

ForePay OrPAY1000 Installation Manual

P/N: 817400083

Revision A



SAFETY CONSIDERATIONS

Carefully read all warnings and instructions, provided to help you install and maintain the equipment safely in the highly flammable environment of a gas station.

Disregarding these warnings and instructions could result in serious injury and property loss or damage.

It is your responsibility to install, operate and maintain the equipment according to the instructions in this manual, and to conform to all applicable codes, regulations and safety measures. Failure to do so could void all warranties associated with this equipment.

Ensure that the installation is performed by experienced personnel, licensed to perform work in gas stations and in flammable environments, according to the local regulations and all relevant standards.

WARNING - EXPLOSION HAZARD

Use a separate conduit for intrinsically safe wiring. Do not run any other wires or cables through this conduit, since it may lead to an explosion hazard.

Use standard test equipment only in the non-hazardous area of the fuel station, and approved test equipment for the hazardous areas.

Installation and service must comply with all applicable requirements of the National Fire Protection Association NFPA-30 "Flammable and Combustible Liquids Code", NFPA-30A "Automotive and Marine Service Station Code", NFPA-70 "National Electric Code", federal, state and local codes and any other applicable safety codes and regulations.

Do not perform metal work in a hazardous area. Sparks generated by drilling, tapping and other metal work operations could ignite fuel vapors and flammable liquids, resulting in death, serious personal injury, property loss and damage to you and other persons.

CAUTION - SHOCK HAZARD

Dangerous AC voltages that could cause death or serious personal injury are used to power the equipment. Always disconnect power before working on the equipment. The equipment may have more than one power supply connection point. Disconnect all power before servicing.

WARNING - PASSING VEHICLES

When working in an open area, block off the work area to protect yourself and other persons. Use safety cones or other signaling devices.

WARNING

Substitutions of components could impair intrinsic safety. Use of unauthorized components or equipment will void all warranties associated with this equipment.

CAUTION

Do not attempt to make any repair on the printed circuit boards that reside in the equipment, as this will void all warranties associated with this equipment.

PROPRIETARY NOTICE

The information contained in this guide is confidential and proprietary to Orpak Systems Ltd.. No part of this guide may be disclosed or reproduced in any form without written permission of Orpak Systems Ltd.. The information provided in this document is current as of the date of its publication, and it may be changed at any time without notice.

DISCLAIMER

This document is provided for reference only and while every effort has been made to ensure correctness at the time of publication, Orpak Systems Ltd. assumes no responsibility for errors or omissions.

FCC COMPLIANCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

- » Reorient or relocate the receiving antenna
- » Increase the separation between the equipment and receiver
- » Connect the equipment to an outlet on a circuit different from that to which the receive is connected
- » Consult an authorized dealer or service representative for help

FCC WARNING

Modifications not expressly approved by the manufacturer could void the user authority to operate the equipment under FCC Rules.

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Section 1 Introduction

1.1. General

This manual provides instructions on how to install OrPAY1000, Orpak's flexible and cost-effective outdoor payment and authorization terminal.

1.2. Solution Description

OrPAY1000 is Orpak's next generation of flexible and cost-effective outdoor payment terminals. installed directly onto the dispenser or wall mounted next to it for both attended and unattended activities. OrPAY1000 is installed directly onto the dispenser or wall mounted next to it for both attended and unattended activities. The terminal boasts advanced user interface and supports a wide range of payment options, including:

- » Contactless MiFare cards & tags
- » 125KHz tags
- » Magnetic stripe cards
- » 2D barcode scanner for vouchers and coupons

Figure 1-1 - OrPAY1000 - General View

1.3. Main Features

The OrPAY1000 payment terminal is small enough to fit in any standard pump head or pedestal, yet provides an amazingly efficient advanced user interface with its 4.3" multimedia color display, 4 screen addressable keys, and full alphanumeric vandal proof 40 key keyboard. Additionally, the device enables various communication interfaces such as LAN, RS-485 to the station controller (FCC), or POS.

