

Issued by NMI Certin B.V.
Hugo de Grootplein 1
3314 EG Dordrecht
The Netherlands

In accordance with

- WELMEC guide 8.8 “General and Administrative Aspects of the Voluntary System of Modular Evaluation of Measuring instruments under the MID”.
- OIML R117-1: 2007 “Dynamic measuring systems for liquids other than water”.
- WELMEC 10.7 “Guide on evaluating of purely digital self-service devices for direct sales to the public”
- WELMEC 10.10 “Guide on evaluation of Purely Digital Parts”

Producer Scheidt & Bachmann GmbH
Breite Straße 132
D 41238 Mönchengladbach
Germany

Measuring instrument A **self-service device** for use as a part of a fuel dispenser, LPG dispenser and/or other liquid dispensers (e.g. AdBlue).

Producer mark or name : Scheidt & Bachmann GmbH
Designation : TMS30 / SIQMA

Further properties and test results are described in the annexes:

- Description TC7596 revision 14;
- Documentation folder TC7596-6.

Remarks

- This revision replaces the previous revisions;
- The documentation folder replaces the previous documentation folder.

Issuing Authority **NMI Certin B.V.**
9 November 2018



C. Oosterman
Head Certification Board

1 General information on the self-service device

Properties of the self-service device, whether mentioned or not, shall not conflict with the legislation.

This Evaluation Certificate is the positive result of the applied voluntary, modular approach, for a component of a measuring instrument, as described in WELMEC guide 8.8.

The complete measuring instrument must be covered by an EC type-Examination Certificate or EU-type examination certificate.

1.1 Essential parts

1.1.1 Hardware components

The following chapters presents the different hardware components of the self-service device together indicating for each component whether it is essential or conditional. First the different models of the TMS30 / SIQMA system are mentioned, followed by the interfaces:

1.1.1.1 POS TMS (self-service device)

Component description	Function / Consists of entry	Remarks
POS PC master with FC (Forecourt Controller)	The POS TMS30 / SIQMA (Tankstellen Management System) is provided with a computer which controls all other components of the system. Especially the dispensers are controlled by software on this PC (pump controller). The TMS30 / SIQMA mainly consists of two separate PC's (one with POS- and one with BOS functionality (Back Office). The Station Server consists of one PC (POS with integrated BOS functionality) The system is built-up as follows:	
	Computer (POS-PC) : including a seller display (optional with touch), an optional PC keyboard and a special POS keyboard of different manufacturer's with required CE-marking	Conditional component
	LON-Interface : ISA Card inside POS-PC and IFSF-LON connection board for connection of fuel dispensers working via the IFSF-LON protocol	Conditional component
	V11-Interface : ISA Card KR20 inside POS-PC and connection board AK20/SBC10 for connection of fuel dispensers working via the V11 protocol	Conditional component
	DOMS PSS5000 Forecourt Interface : optional applied in a special housing for indoor use and for converting of the different dispenser protocols to the DOMS protocol in direction of the POS. For the MID Software versions numbers see below in the Table Interfaces.	Essential component (if present)



Description

Number **TC7596** revision 14
 Project number 1902602
 Page 2 of 24

Component description	Function / Consists of entry	Remarks
	<p>FCI Module (Forecourt Controller Interface) Optional applied in a special housing (Courtmaster / SIQMA Cloudlink interface box) with optional IFSF-LON and/or V11 Interface for connection of calculating/indicating devices working with the IFSF-LON and V11 protocol.</p>	Essential component (if present)
	<p>Multi I/O board: for attachment of receipt printer, customer display and UPS. Alternatively the USB interface is allowed to use.</p>	Conditional component
	<p>Network Interface Card: For connection of other devices, especially POS-PCs or CRID's or OPT's.</p>	Essential component
	<p>Customer display: for presentation of information for the customer, such as dispenser-information (dispenser number, product, volume, amount and (sub) total etc.) Customer displays (with CE-marking) of different manufacturers may be applied under the condition that the checking facilities (for power off, uncoupling, no serial communication, etc. keeps the same</p>	Conditional component
	<p>Receipt Printer: For printing the registration for customer. Different manufacturers (with CE-marking) may be applied under the condition that the checking facilities (for power off, uncoupling, no serial communication, end of paper etc. keeps the same</p>	Conditional component
	<p>Electronic journal: Always available for electronic storage of the registration of the seller mostly on the hard-disc of the TMS30 / SIQMA POS-PC. Different manufacturers with required CE-marking may be applied under the condition that the checking facilities keeps the same (CRC-check etc.)</p>	Essential component
	<p>Pin Pad: Of different manufacturer's with required CE-marking, for entering the PIN-code and further information during Indoor payment (IPT) via cards.</p>	Conditional component
	<p>Card reader : Of different manufacturers with required CE-marking used as Indoor Payment Terminal (IPT)</p>	Conditional component
	<p>EPS Server: For connecting PIN-Pad terminals to the TMS30 / SIQMA PC. A Print Server for connecting receipt printers is included in the EPS server. The EPS Server can be included in the POS software also.</p>	Conditional component

Component description	Function / Consists of entry	Remarks
	<p>Sitemaster functionality: The Sitemaster is an alternative configuration of the POS PC with build-in Forecourt Controller (Courtmaster) for pump control in a joint housing. It is not intended for the normal sales operation mode and is allowed to be used without printer, display, customer display and keyboard. The Sitemaster can be connected via IFSF „FDC POS Standard protocol“ with a „third party“ non-MID POS PC Terminal (third party cash register) and a BOS PC Terminal (Backoffice System) and additionally with an OPT240 Tankautomaten. The customer receipt on the third party cash register is not under legal control. Hints like “data from measuring devices are marked by star (*) “ are not allowed to be printed by foreign cash register. The fuelling data is automatically stored on the Sitemaster for 100 days at least and could be displayed on demand in electronic journal after putting on a display and keyboard.</p>	Essential component (if present)
	<p>UPS (Uninterruptable Power Supply) For emergency power supply of the computer (POS/BOS terminal) and the optional receipt printer). For each computer an UPS is applied. Different manufacturer's (with CE-marking) may be applied under the condition that the specifications etc. keeps the same</p>	Conditional component

1.1.1.2 CRID (optional)

CRID (Card Reader In Dispenser) is an optional slave card reader which is installed directly in the dispenser. The CRID is connected to the POS TMS self-service device or to a standalone (master) OPT.

