

Outdoor Payment Terminal “KT-OPT” - including “KT-Retail” and “KT-Account”

Issued to

Knowtronic ApS

Stationsvej 83, DK-4684 HOLMEGARD, Denmark

In respect of (part of instrument)

OPT Outdoor Payment Terminal (OPT) “KT-OPT” including models “KT-Retail” and “KT-Account” are purely digital self-service devices (SSD) intended for use with fuel dispensers at unattended fuel stations.

Characteristics/rated operating conditions

The terminal is an evaluated part of an interruptible measuring system for liquids other than water (LOTW), a self service device for direct sales to the public, with unattended delayed payment. The terminal accepts customer cards and bank cards (with chip and/or magnetic strip) for payment. It includes a printer (depending on configuration) and a memory device and can be used for setting unit prices in fuel dispensers.

Accuracy class: 0,5 or higher

In accordance with

- WELMEC Guide 8.8, Issue 2 “General and Administrative Aspects of the Voluntary System of Modular Evaluation of Measuring instruments under the MID”,
- WELMEC Guide 10.7, Issue 1 “Guide on evaluating purely digital self-service devices (PDSSD) for sales to the public” and
- WELMEC Guide 7.2, 2015 “Software Guide”.

This Parts Certificate is the positive result of the applied modular approach under these WELMEC Guides, for a part of a measuring system for the continuous and dynamic measurement of quantities of liquids other than water.

This is not a MID Certificate (EU-type examination certificate according to 2014/32/EU), but the MID requirements have been applied. The complete measuring system shall be subject to a conformity assessment procedure as described in MID.

This Parts Certificate is free to use by manufacturers of complete measuring instruments.

Certificate No. SC0099-18 | issue 1 | 2018-03-05

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Applicable essential requirements MID 2014/32/EU

- MID, Annex I, Essential requirements
- MID, Annex VII (MI-005) Measuring systems for the continuous and dynamic measurement of quantities of liquids other than water (LOTW)

Harmonized standards and normative documents used

Applicable parts of the following normative documents referred to in the Official Journal of the European Union 2011/C33/01:

- OIML R 117-1 Edition 2007 (E), Dynamic measuring systems for liquids other than water

Further applied documents:

- The Measuring Instruments Regulation, STAFS 2016:1
- Regulations and Guidelines concerning Measuring Systems for the Continuous and Dynamic Measurement of Quantities other than Water, STAFS 2016:6
- SP's Certification Rules SPCR 181

Validity

Valid until 2028-03-05.

Miscellaneous

This issue of the certificate is the first edition.

The principal characteristics, approval conditions are set out in the appendix hereto, which forms part of the approval documents. All the plans, schematic diagrams and documentations are recorded under reference file 6P09184. The evaluation report 6P09184-1 has been issued in accordance with WELMEC Guide 8.8, Voluntary system of Modular Evaluation.

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0 Conditions

The use of this Parts Certificate is limited to:

Combination with other parts of a measuring system (e.g. fuel dispenser) under the following conditions:

- One of the communication protocols defined in this certificate is used
- The other parts of the measuring system having an EC-type examination certificate, Evaluation Certificate or Parts Certificate covering compatibility with the communication protocol used or
- The other parts of the measuring system having a National Type approval covering compatibility with the communication protocol used

Other parties are free to use this PC.

The device must correspond with the following specifications:

1 Design of the device

1.1 Construction

Payment terminal description

“KT-OPT” is part of a self service arrangement.

The payment terminal is a self service device for unattended delayed payment and accepts customer cards and bank cards (with chip and/or magnetic strip) for direct sales, in an interruptible measuring system. It includes a printing device (depending on configuration) and a memory device and can be used for setting unit prices in fuel dispensers.

The terminals support the following service mode and type of payment:

	Attended post-payment	Attended pre-payment	Unattended delayed-payment	Unattended pre-payment
KT-OPT - KT-Retail	--	--	yes	--
KT-OPT - KT-Account	--	--	yes	--

The terminal can be configured for communication with one or multiple back-end host system for local card authorization, transaction collection, reporting, retrieval of price and product lists, etc. The terminal may be configured to update prices in the fuel dispensers to match the price list retrieved from the online host.

The DOMS PSS-5000 (Parts Certificate SC0257-15) may be used as a protocol converter.

The terminal is produced in various configurations:

- Model ‘**KT-Retail**’ with 7” graphic touch display, bank card support and receipt printer
- Model ‘**KT-Retail**’ with 4x20 dot matrix display, bank card support and receipt printer
- Model ‘**KT-Account**’ with 7” graphic touch display, local card support and optional receipt printer
- Model ‘**KT-Account**’ with 4x20 dot matrix display, local card support and no printer

All configurations may be delivered with a pillar, or may be mounted directly on a wall or on a fuel dispenser.

