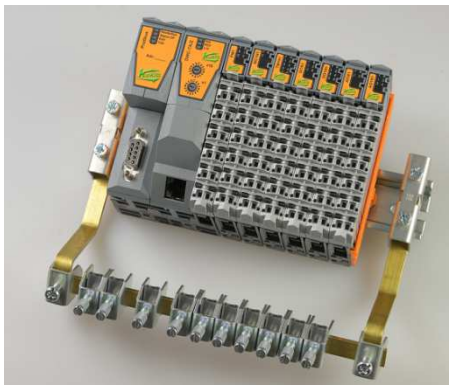
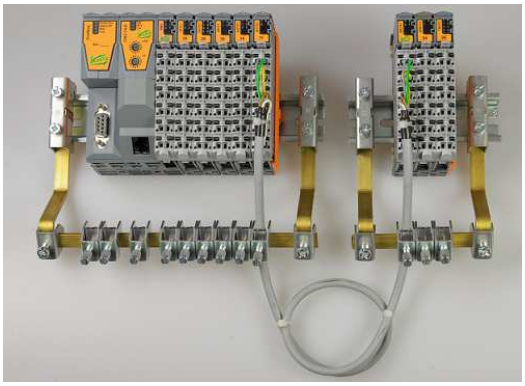
Parameter manual

T2

since 1933
WEIGHING TECHNOLOGY





DWC-7A

*** SAFETY REGULATIONS ***

Being under voltage the device must not be opened. Danger of electric shock exists. Service works at the weighing equipment are permitted only for qualified personnel. In case of works at conveying lines, all relevant drives have to be switched-off and secured against re-engaging.

The related device/system may only be set-up and operated in connection with this documentation. Start-up and operation of a devices/system may only be carried out by **qualified personnel.** Qualified personnel in terms of safety notes of this documentation are persons being authorized to take into operation, to ground and to label the devices, systems and circuits in accordance with the standards of safety engineering.

Index

Revision list

Revision	Date	Author	Chapter	Description
T2_DWC7A_V0_4_d	16.09.2014	Ratzinger		Preliminary edition
T2_DWC7A_V1_23_en	05.04.2016	Ratzinger	all	Description of new functions and parameters based on technological progress
T2_DWC7A_V1_29_en	24.08.2017	Ratzinger Jungwirth	all	Description of new functions and parameters based on technological progress Translation Check

Software indication

These instruction is based on following Software versions:

W.00.01.29 (Weighing system)
P.00.01.29 (Operating unit)

In course of the technical progress changes can be carried out at the software. At subsequent software versions therefore deviations are possible compared to these instructions.

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1 General description

This part of the service instructions describes the possibilities of parameterisation of the DWC-7A Weighing system.

It is an extension of the T1-Service instructions, but is no separate manual.

It does not include details and parameters affecting the fieldbus interface. These have been transferred to the T3-Manual.

1.1 Symbols

This manual is using the following symbols for special indications:

IMPORTANT INDICATION!
Marks an important indication.

WARNING!
Marks a general warning.

DANGER!
Means that death or severe personal injury might occur if the corresponding precautions are not taken.

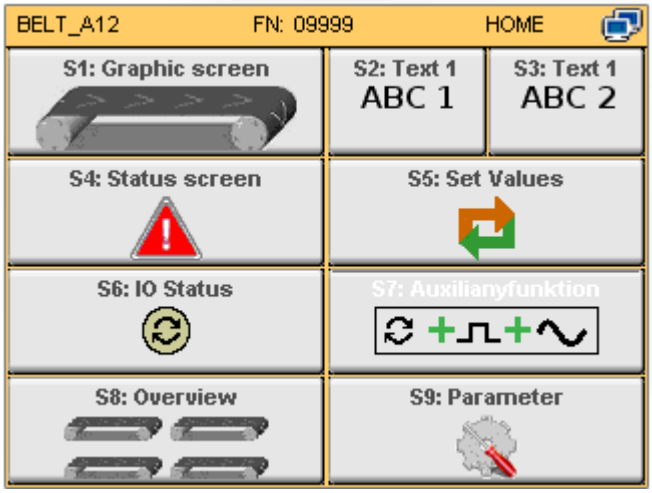
* marks KUKLA - factory settings

1.2 Access into Parameter-system

Via one single operator panel OP-7A several different weighing units can be operated and parameterized under certain circumstances. It ABSOLUTELY must be observed which physical weighing unit is selected currently.

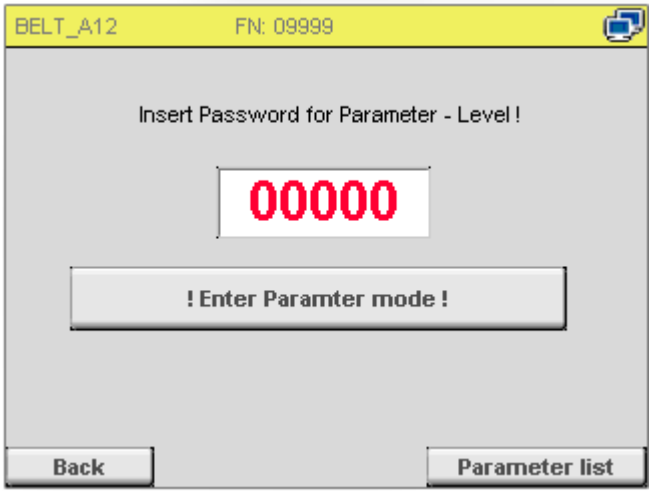
Name and fabrication number of the currently active weighing unit is always shown in the TOP LEFT CORNER of the display.

Within one scale the main selection can be opened with key “MODE”.



“S9: Parameter” opens the input window for parameterisation.

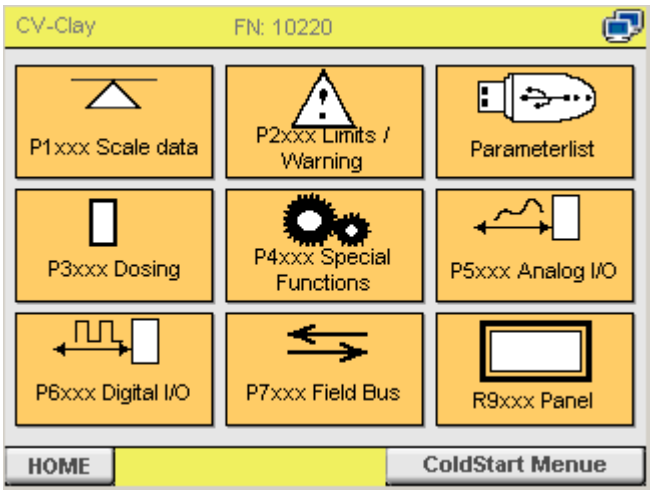
Only if a parameter password (P1060) was set, the following screen appears. For entering the password click the red password-number and change it to the number indicated in your parameter printout.



Then, the parameter menu can be opened by pressing the button in the centre of the display.

1.3 Parameter - Main selection

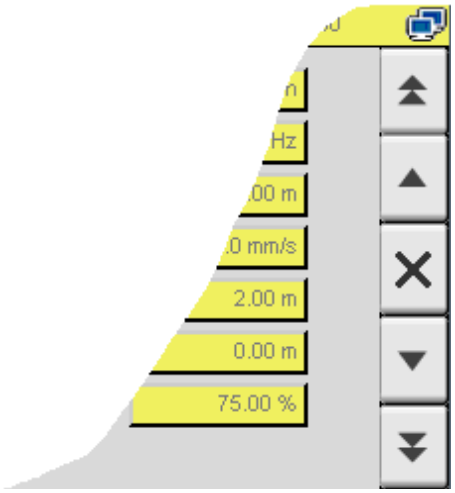
All parameters are divided into logically related blocks of thousands. Some parameters or even complete parameter blocks could be omitted (e.g. Block P7xxx if no Fieldbus interface is installed).



The main selection permits quick access to all parameters.

1.4 Navigation within the parameter pages

All parameters are divided into logically related blocks of thousands. Some parameters or even complete parameter blocks could be omitted (e.g. Block P7xxx if no Fieldbus interface is installed).



Key ⏫ serves for fast scrolling back (in blocks) within the parameter pages.

Key ▲ scrolls back one single parameter page.

Key ✕ changes into main selection.

Key ▼ scrolls forward one single parameter page.

Key ⏬ serves for rapid scrolling forward (in blocks) within the parameter pages.

Parameters are only transferred into the weighing unit as a complete data package if key ✕ has been pressed!

1.5 Operating elements in the parameter level

Since the selection fields in the parameter level sometimes are relatively small, KUKLA recommends operation with a special Touchscreen- pen (in case of need an upturned ball point pen or similar).

Onscreen keyboard for entering text:

Due to the small screen size for entering text the desired page has to be selected with the three character set keys.

The active page appears dark.

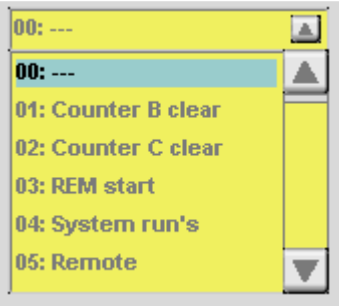
 leaves the input window WITHOUT CHANGE

 deletes ONE character

 takes over the data and leaves the picture WITH THE CHANGE

 Corresponds to SHIFT-key, this selection always only applies for the next character.

Onscreen keyboard for entering numbers:



Selection menu:

By means of the arrow-keys in case of need navigation within the selection is possible.

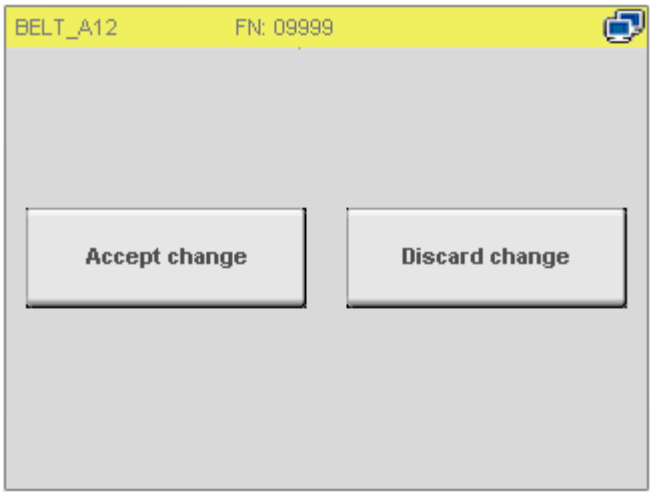
The first line as well as the green coded area selects the actual selection.

!

It absolutely has to be observed that the picture has to be left with correct selection.

1.6 Leaving the parameter level

All parameters are divided into logically related blocks of thousands. Some parameters or even complete parameter blocks could be omitted (e.g. Block P7xxx if no Fieldbus interface is installed).



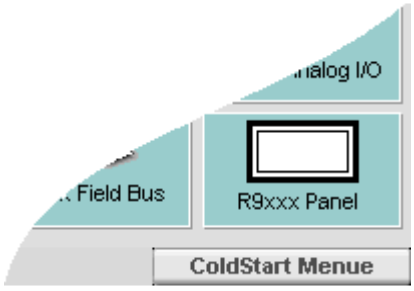
With key ✕ the change to main selection is possible at any time.

Parameters are only transferred into the weighing unit as a complete data package if key ✕ and the button “Accept change” have been pressed!

Exception is parameter P1070 (Language), which immediately affects the display screen internally.

With key “HOME” the parameter mode is left in direction main selection.

