

# Operating Manual

## PIN<sup>04</sup>



## OPERATING MANUAL (Translation) “PIN04”

Dear Customer,

These operating instructions will familiarise you with the set up and operation of your “PIN module”. Please read the operating instructions carefully and follow the advice given here diligently, by doing so disruptions and operational faults will be avoided. Your personal safety and long service life of your PIN04 can be assured by doing so.

THE COMMISSIONING OF THE DEVICE MUST ONLY BE UNDERTAKEN BY TRAINED SPECIALISTS AND ONLY WITHIN THE SCOPE OF APPROPRIATE USE. THE MANUFACTURER ACCEPTS NO LIABILITY FOR DAMAGES CAUSED THROUGH INAPPROPRIATE USE AND IMPROPER OPERATION. THE “GENERAL SAFETY REQUIREMENTS” CHAPTER MUST BE READ BEFORE COMMISSIONING.

Please keep these operating instructions safe.

The equipment produced by “Lampert Werktechnik GmbH” fulfils the conformity requirements of the CE mark and is manufactured in accordance with the VDE guidelines.

Only use original spare parts for maintenance and servicing. Our customer service department will naturally be happy to help you.

THE DEVICE MUST ONLY BE OPENED OR MODIFIED BY AUTHORISED CUSTOMER SERVICE PERSONNEL, OTHERWISE ALL GUARANTEES AND WARRANTIES ARE VOID.

LAMPERT WERKTECHNIK GMBH

September 2013

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## 1. WARNING AND INFORMATION SIGNS



Warning!

“Warning” identifies a potentially dangerous situation. If this is not avoided, the consequences can be death or severe injuries.



Note!

“Note” identifies the product at risk from the hazard and possible damage to the equipment.

## 2. APPROPRIATE USE (FIELD OF APPLICATION)

- The welding of metal pins designed for this purpose, in particular earring pins made from precious metal alloys, steel alloys, titanium and various non-precious metals.
- The pin module is designed for use in connection with the PUK04 and PUK U4 fine welding device only.
- This device is designed for indoor use only. Never attempt to operate outdoors.



THE PIN-MODUL MAY ONLY BE USED IN CONJUNCTION WITH A PUK04/PUK U4, AND OPERATED THROUGH THE PUK 04/PUK U4 VIA THE FOOT SWITCH OF THIS MODEL. PLEASE ALSO CONSULT THE SEPARATE OPERATING INSTRUCTIONS OF THE PUK04/PUK U4 REGARDING THIS SUBJECT.



GENERALLY NO LIABILITY IS ACCEPTED FOR THE DURABILITY OF THE WELDING. WE RECOMMEND THAT THE WELDING IS ALWAYS CHECKED.

## 3. SAFETY INSTRUCTIONS

### 3.1 GENERAL SAFETY REQUIREMENTS



PERSONS WHO WEAR ACTIVE IMPLANTS (HEART PACEMAKERS) MUST MAINTAIN A SAFETY DISTANCE OF 20CM BETWEEN THE WELDING CURRENT CABLE / SOURCE OF THE WELDING CURRENT AND THE IMPLANT.



The opening of the device is only permitted when undertaken by a qualified electrician. Before opening remove the connection cable to the welding device and ensure that the device is de-energised. Discharge any components in the device that could hold electrical charge.

In case of doubt or uncertainty, always consult with a specialist. Our customer support department is naturally always available to assist you with their professional trained personnel, appropriate tooling and equipment.

Always use suitably long original cables.

Hazards can arise due to welding currents.

The highest and most dangerous voltage in the welding circuit is the no-load voltage.

The highest permissible no-load voltages are recorded in the national and international regulations in accordance with the type of welding current, construction of the current source and the extent of the electrical hazard to the workplace.

If it can be assumed that risk-free operation is no longer possible, the unit must be put out of operation and secured against being unintentionally restarted.

It can be assumed that risk-free operation is no longer possible if;

- The equipment shows visible signs of damage
- Malfunctions occur
- The equipment is no longer working.

THE DEVICE MUST ONLY BE OPENED BY AUTHORISED SERVICE PERSONNEL!

### 3.2 HAZARDS AND PERSONAL BODY PROTECTION



Protective gloves should be worn on both hands whenever possible when welding, as sparks and spatters can never be completely excluded. The protective gloves must not contain a high proportion of easily melting plastic fibres. With intensive welding, protective gloves guard against the damaging UV radiation.

Wear suitable clothing; do not wear articles of clothing made with synthetic fibres

#### EYE PROTECTION WHEN WELDING:

Do not look at the electric arc with unprotected eyes. Wear the protective goggles belonging to the welding equipment when welding. These protect the eyes from hazardous UV radiation as well as sparks and spatters.

