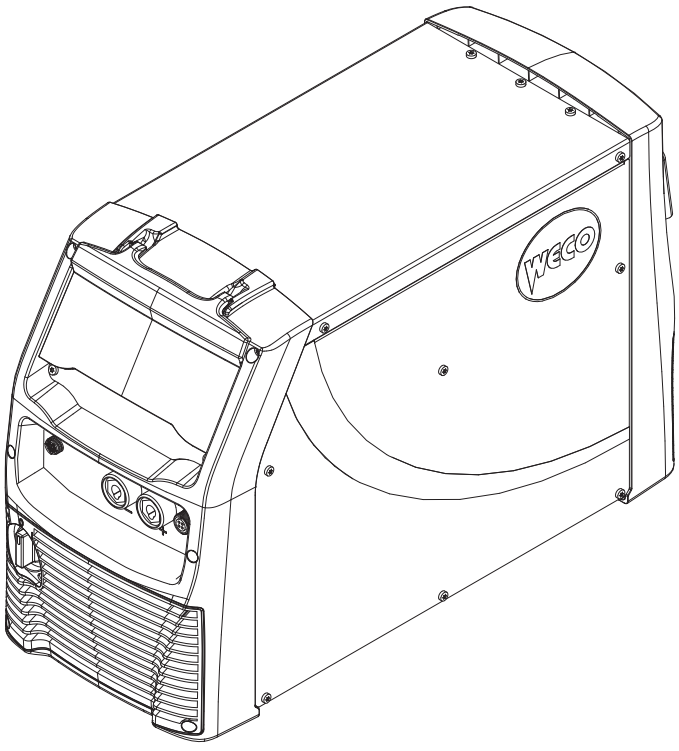
WELD THE WORLD

# Pioneer 3200 - 4000 - 5000
# Pioneer Pulse 3200 - 4000 - 5000
# Power Pulse 3200 - 4000 - 5000
# Power Pulse 3200 - 4000 - 5000 Robot

## Instruction Manual

**ENGLISH**

Translation of original instructions



Code 006.0001.2430
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# 1 GENERAL INFORMATION

**IMPORTANT!**
**For your safety**

This documentation must be consigned to the user prior to installation and commissioning of the unit.
**Read the manual "GENERAL INSTRUCTIONS FOR USE" provided separately from this manual before installing and commissioning the equipment**.
The meaning of the symbols in this manual and the associated precautionary information are given in the "GENERAL INSTRUCTIONS FOR USE".
If the "GENERAL INSTRUCTIONS FOR USE" are not present, it is mandatory to request a replacement copy from the Manufacturer or from your dealer.
Retain these documents for future consultation.

## 1.1 MEANING OF THE SYMBOLS

**DANGER!**

**This pictogram warns of danger of death or serious injury.**

**WARNING!**

**This pictogram warns of a risk of injury or damage to property.**

**CAUTION!**

**This pictogram warns of a potentially hazardous situation.**

**NOTICE!**

**This pictogram gives important information concerning the execution of the relevant operations.**

**Information**

**This pictogram indicates additional information or refers to another section of the manual with the related information.**

- **Note:** The figures in this manual are purely guideline and the images may contain differences with respect to the actual equipment to which they refer.

## 1.2 PRESENTATION

Pioneer 3200-4000-5000, Pioneer Pulse 3200-4000-5000, Power Pulse 3200-4000-5000 are multifunction current generators for MIG/MAG, MMA and TIG welding (with contact ignition).

The Power Pulse 3200-4000-5000 Robot version, featuring an interface for ROBOT applications, allows the generator to be connected to the corporate LAN network via Ethernet port or via Wi-Fi communication and to the ROBOT system via a fieldbus module. It is possible to install different types of modules in the generator depending on the type of communication protocol used by the robot system.

**Fan.** The fan is switched on only during the welding phase, at the end of which it remains switched on for a preset time depending on the welding conditions.
In any case, the fan is controlled by special thermal sensors that guarantee proper cooling of the machine.

