



Part No: - 500-0022-00
Model: - IG120J-4 Igniter

PRODUCT SPECIFICATION

GAS IGNITERS GENERAL TECHNICAL REQUIREMENTS

Flame Ignition - For gas appliances

Contents



- Product description
- Operating Principles
- Compliance standards
- Functional Requirements
- Mechanical Requirements
- Technical Specification
- Environmental Specification

Product

Gas igniters provide a Direct Spark Ignition system for use with Natural, Manufactured, Mixed, Liquefied Petroleum and LP gas-air mixtures.

Operating Principles

Igniter provides spark simultaneously to all burners at nominal spark rate while mains power is applied.

Compliance to Standards:

ANSI Z21.92 2001 / CSA-6.29-2001 Manually Operated Electric Gas Ignition Systems and Components
CSA International Certification Number: **TBA**

Reference Documents:

UL840: 1995 Standards for Safety - Insulation Coordination including clearance and creepage distance for electrical equipment.

RoHS Compliance

Units supplied in:

- Housing Material Lixin FR2022V0 Nylon 66 UL94-V0: Product is NOT ROHS compliant

Subject to change: -

Last Change:- Product limits updated to reflect initial batch results

Issue:- 02 C/Note:- 8543 Date:- 4/6/07 By:- PZ Auth.:- ST





Part No: - 500-0022-00
Model: - IG120J-4 Igniter

PRODUCT SPECIFICATION

Functional Requirements:

- A single electrode mounted at each burner is connected by high voltage cable to the High Voltage terminal of the igniter.
- The high voltage output coil generates sufficient voltage and energy to create an arc from the electrode, crossing the spark gap, to the earthed burner to ignite the gas. A spark is guaranteed, provided the spark gap, cable load and cable length meet the technical specifications (page 3).
- While nominal 120Vac power is applied, sparking will continue at a nominal rate, at all spark gaps simultaneously. The spark rate varies primarily due to changes in the supply voltage; however other factors including temperature and component tolerances have an influence.

Mechanical Requirements

Input and Output Connectors

All dimensions, tolerances and material specifications are derived from industry standards and UL requirements (e.g. UL 310)

Connector Materials

All production tab connectors shall be made of plain or plated copper-zinc alloy (Brass) or of nickel or nickel alloy, or of a plated or un-plated steel of a corrosion resistant alloy where such construction is permitted. Specific material requirements should be traceable for parts used by Tytronics

Input terminals

All mains input terminals are to be 0.25" (6.3mm) x 0.32" (0.8mm) Tab terminals; this includes Earth / Ground terminals if they are connected by wire connection.

Output terminals

The high voltage spark output terminals are:
0.11" (2.8mm) x 0.32" (0.8mm) Tab terminals

Housing Detail

Material – Nylon 66 Flame Retardant to UL94-V0.

Housing Colour

Plastic housing colour must be blue and similar to Pantone 2925.

IP Rating

The class of protection due to the enclosure shall be a minimum of IP614
Protects against dust ingress,
Protects against vertical falling drops of liquid, eg condensation
Protects against 2.0J (500g weight falling from 40cm height)

Subject to change: -

Last Change:- Product limits updated to reflect initial batch results

Issue:- 02 **C/Note:-** 8543 **Date:-** 4/6/07 **By:-** PZ **Auth.:-** ST





Part No: - 500-0022-00
Model: - IG120J-4 Igniter

PRODUCT SPECIFICATION

Labelling

The following information is required

Label LB1 – Product identification (Model number, Input specifications, Approvals mark)

Label LB2 – Date Code 4-digit YYWW (eg [0722] is week 22, 2007)

Label LB3 – Customer Identification (optional).

Mounting Detail

Optional dependent on model but panel screw or clip is acceptable

When using optional screw positions for additional mounting support, use of M4/No.8 screws recommended.

EMI/EMC options

Stated models require suitable EMI/EMC filters to be fitted.

Definitions

Spark Gap: The closest distance from the electrode tip to any point on the cooktop range assembly that is connected to earth.

Capacitive Load: The total load capacitance with respect to earth, as measured at the spark cable. Note for Igniter (dual output) coils the equivalent load across the coil is determined by the series combination of the individual capacitive loads.

Caution:

Label all wires prior to disconnection when servicing valves. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

ATTENTION:

Au moment de l'entretien des commandes, étiquetez tous les fils avant le débranchement. Des erreurs de câblage peuvent nuire au bon fonctionnement.

S'assurer que l'appareil fonctionne adéquatement une fois l'entretien terminé.

