

PSS 5000

Hardware Configuration Guide

Selecting the CPU Board and Interface Modules



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About This Documentation

Purpose	This documentation enables you to select the correct hardware to configure a PSS 5000 for a specific site. It describes the prerequisites required before you start and leads you through the process of selecting the correct types and number of modules required for the specific system.
Audience	The content of this documentation is designed for any person who needs to configure the hardware of a PSS 5000 forecourt controller for specific forecourt devices.

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1 How to Select the Correct Hardware

Overview

Before a PSS 5000 can be installed on a site, the correct Hardware Interface Modules (HIMs) must be selected. The method to select the correct HIMs and an example of how to connect the devices and HIMs together are provided in the following topics:

- [‘1.1 Selecting Hardware Interface Modules \(HIMs\) and CPU Board’ on page 4](#)
- [‘1.2 A Worked Example of How to Select HIMs’ on page 5](#)

1.1 Selecting Hardware Interface Modules (HIMs) and CPU Board

To select the correct HIMs for the PSS 5000

This procedure describes how to obtain the information necessary to select the correct type and number of HIMs.

Note: If your forecourt devices, protocols or interfaces do not match the reference tables, contact support@doms.dk to help provide a solution.

1. Make a list of all the devices on the forecourt that you want the PSS 5000 to control.

To help you create this list, there is a form at the end of this documentation.

2. Look at the POS and find out which type of interface connection exists between the POS and the PSS 5000:

- If the connection is a serial interface, use the HIM hardware table ([‘3.11 HIM Details and Interface Types’ on page 32](#)) to select the correct DSB module for the interface type. Continue to Step 3.
- If an Ethernet interface is used, go to Step 3.

3. Use the Manufacturer/Protocol tables (see [‘2 Device Manufacturers and Device Protocols Used’ on page 10](#)) to see which protocol each device uses, or is most likely to use. Write this in the list opposite each of the devices.
4. Use the Protocol/HIM tables (see [‘3 Device Protocols and Associated HIMs’ on page 19](#)) to select the HIMs for the actual Protocol/physical interfaces the devices use.

Note: If your actual Protocol/physical interface combinations are not listed in the tables, contact support@doms.dk for a solution.

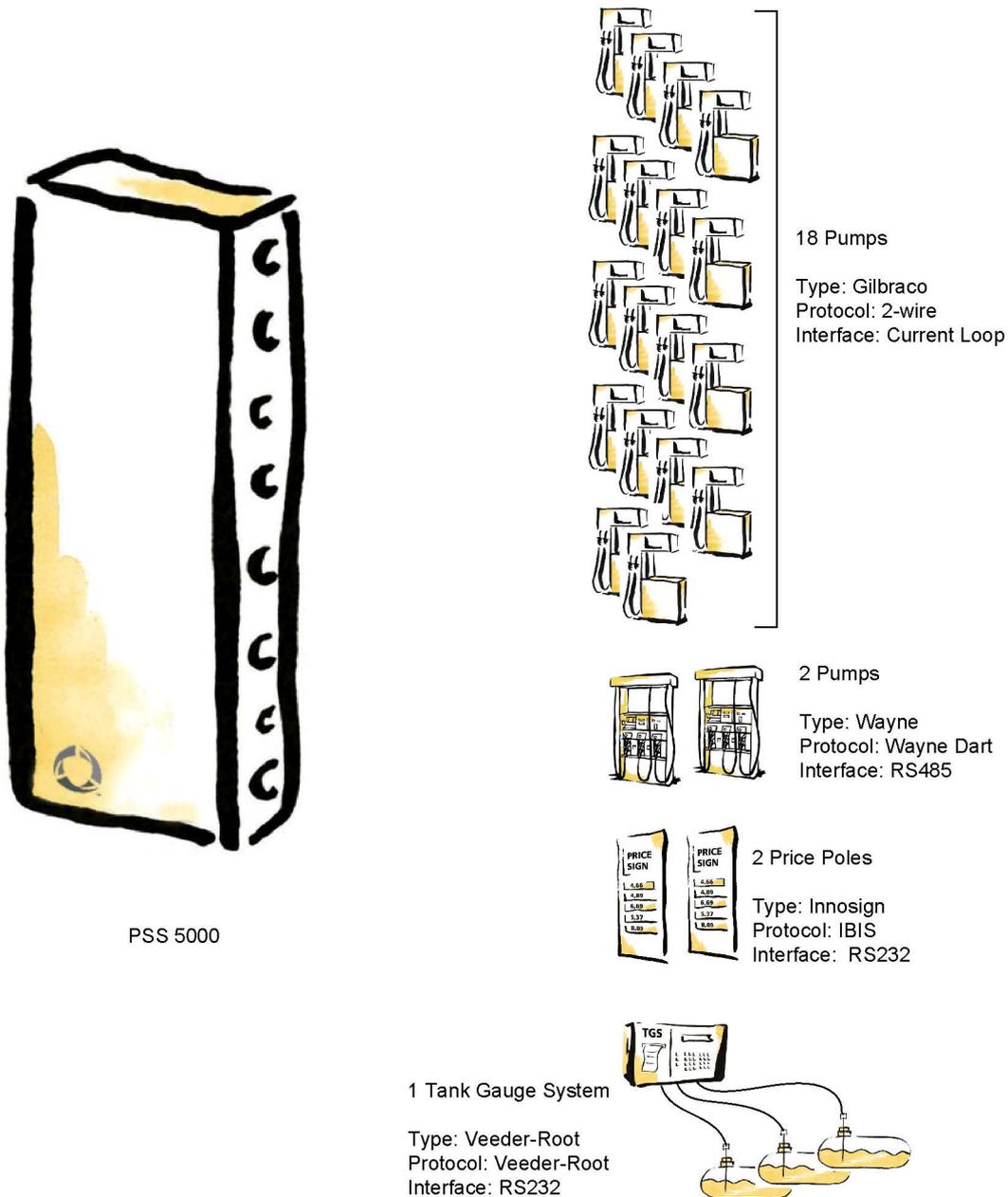
5. Use the connection information provided for each HIM (see [‘3.11 HIM Details and Interface Types’ on page 32](#)) to determine how many of each type of HIM you require.
6. Use the information from Step 5. together with the information in [‘4 PSS 5000 CPU Board and Cabinet Specifications’ on page 37](#) to help you decide which cabinet to select for the PSS 5000.
7. Use the information in [‘5 PSS 5000 Accessories List’ on page 39](#) to select the accessories you require (cables, etc).

For example, if your HIMs fill more than 14 single-width modules, you need an extension rail to mount all the HIMs.

1.2 A Worked Example of How to Select HIMs

Worked example
forecourt scenario

The figure below is an example of a simple petrol station forecourt. We will use this scenario to introduce the concepts of selecting the correct HIMs and connecting the HIMs to the ports on the CPU Board.



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Worked example procedure

In this procedure we will use the ‘[Worked example forecourt scenario](#)’ on page 5 to provide the necessary input to select the correct HIMs.

1. Make a list of the types and numbers of devices on the forecourt.

Device	Manufacturer	No.	Protocol	Interface Type	HIM				HIMs Required
					Name	Connections	Stock No.	Width	
Pumps	Gilbarco	18							
Pumps	Wayne	2							
TGS	Veeder-Root	1							
Price Poles	Innosign	2							

2. Use the Manufacturer/Protocol tables to select the protocols used.

Note: The cross-references (blue text) in the Manufacturer/Protocol tables lead you to the correct protocol in the Protocol/HIM table. In this example, the Gilbarco pump that uses a 2-wire protocol leads you to ‘[Gilbarco 2-wire](#)’ on page 21.

3. Add each of the protocols to your list.

Note: If more than one protocol is possible, check the hardware to see which one is implemented.

Device	Manufacturer	No.	Protocol	Interface Type	HIM				HIMs Required
					Name	Connections	Stock No.	Width	
Pumps	Gilbarco	18	Gilbarco, 2-wire						
Pumps	Wayne	2	Wayne Dart						
TGS	Veeder-Root	1	Veeder-Root						
Price Poles	Innosign	2	IBIS						

- Use the Protocol/HIM tables to find out which HIMs you must use to connect the PSS 5000 to the forecourt devices.

When you have found the correct protocol, select the interface type used by the device. Next to this information is the name of the correct HIM.

Protocols	Interface Type	HIM	PN	Devices/Port
Gilbarco 2-wire	Current Loop, 45mA	DSB492	140042	10
		DSB338	Replaced	
IFSF	LON (TP/FT-10)	DSB447 + KIN22	133319 135898	83
Wayne Autocoupl/Ferranti	Current Loop, 20mA	DSB338	136877	24
Wayne Dart	RS485	DSB453	133768	20
		DSB501	142012	
Wayne Dresser PIB	RS232	DSB347	123240	16
Veeder-Root	RS232 (with carrier detect)	DSB347	123240	16
	RS232 (3-wire)	DSB457	133845	
		DSB457	133845	
IBIS	RS232 (with carrier detect)	DSB347	123240	1
IFSF	LON (TP/FT-10) ‡	DSB533	143376	255

‡ Custom LON (TP/FT-10) interface (e.g. 143376 or 143557) on bus

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- Use the HIM Details table to find and add the connection details, Doms Stock number and module width for the individual HIMs to your list.

Device	Manufacturer	No.	Protocol	Interface Type	HIM				HIMs Required
					Name	Connections	Stock No.	Width	
Pumps	Gilbarco	18	2-wire	Current Loop	DSB492	8	140042	2	
Pumps	Wayne	2	Wayne Dart	RS485, 2-wire	DSB453	4	133768	2	
TGS	Veeder-Root	1	Veeder-Root	RS232 (3-wire)	DSB347	1	123240	1	
Price Poles	Innosign	2	IBIS	RS232 (3-wire)	DSB347	1	123240	1	

6. Use the **No.** and **HIM Connections** values to determine how many HIMs you require for each protocol.

In the example, the Gilbarco pumps use DSB492. Each DSB492 can have 8 pumps connected to it. Therefore, to connect 18 pumps you need to use 3 DSB492 modules.

