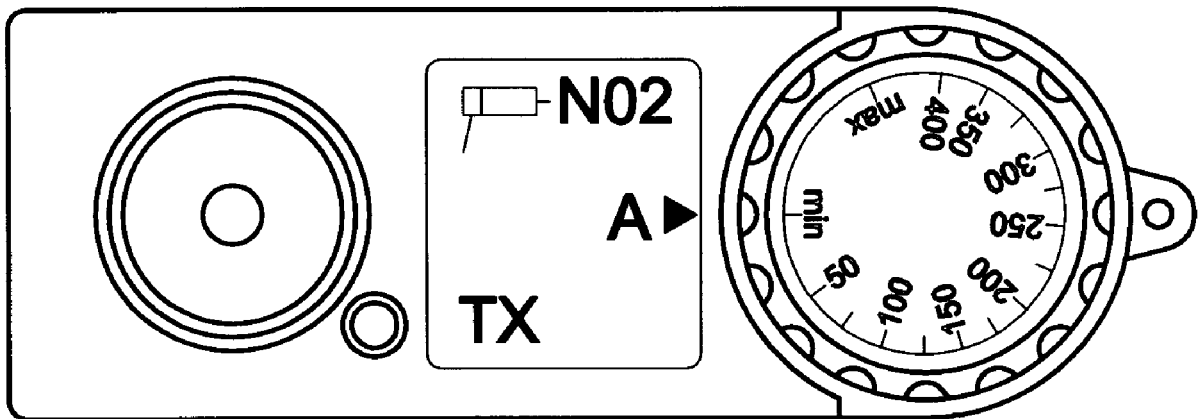


N02



Service manual

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READ THIS FIRST

Maintenance and repair work should be performed by an experienced person, and electrical work only by a trained electrician. Use only recommended replacement parts.

This service manual is intended for use by technicians with electrical/electronic training for help in connection with fault-tracing and repair.

Use the wiring diagram as a form of index for the description of operation. The circuit board is divided into numbered blocks, which are described individually in more detail in the description of operation. All component names in the wiring diagram are listed in the component description.

This manual contains details of all design changes that have been made up to and including November 2008.

**The N02 wireless transmitter is designed and tested in accordance with international and European standard IEC/EN 60974-1 and EN 60974-10.
On completion of service or repair work, it is the responsibility of the person(s) etc. performing the work to ensure that the product does not depart from the requirements of the above standard.**

INTRODUCTION

Wireless transmitter N02 is a part of an alternative remote control system for LHF 405/615 PIPEWELD and Origo™ Arc 410c/650c/810c with panel A12.

Welding cable of power source is used for N02 signal transmission. Lack of thin remote control cables is very convenient in hard environments like shipyards or mines.

Signal transmission is not possible while welding arc is lit.

TECHNICAL DATA

Setting range (DC)	N02 50–400A
Dimensions l x w x h	130 x 45 x 41 mm
Weight	0,215 kg
Operating temperature	-10 to +40°C
Enclosure class	IP 23

WIRING DIAGRAM

Component description

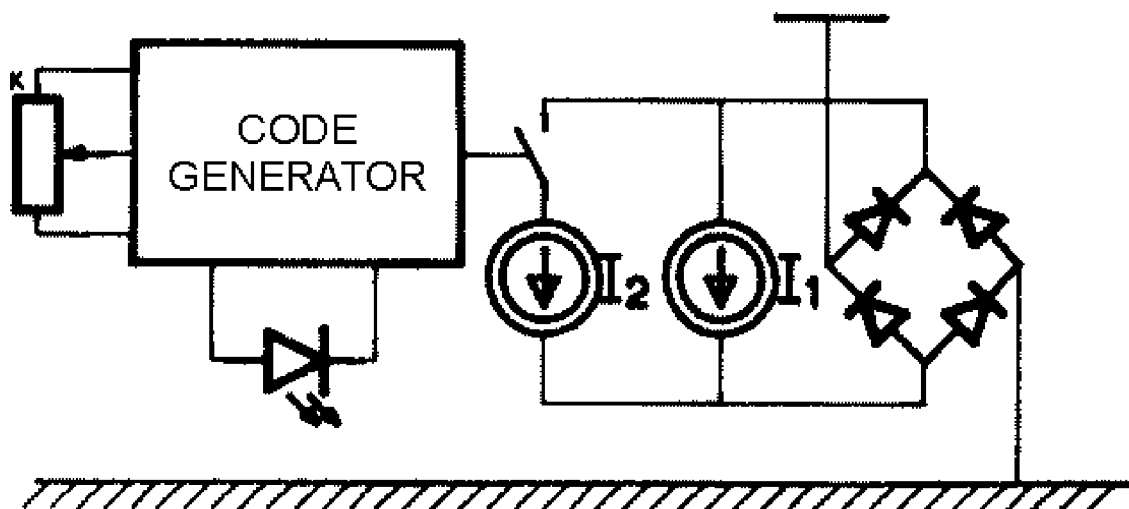


WARNING !