Component description	Function / Consists of entry	Remarks
CRID (Optional Card Reader in one house with the OPT/BNA)	The CRID is provided with a LANCOM Module to allow the software of the POS to control all components of the CRID. Alternatively a computer which controls all other components of the CRID can be used in case of a multimedia display with advertising. The legal part of the SW is always running in the POS or Master OPT Standalone to which the CRID and the dispensers are connected to. The CRID is built-up as follows:	
	<p>Computer : including display unit (with optional touch) of different manufacturer's with required CE-marking a so called Multi Media-PC (see TC7571)</p>	Conditional component

Component description	Function / Consists of entry	Remarks
	FCI Module (Forecourt Controller Interface) Optional applied instead of the LanCom Converter without forecourt connection and used for converting the LAN TCP/IP to RS232 protocol to control the printer and PINPad (no connection to dispensers)	Essential component
	Touchscreen (optional): fitted in the above mentioned computer for presentation of customer information during payment via cards (e.g. to ask a customer receipt and for to give input instructions etc.)	Conditional component
	LANCOM Converter or LANCOM Interface (LCI) : converts the LAN TCP/IP protocol to RS232 protocol	Essential component
	Receipt printer built-up as follows : <ul style="list-style-type: none"> • Printhead with Controller Board: For printing the registration for the customer. The following receipt printer may be applied: Manufacturer Epson, type M-T522AF 	Essential component
	Pin-Pad (optional): of different manufacturer's with required CE-marking, for entering the PIN-code and further information during payment via cards (e.g. to ask a customer receipt and for to give input instructions etc.)	Conditional component
	Card reader: of different manufacturers with required CE-marking	Conditional component
	Battery pack : For emergency power supply of the computer battery packs may be applied with the following conditions: 33,6 V ± 6V and at least 0,5 Ah	Conditional component
	Heater : The CRID is equipped with a heater including a ventilator and thermostat with a capacity of at least 300 Watt	Conditional component
	Power supply with connection field : For 230 V Power supply of the different hardware components	Conditional component
Note: The CRID transactions are stored on the electronic journal of the POS TMS30 / SIQMA self-service device or the standalone (master) OPT.		

1.1.1.3 SIQMA CRID (optional)

SIQMA CRID (Card Reader In Dispenser) is an optional slave card reader which is installed directly in the dispenser. The CRID is connected to the POS TMS self-service device or to a standalone (master) OPT.

Component description	Function / Consists of entry	Remarks
SIQMA CRID	The SIQMA CRID (optional slave Card Reader IN Dispenser) is provided with a computer board to allow the software of the POS to control all components of the CRID. The LAN TCP/IP protocol is converted to RS232 protocol or USB. The legal part of the SW is always running in the POS or Master OPT Standalone to which the SIQMA CRID and the dispensers are connected to. The SIQMA CRID is built-up as follows:	
	Computer board: includes a Tripzeps7 CPU module with ARM Cortex-A9 CPU used for multimedia, multi touch and multi display applications, with required CE-marking.	Conditional component
	Display unit with HW buttons (Touchscreen optional): with required CE-marking, Connected to the above mentioned computer for presentation of customer information during payment via cards or bank notes (e.g. to ask a customer receipt and for to give input instructions etc.)	Conditional component
	Receipt printer built-up as follows : <ul style="list-style-type: none"> Printhead with Controller Board: For printing the registration for the customer. The following receipt printer may be applied: Manufacturer Epson, type M-T522AF 	Essential component
	Pin-Pad (optional): of different manufacturer's with required CE-marking, for entering the PIN-code and further information during payment via cards (e.g. to ask a customer receipt and for to give input instructions etc.)	Conditional component
	Card reader: of different manufacturers with required CE-marking	Conditional component
	Contactless reader: of different manufacturers with required CE-marking – connected to PINPAD	Conditional component
	Transponder (optional): of different manufacturers with required CE-marking. Not used and tested	Conditional component
	Bank Note Acceptor Unit (optional) : of different manufacturers with required CE-marking and for entering bank notes in the pre-payment self- service situation	Conditional component
	Money Cassette (optional): a special housing to collect all entered Bank Notes	Conditional component

Component description	Function / Consists of entry	Remarks
	Bar Code Scanner (optional): of different manufacturers with required CE-marking - Used in the Refund Amount situation.	Conditional component
	Heater : The CRID is equipped with a heater including a ventilator and thermostat with a capacity of at least 150 Watt	Conditional component
	Power supply with connection field: For 230 V Power supply of the different hardware components (12V or 24V).	Conditional component
Note: 1. The Slave SIQMA CRID transactions are stored on the electronic journal on the hard Disc inside the TMS30 / SIQMA POS-PC. 2. The SIQMA CRID is located in the vicinity of the Dispenser.		

1.1.1.4 OPT230 or OPT230/2 (both optional)

The **OPT (Outdoor Payment Terminal)** is an optional slave card reader terminal installed in its own housing and is connected to the POS TMS30 / SIQMA self-service device or to a standalone (master) OPT.

