

Operating Instructions

Control Unit PST1

Control Unit TYPE PST1



Softwareversion: PST1 V1.15

Operating Instructions

Control Unit PST1 for Pricesigns

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Technic

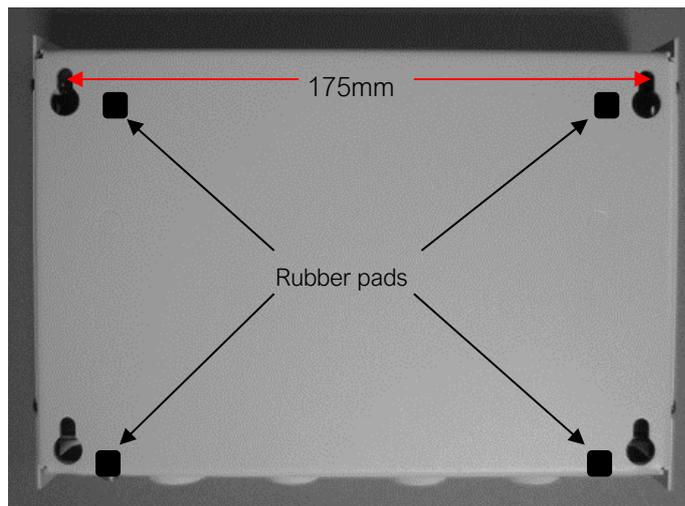
The control unit provides the interface between the POS of the petrol station and the price sign. The control unit comes with a keyboard with 16 keys, one lighted LC-display and status LED's in the front. The communication is operated by serial interfaces. The control unit can be driven online or manually.

The control unit can be installed as a desktop or be mounted on the wall. The power supply is carried out by an external wall power supply to a 230VAC mains. In the inside the control unit has a terminal strip for connection to the periphery. Connecting up to two price signs is standard. The connection to the POS is made by a separate interface module.

Control Unit

Setup & Installation

The control unit can be installed as a desktop or be mounted on the wall. For mounting the wall we use keyholes (M4).



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Keypad, Display, Status-LED



Power LED lights up blue when the device is powered.

Data LED blinks red during transferring the data from the POS or while using the keypad.

PT 1 – Status LED (green) price sign 1

PT 2 – Status LED (green) price sign 2

Status LED PT1 and PT2:

LED on	= price sign active
LED blinks irregular	= data transmission to the price sign
LED blinks every second	= price sign in standby mode

The operating buttons F1-F4 have operations depending on the menu. The particular operation is shown in the lowermost line in the Display.

For above example:

- F1: back to the main menu
- F2: change to online mode
- F3: sending prices (to price sign)
- F4: switch between the price signs 1-6, 7-12, 13-16, in the Display

Enter data with the buttons **(0-9)**.
Button "**Clear**" cancels last input.
Button "**Enter**" confirms the input.

Handling

General Instructions

The input of all operations is done with a multi-stage menu system.

The operating buttons F1-F4 are reserved dynamically. The current operations are shown either in line 4 above the Display or in the line before the operation.

Notice:

If there is no button pressed for 30 seconds during an input, the control unit will automatically return to its basic position.

After about 60 seconds the display turns dark.

Display turns on again after pressing one of the buttons.

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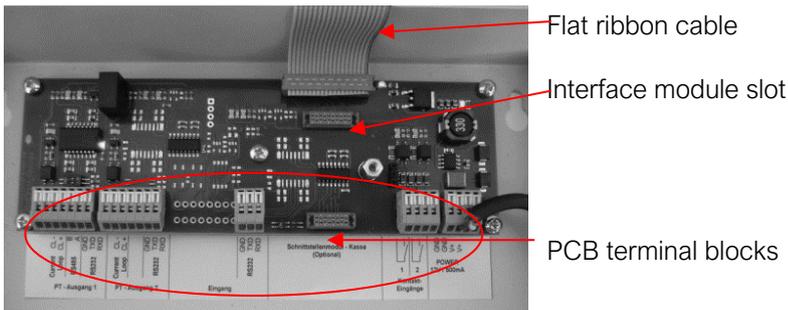
Control Unit PST1 for Pricesigns

Connection Interface

Open unit:

Loosen the screws on the side and remove top. If top should be removed completely the flat ribbon cable must be removed **carefully** from the control card.

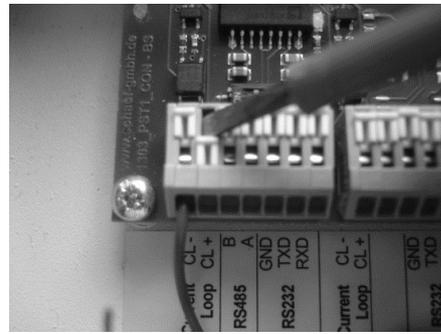
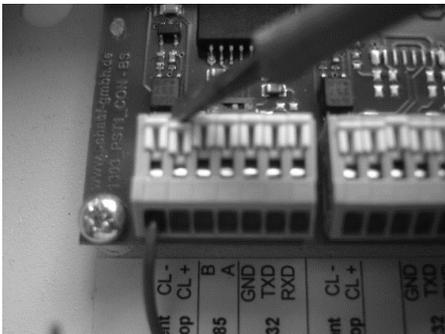
The connection terminals on the connector PCB are accessible after opening.



