Operating Instructions

P 920
Polariser Module

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Edinburgh Instruments Ltd., 2 Bain Square, Kirkton Campus, Livingston, EH54 7DQ. UK
T: +44 (0)1506 425300 - F: +44 (0)1506 425320 - E: eai.service@edinst.com - W: www.edinst.com

Table of Contents

page

1. Introduction 1
2. Transit and Packing 5
3. Operation 7
4. Technical Specification 9
5. Warranty 11
6. CE Declaration of Conformity 13

1. Introduction

The P920 is a module designed for computer controlled operation of polarising prisms within the FLS920 spectrometer system.

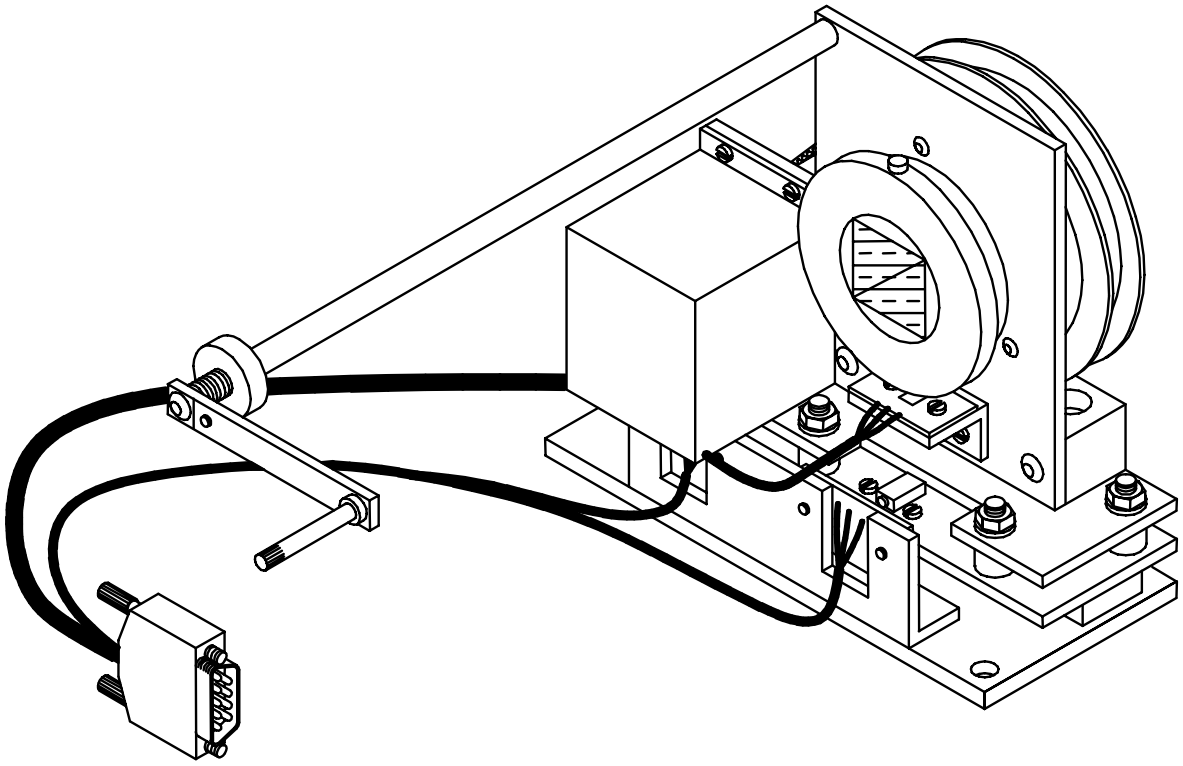
The module consists of a slide section designed to move the polariser assembly in and out of the beam and of a rotation mechanism for adjusting the polariser orientation. Both “ IN” and “ OUT” positions are detected by two Hall sensors The initialisation position (vertical orientation = 0 degree) is detected by a third Hall sensor.

The module is equipped with a lever for manual selection of the "IN" and "OUT" position, so that the polariser assembly can be inserted and removed from the beam without removing the large sample chamber lid.