Component description	Function / Consists of entry	Remarks
OPT230, OPT230/2	The OPT (Outdoor Payment Terminal) is provided with a computer which controls all other components of the OPT. The OPT230 or OPT230/2 (not applied with a LCD screen) are connected to the dispenser via the POS-PC or a Master OPT Standalone. The legal part of the SW is partly running in the POS or another Master OPT Standalone to which the OPT and the dispensers are connected to and on the OPT itself. The OPT is built-up as follows:	
	Computer : including display unit (with optional touch) of different manufacturer's with required CE-marking	Conditional component
	Receipt printer built-up as follows : <ul style="list-style-type: none"> • Printhead with controller board: For printing the registration for the customer. The following receipt printer may be applied: Manufacturer Epson, type M-T522AF 	Essential component
	Pin-Pad with display of different manufacturer's with required CE-marking, for entering the PIN-code and further information during payment via cards.	Conditional component
	Card reader: of different manufacturer's with required CE-marking	Conditional component

	Battery pack : For emergency power supply of the computer battery packs may be applied with the following conditions: 33,6 V ± 6V and at least 1,2 Ah	Conditional component
	Heater : The OPT is equipped with a heater including a ventilator and thermostat with a capacity of at least 500 Watt	Conditional component
	Power supply with connection field : For 230 V Power supply of the different hardware components	Conditional component
Note: The OPT230 or OPT230/2 transactions are stored on the electronic journal of the OPT230 or the standalone (master) OPT.		

1.1.1.5 OPT240, also named SIQMA OPT240 (optional)

The OPT240, also named SIQMA OPT240, is an optional slave card reader terminal installed in its own housing and is connected to the POS TMS30 / SIQMA self-service device or to a standalone (master) OPT.

Component description	Function / Consists of entry	Remarks
OPT240/ SIQMA OPT240	The (SIQMA) OPT240 (Outdoor Payment Terminal) is provided with a computer which controls all other components of the OPT. The OPT240 is connected to the dispenser via the POS-PC or another Master OPT Standalone. The legal part of the SW is partly running in the POS or another Master OPT Standalone to which the OPT and the dispensers are connected to and on the OPT itself. The OPT240 is built-up as follows:	
	Computer : Embedded PC of different manufacturer's with required CE-marking	Conditional component
	Touchscreen (optional): fitted in the above mentioned computer for presentation of customer information during payment via cards (e.g. to ask a customer receipt and for to give input instructions etc.)	Conditional component
	Receipt printer built-up as follows : <ul style="list-style-type: none"> • Printhead with controller board: For printing the registration for the customer. The following receipt printer may be applied: Manufacturer Epson, type M-T522AF 	Essential component
	Pin-Pad with Controller : optional and of different manufacturer's with required CE-marking, for entering the PIN-code and further information during payment via cards.	Conditional component
	Card reader : of different manufacturer's with required CE-marking	Conditional component

Component description	Function / Consists of entry	Remarks
	Battery pack : For emergency power supply of the computer battery packs may be applied with the following conditions: 33,6 V ± 6V and at least 1,2 Ah	Conditional component
	Heater : The OPT is equipped with a heater including a ventilator and thermostat with a capacity of at least 500 Watt	Conditional component
	Bank Note Acceptor Unit (optional) : of different manufacturers with required CE-marking and for entering bank notes in the pre-payment self- service situation	Conditional component
	Bar Code Scanner (optional): Used in the Refund Amount situation. Not used and tested	Conditional component
	Transponder (optional): Not used and tested	Conditional component
	Money Cassette (optional): a special housing to collect all entered Bank Notes	Conditional component
	Power supply with connection field : For 230 V Power supply of the different hardware components	Conditional component
Note: The OPT240 transactions are stored on the electronic journal of the OPT240 or the standalone (master) OPT.		

1.1.1.6 OPT230 Standalone (optional)

The OPT230 Standalone is an optional master card reader terminal installed in its own housing. Master means it is equipped with a Forecourt Controller.

Component description	Function / Consists of entry	Remarks
OPT230 Standalone	The master OPT230 Standalone (Outdoor Payment Terminal) is provided with a computer which controls all other components of the OPT. Especially the dispensers are controlled by software on this PC (Forecourt Controller). The OPT is built-up as follows:	
	Computer : including display unit (with optional touch) of different manufacturer's with required CE-marking	conditional component
	LON-Interface : ISA Card inside POS-PC and LON connection board for attachment of LON dispensers	essential component
	V11-Interface : ISA Card KR20 inside POS-PC and connection board AK20/SBC10 for attachment of V11 dispensers	essential component
	Easylon USB Interface (optional): connected to the computer via USB for connection of calculating/ indicating devices working with the IFSF-LON protocol	essential component