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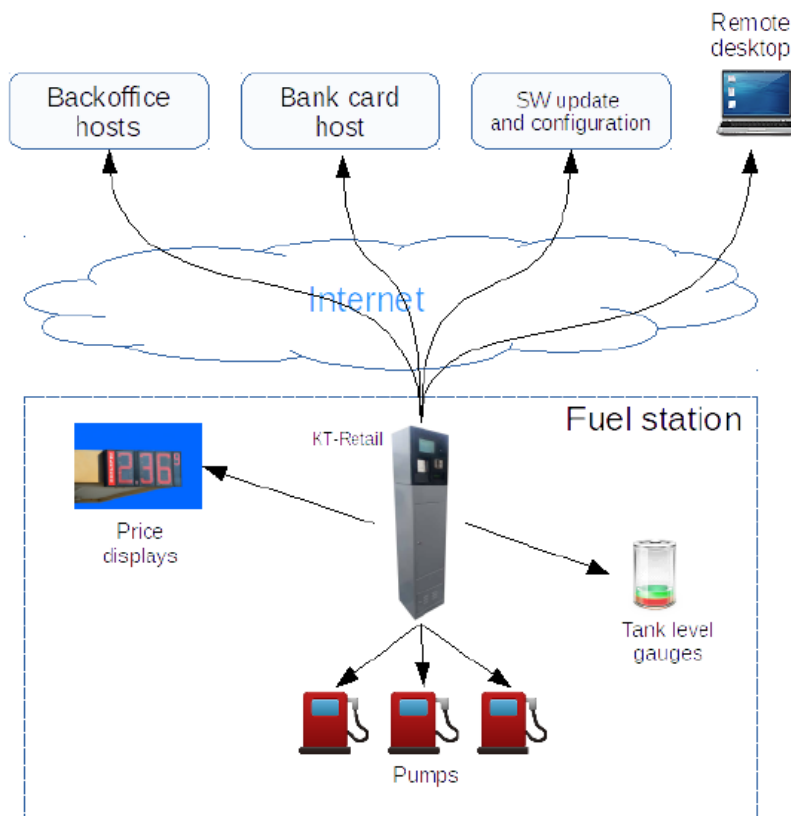
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Picture 1: KT-OPT



Picture 2: KT-OPT in a typical installation

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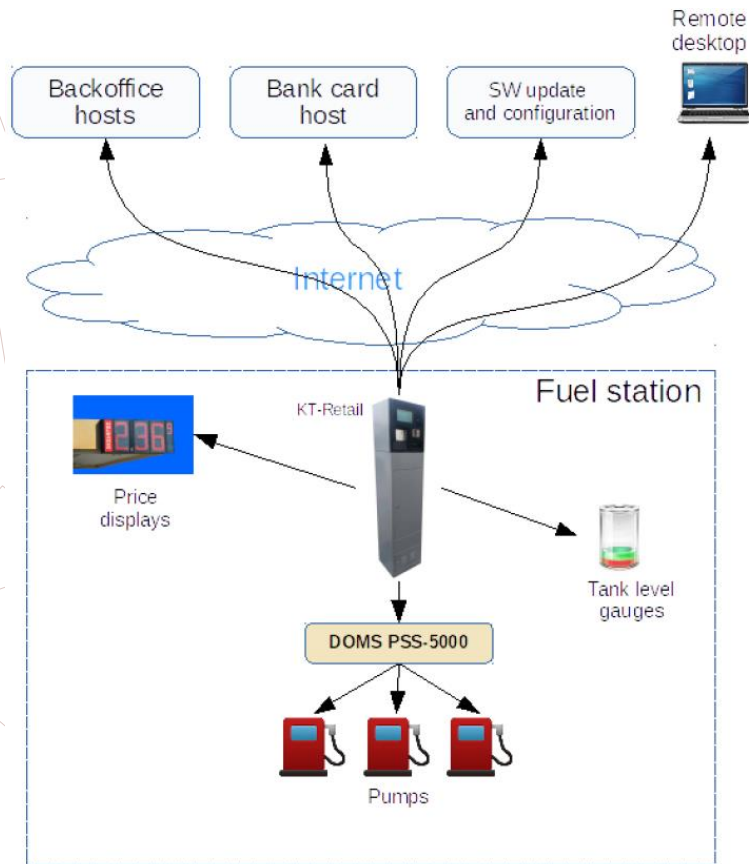


Figure 3: KT-OPT in an installation with DOMS PSS-5000

1.2 Components included

The hardware of the self-service device shall comply with the EMC-directive and other applicable directives as specified in the Declaration of Conformity of the self-service device.