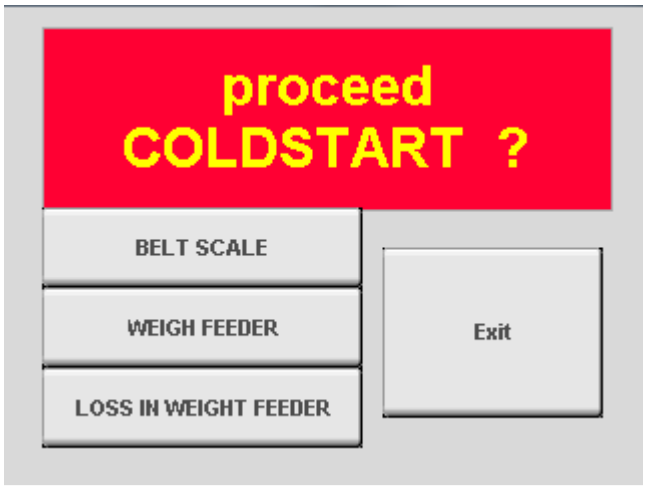
1.7 Factory settings / Cold start



The main menu allows a reset of all parameters to factory settings.

With a reset to factory settings all previously set parameters will be deleted!

A previous backup of the old parameters is strongly recommended if these data must be available later.



It is advised to select those scale type, which most closely corresponds to the future use.

This reduces the number of parameters, which must be modified subsequently according to the detail requirements.

After a cold start, it is essential to switch to the parameter group P1xxx to apply the data also in the base unit.

1.8 Parameter mode at several operating units in the same network

Several operating units can control a single base unit in normal operation.
But always just ONE SINGLE OPERATOR PANEL is allowed to work in the PARAMETER MODE of a particular weighing computer. Therefore, a mutual overwriting of parameters is avoided.

1.9 Automatic exit from parameter mode

In case of about 10 minutes of inactivity (page change) on the panel, the parameter mode is left automatically.

This allows other panels in the network to take control over a particular weighing computer.

2 Parameter file / Parameter printout via USB flash drive

2.1 Parameter – list

After calling the menu point 

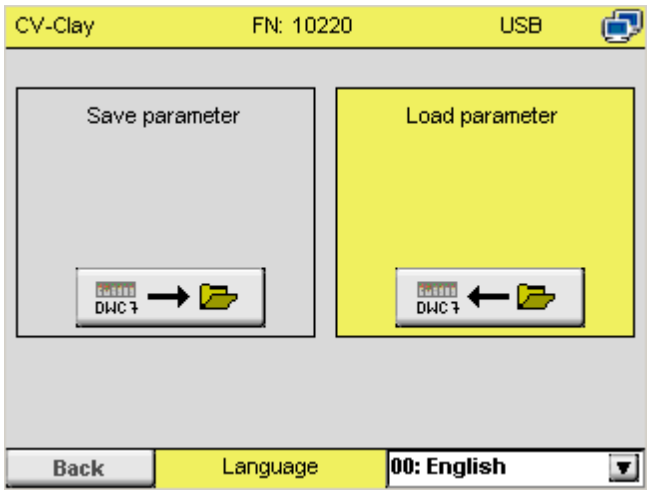
the gate to the parameter menu opens by the key Parameter list.

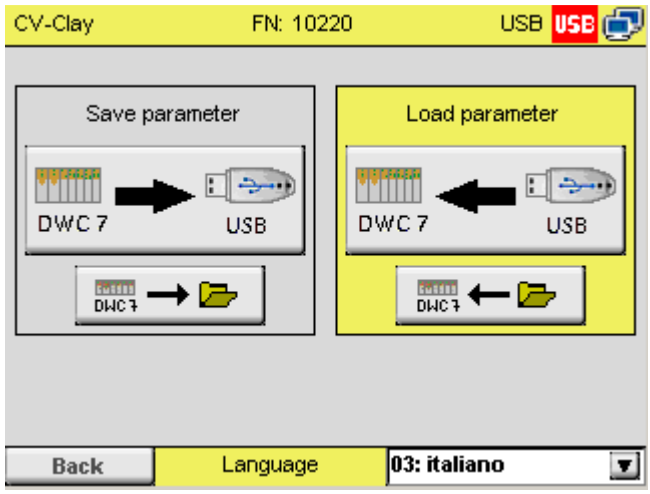
2.2 Administration of sets of parameters

Basically, the system generates parameter files in a .CSV-format. This format can be read from word processing programs or common spreadsheet programs without problems. Also further processing and back reading are possible.

The system can store these CSV-files on an internal partition of the service module (archive) as well as on a connected USB-stick usual in trade.

If an USB-Stick was detected, the following screens can appear:





In this case only the internal archive in the service module is accessible.

With one service module several basic devices can be controlled, therefore it has to be noted that IN THE ARCHIVE ALSO PARAMETER FILES OF OTHER SCLAES ARE EXISTENT, NOT ONLY THE FILES OF THE PRESENTLY ACTIVE SCALE!

The red symbol in the right top corner displays that an active USB-memory was detected. Additionally, both large buttons appear, which permit storing and loading from the USB-memory.

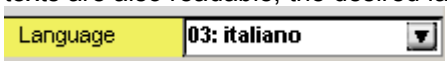
2.3 Saving of an actual set of parameters

In the top line the actually on the service module active scale is displayed.
The gray coded rectangle displays that an unintentional erroneous programming is impossible.

The establishment of a .CSV-parameter file is initiated. After the progress bar has been ran out, usually a success report follows, which has to be confirmed with the key “OK”.

The same process occurs here, but in this case the file is not dropped in the USB-memory but in the internal memory.

For the improvement of the readability the parameter list also gets inserted in plain text. In order that the plain texts are also readable, the desired language can manually be selected via a DropDown-selection.

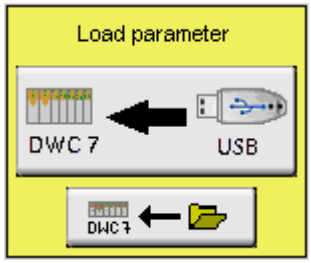


The plain texts are irrelevant for a later back loading of the parameter file because in this case only the received numbers are scanned by the computer system.

2.4 Loading of a saved set of parameters

In the top line, the actually on the service module active scale is displayed.

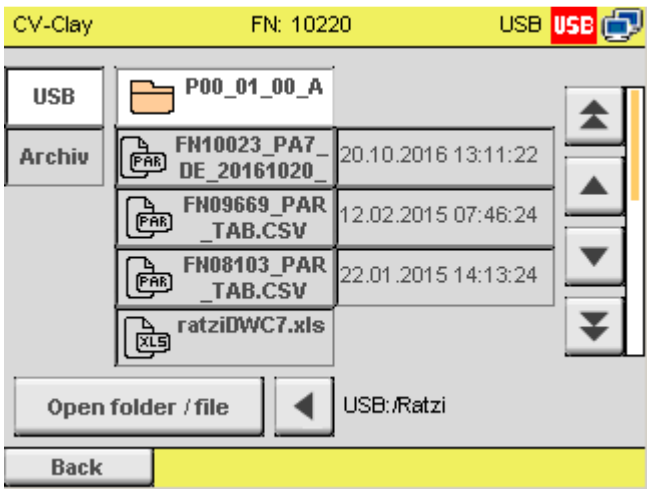
IT IS EXTREMLY IMPORTANT THAT THE RIGHT SCALE IS SELECTED, otherwise an UNINTENED OVERWRITING OF AN ERRORNEOUSLY SELECTED SYSTEM COULD OCCUR!



The yellow coded rectangle displays that an unintentional erroneous programming is possible!

Through the corresponding keys it can be selected from WHERE the parameters should be downloaded

The integrated browser should display the desired medium.



Besides the .CSV-files also other files and folders are displayed, if existing.

DWC-7 parameter files are represented with the symbol.

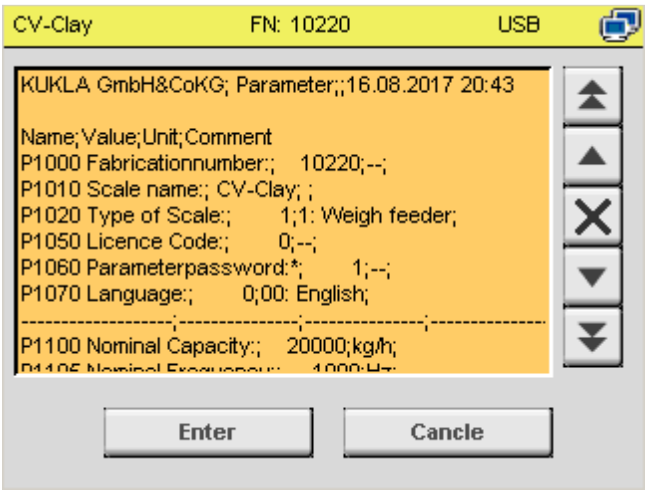
The file name usually starts with FNxxxxx_PA7__yy_date_time.

xxxxx in this case stands for the 5-digits fabrication number and yy for the plain text language selected during the storing.

Whichever a folder or a file was selected, this is opened with the key 

The key  permits the exiting of the actual folder.

The plain texts are irrelevant for a later back loading of the parameter file because in this case only the received numbers are scanned by the computer system.



After few seconds (Loading…) the values read off from the storage medium are represented again to permit a visual control.

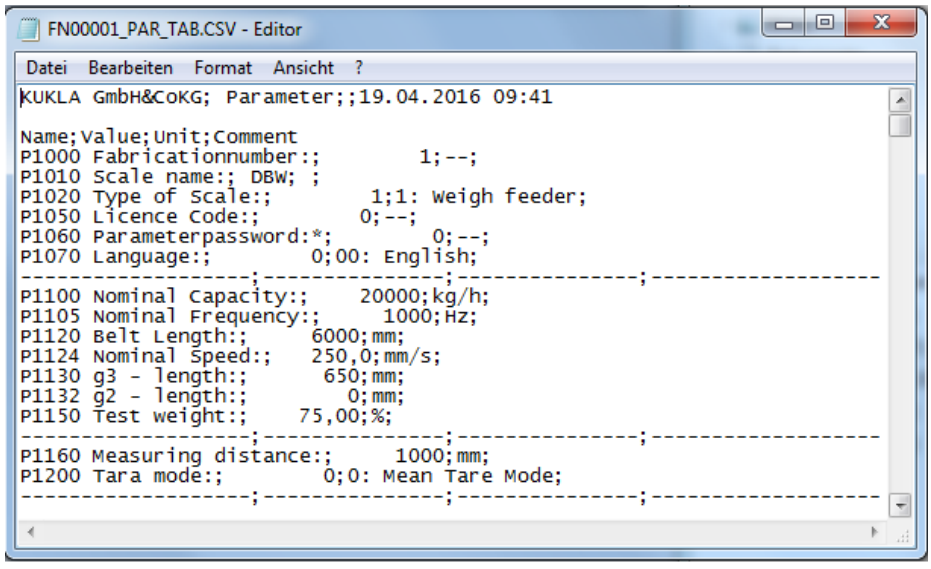
Only with the key 

the parameters are taken into the service module (still not into the basic device/scale).

In the service module they can be edited further.

Only during exiting the parameter mode the user decides, if the changes should be rejected or uploaded into the basic device.