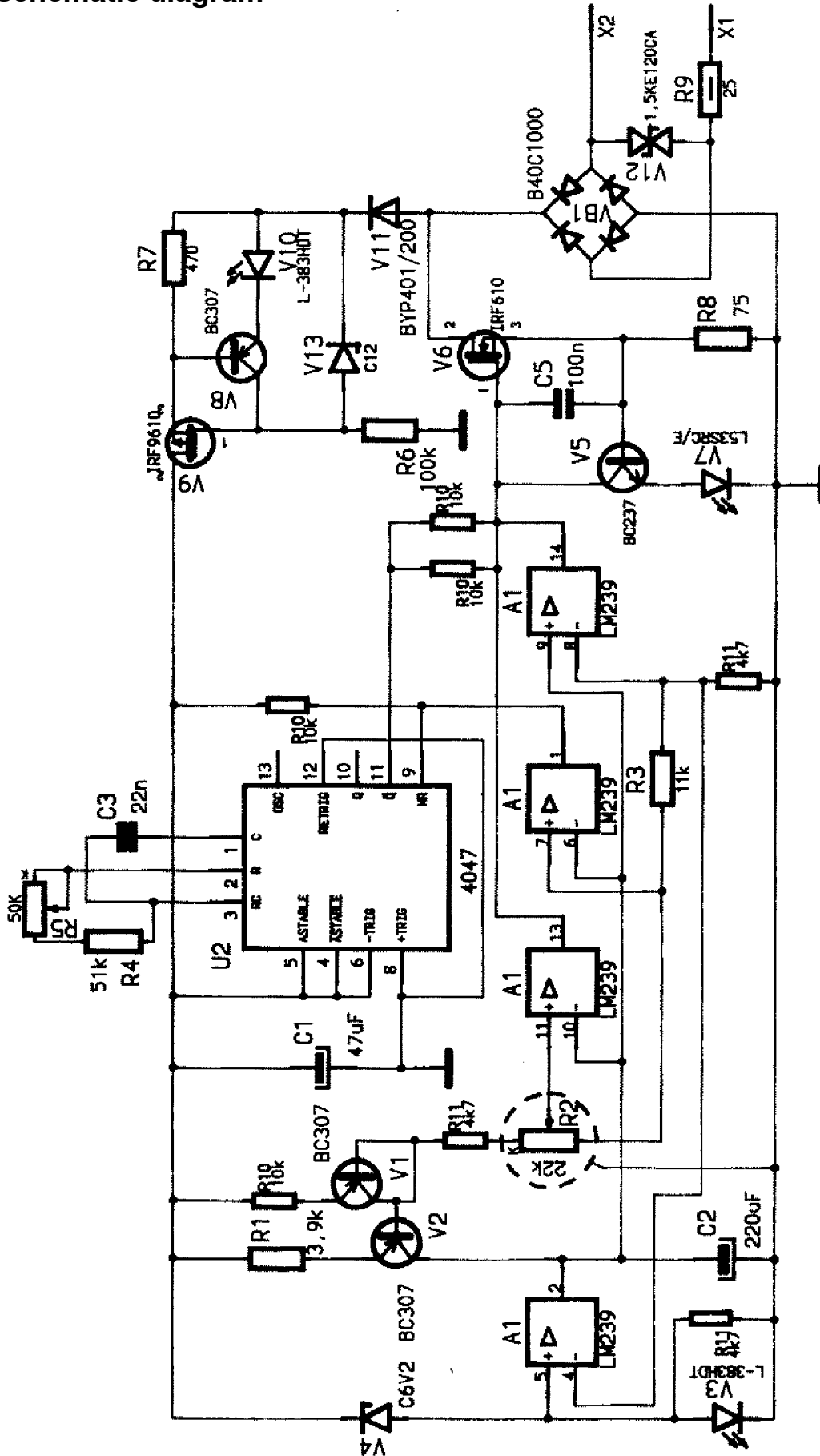
STATIC ELECTRICITY can damage circuit boards and electronic components.