**Accessories/auxiliary devices that can be connected to the equipment:**
- Generator carriage for multifunction configuration (MIG/MAG).
- Liquid cooling unit for MIG/MAG torches.
- Wire feeder carriage.

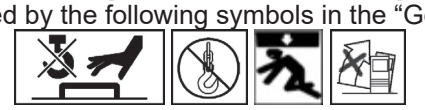
For an up-to-date list of accessories and the latest news available, contact your dealer.

# 2 INSTALLATION

**DANGER!**

**Lifting and positioning**

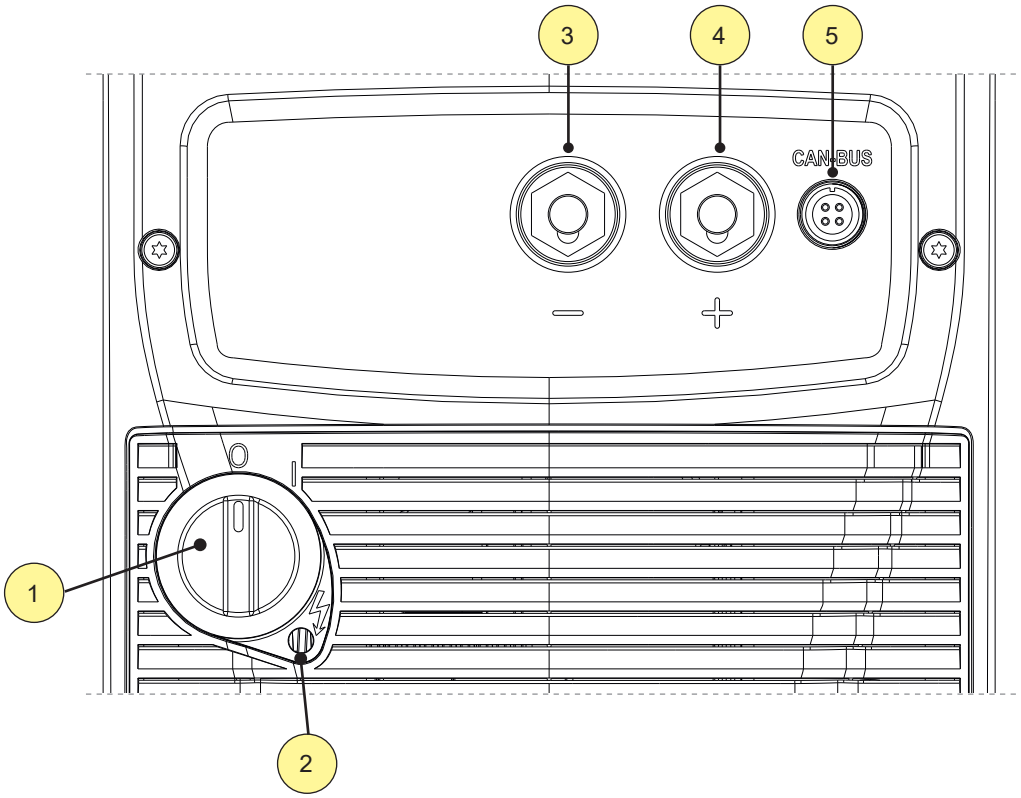
Read the warnings highlighted by the following symbols in the “General prescriptions for use”.



## 2.1 CONNECTION TO THE POWER SUPPLY NETWORK

The characteristics of the power supply network to which the equipment must be connected are indicated in chapter “TECHNICAL DATA”.
The machine can be connected to generator sets provided that they have a stabilised voltage.
Perform connection/disconnection operations between the various devices with the machine switched off.

