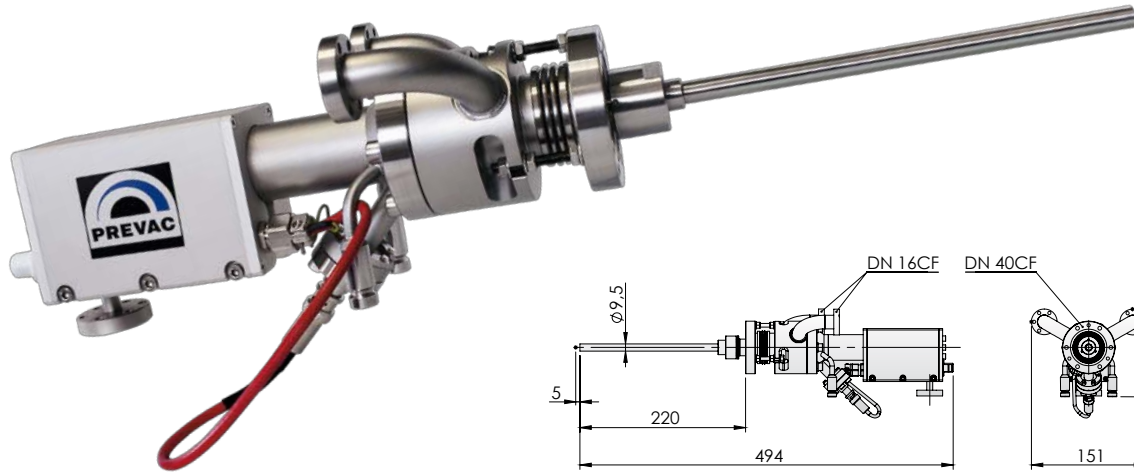


UVS 40A2

HIGH INTENSITY UV SOURCE



UPS

DESCRIPTION

The UV Source (UVS) is a high intensity photon source that can be operated with a variety of discharge gases. The UVS 40A2 is used in UPS (ultraviolet photoelectron spectroscopy) research. The UVS is water cooled for maximum stability and features fully interlocked safety circuitry. The discharge has a maximum photon intensity at a pressure of several mbar so dual differential pumping stages are employed in order to maintain the host chamber pressure. The UVS 40A2 is designed so that a continuous gas flow is maintained through the discharge region. This is a great advantage in maintaining the cleanliness of the discharge capillary and results in very long service intervals.

FEATURES

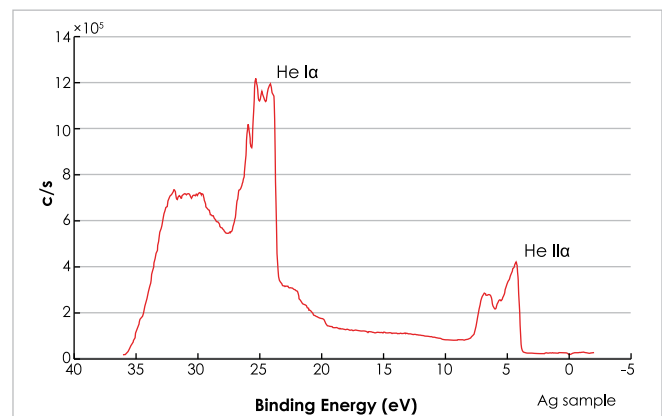
- Can be operated with various discharge gases
- Manual or auto ignition
- Control of the He I / He II ratio via precise adjustment of helium pressure and discharge current
- Easy operation
- Stable output
- Special designed discharge chamber
- Electronically stabilised discharge current
- Windowless, direct sight connection

OPTIONS

- Gas dosing system
- Customised insertion length
- Linear shift (50 - 100 mm)
- Differential pumping (required)
- Chiller

TECHNICAL DATA

Mounting flange	DN 40 CF (non-rotatable)
Gases	He, Ar, H ₂ (option: Kr, Xe, Ne)
Photocurrent	1 - 80 nA
Photon flux	>10 ¹⁶ photons / s*sr
He I / He II ratio	better than 3:1
Water cooling	required, pressure 2 - 3 bar (max. 6 bar), flow > 1.5 l/min, T _{max} = 30 °C
Port aligner	integral, +/- 4°
Discharge current	40 - 300 mA
Beam divergence	small beam divergence: <1°
Capillary I.D.	1.5 mm (others on request)
Insertion length	220 mm (standard), other on request, OD: 9.5 mm
Beam diameter (FWHM)	dependent on working distance (e.g. 1.2 mm for distance 10 mm)
Typical working distance	5 - 100 mm (optimum 5 - 50 mm)
Bakeout temperature	up to 200 °C
Working pressure	< 1 mbar



Excellent ratio between Helium I and Helium II



PREVAC sp. z o.o. sales@prevac.eu
Raciborska Str. 61 [+48 32 459 21 30](tel:+48324592130)
PL44362 Rogów [+48 32 459 20 01](tel:+48324592001)

UVS40A2

UV40A-PS

UV SOURCE POWER SUPPLY



DESCRIPTION

The UV40A-PS can work in either constant discharge current or discharge voltage mode to provide the best operation conditions for the UV source. The source can be automatically ignited directly from the power supply or manually on the source via a piezo-electric igniter. All adjustable parameters are clearly displayed on the large front-panel TFT and precisely controlled via digital encoders. The unit also features a built in timer and automatic standby mode. The UV40A-PS is supplied as a full width 19" rack mounting unit (3U height). Easy firmware update via USB port. Unit can be remotely controlled via RS232/485 or Ethernet interfaces.

APPLICATION

The UV40A-PS power supply controls the UV40A1 UV Source in ultraviolet photoelectron spectroscopy (UPS) applications.

OPTIONS

- Software control (Version Pro, Extended or Library Module)
- Analog I/O card for vacuum measurement (1 gauge)

UV SOURCE CONTROL APPLICATION



TECHNICAL DATA

Supply voltage	100 - 120 VAC/200 - 240 VAC, 50/60 Hz (power consumption max 800 W)
Output power	300 W
Discharge voltage (U_{source})	200 - 1000 V, resolution 10 V, ripple $< 0.5 V_{pp}$
Discharge current (I_{emis})	5 - 300 mA, resolution 1 mA
Vacuum measurement (optional)	CTR90, TTR91, TTR211, PTR225, PTR90, ITR90, ITR100, Baratron, ANALOG IN, MKS937A, PG105, MG13/14, PKR251, PCR280, ATMION
Communication interface	RS232/485, Ethernet
Communication protocol	MODBUS-TCP
User interface	7" TFT display with touchscreen, digital encoder
Interface languages	English, German, Polish
Dimensions	448.8 × 132.5 × 435 mm (W×H×D), 19" rack mountable
Weight (approx.)	9.3 kg



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UV40A-PS