OrPAY1000 is designed specifically as a "pay at the pump" solution at retail sites for cash or fleet card fuel purchases, forecourt promotions, local accounts, loyalty schemes, and attendant management. In addition, OrPAY1000 features simplicity, while enabling all common authorization methods as well as simple data entry by drivers utilizing the terminal's keyboard (see [Figure 1-2](#)).



Figure 1-2 - OrPAY1000 Main Components

1.4. Manual Structure

This manual comprises the following chapters:

Chapter 1: Introduction

This chapter provides a general description of the OrPAY1000 outdoor payment terminal.

Chapter 2: Installation

This chapter provides instructions for installing the OrPAY1000.

Chapter 3: Maintenance

This chapter provides basic maintenance instructions for the OrPAY1000.

1.5. Documentation Conventions

This manual uses the following conventions:



Warning notes contain information that, unless strictly observed, could result in injury or loss of life.



Caution notes contain information that, unless strictly observed, could result in damage or destruction of the equipment or long-term health hazards to personnel.



Notes contain helpful comments or references to material not covered in the manual.



Best practice notes contain helpful suggestions.



Example notes contain additional information to illustrate a concept/procedure.

1.6. Specifications

The following details OrPAY1000's specifications and external interfaces.

1.6.1. General Specifications

The following table details the general specifications for OrPAY1000 (see [Table 1-1](#)):

Table 1-1 - General Specifications

Parameter	Value
PHYSICAL	
Dimensions (HxWxD)	164 mm x 179 mm x 35.5 mm (6.456" x 7.047" x 1.397")
Weight	600 gm
Rear Panel (HxW)	149 mm x 135 mm (5.866" x 5.314")
Rear Panel - cable door (HxW)	157.2 mm x 43.6 mm (6.188" x 1.716")
ELECTRICAL	
Input Voltage	24VDC $\pm 10\%$ (terminal can be operated in the range 12-24VDC depending on local rules)
Power Consumption	45W
ENVIRONMENTAL	
Operational Temperature	-40 to +65°C -30 to +60°C (with barcode reader)
Storage Temperature	-40 to +85°C
Humidity	95% non-condensing
Vibration	IEC 60945 §8.7
Ingress Protection	IP65
Certifications	
	» CE » FCC » Atex zone 2 » UL / cUL  Note: This is not an exhaustive list and requirements may differ from country to country.

1.6.2. External Interfaces

The following details the various types of ports supported by OrPAY1000.

1.6.2.1. Serial Port

The following details the various serial ports:

- » RS232-level, 5-wire (RxD, TxD, RTS, CTS, GND)
- » Unshielded RJ45 female connector
- » Wired as Data Terminal Equipment (see [Table 1-2](#))

Table 1-2 - Serial Port Pinout

Pin	Signal
1	TX1
2	RX1
3	GND
4	485_1-
5	485_1+
6	GPIO
7	TX2
8	RX2
9	GND
10	485_2-
11	485_2+
12	E
13	V-
14	V+

1.6.2.2. USB Port

Devices support will be implemented on a per-customer basis.

USB-A connector with standard pin-out is described in the Port Pinout table (see [Table 1-3](#)):

Table 1-3 - USB Port Pinout

Pin	Signal
1	+5V
2	D-
3	D+
4	GND

1.6.2.3. LAN Port

The following details the various LAN ports:

- » Ethernet
- » 10/100 baseT
- » Shielded RJ45 female connector (see [Table 1-4](#))

Table 1-4 - LAN Port Pinout

Pin	Signal
1	TX+
2	TX-
3	RX+
4	n.c.
5	n.c.
6	RX-
7	n.c.
8	n.c.

Section 2 Installation

2.1. General

The following provides instructions for installing the OrPAY1000. While the guidelines deal primarily with the requirements for mounting onto a fuel pump-head, the steps are applicable to any type of cabinet.

2.2. Precautions and Safety Information

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion or electrical shock could occur and cause death or serious injury if these safe service procedures are not followed.

Preliminary Precautions

You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain, or service this equipment.