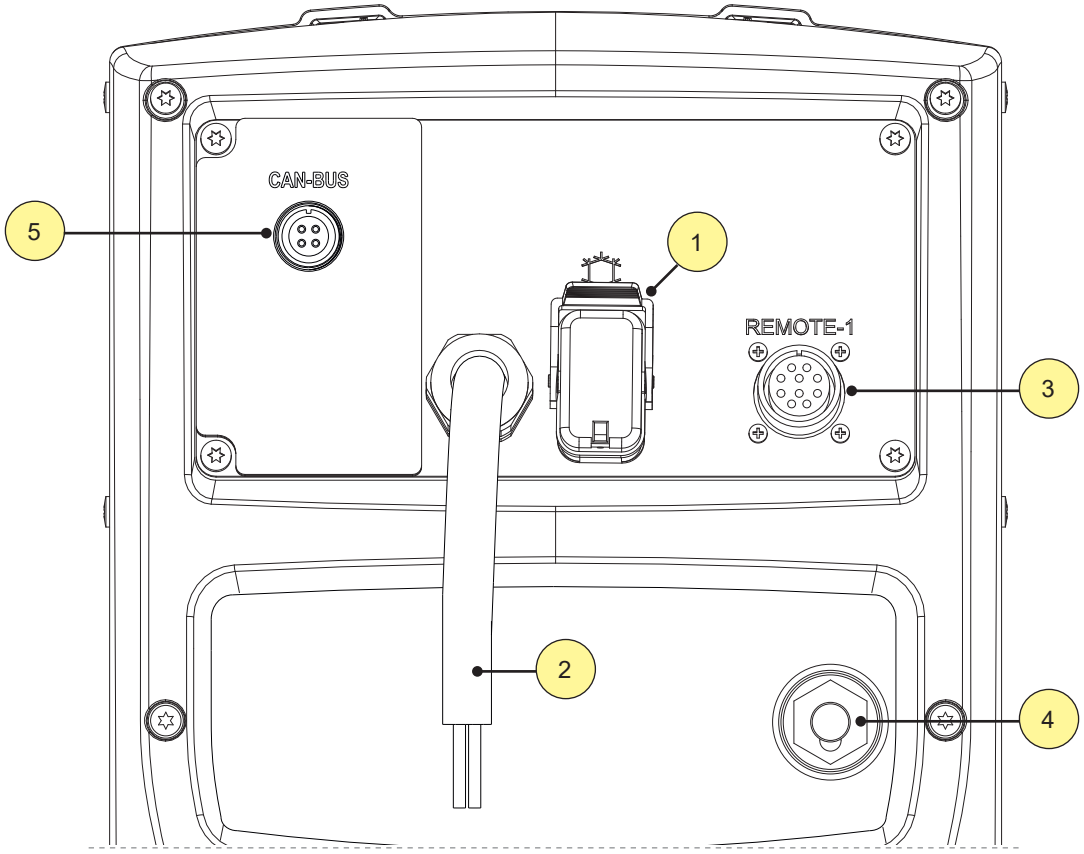
## 2.2 FRONT PANEL




1. Switch to switch the generator off and on.
2. Network protection activation LED.
3. Negative polarity welding socket
4. Positive polarity welding socket
5. Connector for CAN-BUS devices: devices that communicate via CAN-BUS can be connected to this connector (remote control, data manager, IR robot interface, etc).

## 2.3 REAR PANEL

*Pioneer 3200 - 4000 - 5000*
*Pioneer Pulse 3200 - 4000 - 5000*
*Power Pulse 3200 - 4000 - 5000*