- Observe precautions for handling electrostatic sensitive devices.
- Use proper static-proof bags and boxes.

N02 block diagram

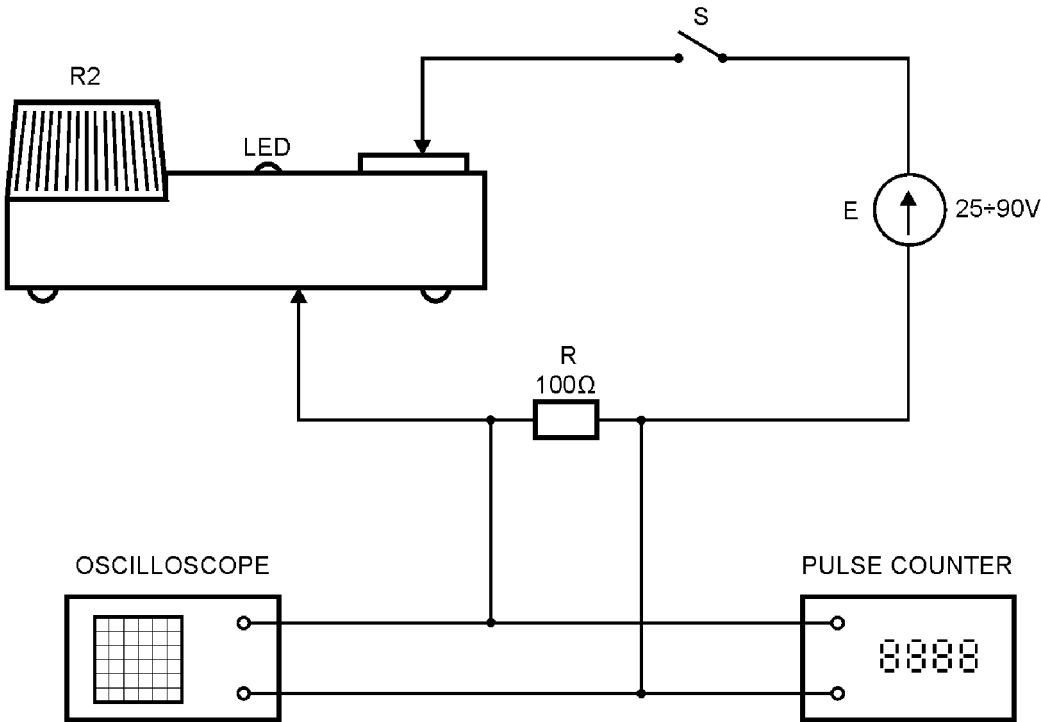


N02 schematic diagram

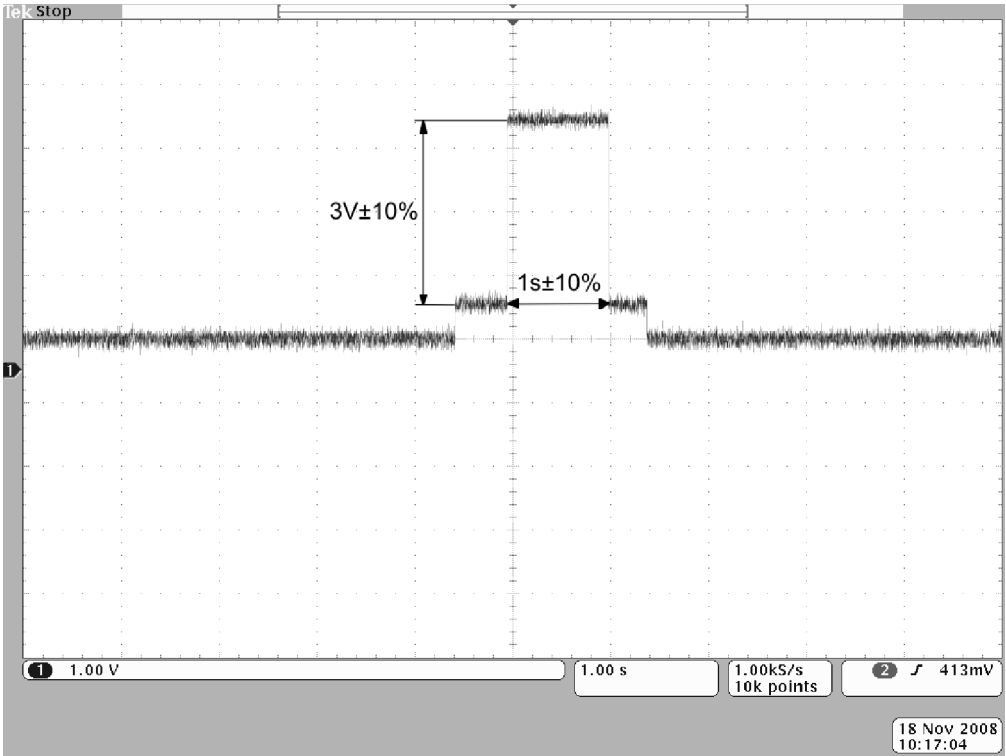


DESCRIPTION OF TESTING/CALIBRATION

Diagram for testing/calibration procedure