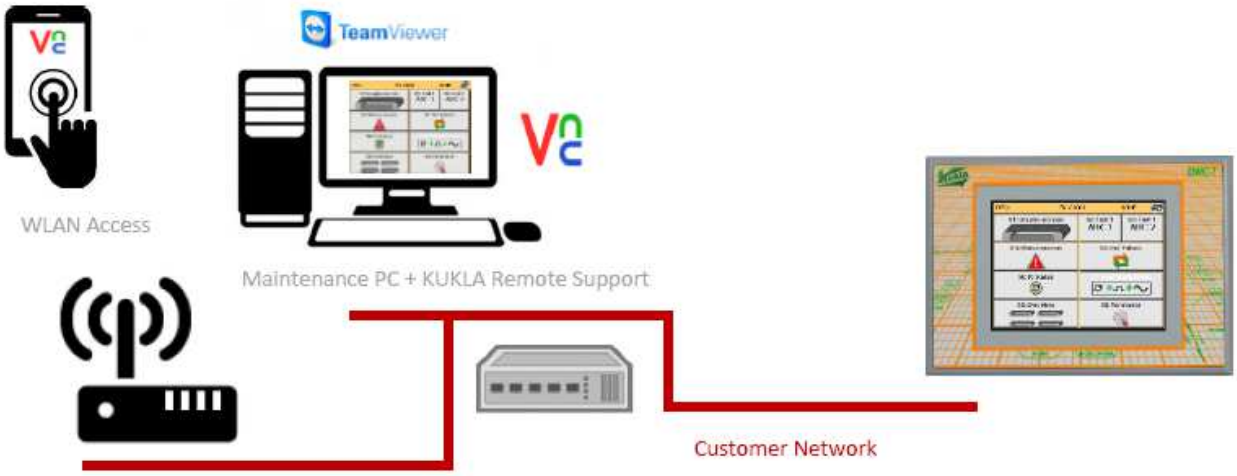
CSV-Data file can be edited by a plain text editor.



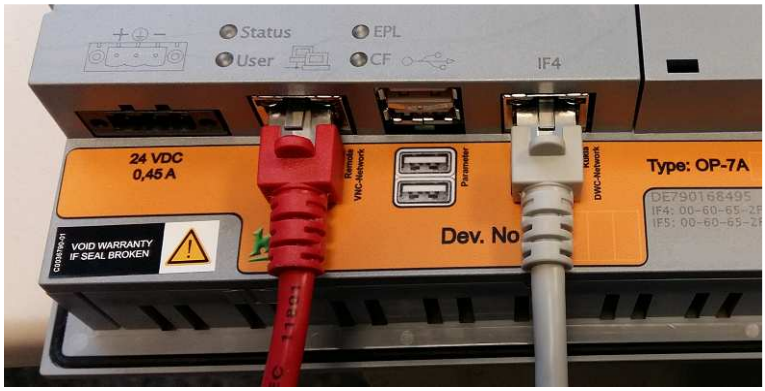
3 Connection to a local IT - network

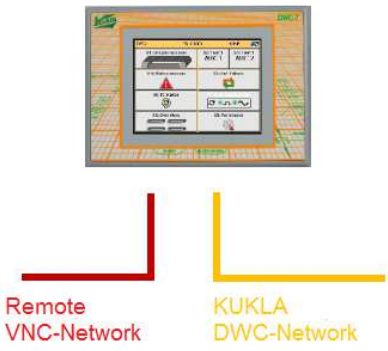
3.1 Remote access via Ethernet or WiFi - Access

The operating unit OP7 provides a visualization as a VNC server (“Virtual Network Computing”) via its own Ethernet interface. This can be connected to an external Ethernet network if desired. In this way, a wireless access on tablets or mobile phones via an optional WiFi adapter can also be realized.



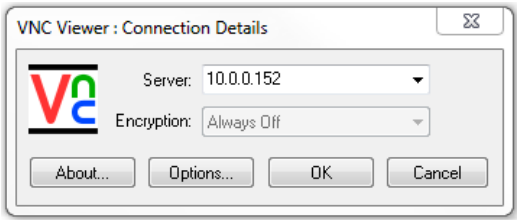
It is essential to ensure that each of the two RJ45 ports is assigned to the correct network.





3.2 Parameterisation via VNC-Client

If a network connection to a terminal device is available, a VNC client can be obtained free from the manufacturer. VNC Viewer are also available as apps in the corresponding app stores. The network setup is made with the parameters R992x on the operator panel.



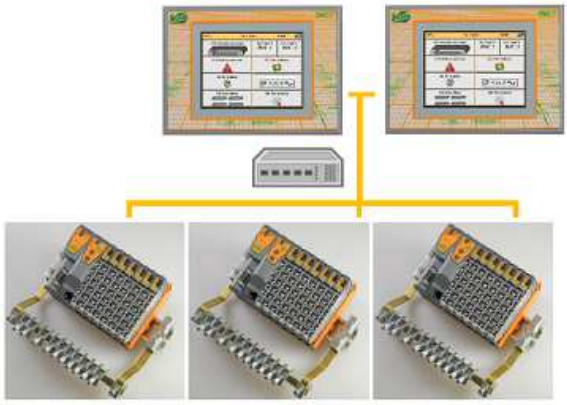
After starting the VNC-Viewer, the IP-address of the service module to be remote-controlled has to be entered.

OK establishes the connection.

In case of problems with the connection build-up, the network connection always should be checked first. This is done with the usual ICMP-Functions (e.g. PING-command).

3.3 KUKLA DWC-Network

The internal network is used for communication of all DWC-7 scale computers with the operator panels. In every single network only a maximum of 8 scale computers and 8 control units is allowed due to performance reasons. External devices must not be connected.



This IP-Address always corresponds to the basic range 10.0.1.xx.

The last digit corresponds to the node number, which is set on the rear of the operator panel.

The network range used by KUKLA is 10.0.1.x.
This range cannot be changed and must be separated from other networks through appropriate gateways if necessary.

4 Parameter description

The parameter description has the following appearance (principle):

Parameter number	Parameter text:	Data type
	Unit: / Selection:	Range:
Cold start:	0	
Description:		
Indication:		
Dependency:		

Parameter number
Indicates the respective parameter number. The numbers used consist of four digits in the range of 0000 up to 9999. Numbers prefixed with "r" or „R" indicate that this parameter is "read-only" and shows a certain value, but cannot be changed directly by specifying a different value via this parameter number.
All other parameters are prefixed with "P". The values of these parameters can be changed directly in the area, which is indicated by the adjustments "Min" and "Max" in the heading line. If these values have a physical unit, the unit is indicated in square brackets.

Parameter text
Indicates the name of the respective parameter.

Data type
The available data types are listed in the following table .

Character	Meaning
String[x]	String [number of characters]
INT	32 Bit integer

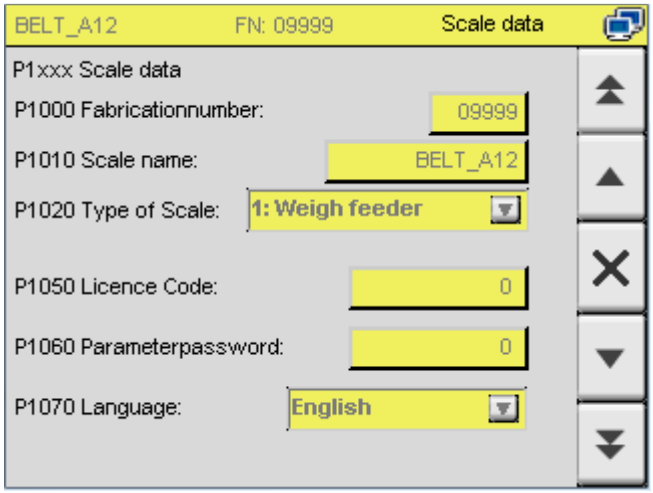
Description
Explanations to the function of a parameter.

Values
Listing of possible values of a parameter.

Indication
Indications concerning recommended adjustments.

Dependency
Conditions, which have to be fulfilled in conjunction with this parameter.
Also, special influences of these parameters to others and vice versa.

4.1 Parameter group P1xxx / Scale data



The parameter group **„Scale data"** describes the nominal data and the basic structure of the weighing system.

Nominal data is usually defined at design and rating of the complete system and is limited with the physical limits of the used components.

P1000	**Fabricationnumber:**		**INT**
	Unit: Absolute	Range:	1-99999
Cold start:	1		
Description:	describes the serial number of the weighing system		
Indication:	This number identifies the entire system at the manufacturer. Please, absolutely provide that number at any communication with manufacturer KUKLA, since only that way the system can be clearly identified.		

P1010	**Scale name:**		**String[16]**
	Unit: ---	Range:	A-Z,a-z,0-9, Special character
Cold start:	RBW (Belt scale), DBW (Weigh feeder)		
Description:	describes the client's designation of the scale		
Indication:	The name should be selected to be possibly significant. Additionally, also a plant note can be added to the text. This parameter is especially important, since one operating unit is able to control several weighing electronics. This text is always indicated in the topmost line at all operating steps.		

P1020	**Type of scale:**		**INT**
	Selection: 0: Belt scale 1: Weigh feeder 2: Flowmeter 3: Loss-in-weight-feeder	Range:	0-3
Cold start:	0 to 3, depending on the selected Cold start		
Description:	describes the basic type of scale A belt scale is a pure registration system, which calculates an actual output from the measured speed and the current material load. A weigh feeder can additionally regulate the main drive in such a manner to achieve a certain setpoint dependent dosing.		

	An impact flow meter (also called impact plate scale) detects the impact force of a bulk material and calculates an actual capacity thereof. A loss-in-weight-feeder calculates the actual capacity from the loss of weight in a weighing bin.
Indication:	Based on this parameter other parameters are connected or disconnected. For example, all dosing parameters (P3xxx) are no longer relevant if 0 has been selected.

P1050	**Licence Code:**		**INT**
	Unit: Absolute	Range:	0-4294967295
Cold start:	0 / Emergency licence for 30 days		
Description:	The license code ensures that the weighing system and scope of functions has been acquired regularly at the manufacturer.		
Indication:	In case of changing important hardware components, it might be necessary to request a new license code from the manufacturer in writing. It has to be noted that KUKLA will only issue a new license if the scope of functions has been acquired officially.		

P1060	**Parameterpassword:**		**INT**
	Unit: Absolute	Range:	0-9999
Cold start:	0		
Description:	The parameter password permits a lock of the parameterisation level for not authorized users. If this lock is not desired, 0 has to be adjusted.		
Indication:	The access lock can also be put on a digital input for reasons of compatibility to a previous system. This can be connected with an external switch.		

P1070	**Language:**		**INT**
	Selection: 0: English 1: Deutsch 2: francaise 3: italiano 4: espanol 5: русский 6: العربية	Range:	0-6
Cold start:	0: English		
Description:	This parameter defines the operating language.		
Indication:	In case of change of this parameter, the changeover immediately affects the displayed language if  is pressed. The parameter itself will be stored to the base unit after leaving the parameter mode like any other parameter.		

P1100	**Nominal Capacity:**		**INT**
	Unit: kg/h	Range:	0-99999999
Cold start:	50000 (Belt scale), 20000 (Weigh feeder)		
Description:	This parameter describes the nominal conveying capacity of the weighing systems.		

Indication:	The nominal capacity of a continuous conveying system always results from the product of conveying weight times conveying speed. Thus, in case of a change of capacity also the conveying speed and/or the material load have to be changed correspondingly.

P1105	**Nominal Frequency:**		**INT**
	Unit: Hz	Range:	0-9999
Cold start:	100 (Belt scale), 1000 (Weigh feeder)		
Description:	The nominal frequency describes at how many pulses per second (at tacho input DI0) the weighing system calculates the nominal speed of 100.0%.		
Indication:	Usually the system also can correctly measure actual speeds of up to 150%.		

P1120	**Belt Length:**		**INT**
	Unit: mm	Range:	0-9999999
Cold start:	20000 (Belt scale), 6000 (Weigh feeder)		
Description:	The belt length describes the endless length of the conveyor belt (including lower belt). For weighing screws the length of the screw has to be entered here.		
Indication:	This parameter's meaning is primarily for calculating the duration of taring and test.		

P1124	**Nominal Speed:**		**INT**
	Unit: mm/s	Range:	0-9999,9
Cold start:	500,0 (Belt scale), 250,0 (Weigh feeder)		
Description:	This parameter describes the nominal speed of the material at 100 speed.		
Indication:	In case of conveyor belts this corresponds to the belt speed, in case of conveyor screws to the material speed in the screw. This parameter's meaning is primarily for calculating the duration of taring and test.		