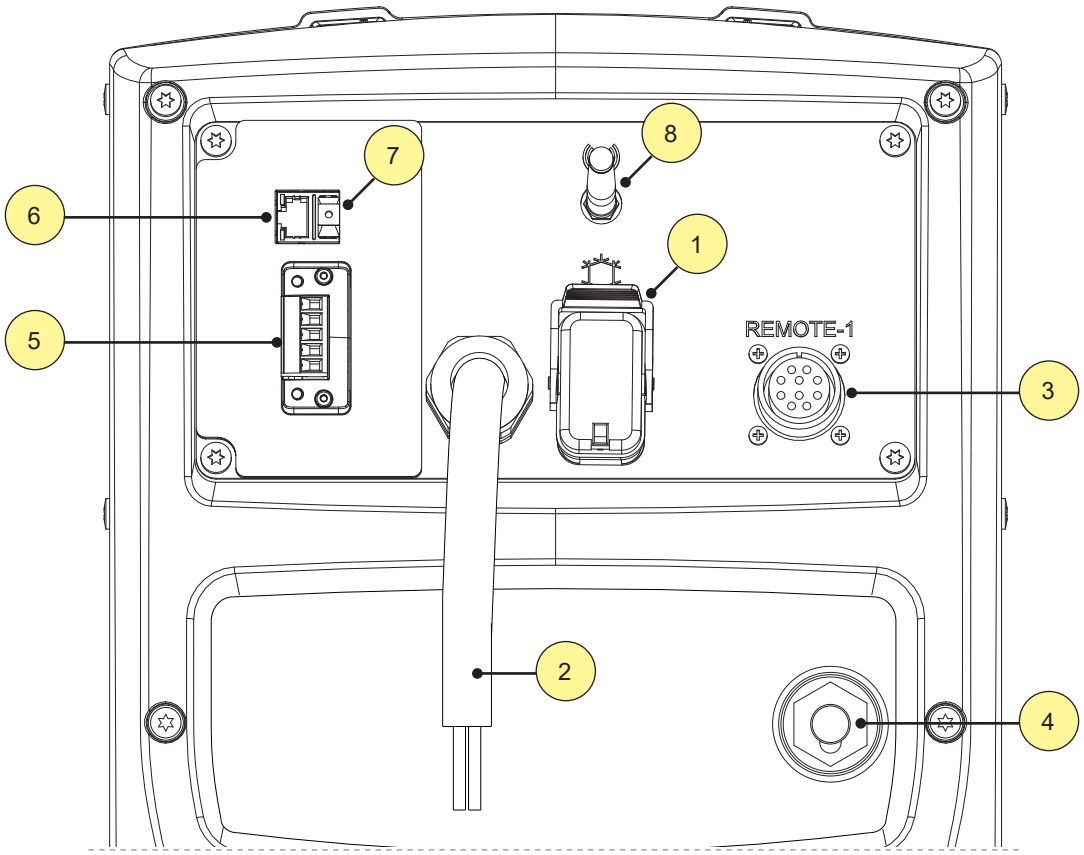



1. Connector for powering the cooling unit
   - Voltage: 400 V a.c.
   - Current supplied: 1.2 A
   - IP protection class: IP20 (cap open) / IP66 (cap closed)

⚠ **DANGER!** **Dangerous voltage!** If no equipment is connected to the socket, always keep the cover closed.

2. Power supply cable
   - Total length (external part): 4.3 m
   - Number and section of conductors: 4 x 4 $mm^2$
   - Type of electrical plug: not supplied
3. Cable bundle connector to connect the generator to the remote unit
4. Socket to connect the power cable between the generator and the remote device
5. Connector for CAN-BUS devices: devices that communicate via CAN-BUS can be connected to this connector (remote control, data manager, IR robot interface, etc).

