

Outdoor Payment terminal (OPT) for cards with integrated pump controller function, models OPT100Bemv, OPT101Bemv, OPT101Bemv+, OPT101Bemv++/ThorII, OPT102Bemv

Issued to

KeystonePaymentSystems ApS

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Type of product (part of instrument) and intended use

Payment terminal device for cards with integrated pump controller function, a purely digital self-service device (SSD) intended for use with fuel dispensers for motor vehicles.

Characteristics/rated operating conditions

The evaluated part of a measuring system for liquids other than water (LOTW) is a self-service device for direct sales, interruptible, unattended delayed payment, including a printer and an integrated pump controller.

Accuracy class:	0,5
Ambient temperature limits:	-40°C to +55°C (optional -40°C to +40°C)
Humidity:	condensing
Location:	open

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, Issue 2015 "Software Guide".

Certificate

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, earlier 2004/22/EC), 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.

Applicable essential requirements according to 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)

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7P03990



Harmonised 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 Swedish Measuring Instruments Regulation, STAFS 2016:1
- The Swedish Regulations and Guidelines concerning Measuring Systems for the Continuous and Dynamic Measurement of Quantities of Liquids Other Than Water, STAFS 2016:6
- RISE Certification Rules SPCR 181, Nov 2011

Validity

Valid until June 20, 2023.

Miscellaneous

This issue of the certificate is the 4th edition and replaces earlier issues

The principal characteristics, approval conditions are set out in the following pages, which forms part of the approval document. All the plans, schematic diagrams and documentations are recorded under reference files PX24588, 5P01707, 5P03644 and 7P03990. The evaluation report PX24588B has been issued in accordance with WELMEC Guide 8.8, Voluntary system of Modular Evaluation.

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Issue	Dated	Revision history
1	2013-06-20	First issue of certificate
2	2015-06-24	Addition of: model OPT 100Bemv, 101Bemv, 101Bemv+; Windows 7; optional temperature range; display configurations and parts for the new models; new checksums; addition in marking
3	2015-07-07	Addition of picture for OPT 101Bemv
4	2018-12-07	Certificate issued by RISE, earlier SP (change of name of Certification Body). Change of name of holder of certificate from Team Wash Aps to KeystonePaymentSystems Aps. New picture of OPT101Bemv. Model OPT101Bemv++/Thor II and new picture added (including changed placing of printer). Editorial changes are done, and of new checksums and Revision history added.

0 Conditions

The use of this Parts Certificate is limited to combination with other parts of a measuring system (e.g. fuel dispenser, station controller, memory device) 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

OPT100Bemv, OPT101Bemv, OPT101Bemv+, OPT101Bemv++ /ThorII and OPT102Bemv are a part of a self service arrangement. They support the following service mode and type of payment:

	Attended post-payment	Attended pre-payment	Unattended delayed-payment	Unattended pre-payment
OPT	no	no	yes	no

The outdoor payment terminal (OPT) is a self service device for unattended delayed payment (card), direct sales, in an interruptible measuring system. It includes a printing device and an integrated pump controller function (only in "standalone" mode). It does not include a presetting or memory device.

The payment terminal accepts bankcards and credit cards for payment. There are two configurations:

- "standalone"
- "shop integrated" (connected to a forecourt server and Point-of-sale system)

The OPT authorizes payment cards by means of online communication to a card acquirer. It then permits the customer to select a dispenser and fuel his vehicle. In "standalone" mode the OPT controls the dispenser by opening it for use and read out transaction data. After fuel delivery is completed, the OPT completes the transaction, and the customer can request a receipt by re-inserting his payment card.

The dispensers are connected directly to the OPT "standalone" and "shop integrated" or via a station controller ("shop integrated"), see chapter 3.



OPT100Bem



OPT101Bemv



OPT101Bemv+



OPT102Bemv



OPT101 Bemv++ /Thor II

1.2 Components included

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

The components included in chapter 1.2 has passed temperature and humidity tests, see chapter 7.4.