P1130	**g3 - length:**		**INT**
	Unit: mm	Range:	0-9999999
Cold start:	8000 (Belt scale), 650 (Weigh feeder)		
Description:	This parameter describes the distance between the measuring length and the point, at which the material leaves the weighing system. At dosing systems, the dosing is done at g3-point.		
Indication:	Since at a weigh feeder the material load on the conveyor belt could vary depending on the design, an exact input of this parameter is necessary. If the short-term accuracy is not relevant for the entire process, this parameter should be set to 0,1m.		

P1132	**g2 - length:**		**INT**
	Unit: mm	Range:	0-9999999
Cold start:	4000 (Belt scale), 0 (Weigh feeder)		

Description:	This parameter describes the distance between measuring length and dosing point. This point is important for special applications, at which an additive or a liquid is added to the weighing material. The supply has to be done between measuring length and discharge point.
Indication:	---
Dependency:	The parameter value may never be higher than parameter P1130.

P1150	**Test weight:**		**INT**
	Unit: %	Range:	0-150,00
Cold start:	75,00		
Description:	This parameter describes how high the load indication must be at laid-on test weight. It is used for calculating the result of a test with test weight.		
Indication:	This parameter is automatically converted by the system in the course of a material test, since the percentage utilization changes inversely proportionally in case of a change of the measuring area.		

P1160	**Measuring distance:**		**INT**
	Unit: mm	Range:	0-9999
Cold start:	1000		
Description:	This parameter describes the length of the active measurement section. This value is defined by the mechanical design of the measuring system.		
Indication:	---		

P1200	**Tara mode:**		**INT**
	Selection: 0: Mean Tare Mode 1: Absolute Tare Mode	Range:	0-1
Cold start:	0: Mean Tare Mode		
Description:	At “0: Mean Tare Mode” via one belt revolution always the same tare value is subtracted from the input signal. However, if the conveyor belt has a different weight at several points, this could lead to short-term deviations of load measuring. But these deviations cancel out each other against ZERO after one belt revolution at the latest. If a high short-term accuracy is necessary, the variant „1: Absolute Tare Mode” has to be activated. In this case the weighing computer stores during the tare process the exact weight of more than 1000 belt sections and subtracts this later always at the right time, so that for g1 always the correct net weight is displayed and also correspondingly dosed.		
Indication:	For the adjustment „1: Absolute Tare Mode” it is necessary to attach on or, even better, in the conveyor belt an additional mark, which can be detected by the weighing electronics with a sensor. This mark corresponds to the logical belt begin in the endless belt.		

P1300	**Display unit:**		**INT**
	Selection: 0: 0,1 kg/h 1: 1 kg/h 2: 0,010 t/h 3: 0,100 t/h 4: 1,000 t/h 5: ---	Range:	0-12

	6: 0,001 kg/min 7: 0,01 kg/min 8: 0,1 kg/min 9: 1 kg/min 10: --- 11: 1 g/m² 12: 1 g/h
Cold start:	---
Description:	The display unit shows the interpretation of capacity values on the display and on paper printouts.
Indication:	Recommendation for the adjustment: **up to 999.9 kg/h = 0: 0.1 kg/h** **1000 - 9999 kg/h = 1: 1 kg/h** **10.00 - 99.99 t/h = 2: 0.010 t/h** **100.00 - 999.9 t/h = 3: 0.100 t/h** **1000.0 - 10000 t/h = 4: 1.000 t/h** Via key Set to standard ! P1300 and P1310 are calculated automatically.

P1310	**Counter Unit:**		**INT**
Selection:	00: 0,1 kg 01: 1 kg 02: 0,010 t 03: 0,100 t 04: 1,000 t 05: --- 06: 0,2 kg 07: 2 kg 08: 0,020 t 09: 0,200 t 10: 2,000 t 11: --- 12: 0,5 kg 13: 5 kg 14: 0,050 t 15: 0,500 t 16: 5,000 t 17: 1 g	Range:	0-17
Cold start:	---		
Description:	The counter unit shows the resolutiuon of counter data (quantity indications) at the display. This adjustment defines at the same time also the counting pulse output for the digital pulse output in case of its use.		
Indication:	Recommendation for the adjustment: **up to 2999 kg/h = 00: 0.1 kg** **3.00 - 29.99 t/h = 01: 1 kg** **30.00 - 299.9 t/h = 02: 0,010 t** **300 - 2999 t/h = 03: 0,100 t** **3000 - 10000 t/h = 04: 1,000 t** Via key Set to standard ! P1300 and P1310 are calculated automatically.		

P1315	Impulslength:		INT
	Unit: ms	Range:	20-2000
Cold start:	100		
Description:	The pulse length describes the pulse length of a counting pulse at the digital counting pulse output.		
Indication:	For internal reasons only values dividable by 20ms are possible. The system rounds the value automatically, if necessary.		

P1320	Home:		INT
	Selection: 00: Chart 01: Mode 02: Text screen 03: Set values 04: Trend 05: Chart 2	Range:	0-5
Cold start:	0		
Description:	This parameter determines which visualization image will be loaded at this scale by default after a restart of the CPU.		
Indication:	Because this parameter is stored at the base unit, other operator panels, which might be linked to this scale, will use this setup too!		

P1400	Speed averaging:		INT
	Unit: Tacho pulses	Range:	---
Cold start:	24		
Description:	The speed measurement is averaged through the number of Tacho pulses set here.		
Indication:	Use always multiple numbers of the pulses per revolution of the measuring unit. (e.g. tachometer wheel with 12 pulses per revolution -> 2 revolutions in total = 24 pulse averaging)		

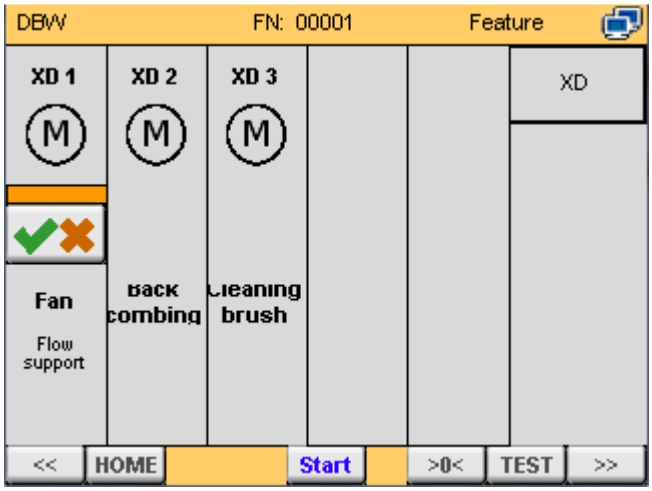
P1410	Integration precision regulator:		INT
	Unit: Tacho pulses	Range:	---
Cold start:	12		
Description:	This parameter determines after how many tachometer pulses the Capacity fine tuner for the capacity control is retriggered.		
Indication:	The regulation time varies thereby proportional to the drive velocity.		

P1440	ITG- Display:		INT
	Unit:	Range:	---
Cold start:	0		
Description:	An averaging of the display output of the actual load at g1, g3 and P3 is done.		

Indication:	---

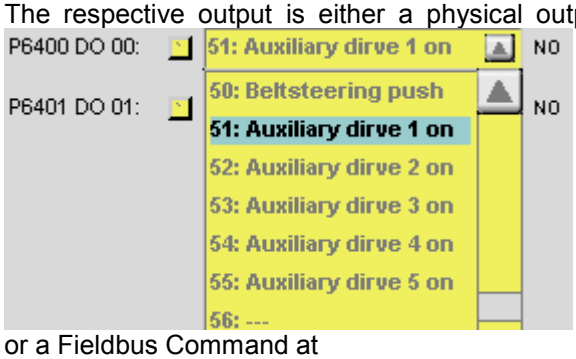
P1450	ITG- Set value:		INT
	Unit: Tacho pulses	Range:	---
Cold start:	0		
Description:	An averaging of the display output of the nominal value is done.		
Indication:	---		

4.1.1 P15xx Auxiliary Drives (XD1-XD5)



Auxiliary drives are support systems, which are necessary for the process and are functionally associated with the weighing system.

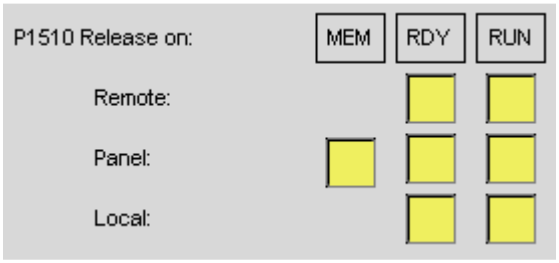
The respective output is either a physical output



or a Fieldbus Command at „BusControlBits2" Register.

P1501 **P1502** **P1503** **P1504** **P1505**	**Auxiliary drive 1:** **Auxiliary drive 2:** **Auxiliary drive 3:** **Auxiliary drive 4:** **Auxiliary drive 5:**	**INT**
	Selection: 00: not active 01: Feeder 02: Fan 03: Slide gate 04: Back combing 05: Combing brush 06: Cleaning brush 07: DischargerDevice LiW 08: DischargerDevice PreBin 09: Loosening injector 10: Flow support 11: Cleaning device 12: --- 13: Loosening device 14: STD drive	Range: 0-14
Cold start:	00: not active	
Linz (LNZ)Description:	It is determined which auxiliary drives are controlled by the system and how their function is defined.	
Indication:	Detailed settings of the P15xx group are hidden if a channel is parametrized to "00: not active".	

P1510 **P1520** **P1530** **P1540** **P1550**	**Release on: (Auxiliary drive 1)** **Release on: (Auxiliary drive 2)** **Release on: (Auxiliary drive 3)** **Release on: (Auxiliary drive 4)** **Release on: (Auxiliary drive 5)**	**INT**
	Unit: Bitfield	Range: 0x01 / 0x02 / 0x04
Cold start:	0x00	

Description:	The line "Remote" describes which status signals are mandatory to release the selected auxiliary drive for the operation. The line "Panel" describes the signals needed for manual operation. The line "Local" describes the signals needed for local mode operation. Local- Mode must be enabled with Parameter P3021 previously. MEM stores the ON/OFF status in the PANel mode at operation mode changes until the return at next time. Caution: Danger of an automatic drive start when switching to PAN! RDY means “release only if the entire system is ready/RDY”. RUN only releases the auxiliary drive if the main conveyor system (belt or screw) is running.
Indication:	

P1511 **P1521** **P1531** **P1541** **P1551**	**Release via Panel 1:** **Release via Panel 2:** **Release via Panel 3:** **Release via Panel 4:** **Release via Panel 5:**	**INT**
	Selection: 00: not Active 01: Active	Range: 0-1
Cold start:	00: not Active	
Description:	This parameter determines whether the control buttons in the status screen “S7: Auxiliary functions” are displayed and thus a manual release control is possible.	
Indication:	---	

P1512 **P1522** **P1532** **P1542** **P1552**	**REM channel: (for Auxiliary drive 1)** **REM channel: (for Auxiliary drive 2)** **REM channel: (for Auxiliary drive 2)** **REM channel: (for Auxiliary drive 2)** **REM channel: (for Auxiliary drive 2)**	**INT**
	Selection: 00: Not active 01: Channel 1 02: Channel 2 03: Channel 3 04: Channel 4 05: Channel 5 06: --- 07: --- 08: Always active	Range: 0-8
Cold start:	00: Not active	
Description:	This parameter determines which digital inputs or Fieldbusbits lead the general release of the auxiliary drives in REMote mode.	

Indication:	Also see digital inputs P60xx / 64,65 etc. or bus command 3 "CHANNEL x START" and "STOP CHANNEL x".