In addition to light and thermal radiation, which can cause dazzling and burning, the electric arc also emits UV radiation. With insufficient protection this invisible

ultraviolet radiation causes very painful conjunctivitis, which can first be noticed hours later.

Persons who are nearby to the electric arc and assistants must also be informed of the dangers and equipped with the appropriate protection; if necessary set up protective partition walls.

When welding, especially in small spaces, it is necessary to ensure that there is an adequate fresh air supply as smoke and hazardous gases can arise.

It is not permitted to carry out welding on containers that have been used for storing gases, propellants, mineral oils or similar, even if they have been empty for a long time, as there is a risk of explosions caused by residues.

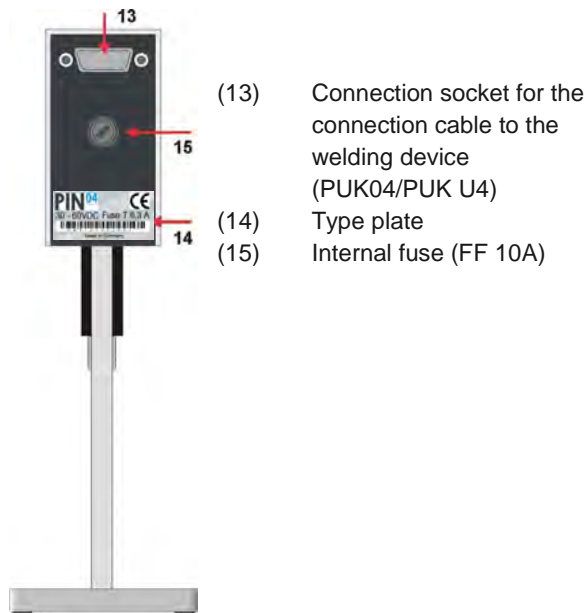
Particular regulations apply to fire and explosion endangered spaces.

## 4.SETUP AND INSTALLATION

### 4.1 SET-UP OF THE DEVICE

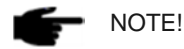
The device should be set up on a base that is solid, level, insulated and non-flammable - ideally on a suitable work table.

### 4.2 DESCRIPTION OF THE REAR OF THE DEVICE



- (13) Connection socket for the connection cable to the welding device (PUK04/PUK U4)
- (14) Type plate
- (15) Internal fuse (FF 10A)

### 4.3 CONNECTION TO WELDING DEVICE:



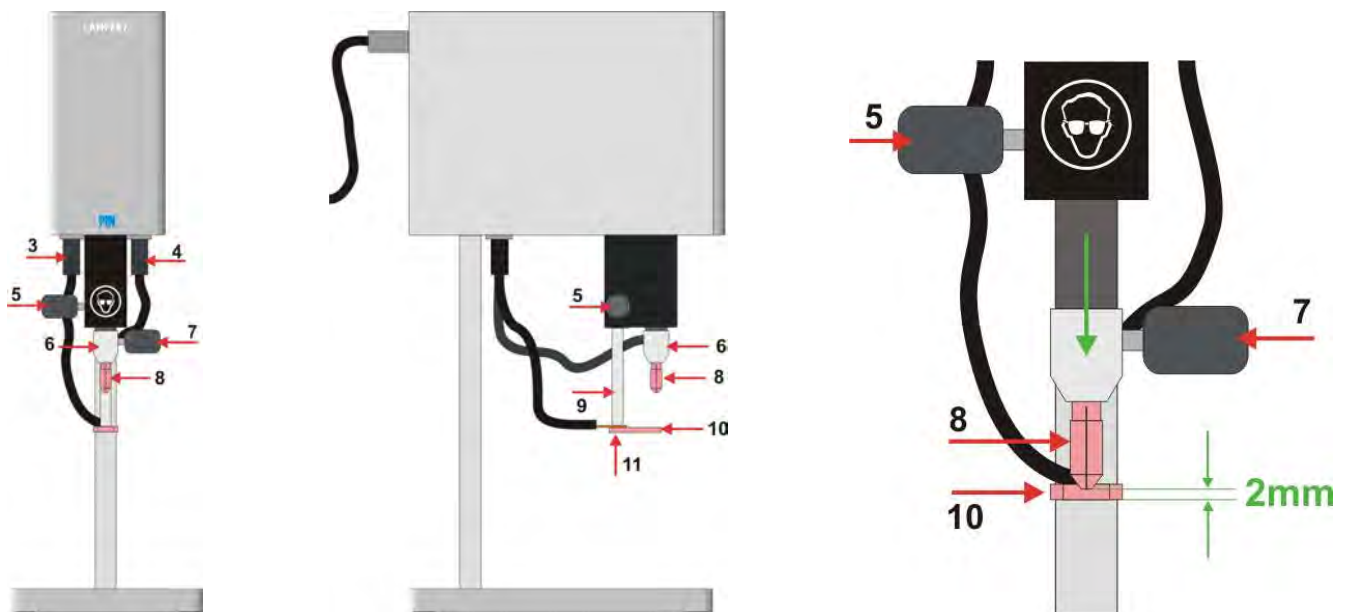
**NOTE!**  
FIRST REMOVE CONNECTED CROCODILE CLIP, PLIER, TWEEZER OR SIMILAR FROM POSITIVE TERMINAL (+) OF PUK04/PUK U4. THESE MAY NOT CONTACT THE CHUCK, WELDING SHOE OF PIN04 OR AN INSERTED WELDING PIN.



