

# EUROSEP *Instruments*

## DC300N ELECTRONICAL POWER SUPPLY FOR ARC LAMPS

The DC300N EUROSEP Instruments power supply is an electronic current regulated power supply, adjustable from 4 to 21 Amp. in a voltage range from 10 to 25 V DC. The maximum wattage output is 300 Watts. The power supply contains an integrated electronic ignitor, which allows to this power supply to operate with xenon lamps in the best electrical conditions (see list below).

### **CAUTION/WARNING**

*Before switching on the power supply, it is essential to ventilate it properly. Bad ventilation may cause important electrical damage which will invalidate the warranty. For more information on this specific point, please contact EUROSEP Instruments.*

### **1. LAMPS**

All the lamps listed below can operate with the DC300N power supply :

EUROSEP	OSRAM	INTENSITY in A	VOLTAGE in V	WATTAGE in W
XC.75.2N XC.75.2	XBO 75/2 XBO 75/2 OFR	5,4 5,4	14 14	75 75
XC.100W XC.100.R	XBO 100 OFR XBO 100/R	6,7 7,0	15 14	100 100
XC.150.1N XC.150.1 XC.150.4 XC.150.S XC.150.CR	XBO 150/1 XBO 150 OFR XBO 150/4 XBO 150/S XBO 150/CR	7,5 7,5 7,5 7,5 8,5	20 20 20 20 17,5	150 150 150 150 150
XC.180.R	XBO 180/R45C	12	14	180
XC.250 XC.250.4	XBO 250/OFR XBO 250/4	18 18	14 14	250 250
XC.75.CER XC.150.CER XC.175.CER XC.300.CER	CERAMIC XENON LAMP	7 13 14 21	10,7 12 13 14	75 150 175 300

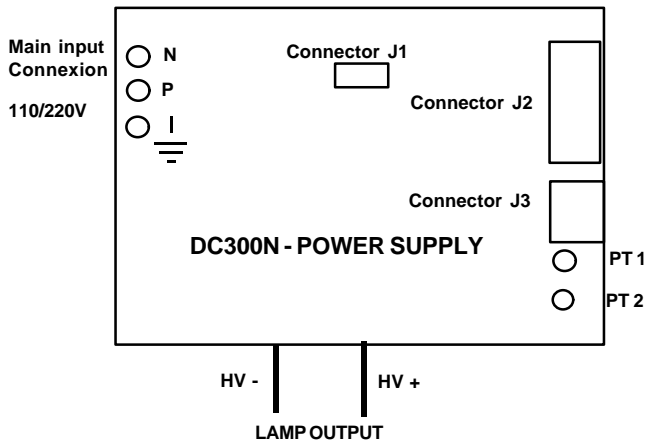
### **2. MAIN INPUT VOLTAGE ADJUSTMENT**

The DC300N EUROSEP Instruments power supplies operate from the following AC main input voltage :

- 100-120VAC/ 60 Hz
- 200-240 VAC / 50 Hz

*These power supplies are designed and manufactured to operate on one of these voltages without external adjustment (auto switch).*

### 3. GENERAL CONNECTION DIAGRAM



It may be seen that the power supply has 5 connectors as following :

- AC main input connector,
- J1 connector (auxiliary output),
- J2 connector,
- J3 connector (programming output current connector),
- Output connections (HV+, HV-) :  
+ on red lead connection,  
- on white blank wire.

Fig. 1. - DC300N Power Supply General Connection Diagram.

### 4. J1 CONNECTOR

Please note the 0V auxiliary output is isolated from the zero logic of J2 connector.

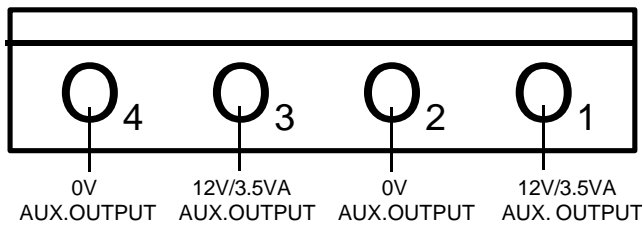


Fig. 2. - DC300N Power Supply - J1 connector.