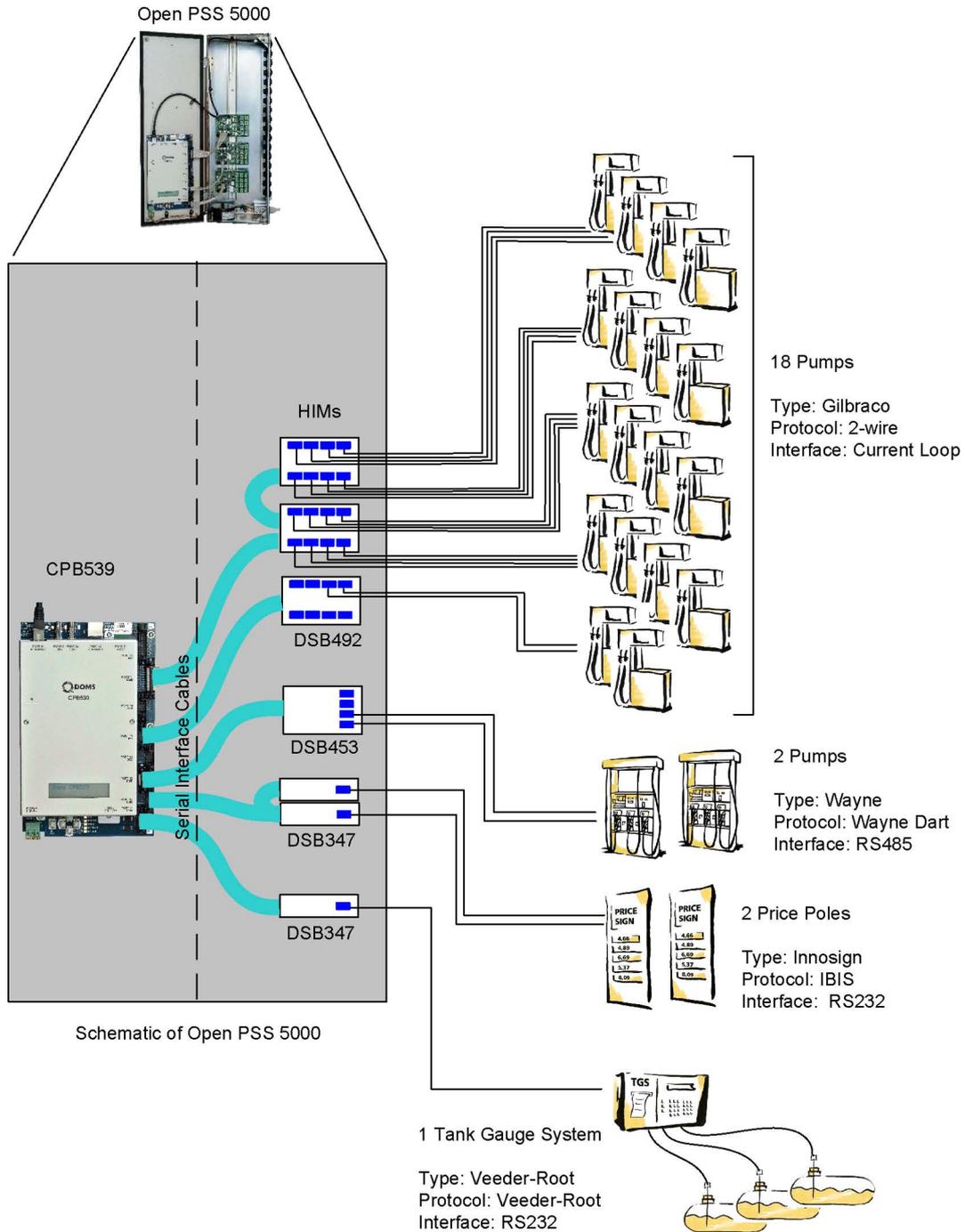
Device	Manufacturer	No.	Protocol	Interface Type	HIM				HIMs Required
					Name	Connections	Stock No.	Width	
Pumps	Gilbarco	18	2-wire	Current Loop	DSB492	8	140042	2	3
Pumps	Wayne	2	Wayne Dart	RS485, 2-wire	DSB453	4	133768	2	1
TGS	Veeder-Root	1	Veeder-Root	RS232 (3-wire)	DSB347	1	123240	1	1
Price Poles	Innosign	2	IBIS	RS232 (3-wire)	DSB347	1	123240	1	2

7. Add all the **Width** values for the individual modules. In this example, the total width for all the modules is 11 single-module units.

Using the cabinet specifications ([‘4.2 PSS 5000 Cabinets’ on page 38](#)), you can see that the standard cabinet, which houses 14 single-module units, must be used and that no extension rail is required here.

8. You are now ready to connect the selected HIMs to the CPU Board.

The figure below shows the devices connected to a CPB539 board through the HIMs and the associated serial interface cables.



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Note: This illustrates that only 16 devices using the Current Loop interface can be connected to a single port (2 of the DSB492 HIMs are daisy chained together and connected to a single port). Under normal circumstances, we recommend that load balancing is used on the ports when connecting multiple devices (with the same protocol) to multiple modules – this increases performance.

2 Device Manufacturers and Device Protocols Used

List of types of devices using protocols

The connectivity of the PSS 5000 is achieved by its ability to interface with different device protocols. The complete list of protocols is divided into the following topics:

- [‘2.1 Pump Manufacturers and Protocols’ on page 10](#)
- [‘2.2 Tank Gauge System \(TGS\) Manufacturers and Protocols’ on page 14](#)
- [‘2.3 Terminal Manufacturers and Protocols’ on page 15](#)
- [‘2.4 Washing Machine Manufacturers and Protocols’ on page 16](#)
- [‘2.5 Vapor Recovery Monitoring Systems Manufacturers and Protocols’ on page 16](#)
- [‘2.6 Price Sign Manufacturers and Protocols’ on page 17](#)
- [‘2.7 Display Manufacturers and Protocols’ on page 18](#)
- [‘2.8 Vending Machine Manufacturers and Protocols’ on page 18](#)

Devices using IFSF

Many manufacturers provide an interface that uses the International Forecourt Standard Forum (IFSF) protocol. Although this is a standard protocol, which can be checked using the IFSF certification tool, it is recommended that the devices are tested with a PSS 5000 before they are commissioned.

Where the IFSF protocol is shown opposite a manufacturer’s name in the Manufacturers/Protocols tables, this indicates that the protocol has been tested with one or more devices from this manufacturer.

2.1 Pump Manufacturers and Protocols

List of pump manufacturers and associated protocols

A list of the pump manufacturers and known supported protocols are shown in the table below:

Note: The HIM used with specific dispensers depends on both the electrical interface(s) and protocol(s) supported by the individual dispenser. To obtain this information, use the manufacturer's technical documentation for the specific dispenser.

Note: For a full list of supported pump protocols, see [‘3.1 Pump Protocols and HIMs’ on page 20](#).

Manufacturers	Protocols
Adast	‘Adast Easycall’ on page 20
Agira	‘GC21 XP & GC22’ on page 21
Aspro	‘GC21 XP & GC22’ on page 21
Autotank	‘Auto Tank ATCL’ on page 20
Avery	‘Avery Single Hose’ on page 20
Batchen	‘Email’ on page 20
	‘Gilbarco 2-wire (Aus. variant)’ on page 21
	‘PEC’ on page 22
Bennett	‘Bennett’ on page 20

Manufacturers	Protocols
Cetil	'Cetil EAS1' on page 20
Dong Hwa	'Dong Hwa Prime' on page 20
Dresser Wayne	'Dresser Wayne SC82/SC86' on page 20
Droher	'Droher-Condohr Protocol' on page 20
	'Droher-Current Loop Protocol' on page 20
Dunclare	'Dunclare' on page 20
EIN	'EIN' on page 20
Email	'Email' on page 20
	'Gilbarco 2-wire (Aus. variant)' on page 21
Korea EnE	'EnE' on page 21
Galileo	'GC21 XP & GC22' on page 21
Gallagher	'PEC' on page 22
	'Gilbarco 2-wire (Aus. variant)' on page 21
G-G Solutions	'GG' on page 21
Gilbarco	'Gilbarco 2-wire' on page 21
	'Gilbarco 2-wire (Aus. variant)' on page 21
	'IFSF' on page 21
	'Novotec' on page 22
Hong Yang	'Hong Yang' on page 21
IMW	'GC21 XP & GC22' on page 21
Insta / Instrumentointi	'Gascomm' on page 21
Koppens	'Koppens EPS-3/5' on page 21
Lanfeng	'Lanfeng' on page 21
	'Lanfeng v3.1' on page 21
Larsen & Toubro	'Larsen & Toubro Z-line' on page 21
	'Larsen & Toubro MPD/QUAD' on page 21
Logitron	'Logitron Pumalan' on page 21
MakPetrol Teas	'MakPetrol Teas' on page 21
Mannesmann Kienzle	'MKS ER 3/2 (ER3/ER4)' on page 21
Maser	'Maser GMS' on page 21
Mechanical Pumps	'Mechanical Pump Interface' on page 21
Mepsan	'Wayne Dart' on page 23
Midco	'Midco' on page 21
MMPetro	'MMPetro' on page 22

Manufacturers	Protocols
Nara	'Nara' on page 22
	'Nara 2' on page 22
Nuovo Pignone	'Nuovo Pignone' on page 22
PEC	'PEC' on page 22
	'Gilbarco 2-wire (Aus. variant)' on page 21
Petposan	'Wayne Dart' on page 23
Petrotec	'Petrotec' on page 22
Prompribor	'Prompribor LIVNY' on page 22
Prowalco	'Prowalco SPDC-1, MPDC-1' on page 22
	'Prowalco ICON Salesmaker' on page 22
Pump Control	'GC21 XP & GC22' on page 21
RongXing	'RongXing MPD' on page 22
Satam	'Satam 008' on page 22
	'Satam 82D' on page 22
Scheidt & Bachmann	'Scheidt & Bachmann T02' on page 22
	'Scheidt & Bachmann T10/8' on page 22
	'IFSF' on page 21
Schlumberger	'Schlumberger IVPE/M3000' on page 22
	'Schwelm ZSR83' on page 22
	'IFSF' on page 21
Schwelm	'Schwelm ZSR83' on page 22
Seetax	'Seetax TK' on page 22
	'Seetax MM' on page 22
Shelf	'Shelf' on page 22
Tatsuno	'Tatsuno (Doms MPI)' on page 22
	'Tatsuno Sunny Ex' on page 23
	'Tatsuno-Benc' on page 23
TEAM	'TEAM' on page 23
TIM	'TIM' on page 23

Manufacturers	Protocols
Tokheim	'Auto Tank ATCL' on page 20
	'Dunclare' on page 20
	'EIN' on page 20
	'IFSF' on page 21
	'Koppens EPS-3/5' on page 21
	'Logitron Pumalan' on page 21
	'MKS ER 3/2 (ER3/ER4)' on page 21
	'Satam 82D' on page 22
	'Schlumberger IVPE/M3000' on page 22
	'Schwelm ZSR83' on page 22
	'Tatsuno (Doms MPI)' on page 22
	'Tokheim' on page 23
	'Tokheim Kaizen' on page 23
Tokheim Hengshan	'Hengshan HS01' on page 21
Transponder Technology	'PEC' on page 22
	'Gilbarco 2-wire (Aus. variant)' on page 21
Veeder-Root	'EMR3' on page 20
Wayne	'Wayne Autocourt/Ferranti' on page 23
	'Wayne Dart' on page 23
	'Wayne Europe/Ljungmans (Current Loop)' on page 23
	'IFSF' on page 21

2.2 Tank Gauge System (TGS) Manufacturers and Protocols

List of TGS manufacturers and protocols

A list of the Tank Gauge System (TGS) manufacturers and known supported protocols are shown in the table below:

Note: The HIM used with specific TGSs depends on both the electrical interface(s) and protocol(s) supported by the individual TGS. To obtain this information, use the manufacturer's technical documentation for the specific TGS.

Note: For a full list of supported TGS protocols, see '[3.2 Tank Gauge System \(TGS\) Protocols and HIMs](#)' on page 24.

Manufacturers	Protocols
4tech	'4Tech Fuelcom 501' on page 24
B Control A (CMS)	'B Control A (CMS)' on page 24
Egemin Naamloze	'Egemin LGS2' on page 24
Enraf	'Enraf STIC 867 (GPU)' on page 24
Fafnir	'Fafnir Visy-Quick' on page 24
	'Fafnir UDP' on page 24
Hectronic	'Hectronic H-Protocol' on page 24
	'Hectronic HLS Protocol' on page 24
	'IFSF' on page 24
Incon	'Veeder-Root' on page 24
Labko	'Veeder-Root' on page 24
Lemis Baltic	'Lemis DC-400' on page 24
Omntec	'Veeder-Root' on page 24
OPW	'Veeder-Root' on page 24
	'Petrovend4' on page 24
Petro Vend	'Petrovend4' on page 24
	'IFSF' on page 24
Scientific & Production Enterprise SENSOR LLC	'Sense PMP' on page 24
Struna	'Struna-M' on page 24
START Italiana	'Veeder-Root' on page 24
Veeder-Root	'Veeder-Root' on page 24
	'IFSF' on page 24

2.3 Terminal Manufacturers and Protocols

List of terminal manufacturers and protocols

A list of the terminal manufacturers and known supported protocols are shown in the table below:

Note: The HIM used with specific terminals depends on both the electrical interface(s) and protocol(s) supported by the individual terminal. To obtain this information, use the manufacturer's technical documentation for the specific terminal.

Note: For a full list of supported terminal protocols, see '[3.3 Terminal Protocols and HIMs](#)' on page 25.