Computer	IEI Technology Corp. NANO-945GSE2-N270W-R10-KIT*
Operating system	Microsoft Windows XP Embedded, Service Pack 2 (or later version) or Windows 7 embedded
Application software	Team Wash ApS, Fuel II
Communication board, RS422/485	Advantech, PCM-3618I or PCM-3614*
The display/touchscreen is one of configurations A, B or C:	
LCD touch monitor, 8.4" (config A)	WinMate Communication Inc. R08L100-OFU3Daimler*
Display	AU Optronics Corp. G084SN05 LVDS*
Display control board	WinMate Communication Inc. R5W v3.1*
Touchscreen panel and controller	WinMate Communication Inc, 5WRTP*
Display 6.5" (config B)	AU Optronics Corp. G065VN01 LVDS*
Touchscreen panel and controller (config B)	Chengdu VTouch Technology Co., Ltd 6.5" 5-Wires resistive Touch panel Anti-Glare, 3mm vandal-proof*
Display 8.4" (config C)	AU Optronics Corp. G084SN05 LVDS*
Touchscreen panel and controller (config C)	Chengdu VTouch Technology Co., Ltd 8.4" 5-Wires resistive Touch panel Anti-Glare, 3mm vandal-proof*
Card reader	Hypercom Optimum H2210*
PIN pad	Hypercom K1200*
Printer	Nippon NP-3511, -3512 or -3513 **
Heater	DBK Cirrus Cirrus 60 FGC3050, 400 W*
Thermostat for heater	DBK FTG100* Set point: +1 °C
Fan, upper compartment (100Bemv)	Axial Fan T&T, 8025HH12B or equivalent*
Power supply, 24V, (2 pcs for 100Bemv and 102Bemv)	Flux A/S, EMTECH Power A/S, EMT 7524*
Power supply, 12V	Flux A/S, EMTECH Power A/S, EMT 7512*

* or equivalent with CE-marking and suitable climate specification

** or equivalent, with CE-marking and suitable climate specification, under the condition that the functionality of the checking facilities for power off, decoupling/no serial communication, end of paper, is the same.

Network adaptor, MODBUS-RS485(not 101Bemv)	Crevis, NS-9173*
Digital output module (not 101Bemv)	Crevis, ST-222F*
MODBUS I/O module (101Bemv)	Advantech, Adam-4150 or equivalent*
Ethernet switch	ICP DAS, NS-205*
LAN I/O	Advantech, Adam-6066*
Ethernet modem or Wireless 3G Ethernet gateway	Sierra Wireless, AirLink Raven XE H2295E-W*
Antenna	Smarteq Wireless AB, SmartDisc*
Relay/transistor/triac module (not 101Bemv)	Crevis, Team Wash STN8-Rel*
Housing (100Bemv)	KeystonePaymentSystems Aps/ Team Wash ApS, ODIN
Housing (101Bemv)	KeystonePaymentSystems Aps/ Team Wash ApS, S3-KIT
Housing (101Bemv+)	KeystonePaymentSystems Aps/ Team Wash ApS, THOR
Housing (102Bemv)	KeystonePaymentSystems Aps/ Team Wash ApS, MaxiCute KIT for EMV

* or equivalent with CE-marking and suitable climate specification

Software specification according to WG 7.2:

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

List of legally relevant software modules

Name	Checksum
Transactionhandler.dll	072E42FA or 6C8B97FF or 32F5BCF8
Receipt.dll	EC93E5F8 or 355451FF or A16D5FFE
Cox_dll.dll	5F9187F9 or B2AB6BF9 or 604FE8FA
IFSF_dll.dll	E648F1Fb or 4D74A3F8 or 16DA4EFD
Ipos.dll	0F20E5FA or 871932F8 or C4C45BFC

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 the checksum, which can be accessed according to 5.3.

1.5 Integrated equipment and functions not subject to MID

Carwash System “Operate a carwash machine 24 hours”.

2 Technical data

2.1 Rated operating conditions

Description

Payment terminal device for cards, intended for use with fuel dispensers for motor vehicles. Self service device for direct sales, interruptible, unattended delayed payment, including a printer and pump controller function.

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 1,0

Environments classes / influence quantities

The components included in chapter 1.2 has passed temperature and humidity tests, see chapter 7.4.

Mechanic:	class M1
Ambient temperature limits:	-40°C to +55°C (optional -40°C to +40°C)
Humidity:	condensing
Location:	open

2.2 Other operating conditions

Not applicable.