Component description	Function / Consists of entry	Remarks
	FCI Module (Forecourt Controller Interface) Optional applied with optional IFSF-LON and/or V11 Interface for connection of calculating/indicating devices working with the IFSF-LON and V11 protocol	essential component
	DOMS PSS5000 Forecourt Interface (optional): for use of converting different dispenser protocols to the DOMS protocol in direction of OPT. For the MID Software versions numbers see below in the Table Interfaces. The PSS5000 Interface (and Surge Protector) are optional fitted outside the OPT in a separate housing installed indoors.	essential component
	Touch screen (optional): fitted in the above mentioned computer for presentation of customer information during payment via cards (e.g. to ask a customer receipt and for to give input instructions etc.).	conditional component
	Pin-Pad : of different manufacturer's with required CE-marking, for entering the PIN-code and further information during payment via cards.	conditional component
	Card reader : of different manufacturer's with required CE-marking	conditional component
	Receipt printer built-up as follows : <ul style="list-style-type: none"> Printhead with controller board: For printing the registration for the customer. The following receipt printer may be applied: Manufacturer Epson, type M-T522AF 	essential component
	Electronic journal : Always available for electronic storage of the registration of the seller on the hard-disc of the OPT. Different manufacturers with required CE-marking may be applied under the condition that the checking facilities keeps the same (CRC-check etc.)	essential component
	Battery pack : For emergency power supply of the computer battery packs may be applied with the following conditions: 33,6 V ± 6V and at least 1,2 Ah	conditional component
	Surge protector : The mains of the PSS5000 Interface is connected via a Surge protector of different manufacturers including required CE-marking and with the following conditions: 220~240 Vac; 10 A; at least 903 Joule and max. surge peak of 13 kA.	conditional component
	Heater : The OPT is equipped with a heater including a ventilator and thermostat with a capacity of at least 500 Watt	conditional component

Component description	Function / Consists of entry	Remarks
	Power supply with connection field : For 230 V Power supply of the different hardware components	conditional component

1.1.1.7 OPT230 Standalone/2 (optional)

The OPT230 Standalone/2 is an optional master card reader terminal installed in its own housing. Master means it is equipped with a Forecourt Controller.

Component description	Function / Consists of entry	Remarks
OPT230 Standalone/2	The master OPT230 Standalone/2 (Outdoor Payment Terminal) is provided with a computer which controls all other components of the OPT. Especially the dispensers are controlled by software on this PC (Forecourt Controller). The OPT is built-up as follows:	
	Computer : of different manufacturer's with required CE-marking	Conditional component
	LON-Interface : ISA Card inside POS-PC and LON connection board for attachment of LON dispensers	Essential component
	V11-Interface : ISA Card KR20 inside POS-PC and connection board AK20/SBC10 for attachment of V11 dispensers	Essential component
	Easylon USB Interface (optional): connected to the computer via USB for connection of calculating/indicating devices working with the IFSF-LON protocol	Essential component
	FCI Module (Forecourt Controller Interface) Optional applied with optional IFSF-LON and/or V11 Interface for connection of calculating/indicating devices working with the IFSF-LON and V11 protocol	Essential component
	DOMS PSS5000 Forecourt Interface (optional): for use of converting different dispenser protocols to the DOMS protocol in direction of OPT. For the MID Software versions numbers see below in the Table Interfaces. The PSS5000 Interface (and Surge Protector) are optional fitted outside the OPT in a separate housing installed indoors.	Essential component
	Receipt printer built-up as follows : <ul style="list-style-type: none"> • Printhead with controller board: For printing the registration for the customer. The following receipt printer may be applied: Manufacturer Epson, type M-T522AF 	Essential component

Component description	Function / Consists of entry	Remarks
	Electronic journal : Always available for electronic storage of the registration of the seller on the hard-disc of the OPT. Different manufacturers with required CE-marking may be applied under the condition that the checking facilities keeps the same (CRC-check etc.)	Essential component
	Pin-Pad with display : of different manufacturer's with required CE-marking, for entering the PIN-code and further information during payment via cards.	Conditional component
	Card reader : of different manufacturer's with required CE-marking	Conditional component
	Battery pack : For emergency power supply of the computer battery packs may be applied with the following conditions: 33,6 V ± 6V and at least 1,2 Ah	Conditional component
	Surge protector : The mains of the PSS5000 Interface is connected via a Surge protector of different manufacturers including required CE-marking and with the following conditions: 220~240 Vac; 10 A; at least 903 Joule and max. surge peak of 13 kA.	Conditional component
	Heater : The OPT is equipped with a heater including a ventilator and thermostat with a capacity of at least 500 Watt	Conditional component
	Power supply with connection field : For 230 V Power supply of the different hardware components	Conditional component

1.1.1.8 OPT240 Standalone, also named SIQMA OPT240 Standalone (optional)

The OPT240 Standalone is an optional master card reader terminal installed in its own housing. Master means it is equipped with a Forecourt Controller.

Optionally the OPT240 Standalone is equipped with a banknote acceptor, normal screen and hardware buttons.

Component description	Function / Consists of entry	Remarks
OPT240 Standalone/ SIQMA OPT240 Standalone	The master (SIQMA) OPT240 Standalone is provided with a computer which controls all other components of the OPT. Especially the dispensers are controlled by software on this PC (Forecourt Controller). The OPT is built-up as follows:	
	Computer : Embedded PC / Forecourt Controller of different manufacturer's with required CE-marking	Conditional component

Component description	Function / Consists of entry	Remarks
	Multi I/O board: for connection of calculating/indicating devices working with V11 protocol (9* RS485) and other devices via RS232 like the printer, BNA and others. Alternatively the USB interface can be used.	Essential component
	FCI Module (Forecourt Controller Interface) : with optional IFSF-LON and/or V11 Schnittstelle Interface for connection of calculating/indicating devices working with the IFSF-LON and V11 protocol	Essential component
	Easylon USB Interface (optional): for connection of calculating/indicating devices working with the IFSF-LON protocol	Essential component
	Touchscreen (optional): fitted in the above mentioned computer for presentation of customer information during payment via cards (e.g. to ask a customer receipt and for to give input instructions etc.)	Conditional component
	DOMS PSS5000 Forecourt Interface (optional): for use of converting different dispenser protocols to the DOMS protocol in direction of OPT. For the MID Software versions numbers see below in the Table Interfaces. The PSS5000 Interface (and Surge Protector) are optional fitted outside the OPT in a separate housing installed indoors.	Essential component
	Receipt printer built-up as follows : <ul style="list-style-type: none"> • Printhead with controller board: For printing the registration for the customer. The following receipt printer may be applied: Manufacturer Epson, type M-T522AF 	Essential component
	Electronic journal : Always available for electronic storage of the registration of the seller on the hard-disc of the OPT. Different manufacturers with required CE-marking may be applied under the condition that the checking facilities keeps the same (CRC-check etc.)	Essential component
	Pin-Pad with Controller: optional and of different manufacturer's with required CE-marking, for entering the PIN-code and further information during payment via cards.	Conditional component
	Card reader: of different manufacturer's with required CE-marking	Conditional component
	Battery pack : For emergency power supply of the computer battery packs may be applied with the following conditions: 33,6 V ± 6V and at least 1,2 Ah	Conditional component