P1513 **P1523** **P1533** **P1543** **P1553**	**Channeloption REM: (for Auxiliary drive 1)** **Channeloption REM: (for Auxiliary drive 2)** **Channeloption REM: (for Auxiliary drive 3)** **Channeloption REM: (for Auxiliary drive 4)** **Channeloption REM: (for Auxiliary drive 5)**	**INT**

Selection:	00: Meaningless 01: Button 02: Switch 03: Wiping contact	Range:	0-3

Cold start:	00: Meaningless
Description:	This parameter describes which digital input channel / Fieldbusbit will release the auxiliary drive. (only valid for the REMote mode). When selecting "01: Button" the corresponding digital input for "CHANNEL X START" and also the input for "CHANNEL x STOP" must be connected. When selecting "02: Switch" just the corresponding digital input for "CHANNEL X START" must be activated. (see P60xx / 64,65 etc. or bus command 3)
Indication:	---

P1514 **P1524** **P1534** **P1544** **P1554**	**PAN channel: (for Auxiliary drive 1)** **PAN channel: (for Auxiliary drive 2)** **PAN channel: (for Auxiliary drive 3)** **PAN channel: (for Auxiliary drive 4)** **PAN channel: (for Auxiliary drive 5)**	**INT**

Selection:	00: Not active 01: Channel 1 02: Channel 2 03: Channel 3 04: Channel 4 05: Channel 5 06: --- 07: --- 08: Always active	Range:	0-8

Cold start:	00: Not active
Description:	This parameter determines which digital inputs or Fieldbusbits lead the general release of the auxiliary drives in PANel mode.
Indication:	Also see digital inputs P60xx / 64,65 etc. or bus command 3 "CHANNEL x START" and "CHANNEL x STOP ".

P1515 **P1525** **P1535** **P1545** **P1555**	**Channeloption PAN: (for Auxiliary drive 1)** **Channeloption PAN: (for Auxiliary drive 2)** **Channeloption PAN: (for Auxiliary drive 3)** **Channeloption PAN: (for Auxiliary drive 4)** **Channeloption PAN: (for Auxiliary drive 5)**	**INT**

Selection:	00: Meaningless 01: Button 02: Switch 03: Wiping contact	Range:	0-3

Cold start:	00: Meaningless
Description:	This parameter describes which digital input channel / Fieldbusbit will release the auxiliary drive. (only valid for the PANel mode). When selecting "01: Button" the corresponding digital input for "CHANNEL x START" and also the input for "CHANNEL x STOP" must be connected. When selecting "02: Switch" just the corresponding digital input for "CHANNEL x START" must be activated. (see P60xx / 64,65 etc. or bus command 3)
Indication:	It has to be noted that one channel is able to release several auxiliary drives (see P60xx / 64,65 etc.).

P1516 **P1526** **P1536** **P1546** **P1556**	**LOC channel: (for Auxiliary drive 1)** **LOC channel: (for Auxiliary drive 2)** **LOC channel: (for Auxiliary drive 2)** **LOC channel: (for Auxiliary drive 2)** **LOC channel: (for Auxiliary drive 2)**	**INT**

Selection:
00: Not active
01: Channel 1
02: Channel 2
03: Channel 3
04: Channel 4
05: Channel 5
06: ---
07: ---
08: Always active

Range: 0-8

Cold start:	00: Not active
Description:	This parameter determines which digital inputs or Fieldbusbits lead the general release of the auxiliary drives in LOCal mode.
Indication:	Also see digital inputs P60xx / 64,65 etc. or bus command 3 "CHANNEL x START" and "STOP CHANNEL x".

P1517 **P1527** **P1537** **P1547** **P1557**	**Channeloption LOC: (for Auxiliary drive 1)** **Channeloption LOC: (for Auxiliary drive 2)** **Channeloption LOC: (for Auxiliary drive 3)** **Channeloption LOC: (for Auxiliary drive 4)** **Channeloption LOC: (for Auxiliary drive 5)**	**INT**

Selection:
00: Meaningless
01: Button
02: Switch
03: Wiping contact

Range: 0-3

Cold start:	00: Meaningless
Description:	This parameter describes which digital input channel / Fieldbusbit will release the auxiliary drive. (only valid for the LOCal mode). When selecting "01: Button" the corresponding digital input for "CHANNEL x START" and also the input for "CHANNEL x STOP" must be connected. When selecting "02: Switch" just the corresponding digital input for "CHANNEL x START" must be activated. (see P60xx / 64,65 etc. or bus command 3)
Indication:	It has to be noted that one channel is able to release several auxiliary drives (see P60xx / 64,65 etc.).

P1518 P1528 P1538 P1548 P1558	**Parallel function 2: (for Auxiliary drive 1)** **Parallel function 2: (for Auxiliary drive 2)** **Parallel function 2: (for Auxiliary drive 3)** **Parallel function 2: (for Auxiliary drive 4)** **Parallel function 2: (for Auxiliary drive 5)**	**INT**
	Selection: 00: not active 01: Feeder 02: Fan 03: Slide gate 04: Back combing 05: Combing brush 06: Cleaning brush 07: DischargerDevice LiW 08: DischargerDevice PreBin 09: Loosening injector 10: Flow support 11: Cleaning device 12: --- 13: Loosening device 14: STD drive	Range: 0-14
Cold start:	00: not active	
Description:	Sometimes several auxiliary drives are connected to the same digital output channel. Thus, the operating screen "S7: Auxiliary functions" is able to show all correct drive names, this parameter permits a parallel display of several texts.	
Indication:	---	

P1519 P1529 P1539 P1549 P1559	**Parallel function 3: (for Auxiliary drive 1)** **Parallel function 3: (for Auxiliary drive 2)** **Parallel function 3: (for Auxiliary drive 3)** **Parallel function 3: (for Auxiliary drive 4)** **Parallel function 3: (for Auxiliary drive 5)**	**INT**
Description:	2nd parallel text, for functionality see description of P15x8.	

P1561 P1562 P1563 P1564 P1565	**XD1 Pulse time at v min:** **XD2 Pulse time at v min:** **XD3 Pulse time at v min:** **XD4 Pulse time at v min:** **XD5 Pulse time at v min:**	**INT**
	Unit: s	Range:
Cold start:	0.0 s	
Description:	These parameters implement the functionality of a speed monitor for each individual additional drive. The parameter determines within which time a positive edge at the input must occur periodically in order to prevent a fault message. If this control pulse does not appear on time the corresponding error status message S48, S51, etc will be activated.	
Indication:	To avoid wrong alarms, it is recommended to add a safety factor of 10-20%. Speed-monitoring is only active if this channel / drive is currently running.	

4.1.2 P19xx Loss-In-Weight-Feeder Systems LiW / Nominal parameters

The parameter group P19xx is active only if the operation mode is "Loss in weight" or if a level measurement is activated.

P1900	Nominal Bin Load:		INT
	Unit: kg	Range:	10-99999
Cold start:	10.0		
Description:	The nominal weighing area of the bin, where the differential measurement is done. The bin also serves as buffer for a level measurement.		
Indication:	The source of actual values has to be set separately. Depending on the hardware structure several sources can be selected. (e.g. analog input, bus signal etc.)		

P1910	Difference Register Cells:		INT
	Unit: ---	Range:	0-1999
Cold start:	200		
Description:	It can be determined how many cells the system should use for differential measurement. Generally, more cells provide a more stable display. However, this has the disadvantage that the system only responds sluggishly to rapid changes in product characteristics.		
Indication:	---		

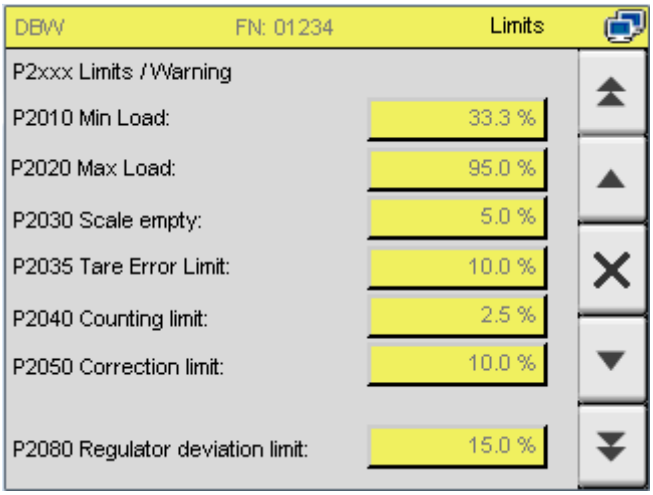
P1912	G Settling:		INT
	Unit: ---	Range:	-9999 -9999
Cold start:	---		
Description:	This parameter allows the smoothing of the direct bin input signal. Positive numbers smooth the signal by means of an additive averaging. With negative numbers, the steepness of the signal change can be limited. Thus, small changes are completely controlled and larger changes are limited.		
Indication:	---		

P1914	PG Mem:		INT
	Selection: 00: average value 01: PG mem 02: Last value	Range:	00-02
Cold start:	00: average value		
Description:	The firmware is able to store a characteristic curve of the product properties during the dosing step. In the next refilling step, the system can then control the drive according to this characteristic, which can lead to an improvement in the accuracy.		
Indication:	In the active state, the system fills with an average value of the last dosing cycle.		

P1920	Max Refillingtime:		INT
	Unit: s	Range:	0-9999
Cold start:	12		
Description:	The maximal permitted time, which a refilling (step 1) may last, is defined here.		
Indication:	---		

P1922	LiW Settling Time:		INT
	Unit: s	Range:	0-9999
Cold start:	---		
Description:	The settling time is active after filling the bin (step 2). It serves for suppression of weight fluctuations by delayed dropping product during the closing process.		
Indication:	---		

4.2 Parameter group P2xxx / Limits-warnings



The parameter group **„limits/warnings"** permits the adaption of various limit values to client's requirements.

Additionally, operational errors and warnings can be adapted individually.

P2010	**Min Load:**		**INT**
	Unit: %	Range:	0 - 90,00
Cold start:	33.3		
Description:	If the material load at discharge point g3 goes below the limit value adjusted here, the status message "S09: Min Load" is set. This message is part of the status message system and can be used via the parameter group P23xx also for warnings and shut-offs.		
Indication:	Also a digital output can be parameterized to this status. (see P64xx)		

P2020	**Max Load:**		**INT**
	Unit: %	Range:	20,00 - 200,00
Cold start:	95,00		
Description:	If the material load at discharge point g3 exceeds the limit value adjusted here, the status message "S10: Max Load" is set. This message is part of the status message system and can be used via the parameter group P23xx also for warnings and shut-offs.		
Indication:	Also a digital output can be parameterized to this status. (see P64xx)		

P2030	**Scale empty:**		**INT**
	Unit: %	Range:	0,00 - 50,00
Cold start:	5,00		
Description:	If the material load at discharge point g1 goes below the limit value adjusted here, the status message "S08: Scale empty" is set. This message is part of the status message system and can be used via the parameter group P23xx also for warnings. Shut-offs are only reasonable to a limited extent. Additionally, this status also serves for a threshold value during taring and test with test weight.		
Indication:	Also a digital output can be parameterized to this status. (see P64xx)		

P2035	Tare Error Limit:		INT
	Unit: %	Range:	0,00 - 50,00
Cold start:	10,00		
Description:	Usually at taring at the weighchannel always a zero point is measured, which is similar to that deposited at the start-up in the Offset-parameter (see P50x4). If now the tare deviates more than by the value adjusted here, the status message “S24: Tare error” is activated.		
Indication:	Also a digital output can be parameterized to this status (see P64xx)		

P2040	Counting limit:		INT
	Unit: %	Range:	0,00 - 20,00
Cold start:	2,50		
Description:	This parameter prevents phantom weight counting in case of an empty running belt for a longer period. Minor weight values can be faded out with this parameter. In case of a load value below this parameter value, all counters are locked. Only the material test counter is excepted thereof.		
Indication:	This value should not be selected too high, otherwise at each drive start or stop a certain quantity will not be counted.		