Emergency Total Electrical Shut-Off

The first and most important information you must know is how to stop all fuel flow to the pump and island. Locate the switch or circuit breakers that shut-off all power to all fueling equipment and dispensing devices.

Total Electrical Shut-Off Before Access

Any procedure requiring access to electrical components or the electronics of a pump / dispenser requires total electrical shut-off of that unit. Know the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing.

Evacuation, Barricading, and Shut-Off

Any procedures requiring accessing a pump / dispenser head requires the following three actions:

- » An evacuation of all unauthorized persons and vehicles
- » Using safety tape or cones as barricades for the effected units
- » A total electrical shut-off of the unit

Read the Manual

Read, understand, and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, contact Orpak's Customer Service. It is imperative for your safety, and the safety of others, to understand the procedures before beginning work.

Follow the Regulations

There is applicable information in Occupational Safety and Health regulations, and national, state, and local codes, which must be followed. Failure to install, inspect, maintain, or service this equipment in accordance with these codes, regulations, and standards may lead to legal citations with penalties, or affect the safe use and operation of the equipment.

Replacement Parts

Use only genuine Orpak replacement parts and retrofit kits in your installation. Using parts other than genuine Orpak replacement parts could create a safety hazard and violate local regulations. Repair should only be done by authorized personnel certified by Orpak.

Prevent Explosions and Fires

Fuels and their vapors will become explosive if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause explosive vapors in the vicinity of dispenser or island.



Caution: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.



Attention: Danger d'explosion si la batterie n'est pas proprement remplacé. Jetez les batteries usagées conformément aux instructions.

No Open Flames

Open flames from matches, lighters, welding torches, or other sources can ignite fuels and their vapors.

No Sparks - No Smoking

Sparks from starting vehicles, starting or using power tools, burning cigarettes, cigars or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuels and their vapors. After getting out of a vehicle, touch the metal of your vehicle to discharge any electrostatic charge before you approach the dispenser island.

Working Alone

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Be familiar with Cardiopulmonary Resuscitation (CPR) methods if you are working with or around high voltages. This information is available from the Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA tag out and lock out procedures.

Working With Electricity Safely

Be sure to use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion or electrical shock. Be sure grounding connections are properly made. Make sure that sealing devices and compounds are in place. Be sure not to pinch wires when replacing covers. Follow OSHA Lock-Out and Tag-Out requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Be sure to clean hands after handling equipment. Do not place any equipment in mouth.

Informing Emergency Personnel

Compile the following information for emergency personnel:

- » Location of accident (e.g. address, front / back of building, etc.)
- » Nature of accident (e.g. possible heart attack, run over by car, burns, etc.)
- » Age of victim (e.g. baby, teenager, middle-age, elderly)

- » Whether or not victim has received first aid (e.g. stopped bleeding by pressure, etc.)
- » Whether or not victim has vomited (e.g. if swallowed or inhaled something, etc.)



Warning: Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.



Note: The maximum available current from the building installation (AC / DC power supply) shall be less than 85A under any single fault condition.

North American Directives

For UL standard for North America, "TYPE 4 Enclosure" must be stated in the instructions.

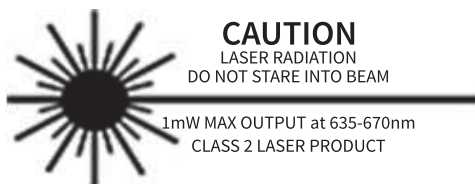
European Directives

The OrPAY1000 complies with the necessary European Directives for the CE mark.



Laser Warning

Some models of the OrPAY1000 incorporate a barcode reader. The barcode reader incorporates a laser aiming system. The Laser has a Class 2 output power to IEC 60825-1:2007:



Caution: Do not stare into laser beam.