Insert the connection cable for the welding device into the corresponding outlet (13) on the PIN module and also into the corresponding outlet on the welding device (before please check and make sure that the PUK04/PUK U4 is switched off) and tighten the safety screws on the plugs by hand.

## 5.COMMISSIONING

### 5.1 DESCRIPTION OF THE CONTROLS



- (3) Welding shoe connector
- (4) Chuck holder connector
- (5) Height adjustment
- (6) Chuck holder
- (7) Chuck fastener

- (8) Chuck
- (9) Height adjustment rod
- (10) Welding shoe
- (11) Welding shoe screw


## 5.2 ADJUSTING THE CONTROLS

Check that the chuck (8) is securely fastened by tightening the fastening screw (7) by hand. Loosen the fastening screw (5) for the height adjustment so that the rod (9) can slide. Now press the tappet all the way down

and hold it in this position. Now position the welding shoe (10) exactly in the center of the chuck, such that the point of the chuck is positioned approx. 2mm above the lower edge of the welding shoe.

 THE CHUCK AND THE WELDING SHOE MUST NOT TOUCH!

## 6. SELECTION OF THE WELDING PARAMETERS

 OBSERVE THE INSTRUCTIONS FOR YOUR PUK04/PUK U4 WELDING DEVICE FOR ACTIVATING THE PIN MODULE AND FOR SETTING THE WELDING PARAMETERS

### POWER:

The welding power or the strength of the welding energy is set in the PIN operating menu on the PUK04/PUK U4

welding device. Please select the welding power recommended for the pin to be welded.

### SPEED OR FORCE:

The speed or force with which the striker moves downwards is likewise set in the PIN operating menu. Please select the setting recommended for the pin to be


welded. In principle: Increasing the speed decreases the welding time and the pin does not penetrate as deeply.

## 7. WELDING INSTRUCTIONS

 NOTE!

BEFORE WELDING, ALWAYS CHECK THE CORRECT SETTINGS FOR THE WELDING SHOE. AT THE SAME

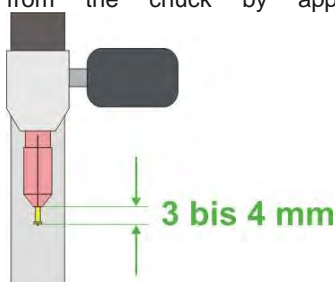
TIME MAKE SURE THAT THE CHUCK AND THE WELDING SHOE DO NOT TOUCH.

 NOTE!


DISCONNECT THE (+) POSITIVE TERMINAL CLAMP FROM PUK04/PUK U4 BEFORE USING THE PIN MODULE. A TERMINAL CLAMP (POSITIVE TERMINAL +) OR THE WELDING HANDPIECE CONNECTED TO THE PUK04/PUK U4 MUST NOT BE CONTACTED WITH THE CHUCK HOLDER OR THE CHUCK OF THE PIN MODULE OR AN INSERTED WELDING PIN.

### 7.1 WELDING INSTRUCTIONS

- Insert a chuck appropriate to the diameter of the pin to be welded.
- Insert the pin into the chuck far enough that it projects from the chuck by approx. 3 to 4 mm.



- The part of the work piece to be processed must be bare metal.
- Press the work piece against the welding shoe from below such that there is good contact with the welding shoe.
- Align the work piece as desired, in order to determine the subsequent position of the earring pin.
- The striker, with the welding pin in the chuck, can be guided downwards by hand.
- The welding is triggered by pressing the foot switch for 3 seconds.

 NOTE!

IF THE FOOT SWITCH IS TRIGGERED WITHOUT THE WELDING PROCESS TAKING PLACE THEN THE WORK PIECE MUST NOT BE TOUCHED BY THE CHUCK OR THE CLAMPED PIN IN ORDER TO PREVENT AN UNINTENDED WELDING. WAIT AT LEAST 20 SECONDS TO ALLOW THE BUILT-UP ENERGY TO DISSIPATE.