### 5. J2 CONNECTOR

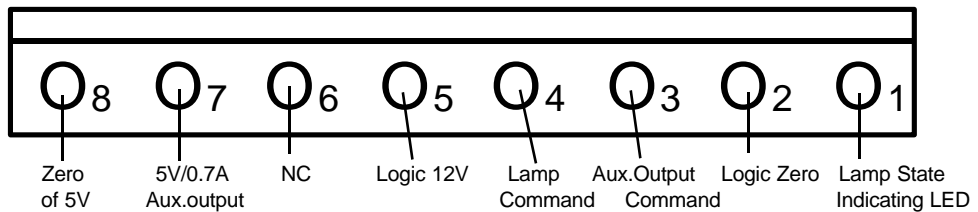


Fig. 3. - DC300N Power Supply - J2 connector.

### 6. J3 CONNECTOR

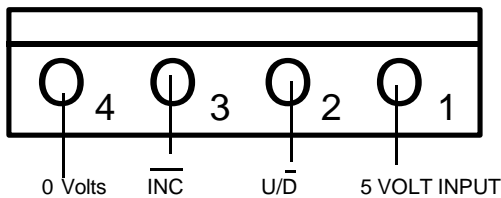


Fig. 4. - DC300N Power Supply - J3 connector.

## 7. OPERATION CURRENT CONFIGURATION

DC300N power supply offers the possibility to adjust the lamp output current by using a numeric potentiometer.

This configuration is possible using the connections on J3 connector as following :

- Apply a 5 V DC tension between pin 1 (+5V) and pin 4 (0V of 5V) of J3 connector. The 5V of J2 connector can be used,
- Input 2 (U/D) allows to configure the increment - increase of output current or the decrement - decrease of output current :
  - \* input 2 at level "1" corresponds to the increment,
  - \* input 2 at level "0" corresponds to the decrement,
- Input 3 (INC) is the contact where the count impulses are applied. The numeric potentiometer has 100 elements of resistance, and consequently 100 current adjustment positions from 4 A to 21 A. The numeric potentiometer is the reference X9312 from XICOR - for further information, please consult the XICOR brochure.

## 8. LAMP CABLES

The "+" and the "-" cables from the power supply output to the lamp must have the following features :

- They must be of a "high voltage" type, with an operation voltage of minimum 25kV,
- They must conduct continuously 25 A,
- They must have a maximum length of 1 m.

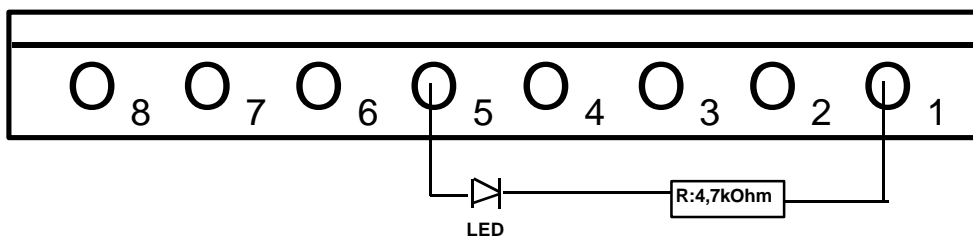
If further information on usable cables is needed, do not hesitate to contact EUROSEP Instruments.

## 9. IGNITOR COMMAND

Pin 4 of J2 connector is used to command the ignition only once the power supply has been correctly connected and configured. When a voltage of 12V is applied (pin 5 of connector J2) on the pin 4 of connector J2, the ignitor is in operation (enabled) and when it is disconnected, the ignitor is out of operation (disabled).

## 10. LAMP STATE INDICATING LED

The corresponding signal on pin 1 of J2 connector is an open collector output. This output goes to Logic Zero when the lamp is on, so it is possible to connect a low consumption LED between this pin and the pin 5 of J2 connector (+12V). An example of this connection is shown below.



## 11. PT1 - PT2

The voltage measured on these two pins fits output current with a proportionality coefficient of 2mV/A. The measurement can be done on a DVM. When the current is adjusted to 21A, the voltage between PT1 and PT2 is 42mV.