*Power Pulse 3200 - 4000 - 5000 Robot*




1. Connector for powering the cooling unit
   - Voltage: 400 V a.c.
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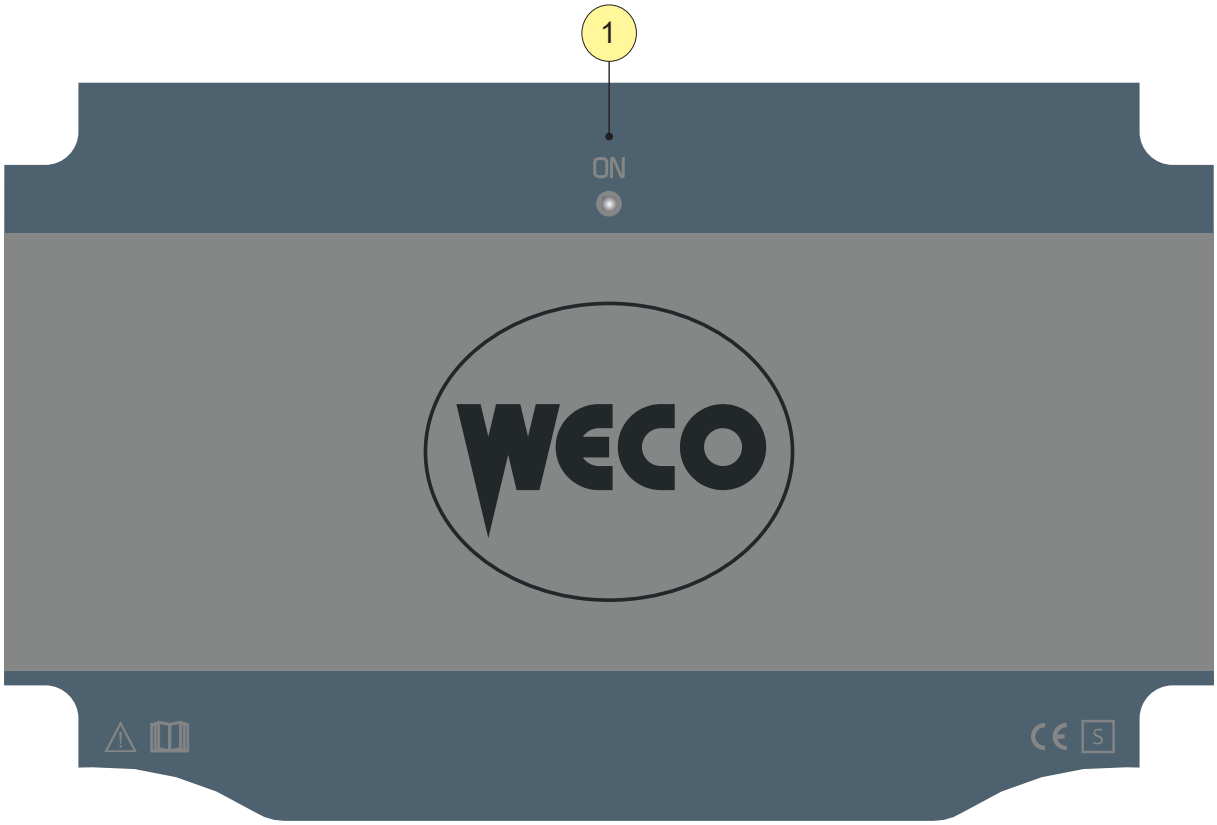
⚠ **DANGER!** **Dangerous voltage!** If no equipment is connected to the socket, always keep the cover closed.

2. Power supply cable
   - Total length (external part): 4.3 m
   - Number and section of conductors: 4 x 4 $mm^2$
   - Type of electrical plug: not supplied
3. Cable bundle connector to connect the generator to the remote unit
4. Socket to connect the power cable between the generator and the remote device
5. Slot for the FIELD BUS connector: a module for communication with other devices can be inserted into this slot (ROBOT).
   The module varies depending on the type of protocol used for communication between devices.
6. Port for the connection of the Ethernet cable.
7. USB port By means of this port, it is possible to:
   - save the welding reports to a USB stick. Saving reports to USB must be pre-configured using the Data Manager software.
   - update the software of the ROBOT interface board.
   - connect a barcode reader.
8. Connector for Wi-Fi antenna (optional) .

**Information** The version for ROBOT applications comes with a specific manual to install the generator on the ROBOT system, which varies depending on the brand of the ROBOT system. Refer to the specific manual for this type of installation.

