

**INSTALLATION, OPERATING AND MAINTENANCE MANUAL**

**CBX PX1700ECO  
CBX PX1700PRO  
WELDING CONTROL IN CABINET**



**P.E.I.-POINT SRL**

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These instructions for use contain basic requirements which must be met in erection, operation and maintenance. Thus, these instructions for use must be read by the integrator, responsible specialist staff and/or operator before assembly and commissioning.

The instructions must always be available at the location of controls or plant.

**CBX PX1700 can only be operated as intended:**

- if the machine/plant is in a technically perfect condition and is used as intended, with attention being paid to safety and risks as per technical instructions.
- if work on electrical parts of the machine/plant is only done by an electrical expert or trained staff under the guidance and supervision of an electrical expert in accordance with technical regulations.
- if the directions given in technical documents, and particularly in these instructions for use, on the handling of the medium-frequency inverters are observed and followed.



- Personnel with cardiac pacemakers are at risk.
- To minimize accident risks, commissioning work is only to be done by trained specialist staff.
- Protection against indirect contact with live parts by use of a current-operated e.l.c.b. system is not part of standard equipment. Mains-side protection to prevent indirect contact must be ensured in a different way.



**Risk of hazardous voltage**

- Voltage supply L1, L2,
- Transformer connections U, V

**Risk of damage from incorrect connection**

- Appliance inputs are only to be connected to voltage as per given data.
- Do not connect outputs to external voltage.
- Do not connect mains and transformer cables to low voltage +24V. They must be adequately insulated against each other.

**Insulation testing**

Insulation testing is performed during routine testing as per EN 60204.

**External or high voltage**

If external or high voltage testing is performed on machine electrical fittings, all the terminals of the appliances must be disconnected in order to prevent damage to the electronic components in the appliances.

**Condensation of water**

Any water leakage in the BOX must be eliminated immediately because of the risk of arcing. For the same reason, water condensation on the live parts must be prevented.

**Water cooling system**

Never use demineralized water or antifreeze mixture as coolant.

The cooling water must meet the following conditions concerning the concentration of soluble chemicals and insoluble substances:

1. Hydrogen ion concentration pH7...9
2. Chloride 20mg/l max., Nitrate 10mg/l max., Sulphate 100mg/l max.
3. Insoluble substances 250mg/l max.
4. Total water hardness D max 10.5 US degrees ( 1 US degree = 0.95 German degrees = 1.19 UK degrees = 1.71 French degrees)

Tap water usually meets these conditions.

However, if the supplied tap water has got improper characteristics a closed cooling system must be used to be able to check the cooling water permanently. Sediments in the installed water pipe are to be removed by cleaning or exchanging in time.

The water temperature at the cooling water inlet must not exceed 30°C.

Functional failures or other damages caused by faulty quality of cooling water or condensate are not covered by the warranty.



**Summary**

The CBX PX1700 controls resistance-welding transformers designed to work at 50 OR 60 Hz frequency.

**Construction**

The inverter together with a control unit is mounted in a sheet-metal case.

Dimensions: (WxHxD) 300x260x360mm

The connections for the control, the main lines, the water cooling and the welding transformer can be supplied from the back panel.