Subject to change: -

Last Change:- Product limits updated to reflect initial batch results

Issue:- 02 C/Note: - 8543 Date: - 4/6/07 By: - PZ Auth.: - ST





Part No: - 500-0022-00
Model: - IG120J-4 Igniter

PRODUCT SPECIFICATION

Technical Specifications

Parameter	Min	Typical	Max	Units
General				
Input Voltage (nominal 120Vac)	96	120	132	Vac
Current Input	4	8	10	mA
Frequency		60		Hz
Spark				
Spark Gap	1	4	5	mm
Spark Energy at electrode		5		mJ
Electrode & Cable Load – each electrode wrt earth		33	66	pF
Peak Voltage across coil: @ Open Circuit Note extended operation may result in coil failure			45	kV
Peak Voltage across coil: @ 33pf load wrt earth on each channel	17		28	kV
Peak Voltage across coil: @ 33pF across coil (*1) (equivalent to 66pF each channel wrt earth)	12		20	kV
Spark Rate – spark per second (*1)	4	8	10	Hz
Time to Light (*1)			300	mSec
*1: 100% factory EOL tested				
Environmental				
Operating Temperature (*2)	-10	85	120	°C
Relative Humidity (at 40°C – non condensing)			95	%
*2: 120C 48 hours / 1 million sparks cont. operation				
Durability				
Hipot voltage for 60 seconds	1500		1800	Vac
Life test	2e6			sparks

Subject to change: -

Last Change:- Product limits updated to reflect initial batch results

Issue:- 02 C/Note:- 8543 Date:- 4/6/07 By:- PZ Auth.:- ST



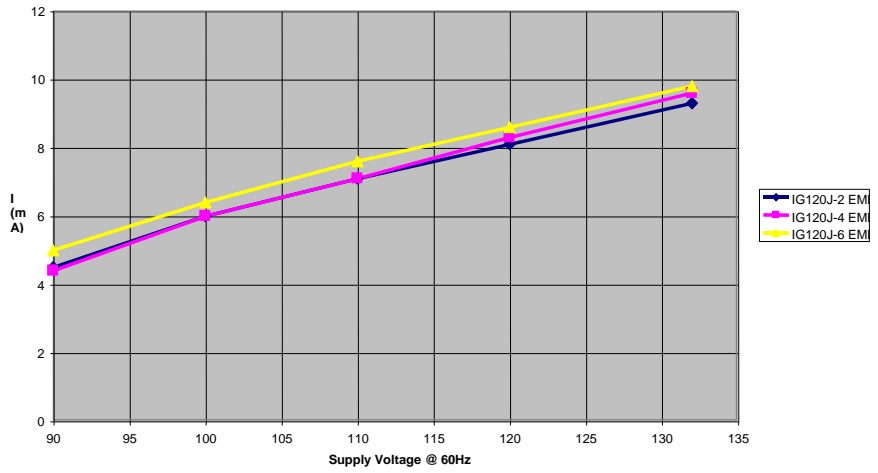


Part No: - 500-0022-00
Model: - IG120J-4 Igniter

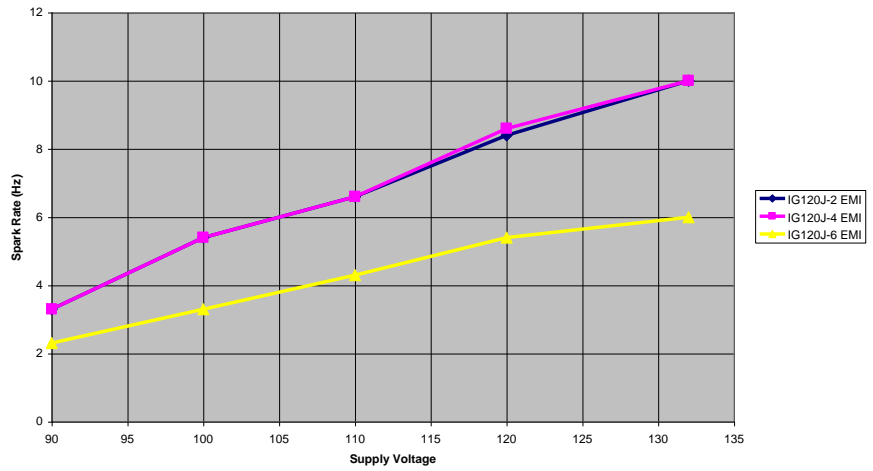
PRODUCT SPECIFICATION

Typical Performance:

