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**Operating Instructions  
for  
PD-471  
PMT Housing  
With HV Supply**

**Acton Research Corporation**  
**Model PD-471**  
**PMT Detector Housing with**  
**Integral High Voltage Power Supply**

**Description:**

The Acton Research Corporation PD-471 PMT Detector Housing is designed for use with ARC SpectraPro Monochromators and the SpectraSense /NCL Data Acquisition System. The PD-471 consists of the PMT detector housing for use with standard 1.125 inch diameter 9 stage side window PMTs, a mounting flange for attachment to SpectraPro Monochromators, a control cable for attachment to the NCL Data Acquisition Module to allow control of high voltage and a signal cable for attaching to the signal input of the NCL. If purchased with a PMT from Acton Research Corporation, the PMT is normally installed in the PD-471 and is shipped as a complete detector assembly.

The detector assembly provided with your order is as follows:

PD-471 Serial Number: \_\_\_\_\_

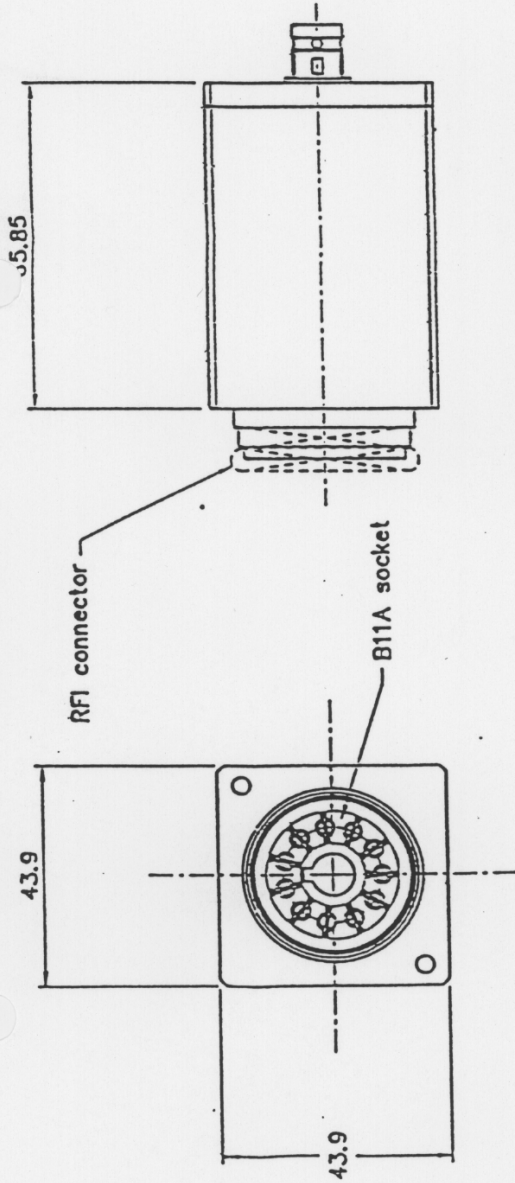
PMT Provided with Your Order: \_\_\_ P1 (1P28) \_\_\_ P2 (R928) \_\_\_ P3 (R5108)  
Other PMT \_\_\_\_\_

**Mounting Instructions:**

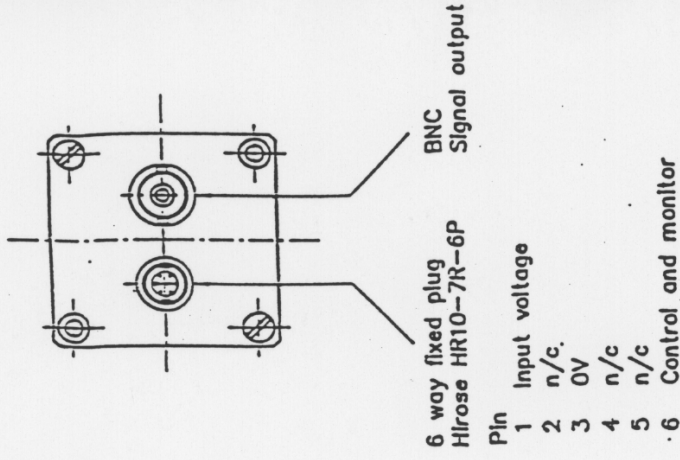
The PD-471 mounts directly to the exit slit of the ARC SpectraPro series Monochromators. The detector should be positioned with the BNC signal connector and 6 pin control connector pointing up (refer to the manufacturer's data sheet attached). The PD-471 is mounted directly against the exit slit such that the four mounting holes of the mounting flange align correctly with the tapped mounting holes of the exit slit. Insert the four 8-32 mounting screws and tighten. The detector should now be mounted correctly.

Connect the control cable provided with the PD-471 from the 6 pin connector on the PD-471 to the channel 1, 2 or 3 control input on the NCL. Connect the signal cable provided with the PD-471 from the BNC connector on the PD-471 to the corresponding channel 1, 2 or 3 input on the NCL. The PD-471 is now ready for use.

Note: If the PD-471 is to be used with the FA-448 filter wheel at the exit slit, the mounting procedure requires three (3) 8-32 screws 1.375 inches long. Insert the three screws into the detector flange, through the filter wheel, and into the tapped holes of the slit or adapter plate. Tighten the screws to secure the accessories. The FA-448 Filter Wheel is more often attached to the entrance slit, however.



External voltage programming for integral high voltage power supply	
Pin	1 ○ — +5V to +8V input voltage
	2 n/c
	3 ○ — 0V
	4 n/c
	5 n/c
	6 ○ — +0.1V to +1.25V control voltage input and monitor
n/c: no connection	
Monitor: 1/1000 of voltage applied to photomultiplier	



Sales Drawing  
not for manufacture

Dimensions in millimetres

Title		Project	
SWHPS/RFI		M.Stoodley	
Date		Date	
19 December 1997		19 December 1997	
Scale		Scale	
1:1		1:1	
Checked		Checked	
Approved		Approved	
Code No.		Code No.	
5/01/98		5/01/98	
Issue		Issue	
2		2	
C/Note No.		C/Note No.	
Sign		Sign	
THIRD ANGLE PROJECTION		THIRD ANGLE PROJECTION	
DRAWING NUMBER		DRAWING NUMBER	
25894 Csk 189		25894 Csk 189	
POWER SUPPLY BASE		POWER SUPPLY BASE	
SWHPS/RFI		SWHPS/RFI	

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