## 3 USER INTERFACE




| REF. | SYMBOL | DESCRIPTION |
|---|---|---|
| 1 | ON | This LED illuminates to confirm the presence of power on the output sockets. |

# 4 TECHNICAL DATA

| | |
|---|---|
| **Directives applied** | Waste electrical and electronic equipment (WEEE) |
| | Electromagnetic compatibility (EMC) |
| | Low voltage (LVD) |
| | Restriction of the use of certain hazardous substances (RoHS) |
| | Eco Design of energy-related products |
| **Construction standards** | EN 60974-1; EN 60974-5; EN 60974-10 Class A |
| **Conformity markings** | Equipment compliant with European directives in force |
| | Equipment suitable in an environment with increased hazard of electric shock |
| | Equipment compliant with WEEE directive |
| | Equipment compliant with RoHS directive |

## 4.1 Pioneer 3200 - Pioneer Pulse 3200 - Power Pulse 3200 - Power Pulse 3200 Robot

| | | | | |
|---|---|---|---|---|
| **Supply voltage** | 3x400V~ ±15% / 50-60Hz | | | |
| **Network protection** | 20 A Delayed | | | |
| **Zmax** | This equipment complies with IEC 61000-3-12, provided that the maximum permitted system impedance is less than or equal to 103 mΩ at the interface point between the power supply of the utility and the public system. It is the responsibility of the installer or user of the equipment to make sure, consulting with the distribution network operator if necessary, that the equipment is only connected to a power supply with a maximum permitted system impedance of less than or equal to 103 mΩ. | | | |
| **Dimensions (D x L x H)** | 722 x 293 x 466 mm | | | |
| **Weight** | 29.2 kg | | | |
| **Insulation class** | H | | | |
| **Protection rating** | IP23S | | | |
| **Cooling** | AF: Forced air cooling (with fan) | | | |
| **Maximum gas pressure** | 0.5 MPa (5 bar) | | | |
| **Welding mode** | | MMA | TIG | MIG/MAG |
| **Static characteristic** | |  Falling characteristic |  Falling characteristic |  Flat characteristic |
| **Current and voltage regulation range** | | 10 A - 20.4V<br>320 A - 32.8V | 5 A - 10.2V<br>320 A - 22.8V | 10 A - 14.5V<br>320 A - 30V |
| **Welding current / Working voltage** | 40% (40°C) | - | - | - |
| | 60% (40°C) | 320 A - 32.8V | 320 A - 22.8V | 320 A - 30.0V |
| | 100% (40°C) | 260 A - 30.4V | 260 A - 20.4V | 260 A - 27.0V |
| **Maximum power absorbed** | 40% (40°C) | - | - | - |
| | 60% (40°C) | 12.9 kVA - 12.2 kW | 9.4 kVA - 8.8 kW | 12.0 kVA - 11.2 kW |
| | 100% (40°C) | 9.8 kVA - 9.2 kW | 7.0 kVA - 6.4 kW | 8.7 kVA - 8.2 kW |
| **Maximum current absorbed** | 40% (40°C) | - | - | - |
| | 60% (40°C) | 18.7 A | 13.7 A | 17.3 A |
| | 100% (40°C) | 14.2 A | 10.2 A | 12.6 A |
| **Actual current absorbed** | 40% (40°C) | - | - | - |
| | 60% (40°C) | 14.5 A | 10.6 A | 13.4 A |
| | 100% (40°C) | 14.2 A | 10.2 A | 12.6 A |
| **Open voltage (U0)** | 66 V | | | |
| **Reduced open voltage (Ur)** | 6.6 V | | | |
| **Energy source efficiency** | Efficiency<br>85% | | | |
| | Energy consumption under no-load conditions<br>24 W | | | |
| **Critical raw materials** | According to the information provided by our suppliers, this product does not contain critical raw materials in quantities greater than 1 g per component. | | | |