Component description	Function / Consists of entry	Remarks
	Surge protector: Only applied when the DOMS PSS5000 Forecourt Interface is fitted. The mains of the PSS5000 Interface is connected via a Surge protector of different manufacturers including required CE-marking and with the following conditions: 220~240 Vac; 10 A; at least 903 Joule and max. surge peak of 13 kA.	Conditional component
	Heater : The OPT is equipped with a heater including a ventilator and thermostat with a capacity of at least 500 Watt	Conditional component
	Bank Note Acceptor Unit (optional) : of different manufacturers with required CE-marking and for entering bank notes in the pre-payment self- service situation	Conditional component
	Bar Code Scanner (optional): Used in the Refund Amount situation. Not used and tested	Conditional component
	Transponder (optional): Not used and tested	Conditional component
	Money Cassette (optional): a special housing to collect all entered Bank Notes	Conditional component
	Power Supply with Connection Field : For 230 V Power Supply of the different hardware components	Conditional component
Sitemaster (optional)	The OPT240 Standalone can be connected like a POS (in configuration Sitemaster) via IFSF „FDC POS Standard protocol“ with a „third party“ non-MID POS PC Terminal (third party cash register) and a BOS PC Terminal (Backoffice System). The customer receipt on the third party cash register is not under legal control. Hints like “data from measuring devices are marked by star (*) ” are not allowed to be printed by foreign cash register. The fuelling data is automatically stored on OPT240 for at least 100 days and could be displayed on demand in the electronic journal.	Essential component (if present)

1.1.1.9 General note to the components mentioned above (CRID and OPT terminals)
 Alternatively the components of the above mentioned CRID (Card Reader In Dispenser) and the different OPT versions (Outdoor Payment Terminals) are applied in a different housing as part of the dispenser housing, e.g. in designation “MZ6000” or “CLOU”.
 See the documentation folder belonging to this Evaluation Certificate.

1.1.1.10 Scheidt & Bachmann interfaces via serial protocol

All components mentioned in the table below are essential components.

Component description	Function / Consists of entry	Remarks
Multi I/O board	Multi I/O board (optional) in embedded PC for direct connection of calculating/indicating devices working with V11 protocol (RS485)	
FCI Module	FCI Module (optional Forecourt Controller Interface) for connection of calculating/indicating devices working with V11 protocol, IFSF-LON, Dresser DART, Dresser Current Loop, Tokheim EPS3/5, Kienzle ER3, Gilbarco 2 wire and Tokheim ZSR83 protocols. Optional the FCI interface is applied in a separate housing called the "Court Master"	
Easylon USB Interface	Easylon USB Interface (optional) for connection of calculating/indicating devices working with the IFSF-LON protocol	
IFSF LON-Board	IFSF LON Board (optional) inclusive one or more IFSF-LON Connection Board fitted between the connected dispensers and the LON board for connection of calculating/indicating devices via the IFSF-LON protocol (fitted in one of the POS PC's).	
KR 20 Board interface	KR20 board (optional) inclusive an AK20 or SBC10 connection board fitted between the connected dispensers and the KR20 board for connection with calculating/indicating devices working with the V11 protocol. Optional an extra "Bridge" Interface housing is applied.	
ICT-Schlumberger EPS Interface	Bridge (optional) for connection with calculating/indicating devices working with the Tokheim / Schlumberger EPS protocol.	
ICT-Kienzle 02 / ER3 Interface	Bridge (optional) for connection with calculating/indicating devices working with the Kienzle 02/ ER3 protocol.	
ICT-Tokheim Schlumberger CoCa / ZSR83 Interface	Bridge (optional) for connection with calculating/indicating devices working with the Kienzle 02 / Tokheim Schlumberger CoCa protocol and ZSR83 protocol.	
ICT-DW X2000 CL Interface	Bridge (optional) for connection with calculating/indicating devices working with the Dresser Wayne X2000 Current Loop protocol.	
ICT-DW X2000 DART Interface	Bridge (optional) for connection with calculating/indicating devices working with the Dresser Wayne X2000 DART protocol.	
Nuovo Pignone / Logitron Pumalan CL Interface	Bridge (optional) for connection with calculating/indicating devices working with the Current Loop protocol.	

Component description	Function / Consists of entry	Remarks
Gilbarco 2-wire Interface	Bridge for connection with calculating/indicating devices working with the Gilbarco 2-wire Current Loop protocol.	