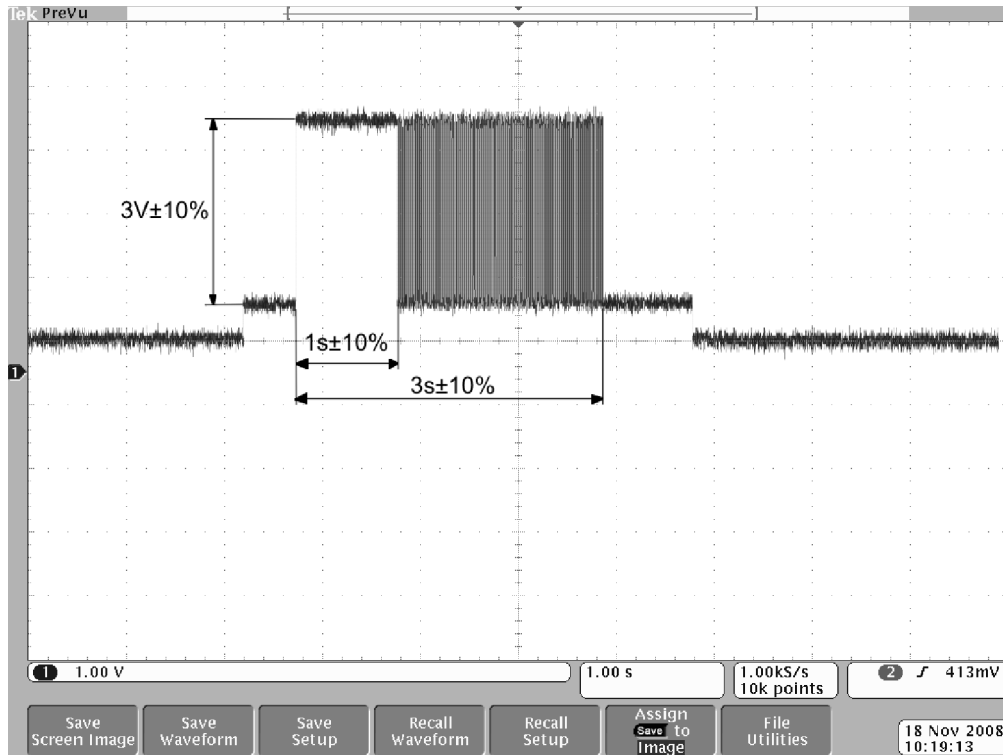


1 Minimum current



Turn the potentiometer R2 to the minimum current value. The correct voltage shape on 100Ω resistor is shown on above oscillogramme.

2 Maximum current



Turn the potentiometer R2 to the maximum current value. The correct voltage shape on 100Ω resistor is shown on above oscillogramme.