Manufacturers	Protocols
ACG	'ACG Mifare RFID Reader' on page 25
Autotank	'AutoTank ATCL' on page 25
Banksys	'Banksys' on page 25
Codab	'Codab C-bus' on page 25
Doms	'Doms FlexPay' on page 25
	'Doms POS' on page 25
	'Doms Standard Terminal' on page 25
	'PetroPay 4000' on page 26
Dresser Wayne	See Wayne
EIN DAC	'EIN DAC' on page 25
Gilbarco	'Gilbarco SPOT' on page 25
	'Generic CRIND' on page 25
Hectronic	'Hectronic AVR' on page 25
Orpak	'Orpak VIT' on page 25
	'Orpak NSL Tag' on page 25
POSTEC	'POSTEC Prism OPT' on page 26
	'POSTEC TVD Tag Reader' on page 26
Prowalco	'Prowalco Remote Tagging ZA-069 (IRIU)' on page 26
	'Prowalco Pump Tag' on page 26
Synergy	'Octane 2000 Tag' on page 25
Tokheim	'Tokheim DAC MPA V5' on page 26
	'Tokheim Pump Tag' on page 26
	'Banksys' on page 25
Wayne	'Wayne CL Terminal' on page 26
	'Wayne CL/EPS-42 Terminal' on page 26

2.4 Washing Machine Manufacturers and Protocols

List of washing machine manufacturers and protocols

A list of the washing machine manufacturers and known supported protocols are shown in the table below:

Note: The HIM used with specific wash machine depends on both the electrical interface(s) and protocol(s) supported by the individual wash machine. To obtain this information, use the manufacturer's technical documentation for the specific device.

Note: For a full list of supported washing machine protocols, see [‘3.4 Washing Machine Protocols and HIMs’ on page 26](#).

Manufacturers	Protocols
Washtec	‘IFSF Car wash’ on page 26
Christ	‘IFSF Car wash’ on page 26

2.5 Vapor Recovery Monitoring Systems Manufacturers and Protocols

List of vapor recovery monitoring systems manufacturers and protocols

A list of manufacturers of Vapor Recovery Monitoring (VRM) systems and known supported protocols are shown in the table below:

Note: The HIM used with specific VRM system depends on both the electrical interface(s) and protocol(s) supported by the individual VRM system. To obtain this information, use the manufacturer's technical documentation for the specific device.

Note: For a full list of supported VRM protocols, see [‘3.5 Vapor Recovery Monitoring Controller Protocols and HIMs’ on page 26](#).

Manufacturers	Protocols
Fafnir	‘Fafnir DVRC’ on page 26
	‘Fafnir DVRC-2’ on page 26

2.6 Price Sign Manufacturers and Protocols

List of price sign manufacturers and protocols

A list of price sign manufacturers and known supported protocols are shown in the table below:

Note: The HIM used with specific price signs depends on both the electrical interface(s) and protocol(s) supported by the individual price sign. To obtain this information, use the manufacturer's technical documentation for the specific price sign.

Note: For a full list of supported price sign protocols, see '[3.6 Price Pole Protocols and HIMs](#)' on page 27.

Manufacturers	Protocols
Abat	'Nautica' on page 27
Able	'Scheidt & Bachmann T10/8' on page 27
Bever Innovation	'Gilbarco Price Sign' on page 27
	'IFSF' on page 27
	'Scheidt & Bachmann T10/8' on page 27
	'Tokheim Koppens KA' on page 28
	'Wayne Marketer' on page 28
Digitekno	'Digitekno' on page 27
EIN	'EIN' on page 27
Emo Neon	'Emo Neon' on page 27
Gilbarco	'Gilbarco Price Sign' on page 27
Inno-Sign	'IFSF' on page 27
	'IBIS' on page 27
Linetron	'Linetron' on page 27
Mannesmann Kienzle	'MKS ER 3/2' on page 27
Novyc	'Novyc RS-232' on page 27
Odeco Electrónica	'Imago' on page 27
PWM	'Gilbarco Price Sign' on page 27
	'IFSF' on page 27
	'PWM-InHouse-Ethernet' on page 27
	'Scheidt & Bachmann T10/8' on page 27
	'Tokheim Koppens KA' on page 28
	'Wayne Marketer' on page 28
RGB Technology	'RGB' on page 27
Scheidt & Bachmann	'Scheidt & Bachmann T10/8' on page 27
Sistem Reklamcilik	'Sistem' on page 27
Tammerneon	'Tammerneon LED' on page 28

Manufacturers	Protocols
Totem	‘Totem’ on page 28
VDS	‘VDS’ on page 28
Visotec	‘Visotec’ on page 28
Wayne	‘Wayne Marketer’ on page 28
	‘Wayne Standard Interface’ on page 28

2.7 Display Manufacturers and Protocols

List of display manufacturers and protocols

A list of display manufacturers and known supported protocols are shown in the table below:

Note: The HIM used with specific displays depends on both the electrical interface(s) and protocol(s) supported by the individual device. To obtain this information, use the manufacturer's technical documentation.

Note: For a full list of supported display protocols, see [‘3.7 Display Protocols and HIMs’ on page 28](#).

Manufacturers	Protocols
POSTEC	‘Pipi’ on page 28

2.8 Vending Machine Manufacturers and Protocols

List of vending machine manufacturers and protocols

A list of vending machine manufacturers and known supported protocols are shown in the table below:

Note: The HIM used with specific displays depends on both the electrical interface(s) and protocol(s) supported by the individual device. To obtain this information, use the manufacturer's technical documentation.

Note: For a full list of supported display protocols, see [‘3.7 Display Protocols and HIMs’ on page 28](#).

Manufacturers	Protocols
Franke	‘Franke CS’ on page 29

3 Device Protocols and Associated HIMs

List of types of devices using protocols

The PSS 5000 can connect to many different devices using a multitude of different device protocols. The complete list of protocols are divided into the following topics:

- [‘3.1 Pump Protocols and HIMs’ on page 20](#)
- [‘3.2 Tank Gauge System \(TGS\) Protocols and HIMs’ on page 24](#)
- [‘3.3 Terminal Protocols and HIMs’ on page 25](#)
- [‘3.4 Washing Machine Protocols and HIMs’ on page 26](#)
- [‘3.5 Vapor Recovery Monitoring Controller Protocols and HIMs’ on page 26](#)
- [‘3.6 Price Pole Protocols and HIMs’ on page 27](#)
- [‘3.7 Display Protocols and HIMs’ on page 28](#)
- [‘3.8 UPS Protocols and HIMs’ on page 28](#)
- [‘3.9 Vending Machine Protocols and HIMs’ on page 29](#)
- [‘3.10 Interface Types and HIMs’ on page 29](#)
- [‘3.11 HIM Details and Interface Types’ on page 32](#)
- [‘3.12 Discontinued HIMs and Possible Replacements’ on page 36](#)

If your actual Protocol/physical interface combinations are not listed in the tables, contact support@doms.dk for possible solutions.

General information about connections for devices and HIMs

Each HIM has a maximum number of connections. If you are connecting devices in series (multiple devices per HIM connection) then use the HIM name hyperlink (or [‘3.11 HIM Details and Interface Types’ on page 32](#)) for information about the maximum number of devices permitted per connection (see **Max. no. of devices/connection**).

HIMs are connected to a port on the CPB. This connection can be direct or through another HIM by creating a daisy-chain, which increases the number of devices on the CPB port. However, the protocol may limit the maximum number of devices that can be connected to a port on the CPB. This information is shown in the **Devices/Port** column.

3.1 Pump Protocols and HIMs

List of pump protocols and associated HIMs

A complete list of the pump protocols currently supported by the PSS 5000 and the HIMs associated with the protocols and interface types are shown in the table below:

Note: Where **Devices** in **Devices/Port** refers to the number of fuelling points that can be connected to each port on the CPB.

Protocols	Interface Type	HIM	Stock No.	Devices/Port
Adast Easycall	RS485	DSB453	133768	16
		DSB501	142012	
Alpha protocol	Current Loop, 20mA, 4W	DMB548	145051	16
Aplab Serial protocol	RS485	DSB453	133768	16
		DSB501	142012	
Auto Tank ATCL	Current Loop, 10/20mA	DSB416	129767	8
Avery Single Hose	RS485	DSB453	133768	16
		DSB501	142012	
BP Standard Protocol	RS232	DSB347	123240	40
Bennett	Current Loop 20mA	DMB425	130742	16
Cetil EAS1	RS485	DSB453	133768	16
		DSB501	142012	
Coritec 4	RS485	DSB453-2	145339	16
Dong Hwa Prime	RS422	DSB352	125775	16
Dresser Wayne SC82/SC86	Current Loop, 30mA	DSB423 ¹	130250	24
		DSB475	136841	
		DSB510	142390	
	RS485	DSB453	133768	
Droher-Condohr Protocol	RS485	DSB337	Replaced	24
		DSB501	142012	
Droher-Current Loop Protocol	Current Loop, 20mA	DSB356	Replaced	16
		DSB517	143186	
Dunclare	Current Loop, 20mA	DMB431	Replaced	16
		DMB507	142346	
EIN	Current Loop, 20mA	DSB476	137571	16
ELREM Tank2000	RS485	DSB453	133768	16
Email	DSB to FSK	DSB552	145213	16
EMR3	RS232 (with carrier detect)	DSB347	123240	31
	RS232 (3-wire)	DSB457	133845	

Protocols	Interface Type	HIM	Stock No.	Devices/Port
EnE	RS485	DSB453	133768	
Gascomm	2-wire, active pull down	DMB514	143076	16
GC21 XP & GC22	Current Loop, 20mA	DSB356	Replaced	16
		DSB517	143186	
GG	RS485	DSB501	142012	16
Gilbarco 2-wire	Current Loop, 45mA	DSB338	Replaced	16
		DSB378 ¹	129251	
		DSB492	140042	
		DSB511	142464	
	RS485	DSB453	133768	
		DSB501	142012	
Gilbarco 2-wire (Aus. variant)	Current Loop, 45mA	DSB492	140042	16
Hengshan HS01	Current Loop, 10mA	DMB450	133395	16
Hong Yang	4-wire, Diff. Interface	DSB541	144753	16
IFSF	LON (TP/FT-10) ‡	DSB522	143576	63
	‡ Only one LON (TP/FT-10) interface (i.e. 1xKit422 or 1xDSB522) can be installed on each system.			
Kontrol Domino LPG	Current Loop, 45mA	DSB492	140042	16
Koppens EPS-3/5	4-wire, Diff. Interface	DMB430	Replaced	16
	4-wire, Diff. Interface with auto-watch	DMB512	142546	
Lanfeng	RS485	DSB453	133768	16
Lanfeng v3.1	RS485	DSB501	142012	16
Larsen & Toubro Z-line	RS485	DSB453	133768	16
		DSB501	142012	
Larsen & Toubro MPD/QUAD	RS485	DSB453	133768	16
		DSB501	142012	
Logitron Pumalan	Current Loop, 20mA	DSB461	134791	16
MakPetrol Teas	Current Loop, 20mA Active with RX inverted	DSB542	144762	16
Maser GMS	RS485	DSB453	133768	16
		DSB501	142012	
Mechanical Pump Interface	Digital I/O	DSB524	143753	32
Midco	RS485	DSB453	133768	16
		DSB501	142012	
MKS ER 3/2 (ER3/ER4)	Current Loop 25mA	DMB489	139024	16