## 4.2 Pioneer 4000 - Pioneer Pulse 4000 - Power Pulse 4000 - Power Pulse 4000 Robot

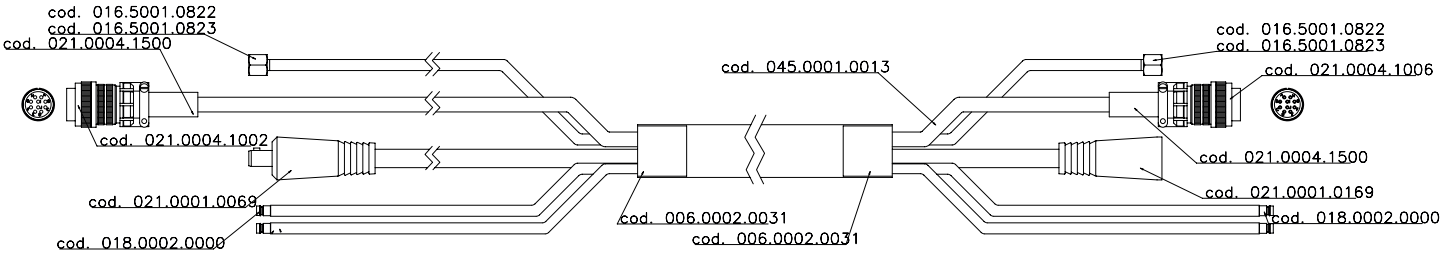
| | | | | |
|---|---|---|---|---|
| **Supply voltage** | 3x400V~ ±15% / 50-60Hz | | | |
| **Network protection** | 32 A Delayed | | | |
| **Zmax** | This equipment complies with IEC 61000-3-12, provided that the maximum permitted system impedance is less than or equal to 28 mΩ at the interface point between the power supply of the utility and the public system. It is the responsibility of the installer or user of the equipment to make sure, consulting with the distribution network operator if necessary, that the equipment is only connected to a power supply with a maximum permitted system impedance of less than or equal to 28 mΩ. | | | |
| **Dimensions (D x L x H)** | 722 x 293 x 466 mm | | | |
| **Weight** | 29.5 kg | | | |
| **Insulation class** | H | | | |
| **Protection rating** | IP23S | | | |
| **Cooling** | AF: Forced air cooling (with fan) | | | |
| **Maximum gas pressure** | 0.5 MPa (5 bar) | | | |
| **Welding mode** | | MMA | TIG | MIG/MAG |
| **Static characteristic** | |  Falling characteristic |  Falling characteristic |  Flat characteristic |
| **Current and voltage regulation range** | | 10 A - 20.4V<br>400 A - 36.0V | 5 A - 10.2V<br>400 A - 26.0V | 10 A - 14.5V<br>400 A - 34.0V |
| **Welding current / Working voltage** | 40% (40°C) | - | - | - |
| | 60% (40°C) | - | - | - |
| | 100% (40°C) | 400 A - 36.0V | 400 A - 26.0V | 400 A - 34.0V |
| **Maximum power absorbed** | 40% (40°C) | - | - | - |
| | 60% (40°C) | - | - | - |
| | 100% (40°C) | 17.3 kVA - 16.5 kW | 12.9 kVA - 12.4 kW | 16.5 kVA - 15.7 kW |
| **Maximum current absorbed** | 40% (40°C) | - | - | - |
| | 60% (40°C) | - | - | - |
| | 100% (40°C) | 25.0 A | 18.6 A | 23.9 A |
| **Actual current absorbed** | 40% (40°C) | - | - | - |
| | 60% (40°C) | - | - | - |
| | 100% (40°C) | 25.0 A | 18.6 A | 23.9 A |
| **Open voltage (U0)** | 66 V | | | |
| **Reduced open voltage (Ur)** | 6.6 V | | | |
| **Energy source efficiency** | Efficiency<br>86% | | | |
| | Energy consumption under no-load conditions<br>24 W | | | |
| **Critical raw materials** | According to the information provided by our suppliers, this product does not contain critical raw materials in quantities greater than 1 g per component. | | | |

