ORPAK

Orpak Systems Ltd.

ORPAK Tag Reader (OrTR)

QUICK REFERENCE
MANUAL

1.1. OrTR Available Configurations

Available configurations

	MiFare Reader	KB (language)	Magnetic card reader	RS485	LAN	RS232
OrTR KB(xx, xx, xxx)	√	√	√	√	√	√
OrTR(xx, xx, xxx)	√		√	√	√	√
FHO MIFARE POD UNIT	√					√

1.2. OrTR (no keyboard) Description

The Orpak Tag Reader (OrTR) is a standalone unit for contactless cards and tags intended for vehicle or driver tag identification in gas stations (see Figure 1).

It can also be equipped with an optional magnetic card reader, at the right-hand side of the unit. The OrTR includes a Security Application Module (SAM) used to handle encrypted contactless cards and tags.

The OrTR is within easy reach of the customer wishing to refuel and transmits the information to the station automation system (OrCU) over an RS-485 shielded cable.

The OrTR is designed to be installed in a non hazardous location in the station.

Figure 1. OrTR, General view

The OrTR has a stylish-look, with a clean panel, which includes two indicators (green and red) and a large LCD. Its operation is very simple: to start a fuel purchase, all the customer has to do is to wave the tag or card in front of the unit. After the tag is recognized and validated, clear messages shown on the display guide the customer and help him to complete the transaction. In addition to the LCD, an internal buzzer beeps to provide audio feedback and the status of the current operation is indicated by the green and red indicators. One or several OrTRs can be installed in a single station for improved service. In this case, all OrTRs in the station should be connected to the same single OrCU (e.g. Fuel Truck Controller or others) via RS-485.connection.

Figure 2. FHO Mifare POD Unit- , General View

1.3. OrTR (with Keyboard) Description

The OrTRs with keyboard (see Figure 3) is similar to the one with no keyboard except for its dedicated keyboard; The full keyboard enables the user to operate the unit and insert the vehicle required data to be sent to the Station Controller.

Figure 3. OrTR KB, General view

1.4. Main Features

The OrTR is based on two microcomputer subsystems: one for handling the secure communication protocol with the tag/card, and the other for communication with the station Controller and for controlling the operation of OrTR. It includes a single cable carrying power and RS485 communication and an optional cable for Ethernet link in the LAN version. For flexibility, the Tag Reader uses a standard communication protocol, and the displayed messages are controlled by the station Controller. The message contents and language can be selected by the system operator, and the microcomputer application software can be updated in the field.

1.5. Supported Cards/Tags Options

This is a contactless card (see Figure 4) used as a fueling card by the driver at the gas station. When the card is presented next to the OrTR, it reads the card / tag data and transmits it to the station controller in the gas station. Upon verification and approval, the Station Controller activates and releases the pump valve, so fuel can be dispensed to the vehicle. Four types of tags are recognized:

- Driver's tag: used to identify a specific driver. Therefore, fuel dispensing is allowed only after the vehicle has been identified by means of its Vehicle Identification Unit (VIU).

- Vehicle's tag: used to authorize fuel dispensing and charging.

- Attendant's tag: permits operation of any fuel nozzle from the OrTR by a station attendant.

- Technician tag: used to setup OrTR RS-485 address

Figure 4. Typical MiFare Tag

1.6. SPECIFICATIONS

User Interface	• LCD- Alphanumeric • Dual-LED green and red indicators • Buzzer • Optional reader for FuelOpass tags
Display Type	• LCD-16 Characters * 2 lines
Communication Interface	• RS232 (optional) • RS- 485 • LAN (optional)
Card Reader	• Magnetic card ISO 7811
Contactless MiFare reader	• Contactless MiFare reader 13.56MHz
Physical	**No keyboard model:** • Height – 110 mm (5.1 in.) • Width – 184 mm (8.3 in.) • Depth – 35.5 mm (1.5 in.) **Keyboard model:** • Height – 141 mm (5.1 in.) • Width – 210 mm (8.3 in.) • Depth – 38 mm (1.5 in.) • Weight (no kb) – 540 gram (1.2 lb.) • Weight – 640 (kb) gram (1.4 lb.)
Power	• Operating voltage - 12 - 24 V DC. • Operating current - 0.9 A
Environmental	• Operating temperature: -5°C - +70°C (-22°F – 158 °F) with heater –30°C +70°C • Storage temperature: -40°C - +80°C (-49°F – 176°F) • Humidity – 95% RH • Degrees of Protection - IP66

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1)   This device may not cause harmful interference and:

(2)   This device must accept any interference received, including interference that may cause undesired operation

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THE FCC WANTS YOU TO KNOW:

This equipment has been tested and found to comply with the limits or a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

SAFETY LIMITATIONS

SAFETY Due to safety requirements, the Tag Reader box can be installed only in non-hazardous areas/ non-classified area. The Tag Reader must be installed within the following boundaries LIMITATIONS
Due to safety requirements, the Tag Reader box can be installed only in non-hazardous areas/ non-classified area. The Tag Reader must be installed within the following boundaries:
Above 18" (0.5 meter) from the island floor
At least 18" (0.5 meter) away from the dispenser

FCC Warning
Modifications not expressly approved by the manufacturer responsible could void the user's authority to operate the equipment under FCC rules.