Protocols	Interface Type	HIM	Stock No.	Devices/Port
MMPetro	RS485	DSB453	133768	32
Novotec	RS485, +5V supply	DSB521	143437	8
Nara	RS485	DSB453	133768	16
Nara 2	RS485	DSB453	133768	64
Nuovo Pignone	Current Loop 4-wire 24V/50mA	DMB426	130745	16
	RS485	DSB453	133768	
		DSB501	142012	
OCP	Ethernet	n/a	n/a	32
PEC	Current Loop, 2-wire, 60mA (+/- 12V)	DSB550	145210	16
Petrotec	4-wire, Diff. Interface with auto-watch	DMB512	142546	16
Prompibor LIVNY	Current Loop 20mA	DMB425	130742	16
Prowalco ICON Salesmaker	RS232 (with carrier detect)	DSB347	123240	16
	RS232 (3-wire)	DSB457	133845	
Prowalco SPDC-1, MPDC-1	Current Loop, 45mA	DSB378 ¹	129251	16
		DSB492	140042	
		DSB511	142464	
RongXing MPD	RS422	DSB352	125775	16
Satam 008	Current Loop, 20mA	DMB425	130742	16
Satam 82D	Current Loop, 20mA	DMB425	130742	16
Scheidt & Bachmann T02	S & B Proprietary	DMB443	132060	16
Scheidt & Bachmann T10/8	RS485	DMB354	Replaced	16
		DMB506	142292	
Schlumberger IVPE/M3000	Current Loop, 20mA	DMB425	130742	16
Schwelm ZSR83	Current Loop, 20mA	DMB431	Replaced	16
		DMB507	142346	16
Seetax MM	Current Loop, 10mA	DMB450	133395	16
Seetax TK	Current Loop, 10mA	DMB450	133395	16
Shelf	RS485	DSB453	133768	16
South West MLPC3	Current Loop, 20mA	DSB486	139212	16
Tatsuno (Doms MPI)	RS485	DSB453	133768	16
		DSB501	142012	
	RS485 (grade select)	DSB348 *	123789	16
* This HIM is discontinued and was only used for selected dispenser models				

Protocols	Interface Type	HIM	Stock No.	Devices/Port
Tatsuno-Benc	RS485	DSB453	133768	16
Tatsuno-Benc PDEX	RS485	DSB453	133768	16
Tatsuno Sunny Ex	RS485	DSB453	133768	16
		DSB501	142012	
TEAM	RS485	DSB453	133768	16
		DSB501	142012	
TIM	RS485	DSB453	133768	16
		DSB501	142012	
Tokheim	Current Loop, 10/20mA (act.)	DSB416	129767	16
	Current Loop, 20mA (pas.)	DSB408	Replaced	
		DSB520	143357	
RS232	DSB357	126879		
Tokheim ELC	RS485	DSB453	133768	16
		DSB501	142012	
Tokheim Kaizen	RS485	DSB453	133768	16
		DSB501	142012	
	Current Loop, 20mA (pas.)	DSB520	143357	
Topaz	RS485	DSB453	133768	16
Topaz 2	RS485	DSB453	133768	64
Wayne Autocourt/Ferranti	Current Loop, 20mA	DSB356	Replaced	24
		DSB517	143186	
Wayne Dart	RS485	DSB453	133768	20
		DSB501	142012	
	Current Loop, 20mA	DSB517	143186	
Wayne Europe/Ljungmans (Current Loop)	Current Loop, 40mA	DSB415	Replaced	16
	Current Loop, 30mA	DSB475	136841	

Note:

¹: This module may only be used in existing configurations where the devices are connected in a loop, and it is not possible to reconfigure the cables. Contact support@doms.dk before you select this module.

3.2 Tank Gauge System (TGS) Protocols and HIMs

List of TGS protocols and associated HIMs

A complete list of the Tank Gauge System (TGS) protocols and the HIMs associated with the protocols currently supported by the PSS 5000 are shown in the table below:

Note: Where **Devices** in **Devices/Port** refers to the maximum number of tank gauges that are supported by the PSS per connected TGS. Normally, the PSS supports only one TGS per port.

Protocols	Interface Type	HIM	Stock No.	Devices /Port
4Tech Fuelcom 501	RS232 (with carrier detect)	DSB347 *	123240	8
	RS232 (3-wire)	DSB457	133845	
B Control A (CMS)	RS232 (with carrier detect)	DSB347 *	123240	16
	RS232 (3-wire)	DSB457	133845	
Egemin LGS2	RS232 (with carrier detect)	DSB347 *	123240	8
	RS232 (3-wire)	DSB457	133845	
Enraf STIC 867 (GPU)	RS232 (with carrier detect)	DSB347 *	123240	10
	RS232 (3-wire)	DSB457	133845	
Fafnir Visy-Quick	RS232 (with carrier detect)	DSB347 *	123240	16
	RS232 (3-wire)	DSB457	133845	
Fafnir UDP	RS485, +5V supply	DSB521	143437	16
Hectronic H-Protocol	RS232 (with carrier detect)	DSB347 *	123240	20
	RS232 (3-wire)	DSB457	133845	
Hectronic HLS Protocol	RS232 (with carrier detect)	DSB347	123240	32
IFSF	LON (TP/FT-10) ‡	DSB522	143576	16
	‡ Only one LON (TP/FT-10) interface (i.e. 1xKit422 or 1xDSB522) can be installed on each system.			
IGLA	RS232 (with carrier detect)	DSB347 *	123240	16
Lemis DC-400	RS485	DSB453	133768	16
MTS	RS232 (with carrier detect)	DSB347 *	123240	16
Petrovend4	RS232 (with carrier detect)	DSB347 *	123240	32
	RS232 (3-wire)	DSB457	133845	
Sense PMP	RS232 (with carrier detect)	DSB347	123240	32
Struna-M	RS232 (with carrier detect)	DSB347 *	123240	16
	RS232 (3-wire)	DSB457	133845	
Struna +	RS485	DSB453	133768	64
		DSB501	142012	
Veeder-Root	RS232 (with carrier detect)	DSB347 *	123240	16
	RS232 (3-wire)	DSB457	133845	

Protocols	Interface Type	HIM	Stock No.	Devices /Port
* This is the recommended HIM, which supports the majority of site configurations.				

3.3 Terminal Protocols and HIMs

List of terminal protocols and associated HIMs A complete list of the Outdoor Payment Terminal (OPT) protocols and the HIMs associated with the protocols currently supported by the PSS 5000 are shown in the table below:

Protocols	Interface Type	HIM	Stock No.	Devices/Port
ACG Mifare RFID Reader	RS485	DSB453	133768	16
		DSB501	142012	
AutoTank ATCL	Current Loop, 10/20mA	DSB416	129767	8
Banksys	Current Loop, 10/20mA	DSB411	128576	1
Codab C-bus	2-wire C-bus	DSB340	121964	16
	RS485	DSB453	133768	
Coritec Pump Tag	RS485	DSB453-2	145339	16
Doms FlexPay	Ethernet	n/a	n/a	16
Doms POS	Serial	Depends on terminal HW& interface type		
	Ethernet	n/a	n/a	99
Doms Standard Terminal	Current Loop, 50mA	DSB338	Replaced	16
	Current Loop, 45mA	DSB492	140042	
		DSB511	142464	
	RS232 (with carrier detect)	DSB347	123240	
EIN DAC	Current Loop, 20mA	DSB476	137571	31
FasTrack	Ethernet	n/a	n/a	32
Generic CRIND	Current Loop, 45mA	DSB492	140042	16
		DSB511	142464	
Gilbarco SPOT	Ethernet	n/a	n/a	16
Hectronic AVR	RS232 (with carrier detect)	DSB347	123240	32
	Ethernet	n/a	n/a	
Intaba S2D	RS485	DSB453	133768	32
MPI Tag	Current Loop, 45mA	DSB492	140042	64
Octane 2000 Tag	RS232	DSB347	123240	99
		DSB457	133845	
Orpak NSL Tag	Ethernet	n/a	n/a	2
Orpak VIT	RS485	DSB453	133768	255
OTi Saturn Tag Reader	RS485	DSB453	133768	16

Protocols	Interface Type	HIM	Stock No.	Devices/Port
PetroPay 4000	Current Loop, 50mA	DSB338	Replaced	16
	Current Loop, 45mA	DSB492	140042	
		DSB511	142464	
POSTEC Prism OPT	Ethernet	n/a	n/a	6
POSTEC TVD Tag Reader	RS485	DSB501	142012	16
Prowalco Pump Tag	Current Loop, 45mA	DSB492	140042	16
		DSB511	142464	
Prowalco Remote Tagging ZA-069 (IRIU)	Current Loop, 45mA	DSB492	140042	255
		DSB511	142464	
	Current Loop, 40mA	DSB503	142061	255
Tokheim DAC MPA V5	Ethernet	n/a	n/a	99
Tokheim Pump Tag	Current Loop, 20mA	DSB408	Replaced	16
		DSB520	143357	
Tomcard Terminal	Ethernet	n/a	n/a	16
Wayne CL Terminal	Current Loop, 40mA	DSB415	Replaced	Cards: 16 Notes: 4
	Current Loop, 30mA	DSB475	136841	
Wayne CL/EPS-42 Terminal	RS422 (with echo canceling)	DSB475	136841	16

3.4 Washing Machine Protocols and HIMs

Washing machine protocol and associated HIM

The washing machine protocol and the HIM associated with it is shown in the table below:

Protocols	Interface Type	HIM	Stock No.	Devices/Port
IFSF Car wash	LON (TP/FT-10) ‡	DSB522	143576	16
	‡ Only one LON (TP/FT-10) interface (i.e. 1xKit422 or 1xDSB522) can be installed on each system.			

3.5 Vapor Recovery Monitoring Controller Protocols and HIMs

Vapor recovery protocol and associated HIM

The vapor recovery protocol and the HIM associated with it is shown in the table below:

Protocols	Interface Type	HIM	Stock No.	Devices/Port
Fafnir DVRC	RS485	DSB453	133768	32
		DSB501	142012	32
Fafnir DVRC-2	RS485	DSB453	133768	32
		DSB501	142012	32

3.6 Price Pole Protocols and HIMs

List of price display protocols and associated HIMs

A complete list of the price display protocols and the HIMs associated with the protocols currently supported by the PSS 5000 are shown in the table below:

Protocols	Interface Type	HIM	Stock No.	Devices/Port
Digitekno	Current Loop, 10/20mA	DSB411	128576	4
EIN	RS485	DSB453	133768	8
		DSB501	142012	
Emo Neon	RS232	DSB347	123240	4
ENI	RS485	DSB501	142012	4
Gilbarco Price Sign	RS232	DSB347	123240	1
		DSB457	133845	
IBIS	RS232 (with carrier detect)	DSB347	123240	1
IFSF	LON (TP/FT-10) ‡	DSB522	143576	255
	‡ Only one LON (TP/FT-10) interface (i.e. 1xKit422 or 1xDSB522) can be installed on each system.			
Imago	RS232	DSB347	123240	4
	RS485	DSB453	133768	
		DSB501	142012	
Linetron	RS232 (with carrier detect)	DSB347	123240	1
Logitron Oneway	Current Loop, 2-wire, 20mA	DMB425	130742	4
MKS ER 3/2	2-wire, 12V/25mA	DMB359	Replaced	16
	2-wire, 12V/25mA	DMB489	139024	
Nautica	RS485	DMB354	Replaced	8
		DMB506	142292	
Novyc RS-232	RS232	DSB347	123240	1
NVSS	RS485	DSB453	133768	1
		DSB501	142012	
PWM-InHouse-Ethernet	Ethernet	n/a	n/a	254
RGB	RS-485	DSB453	133768	1
		DSB501	142012	4
		DMB506	142292	
Rosel	RS485	DSB453	133768	4
Scheidt & Bachmann T10/8	RS485	DMB354	Replaced	16
		DMB506	142292	
Sistem	RS232	DSB347	123240	1

Protocols	Interface Type	HIM	Stock No.	Devices/Port
Tammerneon LED	Current Loop, 10/20mA	DSB411	128576	4
Tokheim Koppens KA	RS232	DSB347	123240	1
		DSB457	133845	
	RS485	DSB501	142012	
		DSB453	133768	
Totem	RS485	DSB337	Replaced	1
		DSB501	142012	
VDS	RS485	DSB501	142012	1
Visotec	RS485	DMB506	142292	16
Wayne Marketer	RS232	DSB347	123240	1
Wayne Standard Interface	RS485	DMB506	142292	4
		DSB501	142012	1
	RS232	DSB347	123240	1

3.7 Display Protocols and HIMs

List of display protocols and associated HIMs

A complete list of the display protocols and the HIMs associated with the protocols currently supported by the PSS 5000 are shown in the table below:

Protocols	Interface Type	HIM	Stock No.	Devices/Port
ACON-RD-02	RS485	DSB453	133768	1
		DSB501	142012	
Pipi	Serial (with power & signal line)	DSB549	145152	1

3.8 UPS Protocols and HIMs

List of UPS protocols and associated HIMs

A complete list of the UPS protocols and the HIMs associated with the protocols currently supported by the PSS 5000 are shown in the table below:

Protocols	Interface Type	HIM	Stock No.	Devices/Port
Network UPS Tool	USB	n/a	n/a	n/a

3.9 Vending Machine Protocols and HIMs

List of vending machine protocols and associated HIMs

A complete list of the vending machine protocols and the HIMs associated with the protocols currently supported by the PSS 5000 are shown in the table below:

Protocols	Interface Type	HIM	Stock No.	Devices/Port
Franke CS	RS232	DSB347	123240	1
	Ethernet *	n/a	n/a	n/a

* This is achieved using an Ethernet to Serial converter module.