Notice: In the case of a wall-mounted unit, the "top cover", i.e. the upper part of the unit, is not allowed to be clamped to the upper edge. This may damage the LCD display.

Open locking slide

Push white slider in front with a suitable small screwdriver.



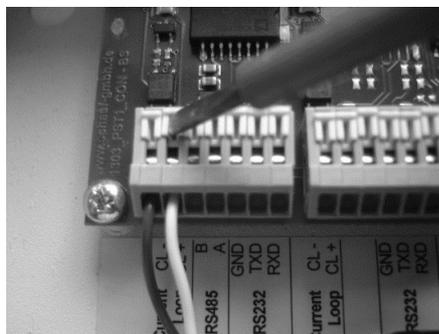
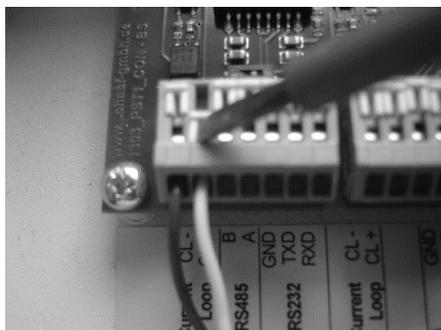
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Close terminal

After opening the terminal, plug in the connection wire. Push white slider back again with a screwdriver.



Should prices be changed automatically by the POS, connect the interface module as mentioned below.

If the interface module is not used, you can change prices manually at the control unit.

Now connect the price sign (terminal PT1).

The control unit has two outputs (for standard) in case a second price sign has to be connected to terminal PT2.

Then connect the POS to the interface module (if available).

Use the connecting plan of the delivered and installed module.

Close control unit:

Attach the flat ribbon cable (in case of removal) and close the control unit again with the screws.

Notice: The unit is not allowed to be operated in the opened state. Otherwise the casing cannot provide any shielding against environmental influences and EM radiation. The cover must be flush and the screws must be securely tightened.

Turn on control unit:

The control unit has no on/off switch, it is on right after it's plugged to the power supply. The power supply for the control unit is made with a power plug 100-240VAC /12VDC 1,5A. The power supply unit is part of delivery. Connect the control unit with the power plug using a 230VAC outlet.

The control unit is now ready for operation.

Operating Instructions

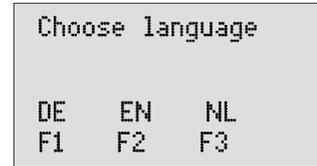
Control Unit PST1 for Pricesigns



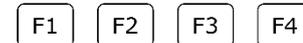
Starting up

Automatic Initialization and Language selection

After connecting and switching on the control unit for the first time, the unit displays a language selection menu. The selected language setting will be saved. The setting can be changed later at any time under "Settings".
If no input is made for 20 seconds, the unit continues without saving.



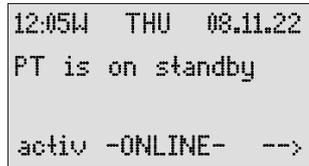
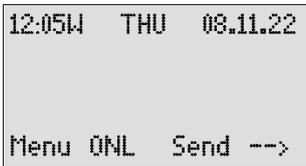
In the further process, the built-in interface module will be queried. This is done automatically and does not require any input. If a built-in interface module is detected, the control unit briefly shows the module number and protocol name on the display or in the info menu.



The unit is now in the main menu by default.

Online-Mode

When the F2 (ONL) key is pressed, the device switches to "Online mode".



ONLINE blinks



Screen when standby mode is active.
(see also PT standby page 14)
F1 Switch on the displays on the price sign.

Screen when standby mode is not active
(see also PT standby page 14)
F1 Switch off the displays on the price sign.

Here you have the possibility to turn the price sign on and off without leaving the online mode.

Repeat pressing button F4 you can view the prices 1-6, 7-12 and 13-16 one after the other.

Notice:

Function "standby" and "active" are only available if Schauf data protocol is used. Using the Kienzle data protocol the name "Menu" will appear.

Operating Instructions

Control Unit PST1 for Pricesigns



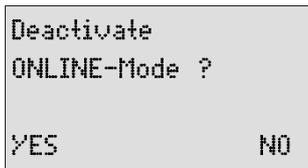
Turn off Online-Mode

To return to manual mode, the -ONLINE- mode must be ended.

This can be ended without concern, for example, to set the time or do other settings. If a price change is made by the POS or petrol station control system during this time, the new prices are temporarily stored in the interface module as long as the unit is not switched off.

Stop online-mode:

Press button F2 or F3.



Key F1 to stop ONLINE-Mode

Key F4 to cancel



If the online mode is left (button F1) the control unit is in its basic position where all settings can be done.

If the control unit is switched on into the online mode, the prices which were entered manually will be overwritten with the prices which were taken over last from the POS.

If no prices were or could be transferred from the POS system, all prices will be "0000".