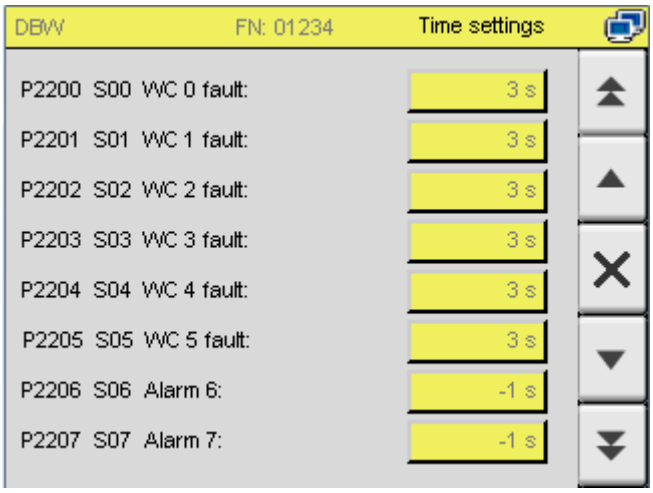
P2050	Correction limit:		INT
	Unit: %	Range:	5,00 - 80,00
Cold start:	10,00		
Description:	This parameter permits a limiting of an automatic system correction. At material test or test with test weight/test load only corrections within the area adjusted here are permitted.		
Indication:	---		

P2080	Regulator deviation limit:		INT
	Unit: %	Range:	2,00 - 20,00
Cold start:	10,00		
Description:	With the help of this parameter linearity errors of the main drive can be automatically corrected. If the main drive receives a nominal value of 90% from the weighing electronics, however, really measured via tacho only 88% come back, the weighing electronics can internally raise the nominal value by this factor maximally (set point increase by approx. 2% to 92%), in order to really get back the 90% nevertheless.		
Indication:	Basically, the dosing main drive should be adjusted as good as possible to the weighing system. The actual factor (linearity) can be read in Text screen 1 under FR.		

4.2.1 P22xx Error periods / General lock of status and error messages

Details as well as additional information to status- and error messages are included in the T1-service instructions.

If the time is set to -1, the corresponding error message of the following P22xx - group can be completely blocked.



The following time parameters permit an adjustment of an activation delay of the respective status message.

P2200	**S00 WC 0 error:**		**INT**
P2201	**S01 WC 1 error:**		**INT**
P2202	**S02 WC 2 error:**		**INT**
P2203	**S03 WC 3 error:**		**INT**
P2204	**S04 WC 4 error:**		**INT**
P2205	**S05 WC 5 error:**		**INT**
	Unit: s	Range:	-1 - 600
Cold start:	3		
Description:	This status message is activated after the period adjusted here, if the input signal at the first Weighchannel input is not within the plausible area.		
Indication:	The number -1 deactivates the status message completely, so that it is not available anymore in the entire system.		

P2206	**S06 Alarm 6:**	**INT**
P2207	**S07 Alarm 7:**	**INT**
Indication:	currently not used / deactivated with -1	

P2208	**S08 Scale empty:**		**INT**
	Unit: s	Range:	-1 - 600
Cold start:	0		

Description:	This status message is activated if the load value at the measuring length goes below the limit value deposited in P2030.
Indication:	This status message should not be delayed. The recommended adjustment is 0s.

P2209	S09 Min Load:		INT
	Unit: s	Range:	-1 - 600
Cold start:	0		
Description:	This status message is activated if the load value at the discharge point goes below the limit value deposited in P2010 .		
Indication:	This status message can be delayed if necessary, however, an immediate activation with adjustment 0s is usual.		

P2210	S10 Max Load:		INT
	Unit: s	Range:	-1 - 600
Cold start:	0		
Description:	This status message is activated if the load value at the discharge point exceeds the limit value deposited in P2020.		
Indication:	This status message can be delayed if necessary, however, an immediate activation with adjustment 0s is usual.		

P2211	S11 Alarm 11:	INT
Indication:	currently not used / deactivated with -1	

P2212	S12 Drive / Tacho error:		INT
	Unit: s	Range:	-1 - 600
Cold start:	0		
Description:	This status message is activated if a motor failure is detected via a digital input or if at a running drive no tacho pulses are measured.		
Indication:	This status message can be delayed if necessary, however, an immediate activation with adjustment 0s is usual.		

P2213	S13 Not recog. belt start mark:		INT
	Unit: s	Range:	-1 - 600
Cold start:	0		
Description:	This status message gets activated if the Absolute Tare Mode (P1200 Tara mode) is selected and the synchronization mark, which is typically incorporated into the fabric of the belt, is not detected correct or not in time.		
Indication:	Never glue metal strips ONTO the belt, usually these quickly cause this error due to loss of belt-marker. If this error occurs, the sensor and the detection distance between sensor and marker should be checked too.		

P2214	S14 Feeder in limits:		INT
	Unit: s	Range:	-1 - 600
Cold start:	10		
Description:	This status message gets activated if the dosing factor of the feeder has achieved his permitted limits and a further automatic readjustment is not possible anymore. It has to be tried to adapt the conveying capacity externally to the correct direction. Large changes in bulk material density or an erroneous emptying of rotary vane feeders or conveyor screws might activate this message too.		
Indication:	---		

P2215	S15 Belt misrun:		INT
	Unit: s	Range:	-1 - 600
Cold start:	10		
Description:	An external sensor has signalled a belt misrun. Usually this signal serves for switching off the belt drive.		
Indication:	This message should be used if no evaluation of the misrun side is possible. If there is a separate sensor on each side and belt misrun is signalled, the messages “S21: Belt misrun LEFT” and “S22: Belt misrun RIGHT” should be used. This status message should usually be delayed 10-30s, in order to enable a rewind of the belt into normal working area after correction of error and quitting.		

P2216	S16 Belt-Slip error:		INT
	Unit: s	Range:	-1 - 600
Cold start:	0		
Description:	An external sensor has detected a slip at the main conveying system. Usually this sensor is mounted at the tensioning drum of the main conveyor belt.		
Indication:	This message can also be triggered by a belt crack or by a screw blocking.		

P2217	S17 Drive stopped:		INT
	Unit: s	Range:	-1 - 600
Cold start:	0		
Description:	This is a pure status message signalling that at the tacho no pulses are measured and, thus, the standstill of the main drive is signalled.		
Indication:	A delay of this message is not reasonable.		

P2218	S18 Setvalue error:		INT
	Unit: s	Range:	-1 - 600
Cold start:	10		
Description:	This message signals an erroneous nominal value.		
Indication:	A delay of this message is not reasonable.		

P2219	S19 Deviation:		INT
	Unit: s	Range:	-1 - 600
Cold start:	10		
Description:	If the current actual capacity value deviates more than by an adjustable limit value from the pre-set nominal value, this status message is issued.		
Indication:	A delay of this message is only reasonable to a limited extent.		

P2220	S20 Alarm 20:	INT
Indication:	currently not used / deactivated with -1	

P2221	S21 Belt misrun LEFT:		INT
	Unit: s	Range:	-1 - 600
Cold start:	10		
Description:	An external sensor has signalled a belt misrun on the LEFT side in conveying direction. Usually this signal serves for switching off the belt drive.		
Indication:	This message should be used if on each side a separate sensor is installed. If there is only one single input signal and a belt misrun is signalled, message “S15: Belt misrun” shall be used. This status message should usually be delayed 10-30s, in order to enable a rewind of the belt into normal working area after correction of error and quitting.		

P2222	S22 Belt misrun RIGHT:		INT
	Unit: s	Range:	-1 - 600
Cold start:	10		
Description:	An external sensor has signalled a belt misrun on the RIGHT side in conveying direction. Usually this signal serves for switching off the belt drive.		
Indication:	This message should be used if on each side a separate sensor is installed. If there is only one single input signal and a belt misrun is signalled, message “S15: Belt misrun” shall be used. This status message should usually be delayed 10-30s, in order to enable a rewind of the belt into normal working area after correction of error and quitting.		

P2223	S23 Chain Tension error:		INT
	Unit: s	Range:	-1 - 600
Cold start:	10		
Description:	This message is used for systems with integrated cleaning devices. A proximity switch signals that the chain(s) for the cleaning scraper has (have) to be tightened.		
Indication:	A delay time of 5-30s is recommended, in order to prevent faulty activations during start or stop period.		

P2224	S24 Tare error:		INT
	Unit: s	Range:	-1 - 600

Cold start:	0
Description:	During the taring process an unpermitted measuring value was measured on the weighing bridge(s).
Indication:	A delay of this message is not reasonable.

P2225	S25 Test error:		INT
	Unit: s	Range:	-1 - 600
Cold start:	0		
Description:	At the test with test weight the nominal number 1000 was not achieved by more than the permitted tolerance (+/- 1,0%).		
Indication:	A delay of this message is not reasonable.		

P2226	S26 Filling error:		INT
	Unit: s	Range:	-1 - 600
Cold start:	0		
Description:	The refilling process (loss-in-weight-dosing) in the pre-bin took longer than permitted by the adjusted parameter. Lack of material or poorly flowing material might activate this error.		
Indication:	A delay of this message is only reasonable to a limited extent.		

P2227	S27 BinMovement error:		INT
	Unit: s	Range:	-1 - 600
Cold start:	1		
Description:	During emptying the loss-in-weight-feeder an implausible increase or decrease of weight being larger than the limit value adjusted was measured.		
Indication:	A delay of this message is only reasonable to a limited extent.		

P2228	S28 Decentral IO offline:		INT
	Unit: s	Range:	-1 - 600
Cold start:	0		
Description:	The connection to the local IO-module (also called cable reduction package) directly at the scale is no longer available.		
Indication:	A delay of this message is only reasonable to a limited extent.		

P2229	S29 Alarm 29:	INT
Indication:	currently not used / deactivated with -1	

P2230	S30 Emergency stop active:		INT
	Unit: s	Range:	-1 - 600

Cold start:	0
Description:	Via a digital input or a fieldbus signal the system is able to report the activation of an external safety switch-off. Thus, a clear text display with clear message can be shown in the error status screen.
Indication:	A delay of this message is only reasonable to a limited extent

P2231	**S31 Fieldbus Offline:**		**INT**
	Unit: s	Range:	-1 - 600
Cold start:	0		
Description:	A Fieldbus module is installed in the weighing system, but is currently not connected to a Master system.		
Indication:	A delay of this message is only reasonable to a limited extent.		

P2232	**S32 MM00 Error:**		**INT**
P2236	**S36 MM01 Error:**		**INT**
P2240	**S40 MM10 Error:**		**INT**
P2244	**S44 MM11 Error:**		**INT**
	Unit: s	Range:	-1 - 600
Cold start:	0 s		
Description:	The connected MoviMot frequency inverter (channel xx) signals a fault. If the error is active longer than the parameterised number of seconds it will trigger the indication. As far as this is useful, short-term errors can be blocked out.		
Indication:	The transmission of this status message is part of the RS485 communication between the DWC-7 MM module and the MoviMot inverter. Details are described in the SEW MoviMot manuals.		

P2233	**S33 MM00 Inverter failure:**		**INT**
P2237	**S37 MM01 Inverter failure:**		**INT**
P2241	**S41 MM10 Inverter failure:**		**INT**
P2245	**S45 MM11 Inverter failure:**		**INT**
	Unit: s	Range:	-1 - 600
Cold start:	0 s		
Description:	The connected MoviMot frequency inverter (channel xx) signals an internal failure. If the error is active longer than the parameterised number of seconds it will trigger the indication. As far as this is useful, short-term errors can be blocked out.		
Indication:	The transmission of this status message is part of the RS485 communication between the DWC-7 MM module and the MoviMot inverter. Details are described in the SEW MoviMot manuals.		

P2234	**S34 MM00 offline:**	**INT**
P2238	**S38 MM01 offline:**	**INT**
P2242	**S42 MM10 offline:**	**INT**

P2246	S46 MM11 offline:		INT
	Unit: s	Range:	-1 - 600
Cold start:	0 s		
Description:	The connected MoviMot frequency inverter (channel xx) is currently offline. If the error is active longer than the parameterised number of seconds it will trigger the indication. As far as this is useful, short-term errors can be blocked out.		
Indication:	Communication via RS-485 data telegrams are currently not successfully.		