Note: Doms does not supply the serial converter nor provide technical support for it.

3.10 Interface Types and HIMs

List of Interfaces with associated HIMs

The table below provides a complete list of the currently supported interface types and their associated HIMs. This list can be used to determine whether development for a new HIM is required when support for a new protocol is being planned.

Note: DSB modules are used for protocols that have addressable devices. DMB modules are used for protocols that have non-addressable devices.

Note: When more than one module is available for an interface type, use the hyperlink to look at the module properties for more information. Normally, the only difference is the number of connectors present on the modules.

Interface Type	Modules	
	Addressable	Non-addressable
2-wire C-bus	DSB340	n/a
2-wire, active pull down	n/a	DMB514
4-wire	Diff. interface	DSB541
	Diff. interface with auto-watch	n/a

Interface Type		Modules	
		Addressable	Non-addressable
Current Loop	4-wire, 10mA (active)	n/a	DMB450
	4-wire, 10/20mA	DSB411 DSB416	n/a
	4-wire, 30mA	DSB475	n/a
	4-wire, 40mA (active)	DSB503	n/a
	4-wire 24V/50mA (active)	n/a	DMB426
	3-wire, 20mA (passive)	DSB520	n/a
	3-wire, 20mA (active)	DSB461 DSB476	n/a
	2-wire, 20mA (passive)	DSB486	DMB507
	2-wire, 20mA (active)	DSB517	DMB425
	2-wire, 20mA (active) with RX inverted	DSB542	n/a
	2-wire, 12V/25mA (active)	n/a	DMB489
	2-wire, 30mA (active)	DSB423 DSB510	n/a
	2-wire, 45mA (active)	DSB378 DSB492 DSB511	n/a
	2-wire, 60mA (active) (+/- 12V)	DSB550	n/a
Digital I/O		DSB451	n/a
		DSB524	n/a
DSB to FSK		DSB552	n/a
Ethernet		n/a	n/a
LON ‡		DSB522	n/a
‡ Only one LON (TP/FT-10) interface (i.e. 1xKit422 or 1xDSB522) can be installed on each system. When upgrading from CPB50x to CPB539, if a LON KIT422 is in use, it is necessary to include a DSB522 with the CPB539 to provide the LON functionality.			
RS232	Tokheim special	DSB357	n/a
	9-pin with carrier detect	DSB347	n/a
	3-wire	DSB457	n/a
	Full handshake (modem interface)	n/a	DMB454
RS422	–	DSB352	n/a
	with echo canceling	DSB475	n/a

Interface Type		Modules	
		Addressable	Non-addressable
RS485	–	DSB453 DSB501	DMB506
	(with grade select)	n/a	n/a
	+ 5V supply	DSB521	n/a
Pipi Proprietary (serial with power & signal line)		DSB549	n/a
S & B Proprietary		n/a	DMB443

3.11 HIM Details and Interface Types

List of HIMs with hardware details and interfaces

A complete list of HIMs and the interface types associated with each HIM is shown in the table below:

Note: The maximum number of devices supported by the connection between the DMB port on the CPU board and the DMB module(s) is 16.

Note: The maximum number of devices supported by the connection between the DSB port on the CPU board and the DSB module(s) is dependent on the protocol (see *Devices/Port* in the *Protocols and HIMs* tables).

Note: The hardware configuration of dispensers with multi-point fuelling points affect the number of HIM connections required by the fuelling point. See '[Hardware configurations and interface connectivity](#)' on page 35.

HIM	Stock No.	No. of connectors	Max. no. of devices/connection	Width (in module units)	Interface type	Drawings /<mod.no.>/indr/
DCB modules						
DCB449	133319	16	–	2	LON (TP/FT-10)	800673/--
DMB modules						
DMB425	130742	4	1	2	Current Loop, 2-wire, 20mA (act.)	800043/--
DMB426	130745	4	1	2	4-wire 24V/50mA (act.)	802793/--
DMB443	132060	4	1	2	S & B Proprietary	802794/--
DMB450	133395	4	1	2	Current Loop, 4-wire, 10mA (act.)	800678/--
DMB454	133771	1	1	2	RS232 (modem interface)	802187/--
DMB489	139024	8	1	2	Current Loop, 2-wire 12V/25mA (act.)	803593/--
DMB506	142292	4	1	2	RS485	804490/--
DMB507	142346	8	1	2	Current Loop, 2-wire, 20mA (pas)	804523/--
DMB512	142546	4	1	2	4-wire, Diff. Interface with auto-watch	804644/--
DMB514	143076	8	1	2	2-wire, (act.)	804840/--
DMB548	145051	4	1	2	Current Loop, 4-wire, 20mA (act.)	–
DSB modules						
DSB340	121964	1	p ²	1	2-wire C-bus	800216/--

HIM	Stock No.	No. of connectors	Max. no. of devices/connection	Width (in module units)	Interface type	Drawings /<mod.no.>/indr/
DSB347	123240	1	1	1	RS232 (with carrier detect)	800322/--
						800345/--
						800520/--
						800696/--
						802303/--
						802458/--
						802494/--
DSB352	125775	4	1	2	RS422	800232/--
						800434/--
						802397/--
DSB357	126879	1	1	1	RS232	800155/--
DSB378	129251	4	4	2	Current Loop, 2-wire, 45mA (act)	800440/--
DSB411	128576	1	1	1	Current Loop, 4-wire, 10/20mA	800539/--
						802798/--
						803686/--
DSB416	129767	4	1	2	Current Loop, 4-wire, 10/20mA (act.)	800190/--
						802566/--
						802567/--
						803304/--
DSB423	130250	4	4	2	Current Loop, 2-wire, 30mA (act.)	802658/--
DSB451	133765	8	1	2	(8 channel - digital I/O)	802225/--
						803456/--
						804370/--
DSB453	133768	4	p2	2	RS485	802190/--
						802800/--
						803455/--
DSB453-2	145339	4	p2	2	RS485, no termination	802800/--
DSB457	133845	4	1	2	RS232 (3-wire)	802222/--
DSB461	134791	4	1	2	Current Loop, 3-wire, 20mA (act.)	802457/--
DSB469	137734	–	–	2	(Memory module)	803215/--

HIM	Stock No.	No. of connectors	Max. no. of devices/connection	Width (in module units)	Interface type	Drawings /<mod.no.>/indr/
DSB475	136841	4	4 ²	2	Current Loop, 4-wire, 30mA	802976/--
DSB476	137571	4	4	2	Current Loop, 3-wire, 20mA (act.)	803177/--
DSB486	139212	8	1	2	Current Loop, 2-wire, 20mA (pas)	803689/--
DSB492	140042	8	1	2	Current Loop, 2-wire, 45mA (act)	803807/--
DSB501	142012	2	P ²	1	RS485	804407/--
DSB503	142061	1	16	1	Current Loop, 4-wire, 40mA (act.)	804432/--
DSB510	142390	4	1	1	Current Loop, 2-wire, 30mA (act.)	804541/--
DSB511	142464	4	1	1	Current Loop, 2-wire, 45mA (act)	804598/--
DSB517	143186	8	1	2	Current Loop, 2-wire, 20mA (act.)	804897/--
DSB520	143357	4	1	2	Current Loop, 3-wire, 20mA (pas)	804933/--
DSB521	143437	4	1	2	RS485, +5V supply	804979/--
DSB522	143576	12	–	2	LON (TP/FT-10) ³	804998/--
DSB524	143753	2	32	2	Mechanical Pump Interface	805084/--
DSB541	144753	4	1	2	4-wire, Diff. Interface	805648/--
DSB542	144762	8	1	2	Current Loop, 2-wire, 20mA (act), RX inverted	805672/--
DSB549	145152	1	1	1	Serial (with power + signal line)	805835/--
DSB550	145210	4	2	2	Current Loop, 2-wire, 60mA (+/- 12V)	805873/--
DSB552	145213	4	2	2	DSB to FSK	805889/--

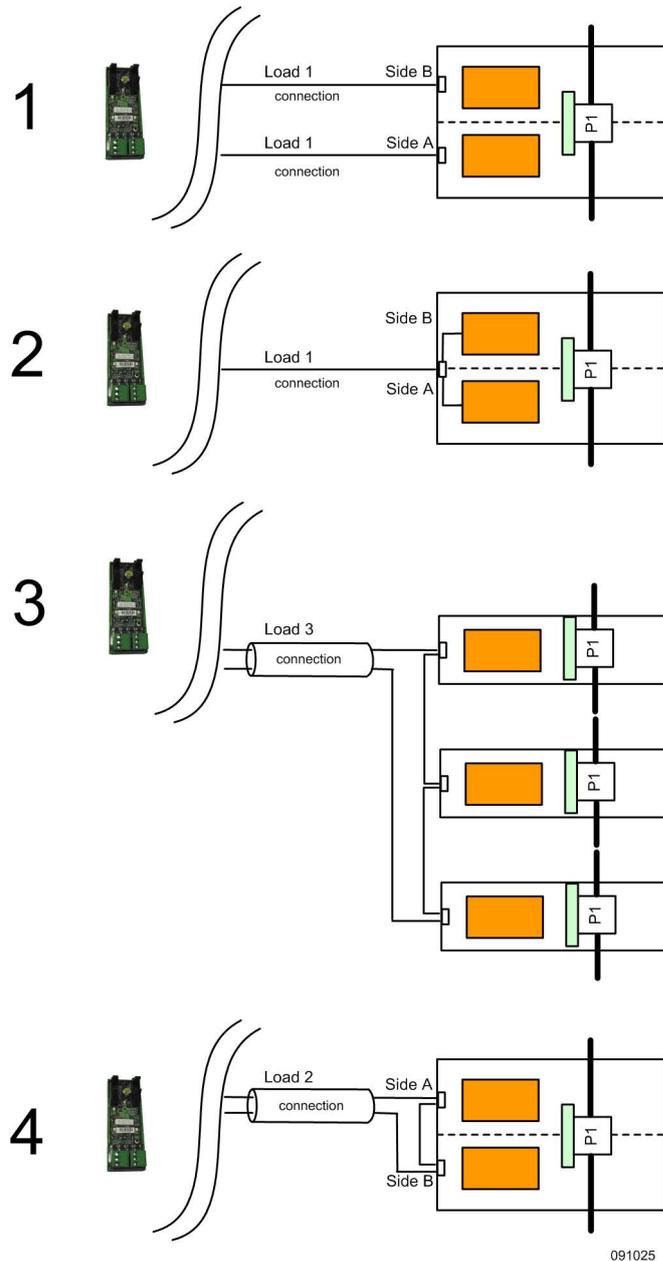
2: It is recommended that only 1 device is used on each connection

3: Only one LON (TP/FT-10) interface can be installed on each system.