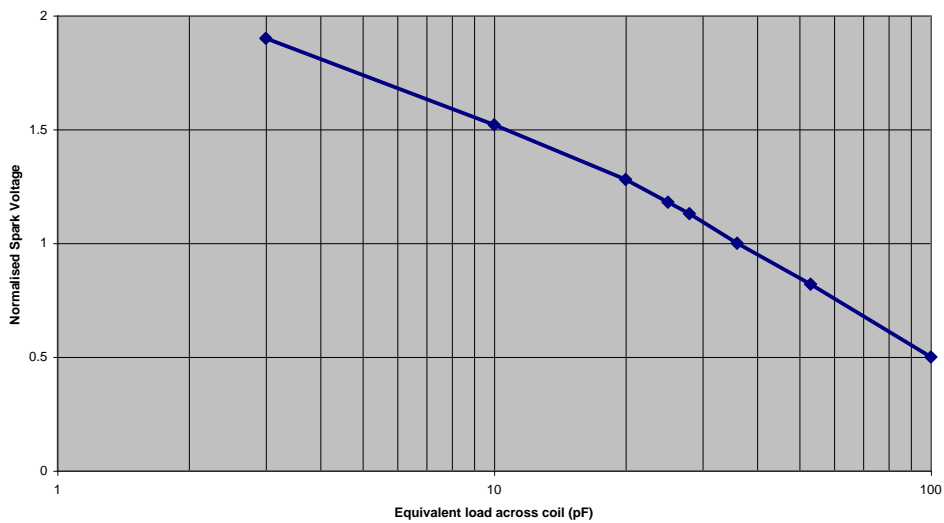
Typical current, Ambient



Typical Spark Rate



IG120J-X Normalised Output Voltage, Typical



Subject to change: -

Last Change:- Product limits updated to reflect initial batch results

Issue:- 02 C/Note:- 8543 Date:- 4/6/07 By:- PZ Auth.:- ST

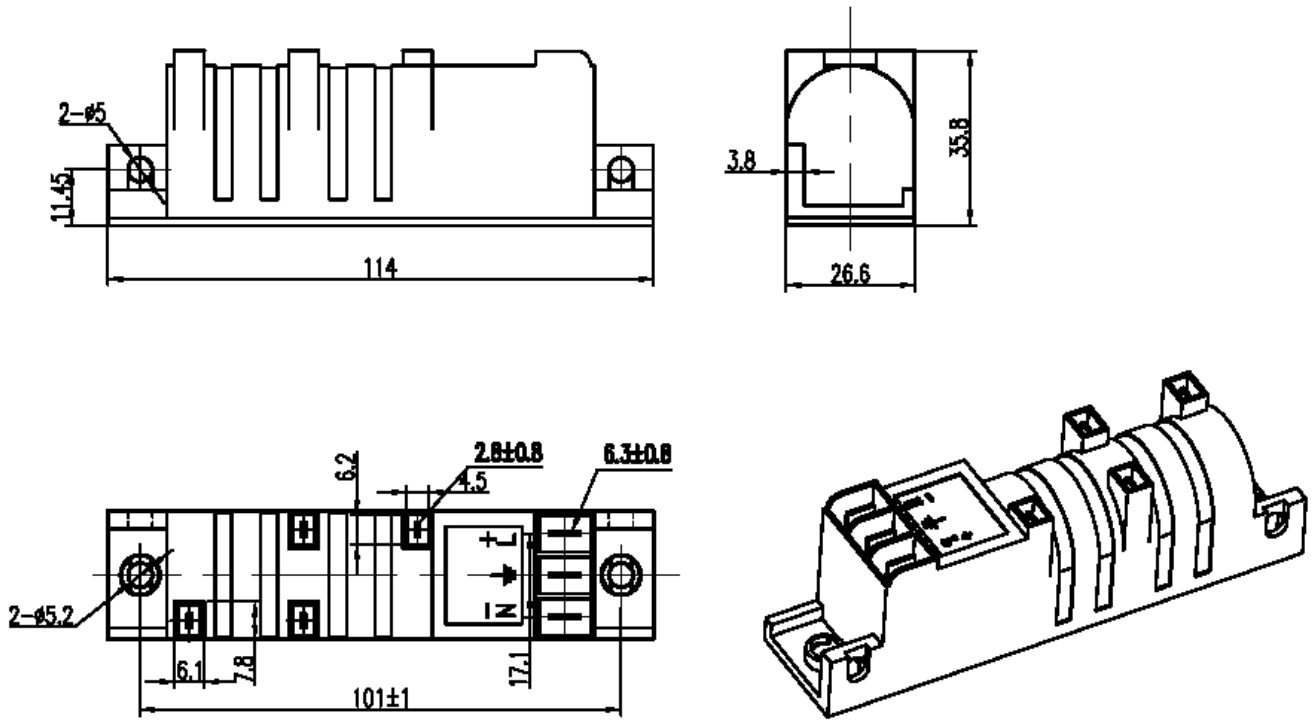




Part No: - 500-0022-00
Model: - IG120J-4 Igniter

PRODUCT SPECIFICATION

Physical Dimensions:



Subject to change: -

Last Change:- Product limits updated to reflect initial batch results

Issue:- 02 C/Note: - 8543 Date: - 4/6/07 By: - PZ Auth.: - ST