2.3. Preliminary Considerations

The following factors need to be considered in designing an installation for the OrPAY1000:

Physical Dimensions

The following displays the physical dimensions of OrPAY1000 (see [Figure 2-1](#)):

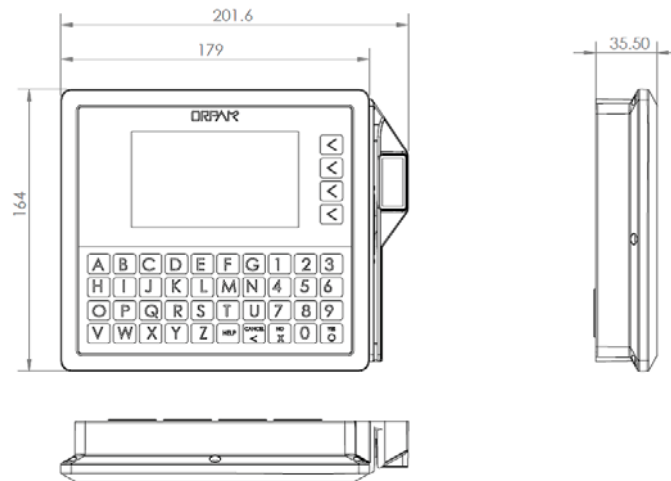


Figure 2-1 - Dimensions

Hinging

Design an enclosure and / or door to house the OrPAY1000. This will ensure there is a clearance between the OrPAY1000 housing and the opening. Right-side hinging is recommended by Orpak.

OrPAY1000 can be installed on top of the pump or hang on the wall (or pump). To install OrPAY1000 on top of the pump you need an L-bracket and to mount it on the wall you need a surface mounting bracket.

The following displays OrPAY1000 attached on top of the pump with an L-bracket (see [Figure 2-2](#)):



Figure 2-2 - OrPAY1000 on top of Pump with L-Bracket

Fire

The enclosure must be designed to meet the requirements of ISO/EN 60950-1 for fire enclosures.

ATEX (Explosive Atmospheres)

ATEX (Explosive Atmospheres): The OrPAY1000 has openings that prevent it being gas-tight, and consequently it must be located away from any hazardous zone. Refer to local laws and regulations for hazardous zones to determine a suitable mounting arrangement for the OrPAY1000. The enclosure in

which the OrPAY1000 is mounted should also be designed to prevent a dangerous build-up of explosive gases.

Security

The enclosure must provide sufficient physical security to protect the public from the hazards within, as well as reduce the possibility of tampering with the outdoor payment terminal.

Power & Data

- a. The enclosure must provide mains power with the following requirements:
 - » A permanently-wired connection or a socket
 - » A protective earth connection
- b. The enclosure must provide an Ethernet data connection with the following requirements:
 - » Capable of at least 10Mbps (preferably 100Mbps)
 - » The connection must be either a socket into which a standard Ethernet patch cable can be connected, or a cable that is terminated in a standard RJ45 plug suitable for direct connection into the outdoor payment terminal's LAN socket
 - » Minimum cable standard should be CAT5e STP (Shielded)
- c. The enclosure may provide an alternative data connection for terminals that have optional communications modules installed. Please consult with Orpak for what options are available

Accessibility

The enclosure must be designed and mounted so that disabled persons are able to operate the outdoor payment terminal.

Materials

The enclosure and all its components must be constructed of durable materials suitable for the intended location.

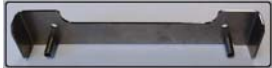
Water Tightness

The OrPAY1000 is rated for IP65 on its display and keyboard. The parts sitting inside the pump / pedestal enclosure are designed to reduce the likelihood of rain drops entering the electronics, but the enclosure must provide good protection from water. The door should have a water seal against the enclosure, and there should also be drainage and / or a system to reduce excessive condensation build-up and dripping.