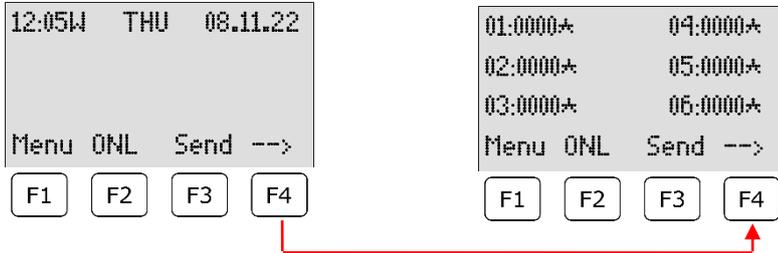
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Menu

Basic menu



Press F4 to switch between the pages to show products 1-6, 7-12 and 13-16
Press F1 to get to the main menu

Main Menu

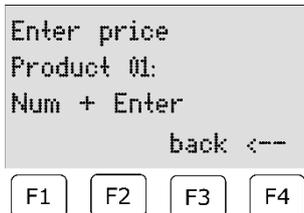


Mit der Taste "Clear" zurück in die Grundstellung

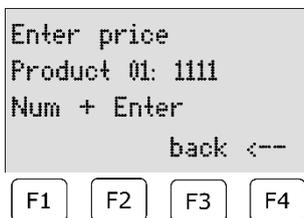
Price input

From basic menu →

Button: F1 (menu) again F1 (Price change)



Select the product with numbers of keyboard (2 digits input 01-12)
Press enter to get to the price input for this product (4 digits)



Type the price for example 1539 and confirm with enter

The input can be cancelled with F4 --> back to the selection of products.
Here you can select a further product or you leave the product selection with F4.
Now you are back in the main menu.

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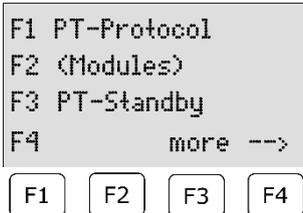
Control Unit PST1 for Pricesigns

Settings

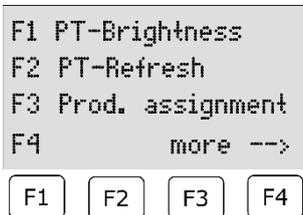
From basic menu →

Button: F1 (main menu) F2 (settings)

The settings consist of multiple pages, with the button F4 you get to the next page. Reaching the last page you get back to the main menu.



Button "F1" selection of PT-protocol (price sign)
 Button "F2" selection of a POS interface
 Button "F3" PT Standby mode settings
 Button "F4" next page



Button "F1" set brightness of LED's on price sign
 Button "F2" specify time for sending the prices again to price sign (Refresh-Function)
 Button "F3" assign products to the display lines
 Button "F4" next page



Button "F1" set time and date
 Button "F2" set a second currency (e.g. SFR)
 Button "F3" restore factory setting
 Button "F4" next page



Button "F1" Setting the device language
 Button "F2" Activate the daylight savings time function
 Button "F3" not used
 Button "F4" back to main menu

Notice:

With the button „Clear“ get back to the main menu!

Operating Instructions

Control Unit PST1 for Pricesigns



PT-Data protocol

The PT protocol is the communication protocol between the PST1 control unit and the electronics in the pricesign and works independently of the interface protocol of the filling station control unit.

The following protocols are available:

1. Kienzle ER3 (for backward compatibility to older price signs).
2. Schauf Std. (standard protocol without responses for wired connection)
3. Schauf Special (secure protocol with responses and error detection)

From basic position → Button: F1 (main menu) F2 (settings) F1 (PT-protocol)

```
F1 Kienzle
F2 Schauf Std. (1)
F3 Schauf Spezial
F4 more -->
```

(x) = active data protocol
(1) = output only PT1
(2) = output PT1+PT2

F1 F2 F3 F4



```
Price sign
Output number?
1 2
```

Select number of outputs (F1 or F2)

F1 F2 F3 F4



```
Price sign
Protocol
SCHAUF Std. ?
YES NO
```

F1 (yes) confirm, F2 (No) cancel

F1 F2 F3 F4

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Details PT-Protocols

(valid Version 1.14)

Kienzle ER3

Kienzle ER3 is implemented due to compatibility, as older price signs might have an outdated firmware version (version b_0002v9). e.g. if they were previously operated with an AST1000 Control Unit.

This Kienzle protocol communicates in a unidirectional way via the current loop interface without responses (CL+ and CL-).

This protocol has a limited range of functions.

Schauf Std.

The protocol is selected by default and communicates unidirectionally without responses. Therefore, it should **only** be used for a **wired connection** to the price sign.

The recommended interface is Current Loop (CL+ & CL-) and is suitable for cable lengths up to 1000m.

Schauf Spezial

This protocol includes all functions of the Schauf protocol, but communicates with short responses, error detection and checksums. Therefore, it is to be used **for a wireless connection** to the PT.

It is additionally recommended to activate the function "PT-Refresh" in the "online mode".

The wireless connection, e.g. a radio link, is usually configured accordingly and adapted to the Schauf electronics.

The protocol communicates via the RS485 or RS232 interface.

Error detection

The error detection at the **Schauf Spezial protocol** is used for troubleshooting and correction of acute problems during data transmission, e.g. wrong wiring, bad or wrong radio modem/antenna alignment.

Timeout: the feedback from the PT must arrive within 1 second.

If a timeout is triggered, it is repeated a maximum of three times. A timeout is considered an error.

Each transmission is evaluated once and shown in the display.