P: The maximum number of devices/connection is dependent on the protocol baud rate used

Hardware configurations and interface connectivity

Multi-point devices, such as multi-point fuel dispensers, may have their hardware configured in one of several different ways. Depending on how they are configured they load the connection between the HIM and device differently. This is illustrated below using dispensers:



091025

Example 1 represents a dual-sided dispenser, where each dispenser is a device and each device requires a connection to the HIM. In this situation, the load on each HIM connection is 1 device.

Example 2 represents a dual-sided dispenser that uses a single HIM connection. Although this device contains 2 dispensers, the hardware configuration means that the load on the single HIM connection is 1 device.

Example 3 represents 3 single-sided dispensers where the current loop interface is looped together in a daisy-chain configuration. In this configuration, the load on the HIM connection is 3 devices.

Example 4 represents a situation similar to Example 3, but the daisy-chain occurs inside the dual-sided dispenser. In this situation, the load on the HIM connection is 2 devices.

3.12 Discontinued HIMs and Possible Replacements

List of HIMs no longer available

If you already have HIMs in your system which do not appear in the Protocol/HIM lists, then it may be because they are no longer available. This list contains those modules that have been discontinued and, where possible, the name of a replacement HIM.

DSB modules		DMB modules	
Discontinued	Replacement	Discontinued	Replacement
DSB337	DSB501	DMB354	DMB506
DSB338	DSB492	DMB359	DMB489
DSB339	DSB475	DMB417	none
DSB341	none	DMB418	DMB507
DSB348	DSB501	DMB430	DMB512
DSB356	DSB517	DMB431	DMB507
DSB358	none	DMB452	DMB512
DSB362	none	DMB477	none
DSB363	none		
DSB415	DSB475		
DSB408	DSB520		
DSB433	none		
DSB455	DSB476		
DSB459	none		

List of KITs no longer available

If you already have a KIT in your system that does not appear in the Protocol/HIM lists, then it may be because it is no longer available. This list contains those KITs that have been discontinued and, where possible, the name of a replacement.

Discontinued	Replacement
KIT422	DSB522

4 PSS 5000 CPU Board and Cabinet Specifications

Overview

These hardware specifications are provided in the following topics:

- [‘4.1 PSS 5000 CPU Boards’ on page 37](#)
- [‘4.2 PSS 5000 Cabinets’ on page 38](#)
- [‘4.3 System Versions’ on page 38](#)

4.1 PSS 5000 CPU Boards

PSS 5000 CPU Board specifications

The product specifications for the CPU board of the PSS 5000 is presented in the table below:

Note: When upgrading from a CPB50x system to a CPB539, if the LON KIT422 is in use, it is necessary to substitute it by installing a DSB522 with the CPB539.

Parameters	CPB539
CPU Specs	
CPU Type *	ARM
Flash	4 – 256 GB
SRAM	1 – 4 GB
Real-time Clock	Yes
Port Types and Number	
DSB	6
DMB	2
Ethernet	2
Service (RS232)	0
Extension Socket (LON - FTT10)	0
1: The boot program only supports PPP on the Service port. Software uploads on boards with no Service port must take place via the Ethernet port. *: At a power outage, the system is closed systematically and the data is stored in a non-volatile memory.	

4.1.1 KIT453 – CPB50x to CPB539

LON interface

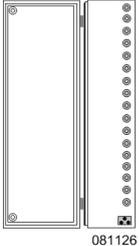
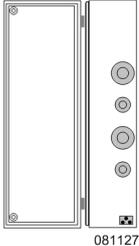
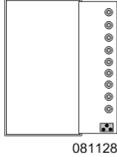
When upgrading a PSS 5000 system using KIT453, it is necessary to note whether the LON KIT422 is in use. If it is, then it is necessary to supplement the CPB539 with a DSB522, which will provide the necessary LON functionality.

4.2 PSS 5000 Cabinets

PSS 5000 cabinet types and specifications

The product specifications for the PSS 5000 cabinet are presented in the table below:

Note: The weights given are for the basic cabinet with a power supply and CPU board (HIMs are not included).

	Cabinet Version		
	Standard - cable  081126	Standard - conduit  081127	Compact  081128
Dimensions: (HxWxD)	600x200x124 mm (23.5 x 7.9 x 4.9")	600x200x124 mm (23.5 x 7.9 x 4.9")	363x200x100 mm (14.3 x 7.9 x 3.9")
Max. number of single-width modules:	14	14	6
Material:	Metal	Metal	Metal
Weight:	8kg (17.6 lbs)	8kg (17.6 lbs)	5kg (11 lbs)
CE + UL Approved:	Yes	Yes	Yes
Hinged door:	Yes	Yes	Yes
No. of grommets:	17 (cables)	4 (conduits)	9 (cables)

4.3 System Versions

PSS 5000 system versions

The table below shows the CPU Board version, cabinet version and power supply version combinations. Each combination has its own Doms stock number:

CPB Type	Standard Cabinet				Compact	
	Cable		Conduit		230V	120V
	230V	120V	230V	120V		
CPB539	145470	145471	–	145946	145758	145760

5 PSS 5000 Accessories List

Cables for the PSS

The cables required to make the necessary connections associated with the PSS 5000 are listed in the table below:

Cable Description	Stock Number
Doms Standard cables	
Standard cables	For new PSS 5000 configurations, Doms supplies correct cable types and lengths for HIMs installed.
DSB cables	
DSB No.23 (DSB universal), 80mm	126678
DSB No.33 short, 200mm	135694
DSB No.34 medium, 430mm	135695
DSB No.35 long, 630mm	135696
DMB cables	
DMB No. 26 DMB (Universal), 50mm	126681
DMB No.36 short, 180mm	135697
DMB No.37 medium, 280mm	135698
DMB No.38 long, 480mm	135699
DSMB No.41, DSMB short, 230mm	138492
DSMB No.39, DSMB long, 710mm	135700
Internal LON, 50mm	139335
External RJ45 Ethernet (X-cable), 5m	136338
External RJ45 Ethernet (patch), 1m	134958
External RJ45 Ethernet (patch), 2m	134959
External RJ45 Ethernet (patch), 5m	133598
External 9P Service, null-modem, 3m (PSS to PC)	135900
External 9P Service, null-modem, 5m (PSS to PC)	136452
Cable Relief 14mm	135788

Miscellaneous
accessories for PSS

Accessories for the PSS 5000 that have not been listed by type are listed in the table below:

Accessory Description	Stock Number
Hardware Sealing Plug (W&M) (CPB50x only)	137139
VRM Alarm Panel (Console CSL228-001)	138613
Extension Rail for HIMs (door mount in Std. cabinet only – for up to 5 single- width modules)	138735

6 Reference Documents

List of pump protocol interface notes and installation drawings for modules

The information below provides a list of the pump protocols currently supported by the PSS 5000 and the document number of the Interface Note for each protocol. In addition to this, each HIM associated with each protocol is listed and the document number for the installation drawing is given:

Protocols	Interface Notes /protocol/itno/	HIMs	Drawings /<mod. no.>/indr/
Adast Easycall	802946/--	DSB453	802800/--
		DSB501	804407/--
Alpha	805781/--	DMB548	–
Aplab Serial protocol	803988/--	DSB453	802800/--
		DSB501	804407/--
Auto Tank ATCL	800089/--	DSB416	800190/--
Avery Single Hose	804001/--	DSB453	802800/--
		DSB501	804407/--
BP Standard Protocol	802302/--	DSB347	800696/--
Bennett	804878/--	DMB425	800043/--
Cetil EAS1	804325/--	DSB453	802800/--
		DSB501	804407/--
Coritec 4	805920/--	DSB453-2	802800/--
Dong Hwa Prime	804471/--	DSB352	802397/--
Dresser Wayne SC82/SC86	800654/--	DSB423	802658/--
		DSB453	802190/--
		DSB475	802976/--
		DSB510	804541/--
Droher-Condohr Protocol	800373/--	DSB337	802773/--
		DSB501	804407/--
Droher-Current Loop Protocol	804286/--	DSB517	804897/--
Dunclare	800349/--	DMB431	800111/--
EIN	802165/--	DSB476	803177/--
Email	805867/--	DSB552	805889/--
ELREM Tank2000	805429/--	DSB453	802800/--
EMR3	805536/--	DSB347	800696/--
		DSB457	802222/--
EnE	805751/--	DSB453	802800/--
GC21 XP & GC22	804848/--	DSB517	804897/--

Protocols	Interface Notes /protocol/itno/	HIMs	Drawings /<mod. no.>/indr/
Gascomm	804790/--	DMB514	804840/--
GG	806330/--	DSB501	804407/--
Gilbarco 2-wire	800090/--	DSB492	803807/--
		DSB338	802795/--
		DSB453	802800/--
		DSB501	804407/--
		DSB511	804598/--
Gilbarco 2-wire (Aus. variant)	806036/--	DSB492	803807/--
Hengshan HS01	804705/--	DMB450	800678/--
Hong Yang	805671/--	DSB541	805648/--
IFSF	800555/--	DSB522	804998/--
Kontrel-Domino LPG	805487/--	DSB492	803807/--
Koppens EPS-3/5	800350/--	DMB512	804644/--
Lanfeng	805841/--	DSB453	802800/--
Lanfeng v3.1	806364/--	DSB501	804407/--
Larsen & Toubro Z-line	803633/--	DSB453	802800/--
		DSB501	804407/--
Larsen & Toubro MPD/QUAD	803635/--	DSB453	802800/--
		DSB501	804407/--
Logitron Pumalan	802652/--	DSB461	802457/--
MakPetrol Teas	805657/--	DSB542	805672/--
Maser GMS	805162/--	DSB453	802800/--
		DSB501	804407/--
Mechanical Pump Interface	805164/--	DSB524	805084/--
Midco	803651/--	DSB453	802800/--
		DSB501	804407/--
MKS ER 3/2 (ER3/ER4)	800413/--	DMB489	803593/--
MMPetro	805248/--	DSB453	802800/--
Nara/Topaz 1	804731/--	DSB453	802800/--
Nara/Topaz 2	805249/--	DSB453	802800/--
Novotec	804991/--	DSB521	804979/--

Protocols	Interface Notes /protocol/itno/	HIMs	Drawings /<mod. no.>/indr/
Nuovo Pignone	800352/--	DMB426	802793/--
		DSB453	802800/--
		DSB501	804407/--
OCCP	806174/--	n/a	n/a
PEC	805807/--	DSB550	805873/--
Petrotec	803352/--	DMB512	804644/--
Prompribor LIVNY	804921/--	DMB425	800043/--
Prowalco ICON Salesmaker	805763/--	DSB347	800696/--
		DSB457	802222/--
Prowalco SPDC-1, MPDC-1	802292/--	DSB492	803807/--
RongXing MPD	804095/--	DSB352	802397/--
Satam 008	800550/--	DMB425	800043/--
Satam 82D (82, SEV2, SEV4)	800351/--	DMB425	800043/--
Scheidt & Bachmann T01/T02	800410/--	DMB443	802794/--
Scheidt & Bachmann T10/8	800337/--	DMB354	800492/--
Schlumberger IVPE/M3000	802295/--	DMB425	800043/--
Schwelm ZSR83	800188/--	DMB431	800111/--
Seetax MM	804928/--	DMB450	800678/--
Seetax TK	800682/--	DMB450	800678/--
Shelf	806188/--	DSB453	802800/--
South West MLPC3	803537/--	DSB486	803689/--
Tatsuno (Doms MPI)	800336/--	DSB453	802800/--
		DSB501	804407/--
Tatsuno-Benc PDEX	804784	DSB453	802800/--
TIM	805039	DSB453	802800/--
		DSB501	804407/--
Tatsuno Sunny Ex	803564/--	DSB453	802800/--
		DSB501	804407/--
TEAM	806244/--	DSB453	802800/--
		DSB501	804407/--
Tokheim	800656/--	DSB357	800155/--
		DSB416	803304/--
		DSB520	804933/--