2.4. Installation Kit

The following table details the installation kit for the OrPAY1000 (see [Table 2-1](#)):

Table 2-1 - Installation Kit

P/N	Description	Image (front)	Image (rear)
815228300	Mounting screws stainless Steel, M4x12mm (x4)		
814127950	Rubber isolator (one for each wire)		
814329460	L - bracket		
814329450	Surface mounting bracket with place holders		
814329400	Surface mounting bracket without place holders		

2.5. Required Tools

The following tools are required to mount the OrPAY1000:

- » Torx T20 screw driver
- » Philips #1, or Flat 5 mm screw driver
- » Side cutters (to trim the cable ties)
- » Cable ties



Warning: Do NOT use power tools if working on a fuel station forecourt. Any spark could cause an explosion.

2.6. Installation Procedures

This section provides instructions for installing the OrPAY1000 on a new pump or cabinet in four different ways:

- » On the door / front of the pump
- » On the wall near the pump
- » On top of the pump
- » For pump retrofit

The installation procedure includes the following steps:

1. Installation of the OrPAY1000 in the prescribed location
2. Cable connections
3. Post-installation checks

Strictly observe all the safety instructions detailed in [Precautions and Safety Information](#).

2.6.1. Installation Template

The OrPAY1000 is fastened by means of four M4 x 16 screws to the mounting surface. The fastening screws pass through holes in the bottom plate of the OrPAY1000. In addition, a 5 mm hole located at the center of the unit is required to pass the connection cable.

2.6.2. Installation with Bracket on Pump

The following table details the installation kit for installing the OrPAY1000 on the door of the pump:

Table 2-2 - Pump Mounting Kit - P/N 819027892

P/N	Description	Quantity
814127000	SEAL BACK OrPAY1000	1
814329400	PUMP MOUNTING HOLDER-OrPAY1000	1
815228300	SCREW, M4x12 SST+2 WASHERS	4
815804000	CABLE TIE KSS CV-140B 150x4mm	4

To install the OrPAY1000 at any non-hazardous area of the fuel pump, proceed as follows:

1. Shut down any power source at the installation and working area
2. Open the fuel dispenser door and locate a non-hazardous area

3. Select a non-hazardous area in the pump where you can install the OrPAY1000. The area should be a flat panel with a thin metal panel where you can attach the OrPAY1000
4. Identify the prescribed location of the OrPAY1000 on the fuel pump housing. Draw a horizontal reference line, to permit correct alignment of the lower edge of the drilling template
5. Use the drilling template (place the plate with the arrow up) and mark the five holes on the mounting surface
6. Drill five 4 mm holes in accordance with the template
7. Drill the middle hole to the final diameter desired, based on communication and power cables used
8. Thoroughly clean burrs on the hole edges
9. Drill the four corner holes to the final diameter, 4 mm
10. Inspect the hole and check for correct location according to the template
11. Clean the surface intended for installing the OrPAY1000
12. Insert the OrPAY1000 into the surface mounting bracket without place holders
13. Using four SEMS screws M4 x 12 mm (P/N 815228300), attach and tighten the OrPAY1000 to the bracket



Figure 2-3 - OrPAY1000 Tightened to Bracket

14. Attach the bracket with the OrPAY1000 to the pump



Figure 2-4 - OrPAY1000 on Pump

2.6.3. Installation with Bracket on Wall

The following table details the installation kit for installing the OrPAY1000 on the wall:

Table 2-3 - Wall Mounting Kit - P/N 819027893

P/N	Description	Quantity
814127000	SEAL BACK OrPAY1000	1
814329450	WALL MOUNTING HOLDER-OrPAY1000	1
815228300	SCREW, M4 x 12 SST+2 WASHERS	4
815804000	CABLE TIE KSS CV-140B 150 x 4 mm	4

To install the OrPAY1000 at any non-hazardous area on a wall near the pump, proceed as follows:

1. Shut down any power source at the installation and working area
2. Locate a non-hazardous area to install OrPAY1000
3. Identify the prescribed location of the OrPAY1000 on the fuel pump housing. Draw a horizontal reference line, to permit correct alignment of the lower edge of the drilling template
4. Use the drilling template (place the plate with the arrow up) and mark the five holes on the mounting surface
5. Drill five 4 mm holes in accordance with the template
6. Drill the middle hole to the final diameter desired, based on communication and power cables used
7. Thoroughly clean burrs on the hole edges