1.1.1.11 DOMS PSS500 Forecourt Controller

The DOMS PSS5000 Forecourt Controller is either constructed as:

- Mentioned in Parts Certificate SC0257-15, issued by SP Sweden;
- Or as described in the table below:

Component description	Function / Consists of entry	Remarks
DOMS PSS5000 Interface (optional)	DOMS PSS5000 Forecourt Interface (optional) for use of converting different dispenser protocols to the DOMS protocol (only for protocol conversion purposes) in direction of the TMS30 / SIQMA POS PC and/or OPT230 /OPT240 Standalone OPT's – Legal Software versions: <ul style="list-style-type: none"> • 498-08-100, Checksum 32A7; • 498-08-101, Checksum 2F62; • 498-08-102, Checksum 0C1B; • 498-15-100, Checksum EDC8; • 498-15-101, Checksum B5A1 	Essential component
	Conditional parts of the DOMS PSS 5000 Forecourt Controller Interface:	
Processor board CPB505 ; CPB508 ; CPB509	The processor board is equipped with a number of inputs and outputs. De installed software is used to configure the in- and outputs.	
DSB 352	Interface of a cash register system to the forecourt controller	
DSB 362	Interface of the Prodata OPT 1600 / 1658	
DSB 347	Interface of miscellaneous peripherals	
DMB 354 DMB 506	Interface of Scheidt & Bachmann indicating devices, types: T10 EX, T10, T10/8, T10/8/11-S and T20.	
DMB 443	Interface of Scheidt & Bachmann indicating devices, types: T01 and T02.	
DMB 426	Interface of Nuovo Pignone indicating devices, type OPT E (exists out of two versions)	
DSB 453	Interface to Dresser Wayne indicating devices, types X2000, X2003 and iGEM resp. to ELREM indicating devices via the ELREM Tank2000 protocol	
DMB 452 / DMB 512	Interface to resp. Koppens, Schlumberger and Tokheim indicating devices, types EPS 3, EPS 5, CoCa and WWC.	

Component description	Function / Consists of entry	Remarks
DSB 347	Optional RS232-Interface existing out of two versions namely with and without a so-called 9p sub-D connector	
DCB 449	Optional Connection Board which will be applied in combination with de hereafter called IFSF-LON-Interface.	
IFSF-LON 55020-01	Optional IFSF-LON-Interface of manufacturer Echelon, type 55020-01, which will be applied as piggyback and is mounted on the main-board for connecting to electronic indicating device via the IFSF-LON-protocol (including Graf indicating device).	
DMB 489	Optional module destined for interfacing of among others Gilbarco GmbH indicating devices of type EC2000.	
DMB 430	Optional module for the interfacing of Koppens KA dispensers	
DMB 359	Optional module for the interfacing of MKS (Kienzle 2-wire) dispensers	
DSB 408	Optional module for the interfacing of among others Tokheim indicating devices of type UDC-VE.	
DSB 475	Optional module destined for interfacing of among others Dresser Wayne indicating devices operating via Current Loop.	
DSB 492	Optional module destined for interfacing of among others Gilbarco GmbH indicating devices of type Epsilon.	
DSB 338	Optional module destined for interfacing of among others Gilbarco GmbH indicating devices of type Epsilon.	
DSB 359	Optional module destined for interfacing of among others Gilbarco GmbH indicating devices of type EC2000, ER112, EL112.	
PSU 342	Power Supply Unit	

1.1.1.12 Fiscal printer (optional)

The following fiscal printer may be applied:

- UPOS, type Fp-T260V (indoor purpose)
- ALZAB, type Omega (indoor purpose)
- OHRMET, type DF-4 (outdoor purpose).

1.2 Essential characteristics

1.2.1 Environment classes: M1 / E1

1.2.2 Ambient temperature range:

- For terminals OPT/CRID: -25 ... +55 °C

- For terminals POS: + 5 ... +40 °C

1.2.3 Legal software function

- The self-service device replaces the primary indications of the measuring instruments. Primary indications of the self-service device are: receipt printers and both displays (for seller and customer) for the POS-PC;
- Memory device for the storage of the transaction data (electronic journal)

1.2.4 Legal software part

Software specification (refer to WELMEC guide 7.2):

- Software type U;
- Risk Class C;
- Extension L, T, S and D;
- TMS30 / SIQMA software versions:

Software version	Date	Checksum of legal software part
1.66	05-05-2008	3C3E4C42
1.67	29-06-2009	E8961AAF
1.68	25-06-2010	15850CF2
1.69	09-09-2011	A5E9EC72

The software fulfils the WELMEC guide 7.2

The legal software is running as part of the TMS30 / SIQMA software on market standard hardware and software components. The PC is equipped with a hard disk, which stores the operating system Windows NT or XP or Windows 10 and the application program TMS30 / SIQMA. Each change of the legally relevant software is stored in a log book (data base table) – see screen “system information”, also called “W&M and release information”.

The transaction data stored in the journal files are protected by CRC checksum and transferred in the system together with CRC checksum

The hard disk is secured by electronic sealing against removal. Each software identification line in the log book is secured by CRC32 and includes an activation date with seconds – see picture in paragraph 1.2.3. If you remove the hard disk, it is not possible to create such entry with the old activation date without special knowledge of the TMS30 / SIQMA system. During reverification it is detectable whether the log book was removed or deleted.

The communication to dispenser is possible via IFSF protocol over LON/RS485/TCP/IP, via V11-PS protocol over RS485 or via DOMS PSS5000 Forecourt interface and others via Bridges and FCI module (Forecourt Interface).