## 7.2 BASICS AND TIPS

### IMPORTANT!

- Always ensure that there is very good contact between the welding shoe and the work piece. If contact is difficult, the welding device connection cable can be additionally used by connecting it to the welding shoe connector and fastening the clip on the work piece.
- In doing so ensure that the welding shoe is bare metal and clean. Remove any adhered welding spatter.
- The chuck must be securely clamped when welding.
- Keep the chuck clean by removing any adhesions.
- Only use chucks appropriate for the diameter of the pin.
- Chucks and welding shoes are wearing parts. Replace these in good time, when it is no longer possible to assure a good contact between the pin or the work piece.



### NOTE!

By lightly coating the pin or the workpiece surface with distilled water, you can almost completely prevent the formation of smoke traces and spatters around the weld location.

Due to the non-conducting effect of distilled water, you should ensure good contacting of the workpiece in any case (e.g., by using a flexible contact strip).

The strength of the connection is not impaired by the use of water.

## 8. CARE OF THE SYSTEM COMPONENTS

Your PIN module requires minimal care under normal operating conditions. However, it is essential that a few points are observed in order to guarantee the functionality and to keep the device fully operational for years to come.

- Check all welding and connection cables regularly for damage.
- Check that the moving parts move easily.
- Clean the device occasionally with a suitable cloth.

IF WORK OR REPAIRS THAT ARE NOT DESCRIBED IN THESE OPERATING INSTRUCTIONS ARE NECESSARY THEN CONTACT YOUR DEALER.

THE DEVICE MUST ONLY BE OPENED BY A QUALIFIED ELECTRICIAN!

## 9. TECHNICAL DATA

Device suitable for welding in dry rooms

Power consumption	50 VA
Working voltage	30 – 60 V
No-load voltage	60 V
Duty cycle	80 %
Max. charging time	2 s
Protection class	I
Insulation class	B
Protection type	IP 21S
Weight	2,6 kg

## 10.TROUBLESHOOTING

	FAULT	CAUSE	REMEDY
1	<b>Weld does not hold</b>	Poor contact with work piece	Work piece must be bare at welding location.
		Poor contact with work piece	Use additional clip
		Welding shoe contaminated	Clean or renew welding shoe
		Chuck has poor contact with pin	Replace chuck, insert the pin 3-4 mm into the chuck
		Pin oxidised	Clean pin
		Welding power too low	Adjust power
2	<b>Excessive spatter build-up</b>	Speed too low	Adjust speed
		Power too high	Adjust power
3	<b>No welding current</b>	Speed too low	Adjust speed
		Welding cable loose or damaged	Fasten welding cable or replace
		No connection to the welding device	Check connection cable
		Welding device turned off	Switch on
		PIN mode not active	Activate PIN mode on the welding device
		Internal fuse defective	Replace the defective fuse with a suitable fuse of the <u>same type and value</u> (FF 10A).
4	<b>Chuck holder with inserted welding pin does not move although foot switch being operated</b>	Speed setting too low	Readjust setting by increasing speed
		Foot switch is not connected	Connect foot switch to the PUK04/PUK U4 unit (Please follow the operating instructions of your PUK04/PUK U4)
		Internal fuse defective	Replace the defective fuse with a suitable fuse of the <u>same type and value</u> (FF 10A).

## 11.SPARE PARTS LIST

Chuck 0.7mm  
 Chuck 0.9mm  
 Welding shoe  
 Welding shoe with rod and cable  
 Replacement cable for chuck receptacle



PLEASE NOTE!

Chuck, welding shoe and associated cables and parts are wearing parts and are not covered by the warranty.

## 12.DISPOSAL INFORMATION:

Render discarded devices unusable by removing the mains cable.

Only for EU countries: In accordance with EU directive 2002/96/EC regarding the disposal of used electrical and

electronic equipment, discarded electrical devices must be separated and collected and sent for recovery in an environmentally friendly manner.

## 13.EC – DECLARATION OF CONFORMITY

The manufacturer **“Lampert Werktechnik GmbH”**

Ettlebener Str. 27, D-97440 Werneck

declares herewith that the following product:

Pin module “PIN04”

complies with the stipulations of the directives identified below - including any changes applicable at the time of this declaration.

Applicable EC directives:

Per low voltage directive 2006/95/EC

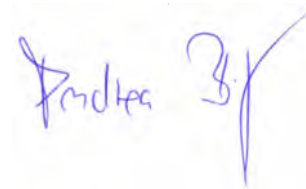
Per EMC directive 2004/108/EC

The following harmonised standards have been applied:

EN ISO 12100

EN 62135-1; EN 62135-2

Werneck, 01.09.2013



Andrea Bauer-Lampert (Managing Director)

Text and illustrations represent the technical status at the time of printing. Subject to change.