8. Drill the four corner holes to the final diameter, 4 mm
9. Inspect the hole and check for correct location according to the template
10. Clean the surface intended for installing the OrPAY1000
11. Insert the OrPAY1000 into the surface mounting bracket with placeholders
12. Using four SEMS screws M4 x 12 mm (P/N 815228300), attach and tighten the OrPAY1000 to the bracket



Figure 2-5 - OrPAY1000 Tightened to Bracket

13. Attach the bracket with the OrPAY1000 to the wall, fine-tune the alignment and tighten the screws



Figure 2-6 - OrPAY1000 on the Wall

2.6.4. Installation with L-Bracket on Top of Pump

The following table details the installation kit for installing OrPAY1000 on top of the pump:

Table 2-4 - Top Mounting Kit - P/N 819027894

P/N	Description	Quantity
814329460	TOP MOUNTING HOLDER-OrPAY1000	1
815228300	SCREW, M4x12 SST+2 WASHERS	2
815804000	CABLE TIE KSS CV-140B 150x4mm	4

To install the OrPAY1000 with the L-bracket on top of the pump, proceed as follows:

1. Unpack the OrPAY1000 from its packing. There will be two M4 x 12 mm screws (2) for mounting the OrPAY1000
2. Unlock and open the pump door
3. Hold the OrPAY1000 outside the pump, and locate at least one of the top mounting screws
4. Place several of the support screws around the OrPAY1000. Verify that the OrPAY1000 is aligned with any features on the pump door, and then tighten the screws
5. Insert and tighten all remaining screws
6. Once the physical mounting is complete, proceed to insert the OrPAY1000 into the bracket
7. Using two SEMS screws M4 x 12 mm (P/N 815228300) attach and tighten the OrPAY1000 to the bracket:

8. Once the screws are tightened, tighten a tie-wrap around the outgoing wire to avoid moisture from getting in (see [Figure 2-7](#)):



Figure 2-7 - Tie-wrap around Wire



Note: When using the optional magnetic card reader, make sure to bring the unit to the front so that your card will not touch the surface when swiping.

2.6.5. Installation for In-Pump-Solution



Note: A prerequisite for this installation is that the customer must prepare the upper dispenser panel with an opening, or a frame, for the OrPAY1000.

The following table details the installation kit for installing OrPAY1000 as an in-pump-solution:

Table 2-5 - In-Pump-Solution Kit

P/N	Description	Quantity
800927857	OrPAY1000 WITH SEAL	1
814942770	REAR CLAMP	1
815200101	WING SCREW	4
814127000	SEAL	1
819127857	POWER HARNESS	1
819122553	LAN CABLE	1
N/A	CARD READER HARNESS	1
819127858	HID HARNESS	1

To install the OrPAY1000 as an in-pump-solution, proceed as follows:

1. Unpack the OrPAY1000 from its packing. There will be four wing screws (4) attached to the OrPAY1000 and the rear clamp
2. Unlock and open the upper dispenser panel
3. Unscrew the four wing screws that are attaching the OrPAY1000 to the rear clamp
4. Insert the OrPAY1000 with the seal to the open frame
5. Secure the OrPAY1000 from the inside with the rear clamp and the wing screws
6. Plug the prepared harness from OrPAY1000 with the prepared harness in the dispenser head
7. Close the upper dispenser panel
8. (Optional) If the customer wants a card reader and / or a contactless reader (HID card), these can be purchased separately

2.6.6. Installation for Pump Retrofit

To install the OrPAY1000 at any non-hazardous area of the fuel pump on a pump retrofit, proceed as follows:

