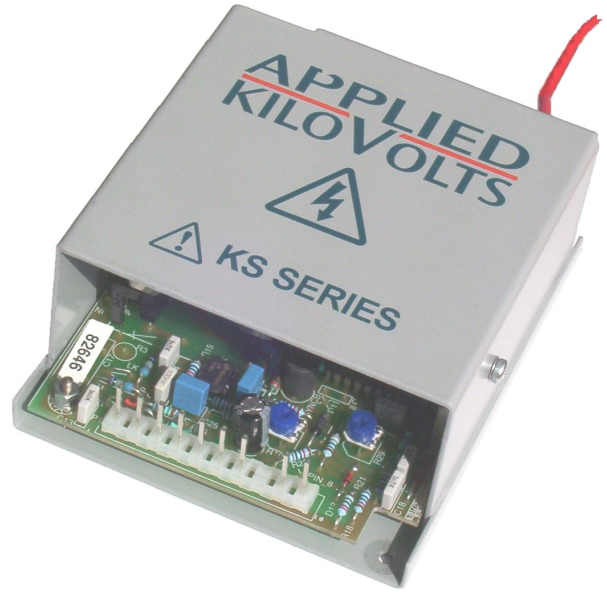


KS Series Data Sheet

KS005, KS010, KS020, KS030

GENERAL PURPOSE

HIGH VOLTAGE MODULES



Application:

Monitor CRT, Lens voltages, Focus & high voltage bias, Ion Pumps, Image Intensifiers, electrostatics

- 5kV, 10kV, 20kV & 30kV
- High Frequency switch mode
- Internal control or externally programmable
- Flashover proof
- 24 hour burn in
- General Purpose
- Now UL recognised as a component under UL category
OGTK2, evaluated under UL61010-1-2nd Edition File no E254121



These stabilised miniature power supplies are available in either positive or negative polarity at output voltages of 5kV, 10kV, 20kV and 30kV. They are intended for general purpose applications and the output voltage can be controlled by Internal or external potentiometers or by an external 10 volt analogue control voltage. The units are pin compatible with the high precision HP series and similar to the 100 Watt HW series of power supplies (please see separate data sheets).

All units use high frequency switching techniques, in conjunction with a ferrite step-up transformer to control the output. All high voltage components are vacuum encapsulated in silicon rubber.

Electrical Specification

Unit Type	Output Voltage	Output Current	Ripple (pk-pk)	Size in mm	Weight (kg)
KS005xAA300	+50 volts to 5kV	1mA	< 0.02%	115 x 98 x 47	0.9
KS010xAA300	100 volts to 10kV	0.5mA			
KS020xAA300	250 volts to 20kV	0.2mA			
KS030xAA300	500 volts to 30kV	0.1mA			
KSxxxPAA300 for +ve o/p versions, and KSxxxNAA300 for -ve o/p versions					

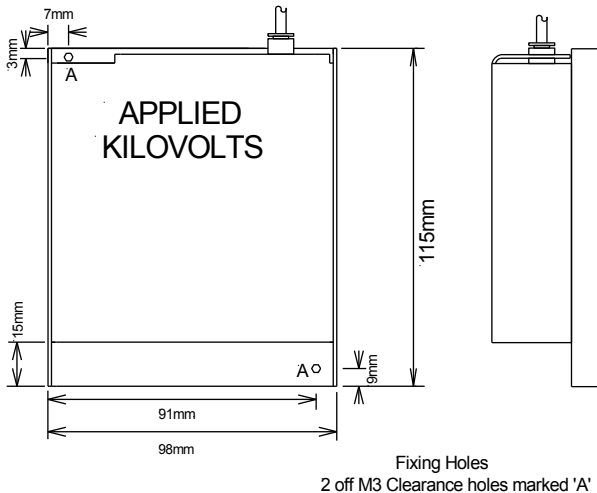
Input	+24V dc $\pm 10\%$ <0.5A. 0V input common to HV return and chassis.
Control of output	<ul style="list-style-type: none"> ● INTERNAL potentiometer. ● EXTERNAL potentiometer ● 10V analogue signal. (0 to +10V gives zero to max o/p, tolerance $\pm 2\%$). Zin 20Kohm.
Voltage monitor	0V to +10V $\pm 3\%$ for 0% to +100%. (Zout= 10k)
Current Monitor	'Stack return' type <i>only</i> , available
Output Temperature Co-efficient	<300ppm/ $^{\circ}$ C <50ppm/ $^{\circ}$ C option is available for 5kV units
Drift (after 1 hour warm up)	<0.05% per hour, <0.25% over an 8 hour period
Line regulation	<0.1% for 1V change in input voltage
Load regulation	<0.1% for load change from 10% to maximum load
Protection (all outputs)	Protected against intermittent arcing but NOT a continued short circuit to ground

Mechanical Specification

Mountings	2 off M3 Clearance holes. Bracket AK20035 available for end mounting
Input & control	10 way 0.2" Molex Connector
Output	Flying lead, 0.5m of URM43 screened (shielded) cable (KS030P & N by 0.7m of TV30)

Environmental Specification

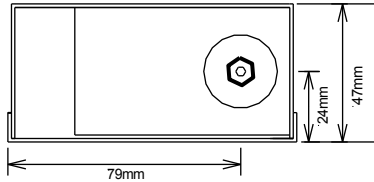
Temperature, operating	+10 to +50°C.	Humidity (RH) <30°C non-condensing	80% maximum
Temperature, storage	-35 to +85°C.	Humidity (RH) >30°C non-condensing	Decrease linearly to 50% at 40°C
Altitude, operating	Up to 2,000m.	Altitude, storage	Up to 18,000m



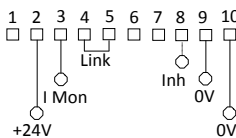
Pin Assignment

- 1 nc
- 2 +24V dc input
- 3 Voltage monitor o/p
- 4 Control Link see diags below
- 5 Control Link see diags below
- 6 Control Link see diags below
- 7 Voltage Control Input¹
- 8 Imonitor — if fitted²
- 9 Signal ground
- 10 0V Power return

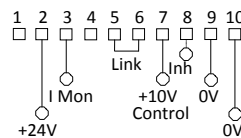
Notes 1/ Control Voltage must be between -0.5V & 10.2V
2/ If Imonitor option fitted then an appropriately sized resistor or link from Pin 8 to Pin 9 MUST be fitted.



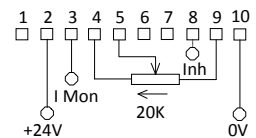
INTERNAL POTENTIOMETER



EXTERNAL 10V



EXTERNAL POTENTIOMETER



Part Number Selection

Series Code	KS	o/p kV	Polarity	Options Code	Temp Co
		005= 5kV	P= +ve	AA= no options	300
		020= 20kV	N= -ve	IS = Stack Return Current Monitor	050

e.g. +10kV KS series with Stack Return Current Monitor: KS010PIS300

[50ppm/°C option is only available on 5kV units]

We manufacture a large number of customized OEM versions and would be pleased to discuss your application with you.

EXELIS

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