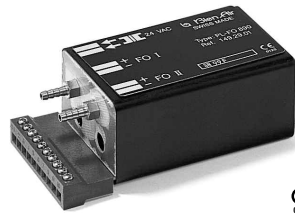


# PLPE 890 FO

## Instruction

REF 2100074-ENG/06.09



### English

Medical devices entirely made in Switzerland by Bien-Air Dental SA.

### Type

PLPE 890 FO, electronic controller for lighting of 2 dental instruments.

### Description

3.5 V supply for 2 lighting circuits, pneumatically controlled independently of one another, with lighting timed to remain on for 10 seconds after motor has stopped. Black anodised aluminium casing, non-watertight. Connections by screw terminals.

### Intended use

Product intended for professional use only. Use in dentistry for general dentistry work.

### Technical data and assembly

### Classification

Class IIa in accordance with European Directive 93/42/EEC concerning medical devices.

### Comments

Controller, preset at the factory, for two 3.5 Vdc and 740 mA for the following Bien-Air Dental products:

- Bulbs REF 1500007-005 for Isolite, MC3 electric motors.
- Bulbs REF 1500000-005 for the turbines.

### Dimensions (L x W x H)

#### Casing without connector:

98x52x39 mm (3.85x2.04 x1.53 in)

#### Casing with connector:

105x55x40 mm (4.13x2.16x1.57 in)

### Weight

115 g

### Air pressure

Minimum 0.6 bars (9 psi)  
maximum 6 bars (87 psi)

### Voltage

12 to 24 Vac

### Off-load power

Maximum 12 W

### Electromagnetism

Corresponds to the electromagnetic compatibility in accordance with IEC 60601-1-2.

### Safety

According to IEC 60601-1 standard (General safety for Medical Electrical Equipment), the device shall be classified as a class II type BF device. Associated terminology is defined in section 2.1.7 & 2.2.5 of the same document. The following regulations as specified in IEC 60601-1 must be observed:

- "Protection against electrical shock"
- "Ingress of liquids"
- "Protection against excessive temperatures and other safety hazard"

### Lighting interlock

Two separate pneumatic-interlock channels, on/off.

### Operation

Continuous

### Environment

Temperature between -40°C (-40°F) and 70°C (158°F), relative humidity between 10% and 100%, atmospheric pressure 50 kPa to 106 kPa (7.3 to 15.3 psi).

### Breakdown voltage

>500 Vac

### Output voltage

2 x 2.4 to 4.4 Vdc

### Output current

2 x maximum 1 A

### Timing for lighting

2 x 10 seconds after motor has stopped.

### Connections

- Electrical: plug-in connector included in the set, 10 terminals (6 used), screw terminal, 5 mm spacing, REF 870.03.08
- Pneumatic: connector for 2 flexible tubes, internal diameter 4 mm

### Installation

The casing may be secured mechanically or, due to its light weight, with Velcro<sup>®</sup> tape. The use of adhesives is not recommended. Do not enclose the casing completely in a thermal insulator - the heat must be able to dissipate freely.

### Internal controls

Output voltage of the 2 channels: **fig. 1**.

- ① Identification plate and diagram
- ② Air inlet control for activation put the light 1 out (F01)
- ③ Adjustment trimmer 3.5 Vdc for activation put the light 1 out (F01)
- ④ Air inlet control for activation put the light 1 out (F02)
- ⑤ Adjustment trimmer 3.5 Vdc for activation put the light 1 out (F02)

Connector REF 870.03.08:

- ⑥ 3.5 Vdc output for activation put the light 1 out (F02)
- ⑦ 3.5 Vdc output for activation put the light 1 out (F01)
- ⑧ 12 to 24 Vac power-supply input

### Maintenance

#### Overhaul

Never disassemble the device. For all modifications and repairs, we recommend that you contact your regular supplier or Bien-Air Dental direct.

#### Cleaning

No cleaning or maintenance is necessary.

#### Information

The technical specifications, illustrations and dimensions contained in these instructions are given only as a guide. They may not be the subject of any claim. The manufacturer reserves the right to make technical improvements to its equipment, without amending these instructions. For all additional information, please contact Bien-Air Dental SA at the address indicated on the back cover.