The following evaluations are available:

"Data complete - good connection" - No errors or timeouts occurred.

"Data complete - bad connection" - More than ONE error or timeout occurred, but the entire transmission was **successful**.

"Data not complete - no connection" - More than ONE error or timeout occurred and the data could not be completely transmitted despite retransmission. Or the response from the PT did not arrive. **The transmission was aborted**.

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Serial Interfaces

Current Loop Interface is actively dimensioned with approx. 20 mA and approx. 12V isolated voltage source.

RS485 interface is galvanically isolated, has internal failsafe termination and is switched on and off by software. A corresponds to T+/R+ (non-inverting) -- B corresponds to T-/R- (inverting)
Due to a missing GND for RS485 only short line lengths are recommended.

RS232 interface is generally only recommended for short line lengths. E.g. 10m line to the radio modem.

Only one interface per PT may be wired at the same time.

Important:

When selecting the PT protocol, the price transparent must also be set to the selected protocol.
This is done via DIP switches on the control electronics in the PT.
Please refer to the documentation for the price transparent.

Operating Instructions

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PT-Standby

General

The price sign can be switched into standby mode for petrol stations which are not open 24 hours. In this mode the LED's are turned off but price changes will be processed anyway.

There are 3 possibilities, to switch the price sign into a Standby-Mode:

1. Manually
2. With a Timer
3. With an extern switch

These 3 possibilities are described as follows:

If a price sign is in Standby-Mode or active, it will be signalized by LED's on the front side.

Status LED PT1 and PT2:

LED on	= price sign active and is driven by the control unit
LED blinks irregular	= price sign receives data from control unit
LED blinks every second	= price sign in standby mode, but still driven by the control unit

Notice:

Generally, only one of three possibilities should be used. For example, you should not use the timer function and an additional switch.

If the control unit is in timer mode, the price sign can be switched off and on manually, while the control unit is in ONLINE mode.

Important

Standby-Function is only possible if the PT-data protocol „Schauf“ or „Schauf Spezial“ has been set!
(see also page PT-data protocol).

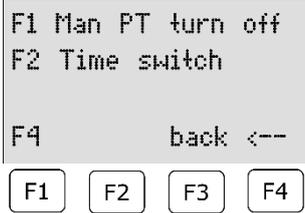
This function is described in the operating instructions of the price sign and the firmware of the PT control electronic has to support this function!

Operating Instructions

Control Unit PST1 for Pricesigns

PT-Standby OFF manually

From basic position → Button: F1 (main menu) F2 (settings) F3 (PT-standby)



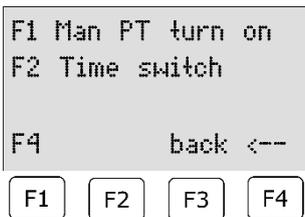
F1 manually PT-Standby switch on
F2 timer setting
F4 go back one page

Press button F1 to set the price sign into the Standby-Mode. Immediately data is sent to the price sign and displays will be switched off. All other functions (such as price changes) remain. They first will be displayed when price sign is switched from standby-mode into normal- mode.

The standby mode allows a petrol station which is not open 24 hours to switch off the price sign when petrol station closes. However, price changes will be taken over and stored. When the price sign is switched on again (petrol station opens) the new prices will be displayed immediately.

PT-Standby ON manually

From basic position → Button: F1 (main menu) F2 (settings) F3 (PT-standby)



F1 manually PT-Standby switch off
F2 timer setting
F4 return

Press button F1 to switch the price sign back to normal mode. Immediately the data is sent to the price sign and the displays will be turned on again.

Operating Instructions

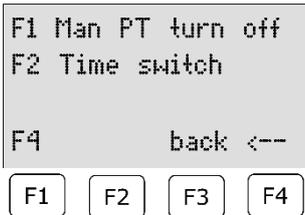
Control Unit PST1 for Pricesigns

PT-Standby Timer switch

Notice

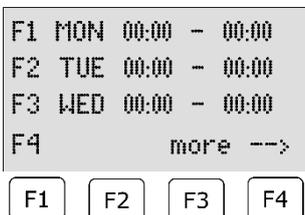
Should the price sign work without timer, set on and off time at 00:00 o'clock. This is also the factory setting.

From basic position → Button: F1 (main menu) F2 (settings) F3 (PT-standby)



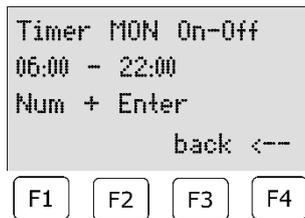
F1 manually PT-Standby switch on
F2 timer setting
F4 go back one page

Press button F2 to see turn on time.



F1 time on for Monday
F2 time on for Tuesday
F3 time on for Wednesday
F4 next page to Thursday, Friday, Saturday and Sunday

Press button F1-F3 to set time when on:
(Here an example for Monday)



Now set time when price sign should be switched on and then set time when price sign should be switched off.

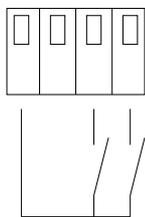
If making a mistake the input can be continued. The cursor moves back to the first position after input of the last position.

The input must be confirmed with „Enter“.

The price sign is switched on from 6:00 o'clock until 22:00 o'clock in our example.