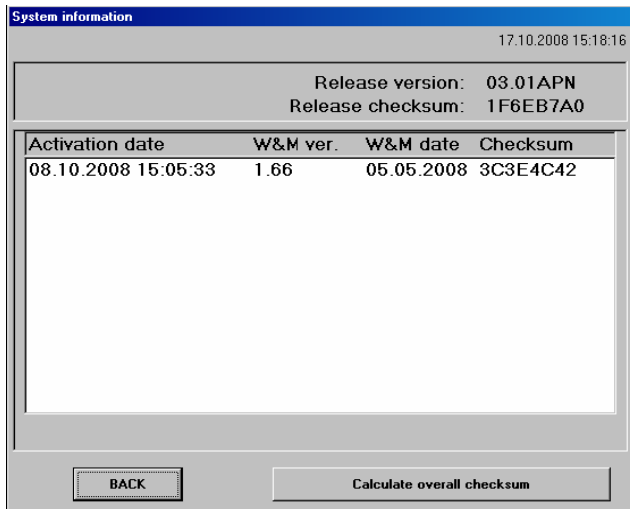
Special handling for outdoor devices like CRID and OPT:

When the printer paper roll is nearly empty the customer is warned before the start of refuelling according to OIML R117-1 No. 5.10.3.1.2, that the printing of a receipt is not possible. If no paper is available the locking of the device is not necessary.

Special handling for special customers:

For special applications where a customer card is in used for authorisation the unit price and the amount of the measuring data will be omitted, because the customer will receive a monthly invoice with a customer dependent unit price.

- 1.2.5 Legal software part of the TMS30 / SIQMA POS-PC
 The valid version of the software has to be checked with release number „W&M Ver.“ and check sum. This data can be recalled using the following steps:



- Press button MENU on POS keyboard (SHIFT F3 on a PC keyboard)
- Choose line SERVICE on POS screen
- Press ENTER
- Choose line SYSTEMINFO on POS screen
- Press ENTER

Alternative access on touch screen systems:

- Press button instead of ENTER
- Button name is "W&M and release information"

- 1.2.6 Legal software part of the CRID
 There is no legal software.

- 1.2.7 Legal software part of the OPT terminal (all versions of OPT equipped with a display)
 The software version including the belonging checksum can be read on the display of the OPT.

Example of the screen:



1.2.8 Legal software part of the OPT230/2 and OPT230 Standalone/2

- The software version including the belonging checksum can be read out by entering on the PINPad the following key sequence: <ENTER> <99> <ENTER>
 The display on the PINPad will show the software version and checksum.
- The software version including belonging checksum and activation date can be print out by entering on the PIN-Pad the following key sequence:
 <ENTER> <98> <ENTER> <060709> <ENTER>



1.2.9 Service modes

The following service modes are possible:

- Attended service mode with the following payment types:
 - Post-payment (including credit cards and debit cards) via one or more TMS30 / SIQMA Point of Sales terminals;
 - Post-payment using Mobile Payment app via one or more TMS30 / SIQMA Point of Sales terminals;
 - Pre-payment via pre-setting of the amount or volume by the operator.
- Unattended service mode with the following payment modes:
 - Delayed payment (including credit cards and debit cards) via the Outdoor Payment Terminal (OPT);
 - Delayed-payment using Mobile Payment app via one or more TMS30 / SIQMA Point of Sales terminals;
 - Pre-payment via the Outdoor Payment Terminal (OPT with BNA).

The above mentioned service modes and payment modes can be used side by side.

1.2.10 Legal software part of the DOMS PSS5000 Forecourt Interface

- See Parts Certificate number SC0257-15 for details on how to check/verify the installed software version, if the PSS5000 Forecourt Controller is constructed according this Parts Certificate
- If the PSS5000 Forecourt Controller is constructed as described in paragraph 1.1.1.11 the software version can be seen in the LCD-display fitted on the CPU board.



The W&M Legal Software versions number(s) can also be displayed via pressing the four arrow buttons located left from the display namely:

- press Down Arrow for selection of the special W&M Menu
- press Right Arrow for displaying the legal Software version.

1.3 Essential shapes

1.3.1 Configuration of the self-service device

The self-service device of Scheidt & Bachmann GmbH, type TMS, can be configured as follows:

- Configuration 1: A master TMS30 / SIQMA with POS (Point-Of-Sales) or Station Server (POS/BOS) with built in Forecourt Controller (Pump control), Electronic journal, optional IFSF-LON, V11 Interface and Bridges, belonging Customer Display, Customer Receipt Printer, Seller screen, Keyboard and Mouse, optional Indoor Payment Terminal (IPT), optional slave OPT230 (Outdoor Payment Terminal) and/or optional slave CRID (Card Reader In Dispenser) and optional DOMS PSS5000 Forecourt Interface installed indoors in a separate housing.
See the documentation number 7596/7-01, Page 1 of 10.
- Configuration 2: As Configuration 1 but with multi-POS / Station Server and with one or more optional slave OPT230's (Outdoor Payment Terminals) and/or one or more optional slave CRID's (Card Reader In Dispenser's)
See documentation number 7596/7-01, Page 2 of 10.
- Configuration 3: Unmanned Station mainly as Configuration 2 but with a TMS30 / SIQMA with POS-PC or Station Server POS/BOS-PC / Forecourt Controller) with only a Keyboard and Mouse, with one or more optional slave OPT230's (Outdoor Payment Terminals) and/or one or more optional slave CRID's (Card Reader In Dispenser's) and optional DOMS PSS5000 Forecourt Interface installed indoors in a separate housing.
See documentation number 7596/7-01, Page 3 of 10.
- Configuration 4: OPT230 Standalone Outdoor Payment Terminal (master) with built-in PC applied with Forecourt Controller (Pump control), Electronic Journal, Customer Receipt Printer, (optional Touch) Screen, optional Pin-Pad, Card Reader, Battery Pack and Heater with Fan etc. and optional DOMS PSS5000 Forecourt Interface installed indoors in a separate housing. The OPT is (optional) connected with one or more (slave) OPT230 Standalone OPT's. In this case the OPT230 Standalone OPT controls the other slave OPT230's.
See documentation number 7596/7-01, Page 4 of 10.
- Configuration 5: OPT230 Standalone/2 Outdoor Payment Terminal (master) mainly as Configuration 4. The OPT230 Standalone/2 controls the other slave OPT230's.
See documentation number 7596/7-01, Page 5 of 10.
- Configuration 6: OPT240 Standalone Outdoor Payment Terminal (master) with optional BNA (Bank Note Acceptor) mainly as Configuration 4 and 5. The OPT240 Standalone is applied with a FCI Module (Forecourt Interface) with an optional IFSF-LON and V11 Interface and controls the other slave OPT240's.
See documentation number 7596/7-01, Page 6 of 10.