Protocols	Interface Notes /protocol/itno/	HIMs	Drawings /<mod. no.>/indr/
Tokheim ELC	805734	DSB453	802800/--
		DSB501	804407/--
Tokheim Kaizen	805419/--	DSB453	802800/--
		DSB501	804407/--
		DSB520	804933/--
Wayne Autocourt/Ferranti	800364/--	DSB517	804897/--
Wayne Dart	800735/--	DSB453	802800/--
		DSB501	804407/--
Wayne Europe/Ljungmans (Current Loop)	800091/--	DSB475	802976/--

List of Interface Notes for TGS and installation drawings for modules

The information below provides a list of the TGS protocols currently supported by the PSS 5000 and the document number of the Interface Note for each protocol. In addition to this, each HIM associated with each protocol is listed and the document number for the installation drawing is given:

Protocols	Interface Notes /protocol/itno/	HIMs	Drawings /<mod. no.>/indr/
4Tech Fuelcom 501	803260/--	DSB347	800696/--
		DSB457	802222/--
B Control A (CMS)	802392/--	DSB347	800520/--
		DSB457	802222/--
Egemin LGS2	802394/--	DSB347	800696/--
		DSB457	802222/--
Enraf STIC 867 (GPU)	802395/--	DSB347	800696/--
		DSB457	802222/--
Fafnir Visy-Quick	804018/--	DSB347	800696/--
		DSB453	803455/--
		DSB457	802222/--
Fafnir UDP	805912/--	DSB521	804979/--
Hectonic H-Protocol	803353/--	DSB347	800696/--
		DSB457	802222/--
Hectonic HLS Protocol	805109/--	DSB347	800696/--
IFSF	803259/--	DSB522	804998/--
IGLA	805468/--	DSB347	800696/--

Protocols	Interface Notes /protocol/itno/	HIMs	Drawings /<mod. no.>/indr/
Lemis DC-400 (density)	804476/--	DSB453	802800/--
MTS	805026/--	DSB347	800696/--
Petrovend 4	802393/--	DSB347	802494/--
		DSB457	802222/--
Sense PMP	805193/--	DSB347	802494/--
Struna-M	803961/--	DSB347	800696/--
		DSB457	802222/--
Struna +	805789/--	DSB453	802800/--
		DSB501	804407/--
Veeder-Root	802610/--	DSB347	800520/--
		DSB457	802222/--

List of Interface Notes for Price Poles and installation drawings for modules

The information below provides a list of the price pole protocols currently supported by the PSS 5000 and the document number of the Interface Note for each protocol. In addition to this, each HIM associated with each protocol is listed and the document number for the installation drawing is given:

Protocols	Interface Notes /protocol/itno/	HIMs	Drawings /<mod. no.>/indr/
Digitekno	803652/--	DSB411	803686/--
EIN	804317/--	DSB453	802800/--
		DSB501	804407/--
Emo Neon	805943/--	DSB347	800696/--
ENI	806407/--	DSB501	804407/--
Gilbarco Price Sign	805782/--	DSB347	800696/--
		DSB457	802222/--
IBIS	804664/--	DSB347	800696/--
IFSF	802667/--	DSB522	804998/--
Imago	805152/--	DSB347	800696/--
		DSB453	802800/--
		DSB501	804407/--
Linetron	804752/--	DSB347	800696/--
Logitron Oneway	806388/--	DMB425	800043/--
MKS ER 3/2 (ER3/ER4)	800413/--	DMB489	803593/--
Nautica	804486/--	DMB506	804490/--
Novyc	805462/--	DSB347	800696/--

Protocols	Interface Notes /protocol/itno/	HIMs	Drawings /<mod. no.>/indr/
NVSS	805805/--	DSB453	802800/--
		DSB501	804407/--
PWM In-house Ethernet	803647/--	n/a	n/a
RGB	805896/--	DSB453	802800/--
		DSB501	804407/--
		DMB506	804490/--
Rosel	805384/--	DSB453	802800/--
Scheidt & Bachmann T10/8	800337/--	DMB506	804490/--
Sistem	805702/--	DSB347	800696/--
Tammerneon LED	803160/--	DSB411	802798/--
Tokheim Koppens KA	805815/--	DSB347	800696/--
		DSB457	802222/--
Totem	803565/--	DSB501	804407/--
VDS	804766/--	DSB501	804407/--
Visotec	805964/--	DMB506	804490/--
Wayne Marketer	804263/--	DSB347	800696/--
Wayne Standard Interface	806399/--	DMB506	804490/--
		DSB501	804407/-
		DSB347	800696/--

List of Interface Notes for Terminals and installation drawings for modules

The information below provides a list of the payment terminal protocols currently supported by the PSS 5000 and the document number of the Interface Note for each protocol. In addition to this, each HIM associated with each protocol is listed and the document number for the installation drawing is given:

Protocols	Interface Notes /protocol/itno/	HIMs	Drawings /<mod. no.>/indr/
ACG Mifare RFID Reader	803980/--	DSB453	802800/--
		DSB501	804470/--
AutoTank ATCL	800083/--	DSB416	800190/--
Banksys	n/a	DSB411	802798/--
Codab C-bus	802929/--	DSB340	800216/--
		DSB453	802800/--
Coritec Pump Tag Reader	805954/--	DSB453-2	802800/--
Doms FlexPay	n/a	n/a	n/a

Protocols	Interface Notes /protocol/itno/	HIMs	Drawings /<mod. no.>/indr/
Doms POS	n/a	n/a	n/a
Doms Standard Terminal	800074/--	DSB347	800696/--
		DSB492	803807/--
		DSB511	804598/--
EIN DAC	803232/--	DSB476	804490/--
FasTrack	805191/--	n/a	n/a
Generic CRIND	n/a	DSB492	803807/--
		DSB511	804598/--
Gilbarco SPOT	n/a	n/a	n/a
Hectronic AVR	805467/--	DSB347	800696/--
Intaba S2D	804338/--	DSB453	802800/--
MPI Tag	805553/--	DSB492	803807/--
Octane 2000 Tag	804475/--	DSB347	800696/--
		DSB457	802222/--
Orpak NSL Tag	806212/--	n/a	n/a
Orpak VIT Terminal	804337/--	DSB453	802800/--
OTi Saturn Tag	805724/--	DSB453	802800/--
PetroPay 4000	800075/--	DSB492	803807/--
		DSB511	804598/--
POSTEC Prism OPT	804772/--	n/a	n/a
POSTEC TVD Tag Reader	805027/--	DSB501	804470/--
Prowalco Pump Tag	804291/--	DSB492	803807/--
		DSB511	804598/--
Prowalco Remote Tagging	800320/--	DSB492	803807/--
		DSB503	804432/--
		DSB511	804598/--
Tokheim DAC MPA V5	803392/--	n/a	n/a
Tokheim Pump Tag	804348/--	DSB520	804933/--
Tomcard	806258	n/a	n/a
Wayne CL Terminal	803594/--	DSB475	802976/--
Wayne CL/EPS-42 Terminal	804814/--	DSB475	802976/--

List of Interface Notes for Displays and installation drawings for modules

The information below provides a list of the Display protocols currently supported by the PSS 5000 and the document number of the Interface Note for

each protocol. In addition to this, each HIM associated with each protocol is listed and the document number for the installation drawing is given:

Protocols	Interface Notes /protocol/itno/	HIMs	Drawings /<mod. no.>/indr/
ACON-RD-02	804783/--	DSB453	803455/--
		DSB501	804407/--
Pipi	806019/--	DSB549	805835/--

List of Interface Notes for Vending Machines and installation drawings for modules

The information below provides a list of the Vending Machine protocols currently supported by the PSS 5000 and the document number of the Interface Note for each protocol. In addition to this, each HIM associated with each protocol is listed and the document number for the installation drawing is given:

Protocols	Interface Notes /protocol/itno/	HIMs	Drawings /<mod. no.>/indr/
Franke CS	806154/--	DSB347	800696/--

7 Revision Information

Revision history

This documentation has changed as follows:

Rev.	Date	Description of Changes
00	Aug. 01, 2008	First version
01	Sept. 17, 2008	The following changes have been made: <ul style="list-style-type: none"> • Included 2 additional protocols: Schwelm ZSR83 and South West MLPC3 • Added new module DSB510 • Replaced term P/N with Stock Number • Included new cabinet option
02	Nov. 07, 2008	The following changes have been made: <ul style="list-style-type: none"> • Added new module DSB378 • Added a note about the restricted use of DSB378 and DSB423 • Added new module DMB506 as a replacement for DMB354 • Moved DMB354 to the discontinued modules list • Added new module DSB511 • Added new manufacturers: Labko, Omntec, Incon and OPW
03	Nov. 27, 2008	The following changes have been made: <ul style="list-style-type: none"> • Added a new section for Reference Documents • Added a list of Interface Notes for device protocols
04	Feb. 04, 2009	The following changes have been made: <ul style="list-style-type: none"> • Added new module DMB507 as a replacement for DMB431 • Added Schwelm ZSR83 protocol to Schlumberger pumps • Updated cabinet specifications with illustrations of cabinets
05	April 17, 2009	The following changes have been made: <ul style="list-style-type: none"> • Added new module DMB512 as a replacement for DMB452 • Added Able to the price pole manufacturer's list • Added Tokheim Hengshan to pump manufacturer's list • Added Hengshan HS01 protocol
06	June 04, 2009	The following changes have been made: <ul style="list-style-type: none"> • Added Linetron to price pole manufacturer's list • Added IBIS and Linetron to price pole protocols • Added IBIS and Linetron to list of Interface Notes for price pole protocols • Revision history moved from the front to the back of the document
07	June 24, 2009	The following changes have been made: <ul style="list-style-type: none"> • Updated the PSS 5000 system versions table • Corrected stock numbers for DSB511 and DMB512

Rev.	Date	Description of Changes
08	July 29, 2009	The following changes have been made: <ul style="list-style-type: none"> • Added Nara/Topaz to pump protocols • Added Nara/Topaz to list of Interface Notes for pump protocols
09	Sept. 15, 2009	The following changes have been made: <ul style="list-style-type: none"> • Added VDS to price pole protocols • Added VDS to list of Interface Notes for price pole protocols • Added information about device hardware configurations affecting loading on the interface connections between the HIM and the device
10	Nov. 2, 2009	The following changes have been made: <ul style="list-style-type: none"> • Added Dresser-Wayne to terminal manufacturers list • Added Wayne CL/EPS-42 Terminal to terminals protocol list • Added Tatsuno-Benc to pump protocols list • Removed DSB363 • Reorganized Interface Type and HIMs table
11	Dec. 15, 2009	The following changes have been made: <ul style="list-style-type: none"> • Added Orpak and Postec to terminal manufacturers list. • Added Orpak VIT and Postec Prism to the Terminal Protocols and HIMs list. • Updated the information for the VDS protocol in Price Pole Protocols and HIMs
12	Mar. 24, 2010	The following changes have been made: <ul style="list-style-type: none"> • New information about selecting the correct CPB has been included in CPU Board and Cabinet Specifications section. • Added VDS to the price pole manufacturers list • Added Galileo GC21 XP to pump protocols list • Added DMB514 module to DMB HIM list • Updated Reference documents list with Galileo Interface Notes details • Added 2-wire, active pull down to Interface Types table
13	Sept. 13, 2010	The following changes have been made: <ul style="list-style-type: none"> • Changed module used for Veeder-Root TGS in worked example to DSB347 • Added Inst / Instrumentointi to pump manufacturers list • Added Prompribor to pump manufacturers list • Added Banksys to terminal manufacturers list • Added Prompribor LIVNY protocol to pump protocols list • Added Gascomm proocol to pump protocols list • Added Banksys protocol to terminal protocols list