**Operation with welding current measurement (PX1700PRO)**

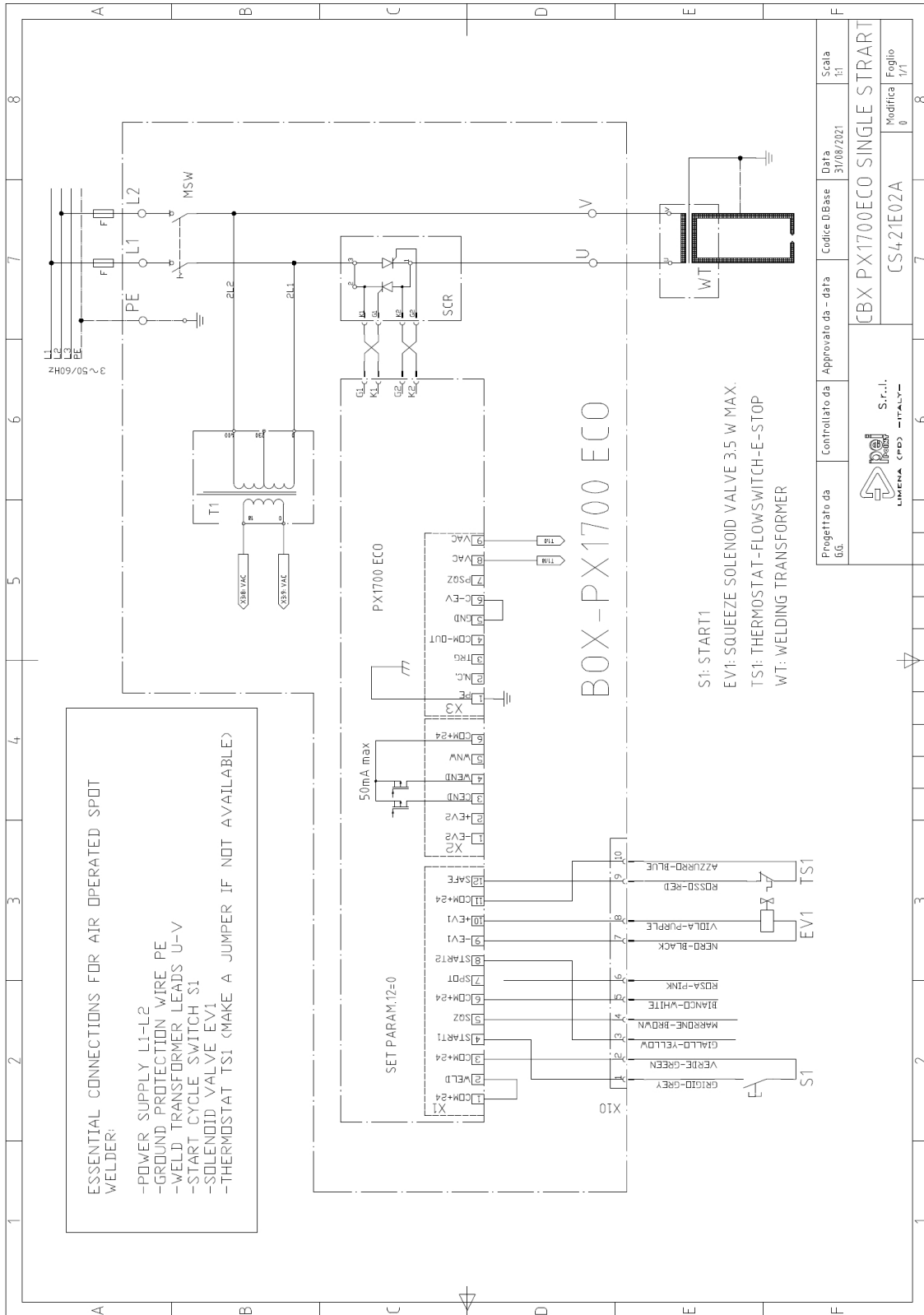
Current is read via a measuring coil (Rogowsky coil 150mV/kA not supplied) to be connected to PX1700PRO control.

**Technical data**

**CBX PX1700**

Power supply connections	2-phase 400V, 50Hz, +15%,-20%
Welding transformer connections	2-phase 400V, 50/60 Hz
Input signals	See electric diagram and PX1700 manuals
Output signals	See electric diagram and PX1700 manuals
Current regulation mode	Open loop circuit with phase shift delay
Maximum load with 90A version	35 kVA @ 50% AC transformer
Maximum load with 160A version	80 kVA @ 50% AC transformer
Maximum welding current	35 kA
Dimensions W*H*D	300x260x360mm
Min. water cooling flow rate	4-6 l/min
Water pressure	2/4 bar
Minimum water temperature	15°C
Ambient temperature	Min.+10°C Max.+40°C
Weight	5,50 kg

**Wiring diagrams**



**Descriptions of signals on CBX PX1700 main connectors**

<b>Connector</b>	<b>Description</b>
L1-L2	POWER SUPPLY VOLTAGE
U-V	OUTPUT VOLTAGE TO MEDIUM FREQUENCY TRANSFORMER
PE	GROUND TERMINAL