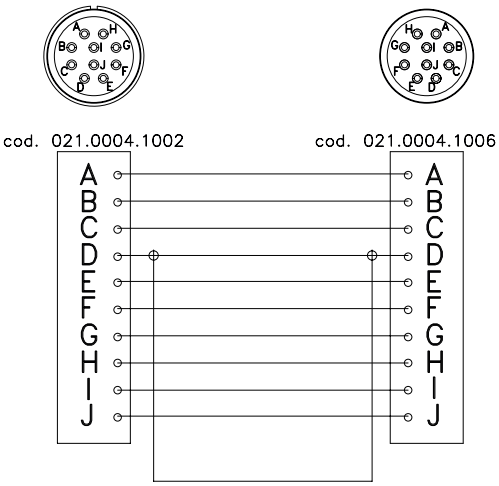
## 4.3 PIONEER 5000 - PIONEER PULSE 5000 - POWER PULSE 5000 - POWER PULSE 5000 ROBOT

| | | | | |
|---|---|---|---|---|
| **Supply voltage** | 3x400V~ ±15% / 50-60Hz | | | |
| **Network protection** | 32 A Delayed | | | |
| **Zmax** | This equipment complies with IEC 61000-3-12, provided that the maximum permitted system impedance is less than or equal to 26 mΩ at the interface point between the power supply of the utility and the public system. It is the responsibility of the installer or user of the equipment to make sure, consulting with the distribution network operator if necessary, that the equipment is only connected to a power supply with a maximum permitted system impedance of less than or equal to 26 mΩ. | | | |
| **Dimensions (D x L x H)** | 722 x 293 x 466 mm | | | |
| **Weight** | 29.5 kg | | | |
| **Insulation class** | H | | | |
| **Protection rating** | IP23S | | | |
| **Cooling** | AF: Forced air cooling (with fan) | | | |
| **Maximum gas pressure** | 0.5 MPa (5 bar) | | | |
| **Welding mode** | | MMA | TIG | MIG/MAG |
| **Static characteristic** | |  Falling characteristic |  Falling characteristic |  Flat characteristic |
| **Current and voltage regulation range** | | 10 A - 20.4V<br>500 A - 40.0V | 5 A - 10.2V<br>500 A - 30.0V | 10 A - 14.5V<br>500 A - 39.0V |
| **Welding current / Working voltage** | 40% (40°C) | 500 A - 40.0 V | 500 A - 30.0 V | 500 A - 39.0 V |
| | 60% (40°C) | 450 A - 38.0 V | 450 A - 28.0 V | 450 A - 36.5 V |
| | 100% (40°C) | 400 A - 36.0 V | 400 A - 26.0 V | 400 A - 34.0 V |
| **Maximum power absorbed** | 40% (40°C) | 24.5 kVA - 23.1 kW | 18.8 kVA - 17.8 kW | 23.8 kVA - 22.6 kW |
| | 60% (40°C) | 20.7 kVA - 19.7 kW | 15.7 kVA - 15.0 kW | 20.0 kVA - 19.0 kW |
| | 100% (40°C) | 17.3 kVA - 16.5 kW | 12.9 kVA - 12.4 kW | 16.5 kVA - 15.7 kW |
| **Maximum current absorbed** | 40% (40°C) | 35.4 A | 27.2 A | 34.4 A |
| | 60% (40°C) | 29.9 A | 22.7 A | 28.9 A |
| | 100% (40°C) | 25.0 A | 18.6 A | 23.9 A |
| **Actual current absorbed** | 40% (40°C) | 22.4 A | 17.2 A | 21.8 A |
| | 60% (40°C) | 23.2 A | 17.6 A | 22.4 A |
| | 100% (40°C) | 25.0 A | 18.6 A | 23.9 A |
| **Open voltage (U0)** | 66 V | | | |
| **Reduced open voltage (Ur)** | 6.6 V | | | |
| **Energy source efficiency** | Efficiency<br>86% | | | |
| | Energy consumption under no-load conditions<br>24 W | | | |
| **Critical raw materials** | According to the information provided by our suppliers, this product does not contain critical raw materials in quantities greater than 1 g per component. | | | |

# 5 WIRING DIAGRAM

## 5.1 CABLE BUNDLE: GENERATOR - WIRE FEEDER



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