1. Shut down any power source at the installation and working area
2. Locate a non-hazardous area to install OrPAY1000
3. Identify the prescribed location of the OrPAY1000 on the fuel pump housing. Draw a horizontal reference line, to permit correct alignment of the lower edge of the drilling template
4. Use the drilling template (place the plate with the arrow up) and mark the five holes on the pump retrofit surface
5. Drill five 4 mm holes in accordance with the template
6. Drill the middle hole to the final diameter desired, based on communication and power cables used
7. Thoroughly clean burrs on the hole edges
8. Drill the four corner holes to the final diameter, 4 mm
9. Inspect the hole and check for correct location according to the template
10. Clean the surface intended for installing the OrPAY1000
11. Insert the OrPAY1000 into the pump retrofit surface
12. Using two SEMS screws M4 x 10 mm (P/N 815226200), attach and tighten the OrPAY1000 to the pump retrofit surface



Figure 2-8 - OrPAY1000 on Pump Retrofit

2.7. Wiring

Three connections need to be made to the OrPAY1000:

- » Ground
- » Ethernet LAN / RS-485
- » DC Power supply
- » (Optional) Pump wires

The DC power supply cable also needs to be connected to the power supply.

2.7.1. Protective Earth

OrPAY1000 is provided with a ground tab mounted on the bottom frame (see [Figure 2-9](#)).

The tab must be connected to the pump (or cabinet) frame to provide protection from both power faults and static discharges. The ground wire must be minimum 1.5 mm² and both it and the ground stud must meet local regulations.



Figure 2-9 - Ground Tab

2.7.2. Ground Cable

OrPAY1000 is provided with a ground tab mounted on the bottom frame (see [Figure 2-10](#)).

The tab must be connected to the pump (or cabinet) frame to provide protection from both power faults and static discharges. The ground wire must be minimum 1.5 mm² and both it and the ground stud must meet local regulations.

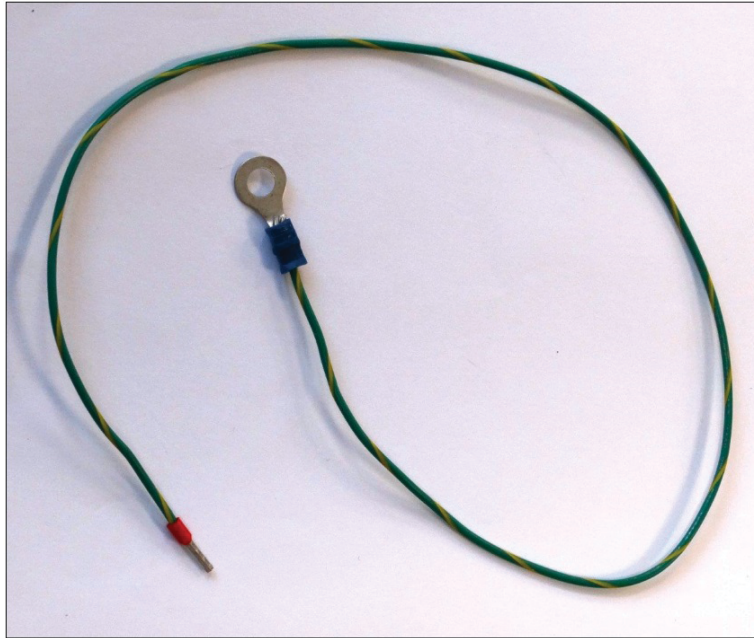


Figure 2-10 - Ground Cable



Figure 2-11 - Ground Cable Connected to OrPAY1000

2.7.3. Ethernet LAN

The Ethernet cable is plugged into the correct connector on the rear of the OrPAY1000 (see [Figure 2-12](#)).



Figure 2-12 - LAN Connector

2.7.4. DC Power Supply

The low-voltage DC Cable is plugged into the correct connector on the rear of the OrPAY1000 (see [Figure 2-13](#)).

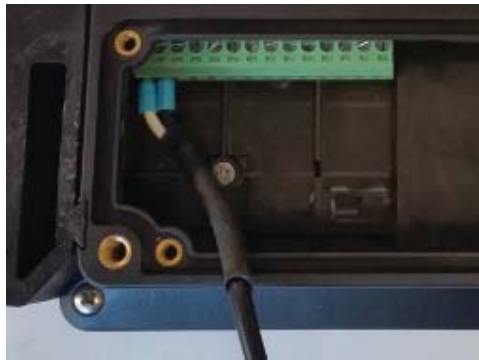


Figure 2-13 - DC P/S Connector

Verify that the polarity is correct before connecting the terminal to the power for the first time.