Reaching the standby time once, data will be transmitted to the price sign and on the display the information appears: „PT in standby-mode“ (in basic position).

PT-Standby with external switch contact



GND 1 2

Contact Terminal

Important

The contact input must be opened with a potential free switch. External voltage is not allowed, the control unit could be destroyed.

Additionally to the above mentioned possibilities, the price sign can also be switched into the standby-mode with an external contact.

Use contact input 1:
(Entry 2 is not used actually)

Function:

The price sign will be set to standby mode when the contact is closed.
The standby mode will be turned off by opening the contact input.

Operating Instructions

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PT-Brightness

From basic position →

Button: F1 (main menu) F2 (settings) F4 (--> forward) F1 (PT-brightness)

Function is only possible if PT-data protocol "Schauf" is selected!
(see also item PT-data protocol).

The price sign has an automatically control for brightness,
it regulates the brightness of the LED Display due to brightness of the environment,
The brighter the light from the environment the brighter the LED's.

The limit of brightness is 100 % (max. brightness) which is standard (factory setting) and the lowest is 5 % (min. brightness).

The control range can be adapted in the menu „PT-Brightness“. Normally an adjustment is not needed but due to the local conditions it could be necessary.

```
F1 PT1: 005-100%
F2 PT2: 005-100%
F3 Transmit
F4 back <--
```

F1 control range for price sign 1
F2 control range for price sign 2
F3 send settings to price sign
F4 one level back

F1 F2 F3 F4

```
Brightness limits
Lower limit: 005%
Num + Enter
back <--
```

Enter the lower limit of brightness using the numeric keypad and confirm with enter.
The input can be canceled with the button F4.

F1 F2 F3 F4

```
Brightness limits
Upper limit: 100%
Num + Enter
back <--
```

Enter the upper limit of brightness above the numeric keypad and confirm with enter.
The input can be canceled with the button F4.

F1 F2 F3 F4

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PT-Refresh

From basic position →

Button: F1 (main menu) F2 (settings) F4 (--> forward) F2 (PT-refresh)

Normally the prices are sent to the price sign once.

1. After adjustment of prices manually
2. After changing the prices through the POS

The prices will be saved in the control unit and remain after switching off the unit.

Using the menu item PT-Refresh an additional interval can be set between 1 to 9 minutes, 0 minutes is no refresh. If setting 4 minutes the prices will be send to the price signs every 4 minutes independent from changes.

```
PT-Refresh: OFF
F1 Interval 0 min.

F4      back <--
```

F1 enter interval
F4 return



```
PT-Refresh Enter
Minutes ? 0
Num + Enter

F4      back <--
```

Geben Sie das Intervall in Minuten ein (1-9) bzw. 0 für aus.
Bestätigen Sie mit der Taste Enter.
Mit der Taste F4 kann die Eingabe abgebrochen werden.



Set interval in minutes (1-9) and 0 is off.

Confirm button with enter.

The input can be canceled with the button F4.

Notice:

It is recommended to activate this function in connection with the online mode and the use of the "Schauf Spezial-Protocol". In this way, e.g. in case of connection interruption, the price transmission is repeated after the interval time.

In general, however, a regular disconnection is considered a serious error that must be corrected in the cause.

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Assignment of products

From basic position →

Button: F1 (main menu) F2 (settings) F4 (--> forward) F3 (Prod. assignment)

With product assignment the order of products on the price sign can be changed.

One or more products can be switched off, they are not displayed (only if set in SCHAUF data protocol).

One or more products can also be set manually, in this case the prices will not be overwritten by a connected POS.

The prices which are set manually will be displayed.

On delivery the first 10 products are set 1:1. That means that product 1 of the POS is given for product 01 in the control unit and is shown on the top of the price sign.

An allocation of products can also be programmed in the POS. If there is no possibility, the allocation of products can also be set in the control unit PST1.

Example for product assignment

Price 3 of the POS must be on product 1 of the display.

```
Product assignment
Product? 01
Num + Enter
F4      back <--
```

F1 F2 F3 F4

Set 01 for product 1 with numeric keypad and confirm with enter.
The input can be canceled with F4.

```
Product assignment
P01 = K03
Num + Enter
MAN OFF <--
```

F1 F2 F3 F4

Set 03 after K (POS) so that product 01 of the PST1 will be related to product 03 of the POS.

Confirm with enter.

The input can be canceled with F4.

Product 3 of the POS is now related to product 1 on the price sign.

Please note:

After this allocation of price 3 of the POS will also relate to product 3 in the control unit.

Now a different product from the POS must be related to product 3,

otherwise, price 3 will be displayed in line 1 and 3.

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Example for a manually set product:

The price 1 must be set manually and should not be overwritten by a connected POS.

```
Product assignment
Product? 01
Num + Enter
F4          back <--
```



Set 01 for product 1 with numeric keypad and confirm with enter.
The input can be canceled with F4.

```
Product assignment
P01 = MAN
Num + Enter
MAN OFF      <--
```



Now press F1 and MAN will be displayed in the second line.

Product 1 will not be overwritten by the POS.
The price set manually will always be displayed for Product 1.