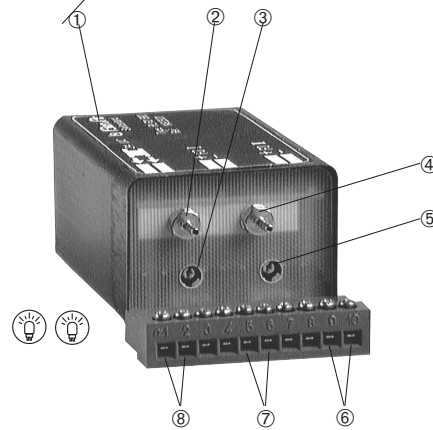
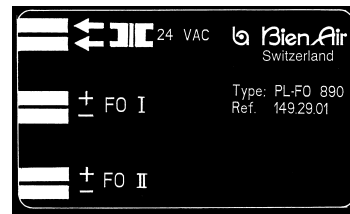


fig. 1

### General information

The device must be used by a qualified person in accordance with the current legal provisions concerning industrial safety, health and accident prevention measures, and these working instructions. In accordance with these requirements, the operators:

- must only use operating devices that are in perfect working order; in the event of irregular functioning, excessive vibration, abnormal heating or other signs indicating malfunction of the device, the work must be stopped immediately; in this case, contact a repair centre that is approved by Bien-Air Dental;
- must ensure that the device is used only for the purpose for which it is intended, must protect themselves, their patients and third parties from any danger, and must avoid contamination through the use of the product.

The device is intended for medical treatment only; any use other than that for which this product is intended is unauthorised and may be dangerous. The medical device meets all the current legal requirements.

The device is not authorised for use in an explosive atmosphere (anaesthetic gas).

Avoid any contact with liquids.

Only use maintenance products and components from Bien-Air Dental. The use of other products and components can void the guarantee.



This device must be recycled. Electrical and electronic equipment may contain dangerous substances which constitute health and environmental hazards. The user must return the device to its dealer or establish direct contact with an approved body for treatment and recovery of this type of equipment (European Directive 2002/96/EC).

### Guarantee

#### Terms of guarantee

Bien-Air Dental grants the operator a guarantee covering all functional defects, material or production faults. The device is covered by this guarantee for 12 months from the date of invoicing.

Bien-Air Dental offers a 24-month guarantee for the glass-bar light conductors.

In the event of justified claim, Bien-Air Dental or its authorised representative will fulfil the company's obligations under this guarantee by repairing or replacing the product free of charge. Any other claims, of whatever nature, in particular in the form of a claim for damages and interest, are excluded.

Bien-Air Dental shall not be held responsible for damage or injury and the consequences thereof, resulting from:

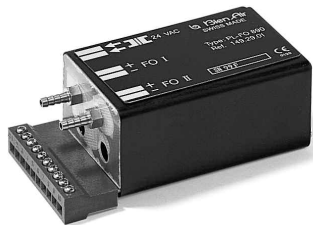
- excessive wear and tear
- improper use
- non-observance of the instructions for installation, operation and maintenance
- unusual chemical, electrical or electrolytic influences
- poor connections, whether of the air, water or electricity supply.

The guarantee does not cover flexible "fibre optic" type conductors, or any parts made of synthetic materials.

The guarantee shall become null and void if the damage and its consequences are due to improper manipulation of the product, or modifications to the product carried out by persons not authorised by Bien-Air Dental.

Claims under the terms of the guarantee will be considered only on presentation, together with the product, of the invoice or the consignment note, on which the date of purchase, the product reference and the Serial No. should be clearly indicated.

## Set supplied



PLPE 890 FO REF 1600142-001

This product may be covered by one or more of the following patents:

**EP Europe:** 0 497 139 / 0 526 783 / 0 745 358 / 0 688 539 / 0 894 879 / 1 145 688 / 1 109 301 **DE Germany:** 296 16 023.7

**DK Denmark:** 96 00315 **FR France:** 2 679 804 / 2 722 972 / 2 733 680 / 2 692 621 / 2 720 263 / 2 757 763 / 2 766 697 / 2 781 318

**CH Switzerland:** 693 922 **CN China:** 129343 **JP Japan:** 2 037 611 / 1 991 770 **US United-States:** 5.059.122 / 4.773.856 / 6.033.220 / 6.337.554 / 5.453.008 / 6.319.003 / 6.495.937

REF 1600142-001 BOARD F0890

## REF Legend

1600142-001 PLPE 890 FO for powering 2 lighting systems independently, controlled pneumatically. Outputs with 10-second time lag.

## List of Bien-Air Dental SA registered trade mark products @:

Aquilon®	Eolia®	Isolite®	MX®
Bora®	Gyro®	Lubrifiuid®	Prestilina®
Boralina®	Gyrolina®	Lubrimed®	Spraynet®

In these instructions, "Device" corresponds to the product described in the heading "Type". For example, turbine, contra-angle, handpiece, micromotor, tube, electronics, connectors, station etc.

## Symbols



Light



Recyclable electrical and electronic material



Device of type BF



Equipment of class II



CAUTION! Refer to the accompanying documents



CE Marking with number of the notified body.

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