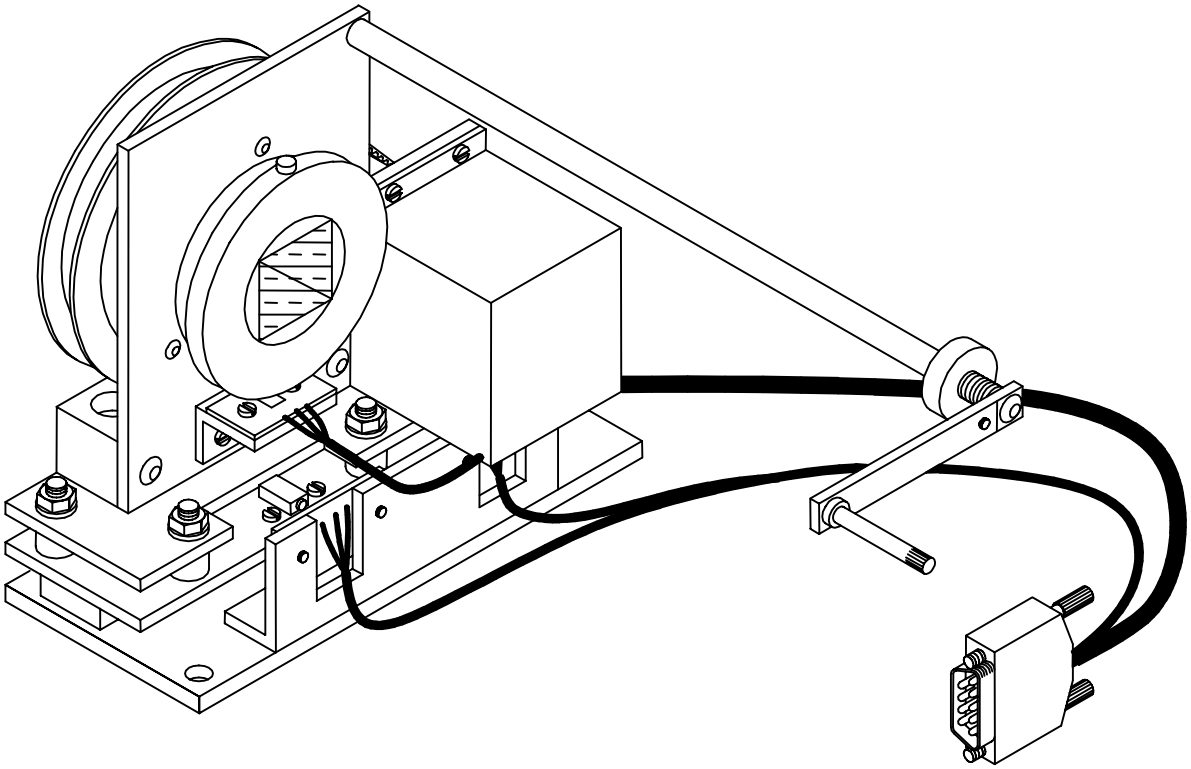
The polarising prism is of the Glan Thompson type. It is manufactured from calcite. The two halves of the prism are glued together using a high quality UV-transparent cement.

Warning

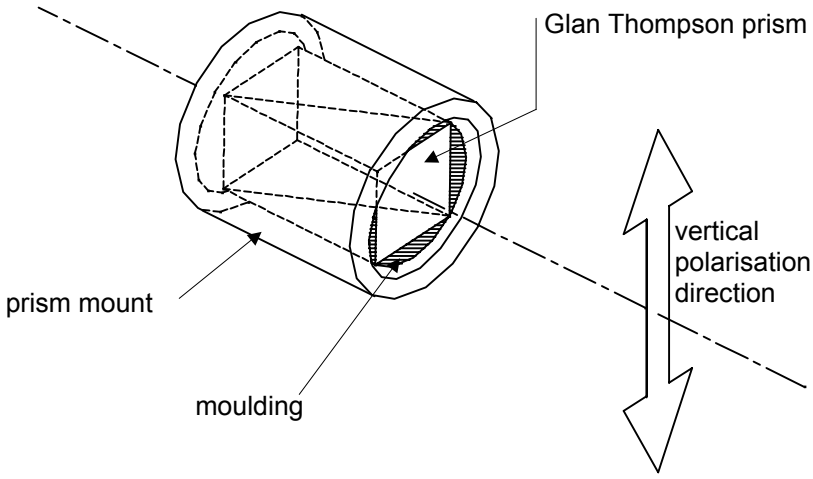
The P920 module contains a delicate and expensive calcite polarising prism.
Calcite is comparatively soft and hydroscopic.
Avoid touching the optical surfaces, avoid contamination with dust.
Dust particle and fresh fingerprints can be cleaned off by using a soft optical cleaning tissue or cotton moistened with a small drop of acetone.



excitation polariser assembly



emission polariser assembly


Glan Thompson prism
vertical
polarisation
direction
prism mount
moulding

2. Transit and Packing

If the P920 module was purchased together with an FLS920 spectrometer assembly, then it is readily installed, mounted into the universal sample chamber. The orientation of the polarising prism has been correctly set up at manufacture.