Payment terminal

Component	Manufacturer/model	
System PC	Intel, NUC6I3SYK	1
Operating system	Microsoft Windows Embedded Standard (Win7 embedded), Service Pack 1 (or newer)	
USB HUB	Conrad, CONRAD 4-PORTS USB 2.0-HUB METAL	1
LAN Switch	Zyxel, Zyxel ES-105A	1
Mobile router	Teltonika, RUT500	1
Pic-modul	Modtronix, SBC65EC	1
KT-User interface	Knowtronic, Knowtronic UserIF	1
7" Display	LiteMax, DLH0765-ENN-G01	1, 2
7" touch sensor	Zytronic, ZYBX7-0.0019	1, 2
USB touch controller	Zytronic, BTC-ZYBX100-U-OFF-32	1, 2
Dot matrix display 20*4	Winstar Display, WH2004L-TFK-ET#	1, 3
Membrane keyboard	Setiket, A13-0222	1, 3
USB to RS232 interface	EasySync, USB2-H-1002-M	1, 4
Bank card module	NETS Danmark, DNK3200	1, 4
PinPad	NETS Danmark, DNK1215-4610	1, 4
Card reader	NETS Danmark, INT5210-4610	1, 4
Receipt printer 60mm	CUSTOM SPA, TG2460H	1, 6, 9
Mag card reader	Magtek Europe, MT-215PRS232	1, 5
Power supply	MeanWell, MDR4024	1, 7
USB to RS485 interface	EasySync, ES-U-2101-M	1, 8
IFSF interface	Calon Associates Limited, 702101A	1, 8
USB to RS232 interface	EaysSync, USB2-H-1002-M	1, 8

Notes:

- 1: Or equivalent with CE-marking, compatible properties and temperature range
- 2: Only in terminals with touch display
- 3: Only in terminals with dot matrix display
- 4: Only in terminals with bank card capabilities
- 5: Only in terminals without bank card capabilities
- 6: Only in terminals with receipt printer
- 7: Two power supplies are installed in terminals with receipt printer
- 8: Optional interface for external dispensers and other equipment
- 9: Or equivalent, with CE-marking, under the condition that the functionality of the checking facilities for power off, decoupling/no serial communication, end of paper, is the same.

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Software specification according to WG 7.2:

Software type U
 Risk class C
 Extension L, T, S, D

Legally relevant software:

Name	Checksum
KTFuelControl.dll	F4819DD1
Knowtronic.SDS.Svc.dll	91E5D989
Knowtronic.SDS.Svc.exe	28F6721A
Knowtronic.SI.Svc.exe	9BFE959B
Knowtronic.SP.Svc.exe	7EB48078

1.3 Optional equipment and functions subject to MID requirements

Not applicable

1.4 Technical documentation

For market surveillance the construction and included components are described in 1.1 and 1.2. The metrological software is identified by checksums which can be accessed, see chapter 5.3.

1.5 Integrated equipment and functions not subject to MID

The following equipment may be connected to KT-OPT (without change of this certificate):

- Cash register / Attended payment terminal
- Price displays
- Tank level meters
- Anti-theft devices / Fuel security valves
- Token dispensers
- Car wash equipment / Other activity based equipment
- External card/token/barcode/RFID reader

2 Technical data

2.1 Rated operating conditions

Payment terminal device for customer cards and bank cards, intended for use with fuel dispensers for motor vehicles. Self service device for direct sales, interruptible, unattended delayed payment, including a printer (depending on configuration) and a memory device. It can be used for setting unit prices in fuel dispensers.

Measurement range

Scale interval, printed volume same as dispenser, but not smaller than 0,01 l
 Scale interval, printed price same as dispenser, but not smaller than 0,01 "PRICE"

Accuracy class of measuring system

0,5 or higher

2.2 Other operating conditions

Not applicable

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3 Interfaces and compatibility conditions

The payment terminal with the following interface boards and protocols as stated in the table below was tested/examined and found in compliance with Welmec Guides 8.8, 10.7 and 7.2.

Communication with other parts of a measuring system (e.g. fuel dispensers, protocol converters) using one of the following protocols:

SW protocol	Interface board
DART pump protocol	RS232/RS485
ATCL pump protocol	RS232/RS485
Pumptronic pump protocol	RS232, RS485
IFSF pump protocol	LON
DOMS POS protocol/TCP	LAN

Installation:

- Shielded communication cable with screen connected in both ends.