P2235	S35 Alarm 35:	INT
P2239	S39 Alarm 39:	INT
P2243	S43 Alarm 43:	INT
P2247	S47 Alarm 47:	INT
Indication:	currently not used / deactivated with -1	

P2248	S48 XD1 speed monitoring:	INT
P2251	S51 XD2 speed monitoring:	INT
P2254	S54 XD3 speed monitoring:	INT
P2257	S57 XD4 speed monitoring:	INT
P2260	S60 XD5 speed monitoring:	INT
	Unit: s	Range: -1 - 600
Cold start:	0 s	
Description:	With this parameter, the "run monitoring error" of the additional drive can be additionally delayed by n-seconds after the physical trigger.	
Indication:	Typically, with this parameter, unwanted short faults can be blocked out.	

P2249	S49 XD1 fault:	INT
P2252	S52 XD2 fault:	INT
P2255	S55 XD3 fault:	INT
P2258	S58 XD4 fault:	INT
P2261	S61 XD5 fault:	INT
	Unit: s	Range: -1 - 600
Cold start:	0 s	
Description:	With this parameter, the "Auxiliary drive fault error" of the auxiliary drive can be additionally delayed by n-seconds after the physical trigger.	
Indication:	Typically, with this parameter, unwanted short faults can be blocked out	

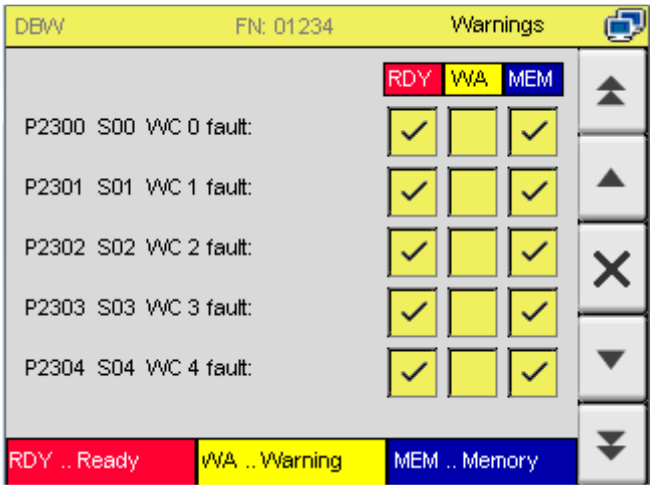
P2250	S50 XD1 run:	INT
P2253	S53 XD2 run:	INT
P2256	S56 XD3 run:	INT

P2259	S59 XD4 run:		INT
P2262	S62 XD5 run:		INT
	Unit: s	Range:	-1 - 600
Cold start:	0 s		
Description:	With this parameter, the "XDx-Run message" of the additional drive can be additionally delayed by n-seconds after the physical trigger.		
Indication:	This parameter should always be set to 0 in order to avoid delays the status indication.		

P2263	S63 Alarm 63:	INT
Indication:	currently not used / deactivated with -1	

4.2.2 P23xx Ready-to-operate switch-off / warnings and error memory

Details as well as additional information concerning status and error messages are included in the T1-service instructions.



This parameter group determines the influence of a status message on the error status of the system.

A tick in the column signals that this status gets triggered.

RDY Signal deactivates „Ready-to-operate”
WA Signal activates „Warning”
MEM Signal will be stored (Confirmation)

P2300	**S00 WC 0 error:**			**INT**
P2301	**S01 WC 1 error:**			**INT**
P2302	**S02 WC 2 error:**			**INT**
P2303	**S03 WC 3 error:**			**INT**
P2304	**S04 WC 4 error:**			**INT**
P2305	**S05 WC 5 error:**			**INT**
	Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	RDY --- MEM			
Description:	This error signals a severe problem in the weight measuring. Thus, the Ready-to-operate message has to be switched off absolutely.			
Indication:	---			

P2306	**S06 Alarm 6:**			**INT**
P2307	**S07 Alarm 7:**			**INT**
Indication:	currently not used			

P2308	**S08 Scale empty:**			**INT**
	Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	--- WA ---			
Description:	The message „Scale empty” is usually only indicated as status (GREY). Possibly also a warning can be switched on.			
Indication:	---			

P2309	**S09 Min Load:**	**INT**

	Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04

Cold start:	--- WA ---
Description:	This message is usually only indicated as status (GREY). For weigh feeders also a warning is reasonable, in order to indicate that the dosing is endangered due to lack of material or light bulk weight.
Indication:	---

P2310	**S10 Max Load:**		**INT**
Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04

Cold start:	--- WA ---
Description:	This message is usually only indicated as status (GREY). For weigh feeders also a warning is reasonable, in order to indicate that the dosing is endangered due to very high bulk weight or erroneous adjustment of the plate to adjust material heights (material leveler plate).
Indication:	---

P2311	**S11 Alarm 11:**	**INT**
Indication:	currently not used	

P2312	**S12 Drive / Tacho error:**		**INT**
Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04

Cold start:	RDY --- MEM
Description:	This message is usually indicated at least as warning (YELLOW). It signals that there is a failure at the drive.
Indication:	It must be decided whether, in case of this message, also Ready-to-operate has to be switched off.

P2313	**S13 Not recog. band start:**		**INT**
Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04

Cold start:	--- WA ---
Description:	Typically, a warning (YELLOW) should occur in case of a synchronization mark error because the short-term accuracy of the system is restricted thereby.
Indication:	---

P2314	**S14 Feeder fault:**		**INT**
Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04

Cold start:	--- WA ---
Description:	This message is usually indicated at least as warning (YELLOW). It signals that the feeder nominal value has achieved its permitted limits.
Indication:	---

P2315	S15 Belt misrun:		INT
	Unit: Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	RDY --- ---		
Description:	This message is usually used as Ready-to-operate switch-off (RED). It signals that that the conveyor belt runs off laterally.		
Indication:	This message should also be stored, in order to prevent an automatic restart.		

P2316	S16 Belt-Slip error:		INT
	Unit: Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	RDY --- MEM		
Description:	This message is usually indicated at least as warning (YELLOW).		
Indication:	---		

P2317	S17 Drive stopped:		INT
	Unit: Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	--- --- ---		
Description:	This is a pure status message.		
Indication:	---		

P2318	S18 Setvalue error:		INT
	Unit: Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	--- WA ---		
Description:	This message is usually indicated as warning (YELLOW).		
Indication:	----		

P2319	S19 Regulator Deviation:		INT
	Unit: Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	--- WA ---		
Description:	This message indicates that the actual capacity deviates from the specified set point by more than allowed by the adjustable limit value. Therefore, no proper dosing process is ensured anymore.		
Indication:	This error can occur for instance if no, or too less material is at the dosing system.		

P2320	S20 Alarm 20:	INT
Indication:	currently not used	

P2321	S21 Belt misrun LEFT:	INT

	Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	RDY --- ---			
Description:	This message is usually used as Ready-to-operate switch-off (RED). It signals that the conveyor belt runs off on the left side.			
Indication:	This message should also be stored, in order to prevent an automatic restart.			

P2322	**S22 Belt misrun RIGHT:**			**INT**
	Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	RDY --- ---			
Description:	This message is usually used as Ready-to-operate switch-off (RED). It signals that the conveyor belt runs off on the right side.			
Indication:	This message should also be stored, in order to prevent an automatic restart.			

P2323	**S23 Chain Tension error:**			**INT**
	Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	--- WA ---			
Description:	This message is usually indicated as warning (YELLOW). The cleaning unit should be checked as soon as possible, in order to prevent possible future damage.			
Indication:	---			

P2324	**S24 Tare error:**			**INT**
	Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	--- WA ---			
Description:	This message is usually indicated as warning (YELLOW).			
Indication:	---			

P2325	**S25 Test error:**			**INT**
	Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	--- --- ---			
Description:	This message can be indicated as warning (YELLOW) if required.			
Indication:	---			

P2326	**S26 Filling error:**			**INT**
	Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	--- WA ---			
Description:	This message is usually indicated as warning (YELLOW).			
Indication:	---			

P2327	S27 BinMovement error:		INT
	Unit: Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	--- WA ---		
Description:	This message is usually indicated as warning (YELLOW).		
Indication:	---		

P2328	S28 Decentral IO offline:		INT
	Unit: Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	RDY --- ---		
Description:	This message is usually used as Ready-to-operate switch-off (RED). This is necessary because significant control parts are not online anymore.		
Indication:	---		

P2329	S29 Alarm 29:	INT
Indication:	currently not used	

P2330	S30 Emergency stop active:		INT
	Unit: Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	--- --- MEM		
Description:	Because this is a pure status indication, a WA could be reasonable. MEM is active permanently, it is FORBIDDEN to realize a safety switch-off directly via the DWC-7A.		
Indication:	---		

P2331	S31 Fieldbus Offline:		INT
	Unit: Checkbox	Range:	0x01 / 0x02 / 0x04
Cold start:	--- WA ---		
Description:	This message is usually indicated as warning (YELLOW).		
Indication:	---		

P2332	S32 MM00 Error:		INT
P2336	S36 MM01 Error:		INT
P2340	S40 MM10 Error:		INT
P2344	S44 MM11 Error:		INT
	Unit: Checkbox	Range:	
Cold start:	--- --- ---		
Description:	This message can be used as a ready-to-operate shutdown (RED) if the MM-Error of the additional drive must lead to the shutdown of the entire system.		

	If the drive does not have a high priority for production, a warning message (YELLOW) can be useful.
Indication:	-

P2333	**S33 MM00 Inverter failure:**	**INT**
P2337	**S37 MM01 Inverter failure:**	**INT**
P2341	**S41 MM10 Inverter failure:**	**INT**
P2345	**S45 MM11 Inverter failure:**	**INT**

	Unit:	Checkbox	Range:

Cold start:	--- --- ---
Description:	This message can be used as a ready-to-operate shutdown (RED) if the MM-Inverter failure of the additional drive must lead to the shutdown of the entire system. If the drive does not have a high priority for production, a warning message (YELLOW) can be useful.
Indication:	-

P2334	**S34 MM00 offline:**	**INT**
P2338	**S38 MM01 offline:**	**INT**
P2342	**S42 MM10 offline:**	**INT**
P2346	**S46 MM11 offline:**	**INT**

	Unit:	Checkbox	Range:

Cold start:	--- --- ---
Description:	This message can be used as a ready-to-operate shutdown (RED) if the MM-offline status of the additional drive must lead to the shutdown of the entire system. If the drive does not have a high priority for production, a warning message (YELLOW) can be useful.
Indication:	-

P2335	**S35 Alarm 35:**	**INT**
P2339	**S39 Alarm 39:**	**INT**
P2343	**S43 Alarm 43:**	**INT**
P2347	**S47 Alarm 47:**	**INT**

Indication:	currently not used

P2348	**S48 XD1 speed monitoring:**	**INT**
P2351	**S51 XD2 speed monitoring:**	**INT**
P2354	**S54 XD3 speed monitoring:**	**INT**
P2357	**S57 XD4 speed monitoring:**	**INT**
P2360	**S60 XD5 speed monitoring:**	**INT**

	Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04

Cold start:	--- --- ---
Description:	This message can be used as ready for operation shutdown (RED) if a speed monitoring error of the additional drive has to lead to the shutdown of the entire system. If the drive does not have as high priority for the production, a warning message (YELLOW) can be useful.
Indication:	-

P2349	**S49 XD1 fault:**	**INT**
P2352	**S52 XD2 fault:**	**INT**
P2355	**S55 XD3 fault:**	**INT**
P2358	**S58 XD4 fault:**	**INT**
P2361	**S61 XD5 fault:**	**INT**

Unit:	Checkbox	Range:	0x01 / 0x02 / 0x04

Cold start:	--- --- ---
Description:	This message can be used as a ready for operation shutdown (RED) if a general malfunction of the auxiliary drive has to lead to the shutdown of the entire system. If the drive does not have as high priority for the production, a warning message (YELLOW) can be useful.
Indication:	-

P2350	**S50 XD1 run:**	**INT**
P2353	**S53 XD2 run:**	**INT**
P2356	**S56 XD3 run:**	**INT**
P2359	**S59 XD4 run:**	**INT**
P2362	**S62 XD5 run:**	**INT**

Unit:	Checkbox	Range:	

Cold start:	--- --- ---
Description:	
Indication:	A ready for operation shutdown (RED) or warning (YELLOW) is not recommended for the run-indication.