P920 units which were purchased at a later date to upgrade a spectrometer are individually packed. Careful handling is required during unpacking. The polarising prism has been correctly set up for vertical orientation during polariser initialisation.

3. Operation

The set-up of the polarisation angle is fully controlled by the computer software. There the dialogue boxes will allow either 0^o (vertical), 35^o, 55^o (magic angle = 54.7^o) and 90^o (horizontal).

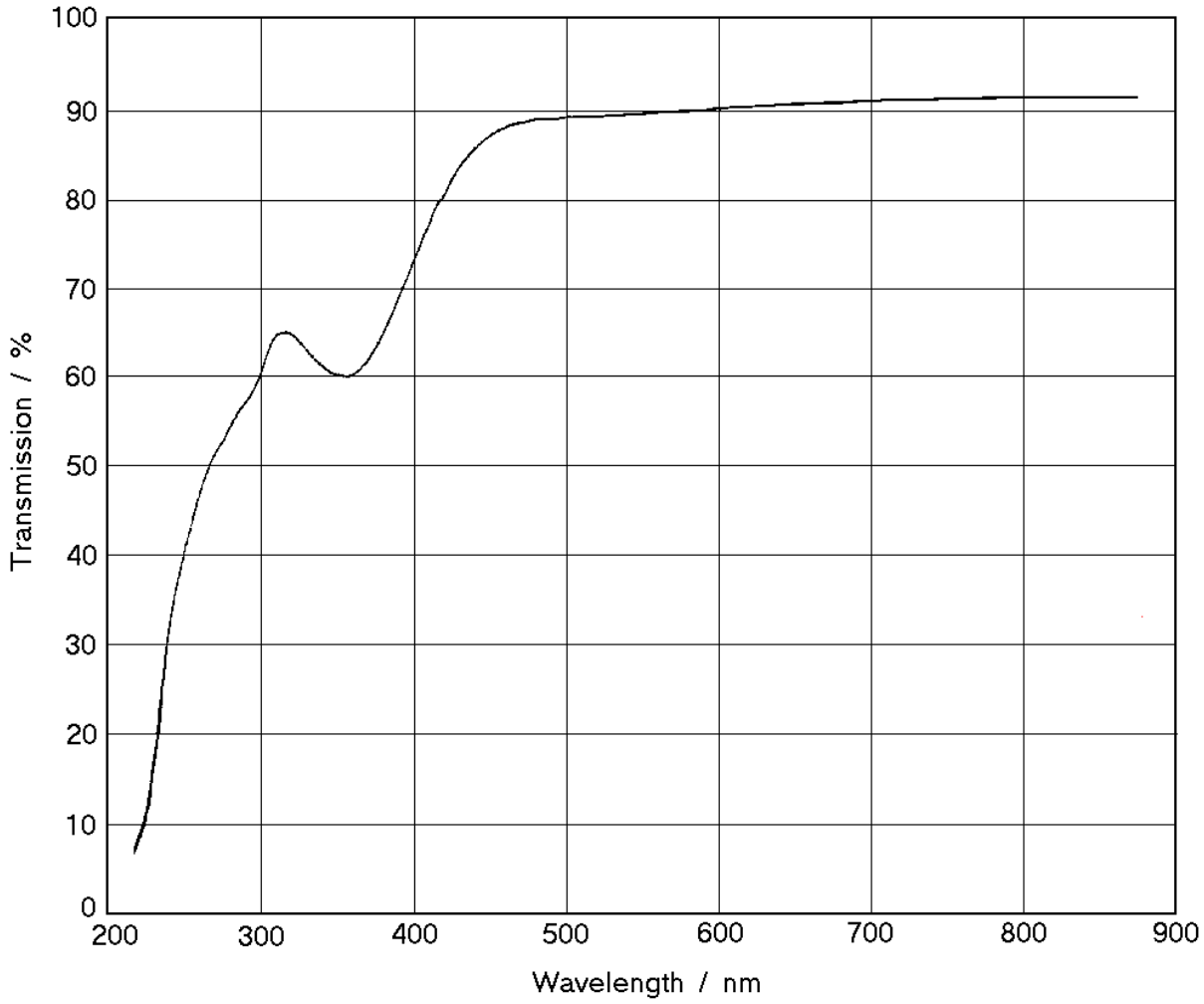
Polarisation angles can be fixed during a measurement in order to measure one particular polarisation direction, or the can be programmed to toggle between horizontal and vertical in order to collect all files required to calculate the Anisotropy function.