Configuration 7: An optional TMS30 / SIQMA "Sitemaster" with built-in Forecourt Controller (Master/FC) for pump control via one of the above mentioned serial connections/ protocols and connected via the IFSF "FDC POS Standard protocol" with a "third party" non-MID slave POS PC Terminal and one or more optional slave OPT240 Outdoor Payment Terminals with optional BNA (Bank Note Acceptor) and connected via TCP/IP. See documentation number 7596/7-01, Page 7 of 10.

Remark: The above mentioned TMS30 / SIQMA POS "Sitemaster" functionality with built-in Forecourt Controller (master/FC/electronic journal) is optional applied in the OPT240 Standalone OPT/BNA Terminal of Configuration 6.

Configuration 8: Identical to configuration 1 to 7, which allows the possibility for customers to access, fuel and pay by using the Mobile Payment app.

1.3.2 Inscriptions

- The following information is clearly visible on the type plate:
 - The Evaluation certificate number: **TC7596**;
 - Name and/or trade mark of the producer;
 - Type designation;
 - Serial number and year of manufacture;
 - Space is reserved on the type plate for national metrology markings with respect to (re)verification or inspection.
 - information concerning using circumstances (such as the temperature range)
 - MID approval number(s) of the connected CE-M certified dispenser(s)
(Note: some countries requires the pumps numbers only).

An example of the type plate is given in documentation number 7596/7-01, Page 8 of 10.

Remarks:

- The type plate is fitted and sealed to a main part of the self-service device;
- Parts of the inscriptions (except for the Evaluation Certificate number and serial number) may be stated on the nameplate or on a separate Data Sheet belonging to the complete dispenser unit.
- Identification sticker with the producer's name and/or trade mark, and the Evaluation Certificate number "**TC7596**" are fitted on the display (screen) of the seller, customer display, customer receipt printer.
- If the DOMS PSS5000 Forecourt controller is constructed according Parts Certificate SC0257-15 for the inscriptions required on the Forecourt controller.

1.4 Conditional shapes

1.4.1 Configuration scheme's / overviews
 See documentation number TC7596/6-01.

1.5 Non-essential parts

- Emergency switch and mains switch
- Router, Hub, Switch
- Cash drawer, Barcode reader, emergency stop or security locks
- Price sign and washing devices



Description

Number **TC7596** revision 14
Project number 1902602
Page 23 of 24

- Optional Security OPT hardware such as a Mifare Reader and Control Board for handling of locks and door sensors

1.6 Non-essential characteristics

- It is also possible to sell other shop items via the cash register system(s).

2 Seals

- The type plate is secured against removal, either by seal or the type plate shall be destroyed when it is removed.
- Electronic sealing of the hard disc can be secured against removal. The removal date are detectable in the log book stored.

3 Conditions for conformity assessment

- The self-service device must be constructed in accordance with this Evaluation Certificate and the appertaining documentation;
- Other parties may use this Evaluation Certificate only with the written permission of the producer.

4 Reports

An overview of performed tests is given in the test reports:

- CPC-802219-02 issued by NMI Certin B.V.;
- NMI-13200506-01 issued by NMI Certin B.V.;
- NMI-11200638-01 issued by NMI Certin B.V.;
- Station Server, Date: 4 September 2008 issued by Scheidt und Bachmann GmbH;
- EMC_21137775_001 issued by TUV Rheinland;
- S&B POS Date: 30 June 2009 issued by Scheidt und Bachmann GmbH;
- NMI-10200638-02 issued by NMI Certin B.V.;
- NMI-13200506-02 issued by NMI Certin B.V.;
- CRID LANCOM, Date: 5 August 2008 issued by Scheidt und Bachmann GmbH;
- EMC_21137795_001 issued by TUV Rheinland;
- CPC-701783 issued by NMI Certin B.V.;
- CPC-802219 issued by NMI Certin B.V.;
- CPC-9200255-01 issued by NMI Certin B.V.;
- OPT230, Date 17 April 2008 issued by Scheidt und Bachmann GmbH;
- OPT230, ref. 0585772, Date 8 July 2009 issued by Scheidt und Bachmann GmbH;
- OPT230, ref. 0585772, Date 29 April 2010 issued by Scheidt und Bachmann GmbH;
- EMC_21135909_001 issued by TUV Rheinland;
- EMC_21142847_001 issued by TUV Rheinland;
- CPC-9200255-02 SW issued by NMI Certin B.V.;
- OPT240 Standalone, ref. 0586915, Date 27 July 2010 issued by Scheidt und Bachmann GmbH;
- OPT230 DOMS NL, ref. 0585772D, Date 29 April 2010 issued by Scheidt und Bachmann GmbH;
- CPC-10200601-01 issued by NMI Certin B.V.;
- CPC-10200601-02 SW issued by NMI Certin B.V.;
- NMI-14200271-01 issued by NMI Certin B.V.;
- NMI-1902602-01 issued by NMI Certin B.V.;
- NMI-1902602-02 issued by NMI Certin B.V..