2.8. First Power-Up

Once the installation is complete and the wiring is certified (if necessary), the main power may be switched on.

OrPAY1000 takes a couple of seconds to complete its start-up phase, during which several information screens will be presented.

If the terminal is successful in connecting to the Ethernet LAN it will display the following screen, and the rest of the normal start-up sequence will continue (see [Figure 2-14](#)):

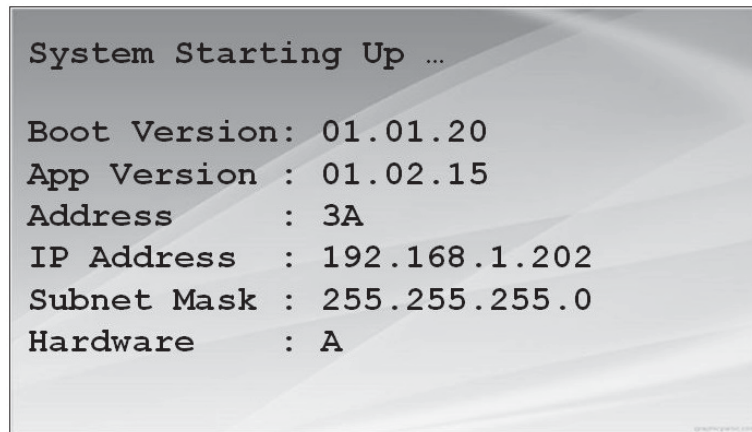


Figure 2-14 - Start-up Screen

Section 3 Maintenance

3.1. General

The following provides basic maintenance instructions for the OrPAY1000.

When properly installed and maintained your terminal will provide many years of service. There are few moving parts and minimal connections, and all parts have been designed to give a good service life.

3.2. Cleaning

Please follow these tips to keep your OrPAY1000 clean:

- » Use a soft cloth dampened with water for daily cleaning
- » If grime builds up, use a diluted mild detergent on a soft cloth
- » Take extra care when cleaning the display window – make sure the cloth is clean and clean the window before using the cloth on other parts of the terminal



Caution: Do NOT use petroleum-based solvent cleaners – they may damage surfaces making the terminal much harder to clean, and shorten the life of the parts.



Caution: Do NOT use a high-pressure hose to clean the terminal.

3.3. Removal and Reinstallation

3.3.1. Removal

To remove the OrPAY1000, proceed as follows:

1. Ensure the terminal is not being used by a customer
2. Open the pump / pedestal door
3. Switch off the mains power to the power supply
4. Unplug the LAN cable and the low-voltage power cable and any other connected cable (e.g. pump connection) from the OrPAY1000. Remove the ground wire
5. Loosen and remove the screws holding the OrPAY1000 to the surface / pedestal door. There will be 4 screws around the outside of the rear plastic
6. Gently hold the OrPAY1000 off the surface / pedestal door, while holding the terminal on the outside to prevent it from falling
7. Place the OrPAY1000 into suitable packaging for transport or perform the necessary maintenance

3.3.2. Reinstallation

To re-install the OrPAY1000, proceed as follows:

1. Place the OrPAY1000 carefully onto the surface, and align it with the screw-holes
2. Place the screws into the OrPAY1000 but don't tighten them. Verify that the OrPAY1000 is properly aligned, and then tighten the screws
3. Pass the wires through the rubber isolator in the back
4. Plug in the LAN cable / RS-485 and the low-voltage power cable, and reconnect the ground wire
5. Use new cable ties to secure the cables to the OrPAY1000. Verify that the cables are tied so that they will not be snagged or pinched when the door is opened and closed
6. Switch on the mains power supply and check that the OrPAY1000 powers up correctly
7. Check that the OrPAY1000 comes online, and then close the door