The payment terminal may only be used in a measuring system with:

- all volume indicating having the same scale interval as KT-OPT
- all price indicating having the same scale interval as KT-OPT

4 Requirements on production, putting into use and utilization

4.1 Requirements on production

No special requirements identified.

4.2 Requirements on putting into use

Functional test of KT-OPT is performed in the factory according to "Knowtronic OPT-Terminal Functional Test specification:

- Set up terminal to coDataHost test site
- Test data communication with coDataHost
- Test data communication with Nets Bank Card Host¹
- Test pump authorization with pump interface simulator
- Test synchronization between card reader and pin pad
- Test synchronization between pin pad and psam¹
- Complete a card sale purchase with a local card
- Complete a card sale purchase with a bank card¹
- Print a service report and observe that all characters are printed correctly
- Test display:
 - a. Touch display: Configure and calibrate touch display according to software drivers. Observe that menus, text and graphical elements are displayed correctly during calibration.
 - b. Dot matrix display: Observe that menus, text and graphical elements are displayed correctly

Note 1: Only relevant for KT-Retail Bankcard Terminal"

4.3 Requirements for consistent utilization

No special requirements identified.

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5 Control of the measuring tasks of the device in use

5.1 Documentation of the procedure

No special requirements identified.

5.2 Special equipment or software, if applicable

No special requirements identified.

5.3 Identification of

- Hardware

The construction and included components are described, see chapter 1.1 and 1.2.

- Software

The legally relevant software is identified by the checksums, see 1.2.

Presentation/identification of the software:

Show software identifiers (checksums) when Restarting the Terminal

- Restart the terminal
- When the SW version is displayed:
 - If the terminal is fitted with a touch screen: Press the version text on the screen
 - If the terminal is not fitted with a touch screen: Press any key on the front of the terminal
- The terminal will pause from the start-up sequence and display legally relevant software information (**checksums**) and information on pump drivers and sealing status
- Use the ENTER key or indicators on the touch screen to toggle between each piece of information.

On terminals equipped with a receipt printer, the menu-item "Service print" will create a printed report that also includes the legally relevant software identifiers (**checksums**).

5.4 Calibration-/adjustment procedure

Not applicable

6 Security measures

6.1 Sealing

The terminal has no physical seal.

The terminal must be electronically sealed by the manufacturer before it is put into use. The electronic sealing status can be read as described in chapter 5.3.

6.2 Data logger

Data base in the payment terminal acts as memory device for unattended delayed payment with cards.

7 Labelling and inscriptions

7.1 Information to be borne by and to accompany the device

The marking plate/label mounted on the payment terminal shall contain the following information:

- the name of the manufacturer; www.knowtronic.com
- the serial number of the payment terminal and year of manufacture
- the designation type name KT-Retail or KT-Account
- the Parts Certificate number, **SC0099-18**
- place for identification of the connected fuel dispenser(s)
- place for the verification sticker

(Information of the connected fuel dispensers is on the OPT display.)

If the KT-OPT has no printer:

In the case only a data storage device (memory device) is used for unmanned stations to store the transaction, information on a visible place on the Self Service Device (KT-OPT) should be available to the customer whom to contact in the case of a dispute regarding the transaction.

7.2 Conformity marking in accordance to MID article 21

This Parts Certificate is not an EU-type examination Certificate. Therefore the payment terminal must **not** be marked with the supplementary metrology marking “M xx”, following the CE marking.

7.3 Further inscriptions, if necessary

No special requirements identified.

7.4 Evaluations carried out for this Parts Certificate

The evaluation under this certificate is recorded in Evaluation Report 6P09184-1 (referring to test and examinations in test reports 6P08977-1 and 6P08977-01).

A summary of the evaluation under this certificate is given below.

Description	+	-	Remarks
Relevant parts of the checklist OIML R117-1 (WG 7.2)	*		6P08977-1 (functional test)

Extension	Description	+	-	Remarks
Type P	Requirements on basic configuration	/	/	
Type U	Requirements on basic configuration	*		6P08977-1 and 6P08977-01
Extension L	Requirements on data storage	*		6P08977-1 and 6P08977-01
Extension T	Requirements on interfaces	*		6P08977-1 and 6P08977-01
Extension S	Requirements on software separation	*		6P08977-1 and 6P08977-01
Extension D	Requirements on software download	*		6P08977-1 and 6P08977-01
Extension I	Specific software requirements	/	/	

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