3 Interfaces and compatibility conditions

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

Communication with other parts of a measuring system using one of the following protocols:

Dispenser:	Wayne current-loop protocol via Communication board/RS422 or Wayne Dart protocol via Communication board RS422/RS485 or IFSF protocol via Lan/Ethernet
Station controller ("shop integrated"):	Wayne forecourtcontrol protocol via Ethernet
CNS host:	COX protocol via Ethernet

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

- all volume and price indicating and memory devices having the same scale interval as OPT100Bemv, OPT101Bemv, OPT101Bemv+, OPT101Bemv++/Thor II and OPT102Bemv.
- a memory device (CNS host) on which measurement data are registered (OIMLR117-1, 5.10.3.1.1, 5.10.3.1.5, 5.10.3.2)

4 Requirements on production, putting into use and utilisation

4.1 Requirements on production

No special requirements identified.

4.2 Requirements on putting into use

The following functional test shall be performed. It may be performed in the factory.

Production Test OPT XXX Bemv	
Serial No.: XXX-XXX-XXX	
*Part Certificate No. SC0796-13	
Production and Flow Test	
Power on system test, 12 VDC, 24VDC	
Software Checksum at startup	
Communication to Host (TCP/IP)	
Communication to Pumps (RS-422 and LAN)	
Activate Card reader and Keyboard	
Verify Software on Card reader and Keyboard	
Date and time Check	
Running fuel transaction test (Bank / local Cards)	
Receipt printout test	
Thermostat adjusted Setpoint:	+1 °C
Burn in test 24 Hours	
All components in order	
Pin pad S/N:	
Card reader S/N:	
*Components used comply with the approval given	YES
Test Date: DD/MM/YYYY	_____
Test completed by:	_____
Approved and Authorised by Production Staff:	_____

4.3 Requirements for consistent utilisations

No special requirements identified.

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 in 1.1 and 1.2.

- Software

The legally relevant software is identified by the checksums (see 1.2). Access to the current terminal software version and to the respective checksum value of the software modules is provided via the service menu. The service menu is entered by first pressing the lower right corner of the touchscreen and then by pressing within one half second the upper left corner of the screen. Stepping through the checksum identification is then possible with the star and hash buttons.

5.4 Calibration-/adjustment procedure

Not applicable.

6 Security measures

6.1 Sealing

The payment terminal is not sealed.

6.2 Data logger

The payment terminal may only be used in a measuring system with a memory device on which measurement data are registered (OIML R117-1 (2007), 5.10.3.1.1, 5.10.3.1.5, 5.10.3.2).

7 Labelling and inscriptions

7.1 Information to be borne by and to accompany the instrument

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

- the name of the manufacturer
- the serial number of the payment terminal and year of manufacture
- the designation or type name
- the Parts Certificate number, **SC0796-13**, of the payment terminal
- place for the verification sticker

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

7.2 Conformity marking in accordance to MID 2014/32/EU article 21

This Parts Certificate is not an EC/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 PX24588B (referring to test and examinations in SP/RISE reports, see table below).

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

Description	Result	Reports or remarks
Relevant parts of the checklist of OIML R117-1	*	SP PX14898D
Cold (-40°C)	*	SP PX14898A, B, C, E
Dry heat (non-condensing) (+55°C)	*	SP PX14898A, B, C, E
Damp heat, cyclic (condensing), severity level 2	*	SP PX14898A, B, C, E

Welmec 7.2 ¹⁾	Description	Result	Reports or remarks
Type P	Requirements on basic configuration	/	---
Type U	Requirements on basic configuration	*	SP PX14898-01-1, RISE 8P06490 r1
Extension L	Requirements on data storage	/	---
Extension T	Requirements on interfaces	*	SP PX14898-01-1, RISE 8P06490 r1
Extension S	Requirements on software separation	*	SP PX14898-01-1, RISE 8P06490 r1
Extension D	Requirements on software download	*	SP PX14898-01-1, RISE 8P06490 r1
Extension I	Specific software requirements	/	---

¹⁾ Requirement/type according to Welmec Guide 7.2

* Fulfils requirements / = Not applicable