Example for a switched off product:

Price 1 should not be displayed on the price sign.

```
Product assignment
Product? 01
Num + Enter
F4          back <--
```



Set 01 for product 1 with numeric keypad and confirm with enter.
The input can be canceled with F4.

```
Product assignment
P01 = OFF
Num + Enter
MAN OFF      <--
```



Now press F2 and line 2 of the display is OFF.

Product 1 will not be displayed on the price sign.

Notice: The display can only be completely switched off if the leading zeros on the control electronics in the price mast are switched off. Otherwise, 0000 will still be displayed in the price pole when the product is switched off.

In the product overview the assignment of products are displayed as follows:

z.B.	01: 0.000*	Product is assigned (even though the products are assigned 1:1)
z.B.	01: 0.000	Product is set to MAN
z.B.	01: 0.000-	Product is switched off (only with SCHAUF protocol)

Operating Instructions

Control Unit PST1 for Pricesigns

Date / Time

From basic position →

Button: F1 (main menu) F2 (settings) F4 (--> forward) F4 (--> forward) F1 (date/time)

```
12:05W THU 08.11.22
F1 Time
F2 Date
F4      back <--
```



Press F1 to set time.
Press F2 to set the date.

```
Setup time:
12:05
Num + Enter
F4      back <--
```



Setup time:

The first digit blinks.
Set time with keypad.
Confirm by using the button "Enter".
The input can be canceled with F4.

```
Setup date:
08.11.22
Num + Enter
F4      back <--
```



Setup date:

The first digit blinks.
Set date with keypad.
Confirm by using the button "Enter".
The input can be canceled with F4.

Please notice

- Weekdays are calculated automatically on the basis of the set date.
- The unit counts its own time and is therefore subject to the variation of its clock.
- Although the error is minimal, it can add up to +- 5 minutes per year.
- It is therefore advisable to check and adjust the time of the unit regularly.

Operating Instructions

Control Unit PST1 for Pricesigns

Currency

From basic position →

Button: F1 (main menu) F2 (settings) F4 (--> forward) F4 (--> forward) F2 (currency rate)

Function is only possible if PT-data protocol "Schauf" is selected!

(See here also item PT-data protocol).

At petrol stations near national borders, price signs can display 2 currencies which appear alternately. If such a price sign exists, the period of time to display for each currency can be set in this item.

A change will be activated automatically by the input of „F2 change“ higher than 00 .
By entering the foreign exchange rate the exchange will be done automatically.

Important

The rate is always quote currency to basic currency.

If the basic currency are swiss francs and shall be changed into euros, the rate of euro to swiss francs must be stated.

Example:

Basic currency price 1,459€ (input from the POS or is entered manually)

As a foreign currency SF should be displayed.

```
F1 Rate      1.0000
F2 Toggle   000s 000s
F3 Transmit
F4          back <--
```

Former entered rates can be shown here

Press F1 and enter the rate for SF.

F1 F2 F3 F4

```
Exchange rate
1.2763
Num + Enter
P8          back <--
```

The rate of 1.2763 was entered here.

Enter the rate in numeric keypad and confirm with enter.
The input can be canceled with F4.

F1 F2 F3 F4

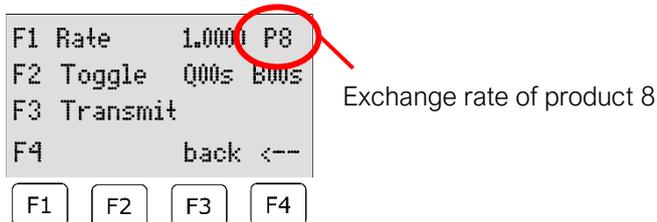
Operating Instructions

Control Unit PST1 for Pricesigns

Additional function SW version V1.02 or higher:

In the menu exchange rate you can choose „P8“ by entering F1, if the exchange rate which is given in product 8 should be taken. In this case the exchange rate can be controlled directly from the POS.

This is marked with „P8“ in the currency menu after the exchange rate, also in the menu for input of the exchange rates.



Please notice:

- The rate which is stored in product 8 only has three decimal places and one integer place based on technical conditions. The fourth place of the intern exchange rate is placed constantly.
- The product 8 can be changed manually such as automatically by the POS.
- Is the control unit „ONLINE“ the rate will automatically be updated to every change due to product 8.
- The transfer of the rate depends on the settings in the menu Settings „Prod. assignment“.
- Product 8 is further processed as product 8. This procedure cannot be used with a price sign with more than 7 types, though product 8 can not be processed.

Operating Instructions

Control Unit PST1 for Pricesigns

Time of changes between base and quote currency

Enter both times for the change between base and quote currency.

```
F1 Rate      1.0000
F2 Toggle   Q00s B00s
F3 Transmit
F4          back <--
```

F1 F2 F3 F4

F2 drücken

```
F1 Quotecurrency 00s
F2 Basecurrency 00s
F4          back <--
```

F1 F2 F3 F4

```
Quote currency
00 sec.
Num + Enter
          back <--
```

F1 F2 F3 F4

press F1

Enter the time by the numeric keypad for the period of time the quote currency should be displayed (00-99s) and confirm with enter.

The change will be switched off by entering 00!

The input can be canceled with F4.

```
Base currency
00 sec.
Num + Enter
          back <--
```

F1 F2 F3 F4

press F2

Enter time by the numeric keypad for the period of time the base currency should be displayed (00-99s) and confirm with enter.

