metal handle - pneumatic wheels
Housing material		stainless steel / steel	stainless steel / steel	stainless steel / steel
Suggested igniters		AD-3050/A-US AD-3050/B-US ADC-3050/A-US ADN-3050/A	AD-6055-US	AD-9070-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

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 ADI series for the ignition and instant re-ignition lamps starting from 150W up to 2000W..

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 series represent a compact and complete range of high voltage igniters expressly designed to strike 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.

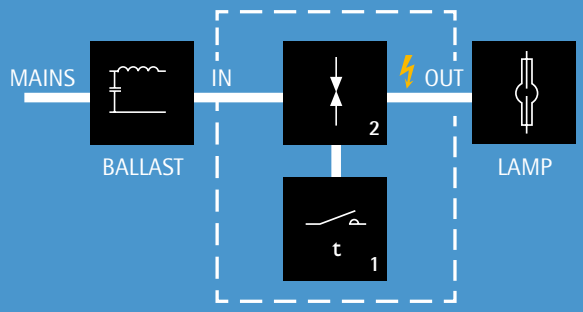
They are characterized by electronic control, internal timing, very wide operating temperature (-30°C...+70°C), compact design, robustness and high reliability.

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

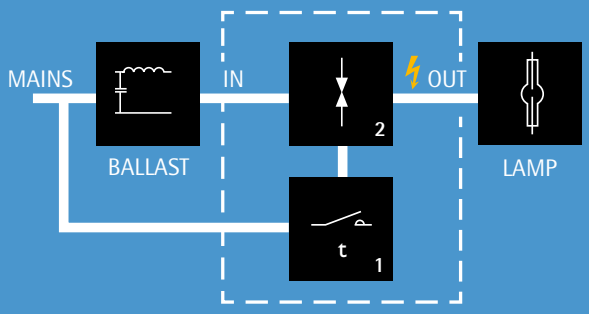

INSTANT RESTRIKE IGNITERS
ADI SERIES

ADI-1540 AND ADI-1560

Electronic Igniters, 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 2000W.
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 have been designed to be connected, downstream from the ballast, by means of three wires for 1000W - 2000W lamps or by means of four wires for 150W - 400W lamps.



Connection for 1000W - 1800W 230V lamps and 2000W 400V lamps
1. INTEGRATED TIMING UNIT
2. INTEGRATED IGNITION UNIT



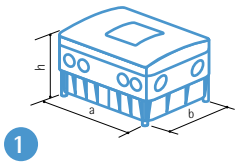
Connection for 150W...400W 230V lamps

ADI SERIES
INSTANT RESTRIKE IGNITERS

SERIES		*ADI*		
MODEL		**ADI-1540**	**ADI-1540**	**ADI-1560**
ITEM NUMBER		*02825240*	*02825245*	*'02825260*
TECHNICAL DATA				
AC nominal voltage[1]	**[V]**	400	230	230
Input voltage range	**[V]**	350-456	198-265	207...253
Frequency	**[Hz]**	50/60		
Frequency range	**[Hz]**	47...63		
Max. input current during ignition	**[A]**	0,3		0,9
H.V. pulses amplitude	**[kV]**	up to 40		up to 60
No. of pulses per half cycle		10-12	8-10	8...12
Load capacity range	**[pF]**	5...30		
Max. lamp current	**[A]**	18		
Max. power loss at Tamb. = 25°C	**[W]**	1,5 @ 11,3A	1,1 @ 9,6A	2,5 @ 11,3A
Max. ignition time	**[s]**	3		
Typical ignition time	**[s]**	< 0,5	< 0,5	<1
Timing unit		integrated		
Compliance CE		2014/35/EU, 2014/30/EU		
Insulation class		I		
Operating temperature*	**[°C]**	-30...+70		
Storage temperature	**[°C]**	-30...+80		
Weight	**[kg]**	1,8		
Type of installation		fixed		
ENCLOSURE				
Overall dimensions AxBxH[2]	**[mm]**	237 x 132 x 111		
Figure		1		
Enclosure material		polyamide reinforced fiber glass		
Enclosure colour		black		
Degree of protection[3]		IP65		
Cable glands[3]		not included		
CONNECTIONS				
Input connections		terminal blocks		
Input wiring		not included		
Output connections		terminal blocks		
Output wiring[4]		2 x included (size 4mm2, insulation Ø12 mm)		
LAMPS				
Power and models[5]		HQI-TS 2000W/.../S 400V	HQI-TS 1000W/.../S 230V	HQI-TS 150W/... 230V
		HQI-TS 2000W/D/S High Flux 400V	HSI-TD 1000W/D	NAV-TS 150W 230V
		MHN-SA 1800W 400V		HQI-TS 250W/... 230V
		MHN-SA 2000W 400V		MHN-TD 250W 230V
		MHN-SB 2000W 400V		HQI-TS 400W/... 230V
		HSI-TD 2000W/D		HQI-TS 1000W/.../S 230V
				MHN-LA 1000W 230V
				MHN-SA 1800W 230V

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 ignitor is fitted with IP65 cable glands and properly installed .The ignitor 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.



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

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