3 Calibration

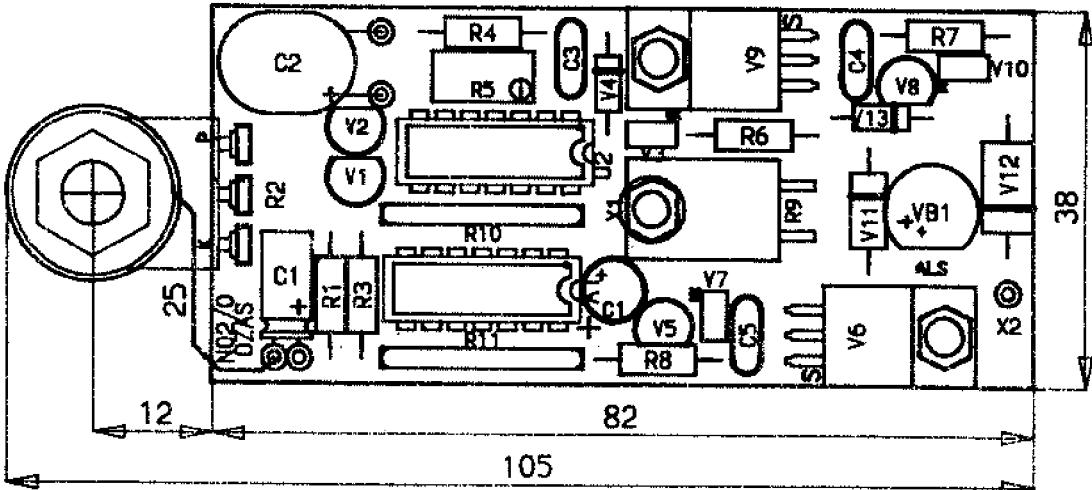
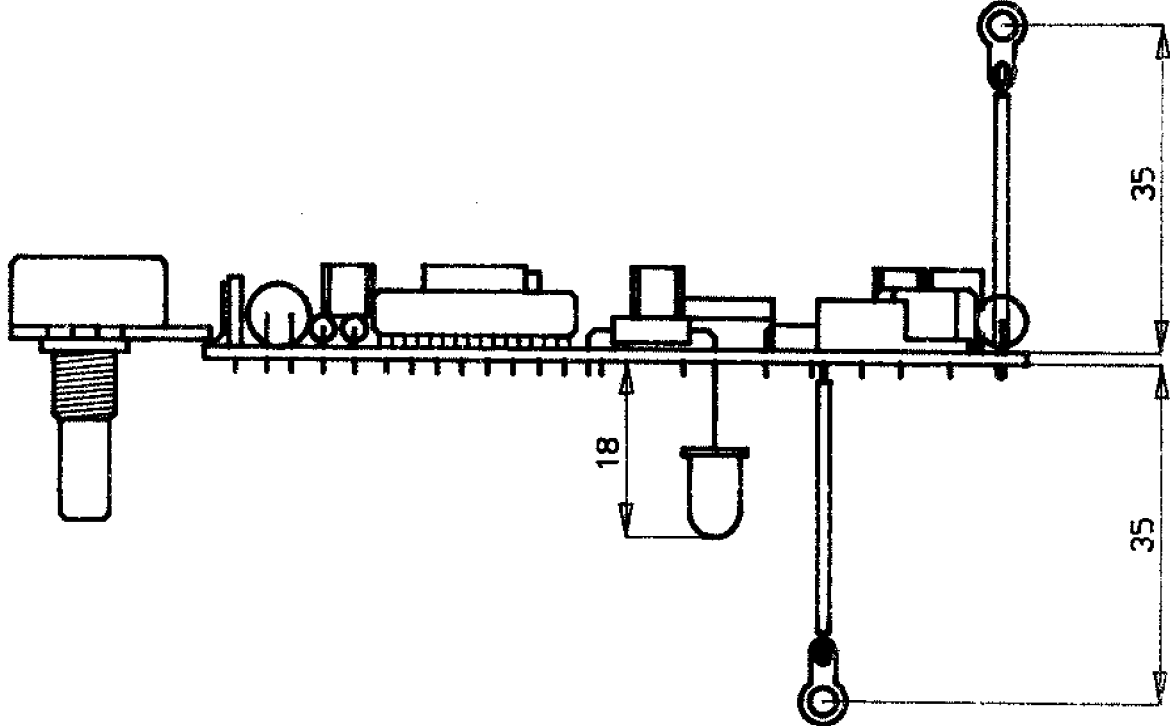
Turn the potentiometer R2 to the maximum current value.

Adjust the potentiometer R5, located on electronics board inside the unit, so the pulse counter read-out is 260 pulses.

NOTE: pulses parameters should remain unchanged for supply voltage ranging from 25 to 90V.

NOTE: any polarity of supply voltage is permissible.

Components layout



INSTRUCTIONS

This chapter is an extract from the instructions for N02.