Rev.	Date	Description of Changes
14	Nov. 12, 2010	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added Novotec protocol to Gilbarco pump manufacturers list • Added Novotec protocol to pump protocols list • Added RS485, + 5V supply to Interface Type list • Added DSB521 to HIM Details list • Added Novotec Interface Note and installation drawing in Reference Documents list • Changed protocol name from Galileo GC21 XP to the generic name GC21 XP • Corrected the alphabetical order of items in the lists
15	Jan. 25, 2011	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added new module DSB520 as a replacement for DSB408 • Minor text corrections
16	March 14, 2011	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • All reference to Doms CWI has been removed • Added POSTEC TVD tag reader protocol to terminal protocols list
17	May 9, 2011	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added new module DSB517 as a replacement for DSB356 • Added Bennett, Nara and TIM to pump manufacturers list • Added Bennett protocol and TIM protocol to pump protocols list • Added START Italiana to TGS manufacturers list
18	August 23, 2011	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added Hectronic HLS to TGS manufacturers list • Added Hectronic HLS to TGS protocols list
19	Sept. 20, 2011	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added Seetax to the pump manufacturers list • Added Seetax MM Protocol to pump protocols list • Added Seetax MM Protocol ITNO to reference list
20	Nov. 29, 2011	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added Mechanical Pump Interface to pump manufacturers list • Added Mechanical Pump Interface Protocol to pump protocols list • Added Mechanical Pump Interface Protocol ITNO to reference list • Added new module DSB524 MPI • Added installation drawing numbers for individual HIMs in HIM Details list
21	Jan. 4, 2012	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added Odeco Electronica to the price sign manufacturers list • Added Imago protocol to the price pole protocols list • Added DSB416 HIM Tokheim pump protocol

Rev.	Date	Description of Changes
22	May 15, 2012	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added Mepsan, Petposan, Maser and MMPetro to pump manufacturers list • Added Scientific & Production Enterprise SENSOR LLC to TGS manufacturers list • Added Nara/Topaz 2 protocol to pump protocols list • Added MMPetro protocol to pump protocols list • Added Maser GMS protocol to pump protocols list • Added Sense PMP protocol to TGS protocols list • Updated Max. no. of devices / connection for DSB461 • Updated No. of connectors for DSB476 • Updated Reference Document lists for pump and TGS protocol ITNOs with drawing numbers
23	March 21, 2013	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added Rosel to price pole protocols • Corrected Doms stock number for DSB511 to 142464 • Expanded explanation about load balancing on HIMs
24	July 24, 2013	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Updated Gilbarco 2-wire protocol with RS485 interface modules: DSB453 & DSB501 • Updated Tatsumo (Doms MPI) with DSB453 & DSB501 • Added Tokheim Kaizen protocol to pump protocols list • Minor text corrections
25	Dec. 16, 2013	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • DSB378 has been removed from the Discontinued Modules list. • Added Novyc to price pole manufacturers list • Added Novyc RS-232 protocol to price pole protocols list • Minor text corrections
26	Jan. 3, 2014	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added DSB522 LON Module • CPB Extension socket removed because it is no longer valid • Minor text corrections
27	March 4, 2014	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added Veeder-Root EMR3 to pump manufacturer's list • Added EMR3 protocol to pump protocols list • Updated Reference Document list for pump protocol ITNOs and drawing numbers

Rev.	Date	Description of Changes
28	Jan. 12, 2015	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added ELREM Tank2000 to pump protocols list • Added Hong Yang to pump protocols list • Added DSB541 to HIM modules and interface types list • Added FasTrack, Hectronic AVR, Intaba S2D & MPI Tag to terminal protocols list • Added Fafnir DVRC-2 to vapor recovery protocols list • Removed references to CPB505 and updated with CPB505-2 • Updated system version numbers to match systems with the CPB505-2
29	Feb. 2, 2015	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added MakPetrol Teas to the list of pump manufacturers • Added MakPetrol Teas protocol to list of pump protocols • Added DSB542 to HIM modules and interface types list
30	Oct. 16, 2015	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added Prowalco ICON Salesmaker to the list of pump manufacturers • Added Prowalco ICON Salesmaker to the list of pump protocols. • Added Sistem to the list of price pole manufacturers • Added Sistem to the list of price pole protocols • Minor text changes in Pump Protocols and HIMs list.
31	Dec. 3, 2015	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added Korea EnE to the list of pump manufacturers. • Added EnE to the list of pump protocols.
32	Feb. 12, 2016	<p>The following changes have been made:</p> <ul style="list-style-type: none"> • Added Gilbarco to list of price pole manufacturers. • Added Gilbarco Price Sign to the list of price pole protocols.
33	Apr. 18, 2016	<p>The following changes have been made.</p> <ul style="list-style-type: none"> • Added NVSS to the list of price pole protocols. • Added NVSS to the list of interface notes for price poles and installation drawings.
34	Apr. 20, 2016	<p>The following changes have been made.</p> <ul style="list-style-type: none"> • Added Struna + to the list of tank gauge protocols. • Added Struna + to the list of interface notes for tank gauges and installation drawings.
35	Sept. 7, 2016	<p>The following changes have been made.</p> <ul style="list-style-type: none"> • Added Lanfeng to the list of pump protocols. • Added Lanfeng to the list of interface notes for pumps and installation drawings.

Rev.	Date	Description of Changes
36	Oct. 11, 2016	The following changes have been made. <ul style="list-style-type: none"> • Added RGB Technology to the list of Price Pole manufacturers • Added RGB to list of price pole protocols. • Added RGB to the list of interface notes for price poles and installation drawings.
37	Jan. 1, 2017	Added new CPB539 hardware platform.
38	Jan. 17, 2017	The following changes have been made: <ul style="list-style-type: none"> • Added Fafnir UDP to list of tank gauge protocols. • Added Fafnir to list of interface notes for tgs and installation drawings.
39	May 2, 2017	The following changes have been made: <ul style="list-style-type: none"> • Updated the stock number for DMB cable No.38. • Included additional information about users referring to device manufacturers' documentation.
40	May 17, 2017	The following changes have been made: <ul style="list-style-type: none"> • Added Tokheim ELC to list of pump protocols • Added Tokheim ELC to list of interface notes for pumps and installation drawings. • Updated information for systems that use a LON interface when upgrading to a CPB539.
41	June 13, 2017	The following changes have been made: <ul style="list-style-type: none"> • Added Emo Neon to list of Price Sign manufacturers • Added Emo Neon to list of price pole and HIMs • Added Emo Neon to list of interface notes for price poles and installation drawings
42	July 12, 2017	The following changes have been made: <ul style="list-style-type: none"> • Added Visotec to Price Sign manufacturers • Added Visotec to list of price pole and HIMs • Added Visotec to list of interface notes for price poles and installation drawings
43	Oct. 17, 2017	The following changes have been made: <ul style="list-style-type: none"> • Updated the doms stock nos in the example configuration • Added Coritec 4 to list of pump protocols and HIMs • Added DSB453-2 to the list of HIMs • Added OTi Saturn Tag Reader to list of terminal protocols and HIMs
44	Nov. 3, 2017	The following changes have been made: <ul style="list-style-type: none"> • DSB348 has been discontinued. It has been replaced by DSB501 • Hectronic AVR terminal protocol has been updated with Ethernet connection • Removed single connection recommendation for DSB423 • The price pole protocol Able KA has been renamed to Tokheim Koppens KA.

Rev.	Date	Description of Changes
45	Jan. 8, 2018	The following changes have been made: <ul style="list-style-type: none"> • Added Hectronic to the list of terminal manufacturers • Renamed the Able KA protocol to Tokheim Koppens KA in the list of reference documents • Corrected the stock number DMB512 in the list of pump protocols
46	Feb. 21, 2018	The following changes have been made: <ul style="list-style-type: none"> • Added Gallagher to the list pump manufacturers • Added a new section for display manufacturers • Added PEC and Email protocols to the list of pump protocols • Added Pipi protocol to the list of display protocols • Added 3 new HIMs: DSB549, DSB550 & DSB552
47	Feb.23, 2018	The following changes have been made: <ul style="list-style-type: none"> • Added Batchen, PEC, Email and Transponder Technologies to the list of pump manufacturers • Added Gilbarco 2-wire Australian variant to list of pump protocols • Added Gilbarco 2-wire Australian variant ITNO to list of reference documents
48	Feb. 27, 2018	The following changes have been made: <ul style="list-style-type: none"> • A Note was added at the beginning of each list of device manufacturers. Each Note provides a reference to the complete list of relevant protocols • Added Bever Innovation to the list of price sign manufacturers • Updated the number of protocols supported by PWM prices signs in the list of price sign manufacturers • Updated the Interface Types supported by Tokheim Koppens KA in the list of price sign protocols
49	May 16, 2018	The stock numbers for PSS 5000-CPB539, 230V and 120V versions have been updated.
50	May 22, 2018	Added Coritec Pump Tag protocol to the list of Terminal protocols.
51	Feb. 03, 2020	The following changes have been made: <ul style="list-style-type: none"> • Updated name for DSB451 • Updated name for DSB524 • Added Vending Machine protocols • Removed references to CPB509
52	May 30, 2020	The following changes have been made: <ul style="list-style-type: none"> • Updated Pump Manufacturers list with Shelf • Updated Pump protocol with Shelf • Updated list of pump protocol interface notes and installation drawings with Shelf
53	Jun. 25, 2021	The following changes have been made: <ul style="list-style-type: none"> • Updated Pump protocols with OCPP • Updated list of pump protocol interface notes and installation drawings with OCPP • Updated Terminal protocols with Tomcard • Updated list of terminal protocol interface notes and installation drawings with Tomcard • Removed all references to CPB505-2

Rev.	Date	Description of Changes
54	Oct. 7, 2021	Minor text corrections
55	Feb. 15, 2022	The following changes have been made: <ul style="list-style-type: none"> • Updated Pump protocols with GG protocol • Updated list of pump protocol interface notes and installation drawings with GG
56	Apr. 6, 2022	The following changes have been made: <ul style="list-style-type: none"> • Updated List of Terminal Manufacturers with Orpak NSL Tag protocol • Updated List of Tank Manufacturers with OPW support of Petrovend4 protocol. • Updated List of Terminal Protocols with Orpak NSL Tag protocol
57	May 25, 2022	The following change has been made: <ul style="list-style-type: none"> • Updated the Alpha pump protocol with the DMB548
58	Jun. 13, 2022	The following changes have been made: <ul style="list-style-type: none"> • Updated list of pump manufacturers with TEAM • Updated list of pump protocols with TEAM Protocol • Updated list of pump protocol interface notes and installation drawings with TEAM
59	Oct. 17, 2022	The following changes have been made: <ul style="list-style-type: none"> • Standard cabinet with 4 conduits has been added • Versions available has been updated with 145946 (Std cabinet with conduit – 120V)
60	Dec. 19, 2022	The following changes have been made: <ul style="list-style-type: none"> • Updated list of pump manufacturers with Lanfeng • Updated list of pump protocols with Lanfeng v3.1 protocol • Updated list of pump protocol interface notes and installation drawings with Lanfeng v3.1

Rev.	Date	Description of Changes
61	Apr. 11, 2023	The following changes have been made: <ul style="list-style-type: none">• Updated the list of price pole protocols with Wayne Standard Interface protocol• Updated list of price pole protocol interface notes and installation drawings with Wayne Standard Interface
62	Jun. 9, 2023	The following changes have been made: <ul style="list-style-type: none">• Updated the list of price pole manufacturers with Wayne Standard Interface• Updated the list of price pole protocols – added DSB347 to Wayne Standard Interface.• Updated the list of price pole interface notes and installation drawings – added DSB347 and DSB501 for the Wayne Standard Interface
63	Jul. 11, 2023	The following changes have been made: <ul style="list-style-type: none">• Updated the list of price pole protocols – added Logitron Oneway and ENI• Updated the list of price pole interfaces notes and installation drawings – added Logitron Oneway and ENI

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