The change will be switched off by entering 00!

The input can be canceled with the button F4.

Press F3 to send configuration to the Price pole. From now on the given time appears alternately in the display.

Operating Instructions

Control Unit PST1 for Pricesigns

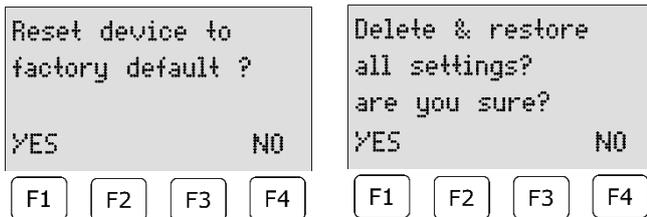
Factory reset

From basic position →

Button: F1 (main menu) F2 (settings) F4 (→ forward) F4 (→ forward) F3 (factory reset)

In this menu the control unit can be set back to factory setting.

The selection has to be confirmed twice.



The control panel is then reset:

- All prices are set to „0000“
- Prices 1 to 10 set to price assignment 1 to 10 assigned one-to-one to the cash register prices
- Prices 11 to 16 set to manual
- PT data protocol SCHAUF with one active output (one price sign)
- PT-Standby Timer OFF – Time 00:00 – 00:00
- PT-brightness to 5% to 100%
- PT-Refresh to 0 minutes = OFF
- Currency Times set to 00 and rate to 1.0000 - Rate from product 8 = OFF
- Time/date remain
- Language settings are reset = Default: German
- Daylight saving time: OFF

Operating Instructions

Control Unit PST1 for Pricesigns

Language

(valid from version V1.15)

From basic position →

Button: F1 (main menu) F2 (settings) F4 (more -->) three times then F1 (Language)

The unit can be customised in the display and operating language. When the unit is started for the first time, the user is asked to select the desired language.

This can be changed later in this settings menu.

```
F1 Deutsch
F2 English
F3 Nederlands
F4      back <--
```



When pressing the F1 to F3 keys, the respective language is directly set and saved.

Press the F4 key to return to the menu.

Automatic daylight saving time

(valid from version V1.15)

From basic position →

Button: F1 (main menu) F2 (settings) F4 (more -->) three times then F2 (Summer time)

In this menu, the automatic daylight saving time adjustment can be activated. This applies to Central European Time and is therefore always changed to 3 o'clock on the last Sunday in March at 2 o'clock. The change to winter time always takes place on the last Sunday in October at 3 o'clock to 2 o'clock.

The adjustment only works as long as the unit is switched on at the time of the time adjustment.

```
F1 Summer time:OFF
Only for CET
F4      back <--
```



F1 key to activate or deactivate the automatic adjustment.

The setting will be saved.

Press the F4 key to return to the menu.

```
12:05W THU 08.11.22
Menu ONL Send -->
```



If a time change has taken place on the respective date, an indicator appears next to the clock.

In this example, a "W" for winter time.

On the next day of the changeover to summer time, e.g. 26 March 2023, an "S" appears next to the clock.

Operating Instructions

Control Unit PST1 for Pricesigns

PT-Testrun

Settings

From basic position →

Button: F1 (main menu) F3 (PT-Testrun)

With this test function different combinations of numbers can be sent in intervals from the control unit to the price sign.

Different functions of the display can be checked according to the selected mode

Mode A: Sends the numbers 0000 to 9999 to all lines one after an other, here it's good to check the display of the numbers.

Mode B: Sends all numbers 1234 2345 3456 etc. to all lines, here the allocation of lines can be recognized

Mode C: Sends all numbers "8888" and blanks to all lines. Check here if all segments are switched on and off.

```
PT-Testrun start?
Mode A
Interval 10s
START SETUP NO
```

F1 F2 F3 F4

Press F1 to start the testrun with mode A and interval of 10 seconds.
Press F2 to change the settings (mode und interval)
Press F4 to get to the main menu.

Change settings

Press F2

```
F1 Interval (10s)
F2 Mode (A)
F4 back <--
```

F1 F2 F3 F4

Press F1 to change interval

```
F1 10 sec.
F2 20 sec.
F3 30 sec.
F4 back <--
```

F1 F2 F3 F4

Press F1 to set 10 seconds interval.
Press F2 to set 20 seconds interval.
Press F3 to set 30 seconds interval.
Press F4 to go back without changes.
F2 drücken Modus zu ändern

Operating Instructions

Control Unit PST1 for Pricesigns

```
F1 Interval (10s)
F2 Mode (A)

F4          back <--
```

F1 F2 F3 F4

Press F2 to change mode

```
F1 Mode A 0000-1111
F2 Mode B 1234-2345
F4 Mode C 8888
F4          back <--
```

F1 F2 F3 F4

Press F1 to select mode A.
Press F1 to select mode B.
Press F1 to select mode C.
Press F4 to go back without changes.

PT Testrun Start/Stop

```
PT-Testrun start?
Mode A
Interval 10s
START SETUP    NO
```

F1 F2 F3 F4

Press F1 to start the testrun with the stated settings.
Now the numbers are displayed in intervals on the price sign according to "Output".

```
Display 0000
is running. 6s

PAUSE            STOP
```

F1 F2 F3 F4

Press F1 to pause the testrun.
Press F4 to stop the testrun.