SAFETY

Users of ESAB welding equipment have the ultimate responsibility for ensuring that anyone who works on or near the equipment observes all the relevant safety precautions. Safety precautions must meet the requirements that apply to this type of welding equipment. The following recommendations should be observed in addition to the standard regulations that apply to the workplace.

All work must be carried out by trained personnel well-acquainted with the operation of the welding equipment. Incorrect operation of the equipment may lead to hazardous situations which can result in injury to the operator and damage to the equipment.

1. Anyone who uses the welding equipment must be familiar with:
 - its operation
 - location of emergency stops
 - its function
 - relevant safety precautions
 - welding
2. The operator must ensure that:
 - no unauthorised person is stationed within the working area of the equipment when it is started up.
 - no-one is unprotected when the arc is struck
3. The workplace must:
 - be suitable for the purpose
 - be free from draughts
4. Personal safety equipment
 - Always wear recommended personal safety equipment, such as safety glasses, flame-proof clothing, safety gloves.
 - Do not wear loose-fitting items, such as scarves, bracelets, rings, etc., which could become trapped or cause burns.
5. General precautions
 - Make sure the return cable is connected securely.
 - Work on high voltage equipment **may only be carried out by a qualified electrician.**
 - Appropriate fire extinguishing equipment must be clearly marked and close at hand.
 - Lubrication and maintenance must **not** be carried out on the equipment during operation.

INSTALLATION

The installation must be executed by a professional.



WARNING!

This product is intended for industrial use. In a domestic environment this product may cause radio interference. It is the user's responsibility to take adequate precautions.

OPERATION

General safety regulations for the handling of the equipment can be found on page 9. Read through before you start using the equipment!

Current setting sequence

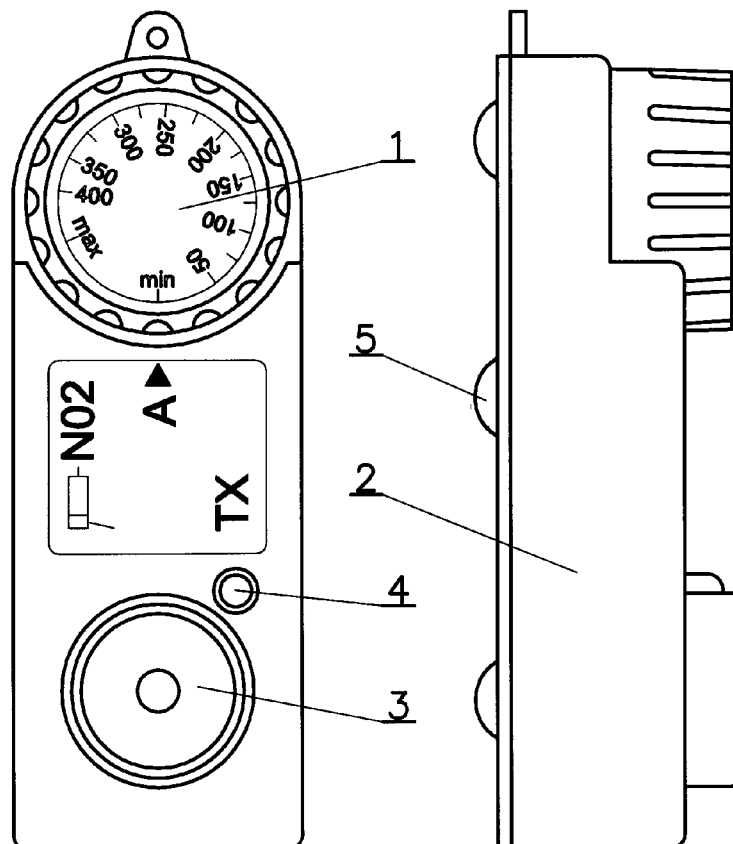
1. Set remote current setting mode on power source.
2. Set demanded current value with knob [1].
3. Put the transmitter on work piece. Make sure there is good electric contact between work piece and copper plate [5].
4. Touch the contact pad [3] with bare tip of electrode gripped with electrode holder, and hold still until end of transmission - LED [4] stops blinking.

Now the current is set and machine is ready for welding.

In order to set other current value, steps 2, 3, 4 must be repeated.

Connection and control devices

- | | | | |
|---|----------------------|---|----------------------------|
| 1 | Current setting knob | 4 | LED transmission indicator |
| 2 | Housing | 5 | Copper plate (bottom) |
| 3 | Contact pad | | |



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