Polarisers can be operated in steady state measurements for steady state fluorescence anisotropy, or in time resolved measurements for time resolved fluorescence anisotropy measurements.

The polarisers have to be moved manually into or out of the beam. A lever on each polarisation unit is provided for this purpose.

4. Technical Specification

Type of polarising prism:	Glan-Tompson
Material:	calcite
Glue:	UV transparent cement
spectral range:	230nm - >900nm
polarisation:	10^5
aperture:	14mm x 14mm
manual settings:	" in" and " out"
computer control:	polarisation angle 0^0, 35^o, 55^o, 90^o (from vertical)



5. Warranty

1 a) The Company guarantees the equipment forming the subject of the contract/quotation against defective materials and workmanship for a period of one year from the date of delivery to the Purchaser.
   b) In the case of sub-assemblies of equipment not manufactured by the Company, but incorporated in the equipment ordered, the Purchaser will be entitled only to the benefit and/or limitations of any guarantee given by the makers of such assemblies.
   c) In no event shall the Company be liable for any consequential loss or damage arising from failure of the equipment under warranty.
   d) At the end of the one year period referred to herein, all claims upon all liability of the Company shall be absolutely at an end.

2 a) The Company also warrants that the equipment conforms to specifications contained in current brochures or to extra specifications confirmed in writing at the time of order acknowledgement.
   b) No warranty is made or implied as to the suitability of any equipment for the Purchaser' s intended use beyond such performance specifications as form part of the contract.

3.The purchaser warrants:
   a) That he will carefully examine and list all parts of the equipment supplied by the Company and notify the Company in writing of any shortage, defect or failure to comply with the contract, which is or ought to be apparent upon such examination and test, within 48 hours of the equipment being delivered to or collected by the Purchaser.
   b) The equipment will be operated in accordance with the instructions and advice detailed in the appropriate operating instructions manual, or any other instructions which may be provided by the Company. The Company shall not be held responsible for any defect arising from the Purchaser' s failure to comply with these recommendations and instructions or from damage arising from negligence or exposure to adverse environmental conditions.

4.The warranty is effective when:
   a) Any defects in the equipment supplied are notified immediately by the Purchaser to the Company.
   b) The equipment is returned to the Company at its Edinburgh premises, transportation and insurance prepaid, and undamaged by the failure to provide sufficient packaging.
   c) The Purchaser has made payment in full for the contract in accordance with the Company' s normal trading terms, i.e. 30 days from date of invoice.

5.The warranty covers:
   a) Engineer' s time costs during inspection and repair.
   b) Any materials or components, which require to be replaced.
   c) Return carriage costs to the Purchaser

6.However, if the Purchaser requests a service engineer to carry out the necessary inspection and repair of the equipment covered by the warranty on site, the Purchaser will be liable, at the Company' s discretion, for:
   a) Engineer' s travelling time costs.
   b) Engineer' s travelling and accommodation expenses.

The timing of the inspection and repair of the equipment will be determined entirely at the discretion of the Company.

6. CE Declaration of Conformity

CE

Manufactured by:	Edinburgh Instruments Ltd. 2 Bain Square Livingston EH54 7DQ Tel.: + 44 1506 425 300 Fax.: + 44 1506 425 320	
Applicable Standards:	Generic Immunity	EN 50082-1 : 1992
	Generic Emission	EN 50081-1 : 1992
	Electrical Safety Standards	EN 61010-1 : 1993

Edinburgh Instruments Ltd. certify that this equipment conforms with the protection requirements of the above Directives.