Testrun pause

```
Testrun paused
continue ?

YES            STOP
```

F1 F2 F3 F4

Press F1 to continue the testrun.
Press F4 to finish the testrun.

Send prices manually / Transmission

```
12:05W THU 08.11.22
Menu ONL Send -->
F1 F2 F3 F4
```

This function is only available when the control unit is not online.

The control menu is located in basic position.
Press F3, prices will be sent to the price sign 1.

```
Sending Prices PT1:
|#####_|
SCHAUF Std.
F1 F2 F3 F4
```

Prices are sent to the pricesign 1 (PT1) oder to pricesign 2 (PT2)

The activated protocol is indicated in the 4th line.

```
Data sent
|#####|
SCHAUF Std.
F1 F2 F3 F4
```

Prices are sent.

The control menu returns to the basic position.

If a protocol is used that works with responses, the display looks as follows:

```
Data complete
good connection
SCHAUF Spezial
F1 F2 F3 F4
```

No errors occurred.

```
TX ERROR 1
Data complete
bad connection
SCHAUF Spezial
F1 F2 F3 F4
```

The data transmission was successful.

However, at least one error or timeout occurred.
This has been corrected by retransmission.

If the transmission is based on a radio link, this is an indication of operation at the edge of the maximum radio range.

Furthermore, this is an indication of a disturbed transmission.

```
TX ERROR 3
Data not complete
no connection
SCHAUF Spezial
F1 F2 F3 F4
```

The data transmission was not successful.

In this case, at least part of the data did not arrive, the transmission was repeated three times without success and then aborted.

With radio link, this is an indication of "out of range" or faulty wiring.

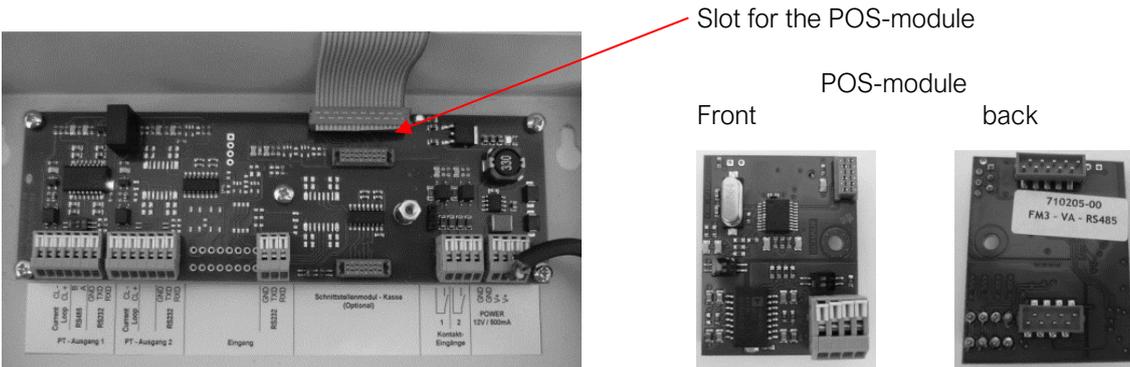
Operating Instructions

Control Unit PST1 for Pricesigns

Installing or changing of Interface module

The control unit PST1 is prepared (standard) for a POS interface module. There are modules with different interfaces (RS232, RS485, CL etc.) and with different data protocols for POS systems like Dresser, Scheid & Bachmann, DOS and a lot more.

On this picture you can see the Connector PCB without POS-module.



Slot for the POS-module

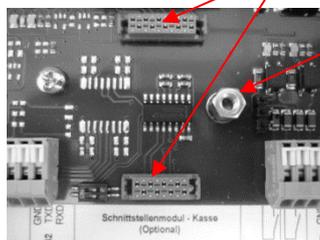
Front

POS-module

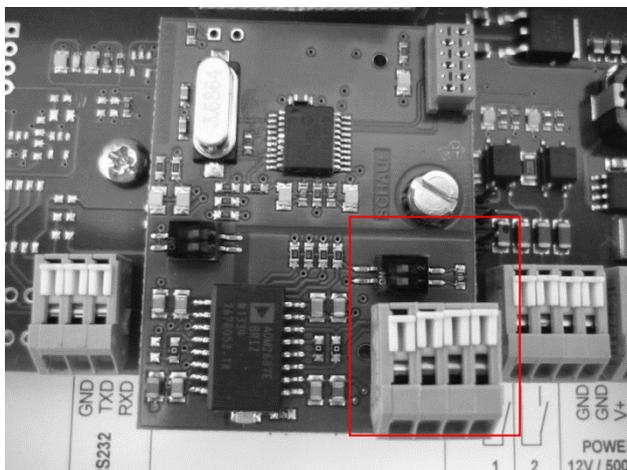
back

Assembly POS interface module

At the slot there are 2 plugs and one spacer to attach the POS-module



Now set the POS-module on the 2 plugs and push. Afterwards secure the POS-module with the M3x6 screw.



The installed POS-module with a lock screw.

The connection for the interface see at enclosed data protocol for the interface.

Connection terminal Interface POS System

If necessary, stick the enclosed sticker with the terminal pin assignment in the foreseen panel.