P2363	**S63 Alarm 63:**	**INT**

Indication:	currently not used

4.2.3 P29xx Loss-In-Weight-Feeder Systems LiW / Limits

P2910	Activate Refilling of Bin:	INT
	Unit: s	Range:
Cold start:	20.0 %	
Description:	This parameter determines the activation limit value for the refilling process. The control system switches to volumetric mode.	
Indication:		

P2912	Stop Refilling of Bin:	INT
	Unit: s	Range:
Cold start:	80.0 %	
Description:	This parameter defines the end of the refilling process. After the settling time, the gravimetric mode is re-entered.	
Indication:	This threshold must always be significantly higher than parameter P2910 in order to have a suitable hysteresis for the emptying cycle.	

P2920	Movement error Bin:	INT
	Unit: s	Range:
Cold start:	5.0 s	
Description:	This limit value checks permanently the measured value from the weighing container. If the change (+/-) is greater than the set tolerance (relative to 100% container content) within a short time, the fault message "S27 Movement fault" is triggered.	
Indication:		

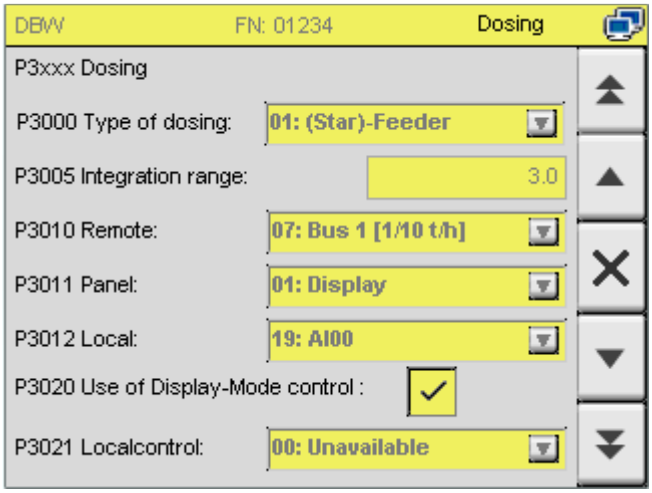
P2930	LossInWeight Bin empty:	INT
	Unit: s	Range:
Cold start:	5.0 %	
Description:	If the actual weight is exceeded in the material container, the internal state "EMPTY" is set. "	
Indication:	After the EMPTY state has been activated, the dosing process is interrupted within in a short while.	

P2932	LossInWeight Bin max:	INT
	Unit: s	Range:
Cold start:	80.0 %	
Description:	If the actual weight is exceeded in the material container, the internal state "MAX" is set.	
Indication:	The internal container status "MAX" is used primarily for indication only, the dosing process is not interrupted.	

P2934	LossInWeight Bin min:	INT

	Unit: s	Range:
Cold start:	20.0 %	
Description:	If the actual weight is exceeded in the material container, the internal state "MIN" is set.	
Indication:	The internal Bin- Status "MIN" is primarily intended to warn that the dosing process is in danger to be interrupted without a immediately refilling process.	

4.1 Parameter group P3xxx / Dosing



The parameter group 

includes all parameters having influence on the dosing process.

P3000	Type of dosing:		INT
	Selection: 0: not active 1: Feeder 2: PreHopper	Range:	0-2
Cold start:	0 or 1, based on selected Cold start		
Description:	Describes the way of dosing. The selection „1: Feeder" is the usual selection for rotary vane feeders or feeding screws, which are directly dosing onto the weighing belt or weighing screw. If there is a separate pre-bin existing directly at the scale, the variant „2: PreHopper" has to be selected.		
Indication:	---		

P3005	Integration range:		INT
	Unit: %	Range:	1,00 - 10,00
Cold start:	3,0		
Description:	This parameter determines in which area at dosing the speed of the weighing belt is readjusted in case of a belt load change. Integration range 3,0 means that the load value „g" may be between 33.3% and 100%. For example, at adjustment 4,0 „g" may be between 25% and 100%. At registration belt scales and flow meters with feeder control the integration range is set to 1,0, since no speed control is possible.		
Indication:	The value indicated in the technical data of the scale must not be changed.		

P3010	Remote:		INT
	Selection: 00: not Active 01: Display 02: Display % 03: Bus 1 [%] 04: Bus 2 [%] 05: Bus 3 [%]	Range:	0-45

06: Bus 4 [%]
07: Bus 1 [1/10 t/h]
08: Bus 2 [1/10 t/h]
09: Bus 3 [1/10 t/h]
10: Bus 4 [1/10 t/h]
11: Bus 1 [kg/h]
12: Bus 2 [kg/h]
13: Bus 3 [kg/h]
14: Bus 4 [kg/h]
15: Bus 1 [1/10 kg/h]
16: Bus 2 [1/10 kg/h]
17: Bus 3 [1/10 kg/h]
18: Bus 4 [1/10 kg/h]
19: AI00
20: AI01
21: AI10
22: AI11
23: BCD0
24: BCD1
25: AI01 x Bus Prozent 1
26: AI00 x Panel
27: AI01 x Panel
28: Bus Prozent 2 x Panel
29: Bus Prozent 3 x Panel
30: Lv x TV1
31: Lv x TV2
32: ---
33: Lv x TV1 x WW
34: Lv x TV2 x WW
35: ---
36: ---
37: ---
38: ---
39: ---
40: Transfer value 1
41: Transfer value 2
42: ---
43: ---
44: P4701 Fixed value 1
45: P4702 Fixed value 2

Cold start:	07: Bus 1 [1/10 t/h]
Description:	Describes the source of nominal values for operation mode „Remote”. This operation mode is usually used as remote control mode if a superior control pre-sets nominal values and ON/OFF commands. Besides simple, direct nominal values, also the multiplication of several values is possible. Thus, for example, functionally the reference input similar to a guiding shaft can be realized. Also a changing working width (WW) can be included in the set point calculation as a third value.
Indication:	---

P3011	**Panel:**		**INT**
	Selection: see Parameter P3010	Range:	0-45
Cold start:	01: Display		

Description:	Describes the source of nominal values for operation mode „Panel”. This operation mode is usually used as manual mode if the superior control is inactive or if maintenance works have to be carried out at the weighing system.
Indication:	---

P3012	Local:		INT
	Selection: see Parameter P3010	Range:	0-45
Cold start:	19: AI00		
Description:	Describes the source of nominal values for operation mode „Local”. This operation mode is usually activated as local mode via a switch directly at the weighing system activated.		
Indication:	---		

P3020	Panelcontrol:		INT
	Selection: 00: Panel 01: Button 02: Switch 03: KUKLA BA switch	Range:	0x00 - 0x03
Cold start:	00: Panel		
Description:	This parameter determines whether the operating unit in the panel mode provides the control buttons for start and stop of the main drive.		
Indication:	This option should only be activated when control in panel mode is desired directly from the display without further controls, such as buttons or switches.		

P3021	Localcontrol:		INT
	Selection: 00: Unavailable 01: Button 02: Switch 03: KUKLA BA switch	Range:	0-3
Cold start:	00: Unavailable		
Description:	Just in case that a real local control is desired, this can be activated here. Thereby it can be determined if the control should be done via switch, button or a special operating mode switch from KUKLA.		
Indication:	It must be noted that eventually existing auxiliary drives must also be considered.		

P3051	Guiding value:		INT
	Unit: Absolute	Range:	1-100000
Cold start:	10000		
Description:	At nominal values determined by multiplication (e.g. „Lv x TV1“) the first value is set to 100% (at A/D 100% = 10 000) with „Scaling1”.		
Indication:	---		

P3052	Guiding weight:		INT
	Unit: depending on P3072	Range:	1-100000

Cold start:	10000
Description:	At nominal values determined by multiplication (e.g. „Lv x TV1“) the second value is set to 100% with this parameter.
Indication:	---

P3053	Work Width:		INT
	Unit: depending on P3073	Range:	1-100000

Cold start:	10000
Description:	At nominal values determined by multiplication with the working width as an additional calculation value, the third value is scaled to 100% with this parameter.
Indication:	---

P3061	ACT Guiding value:		INT
	Selection: 00: not Active 01: Abs pre set1 02: Abs pre set2 03: Pr pre set1 04: Pr pre set2 05: --- 06: Bus 1 [%] 07: Bus 2 [%] 08: Bus 3 [%] 09: Bus 4 [%] 10: --- 11: Bus 1 [abs] 12: Bus 2 [abs] 13: Bus 3 [abs] 14: Bus 4 [abs] 15: --- 16: AI00 17: AI01 18: AI10 19: AI11 20: --- 21: P4702 Fixed value 2 22: P4701 Fixed value 1 23: --- 24: Transfer value 1 25: Transfer value 2	Range:	0-25

Cold start:	00: not Active
Description:	This parameter determines the source of the current guiding value. Usually, the recording is done directly via an analogue sensor (e.g. AI00) or via Fieldbus if this value is transmitted by a central control.
Indication:	---

P3063	ACT work width:		INT
	Selection: 00: not Active 01: Abs pre set1	Range:	0-25

	02: Abs pre set2 03: Pr pre set1 04: Pr pre set2 05: --- 06: Bus 1 [%] 07: Bus 2 [%] 08: Bus 3 [%] 09: Bus 4 [%] 10: --- 11: Bus 1 [abs] 12: Bus 2 [abs] 13: Bus 3 [abs] 14: Bus 4 [abs] 15: --- 16: AI00 17: AI01 18: AI10 19: AI11 20: --- 21: P4702 Fixed value 2 22: P4701 Fixed value 1 23: --- 24: Transfer value 1 25: Transfer value 2
Cold start:	00: not Active
Description:	This parameter determines the source of the current working width.
Indication:	---

P3072	Unit guiding weight:		INT
	Selection: 0: [g/m²] 1: [kg/m²] 2: [l] 3: [%]	Range:	0-3
Cold start:	0: [g/m²]		
Description:	This parameter determines the unit in which the guiding weight is defined and how this number can be displayed and entered as a set point.		
Indication:	In the insulating material production very often basis weights, such as grams per square meter (g/m²), are prescribed.		

P3073	Unit work width:		INT
	Selection: 0: [mm] 1: [%]	Range:	0-1
Cold start:	0: [mm]		
Description:	This parameter determines in which unit this set point proportion is displayed in the operating and set point screens.		
Indication:	---		

P3100	Regulator Limit:	INT

	Unit:	%	Range:	0,00 - 60,00
Cold start:	33,33			
Description:	This value determines up to which minimal load at discharge point g3 the speed of the driving motor for keeping the nominal value is readjusted. If a value lower than the minimal value permitted by the „Integration range" is adjusted here, the nominal value can be kept even for capacities below the nominal capacity.			
Indication:	The maximal speed of 100% cannot be exceeded, therefore, this possibility only works up to achieving the nominal speed of the dosing drive.			

P3110	**Regulator difference:**			**INT**
	Unit:	%	Range:	0,00 - 20,00
Cold start:	3,00			
Description:	If the difference between nominal value and actual value is greater than the value adjusted here, the error message „Deviation" appears.			
Indication:	---			

P3120	**Minimum Set Point:**			**INT**
	Unit:	%	Range:	0,00 - 80,00
Cold start:	10,00			
Description:	This parameter describes the lowest permitted nominal value. If the current nominal value plummets below this value, the associated error message is activated.			
Indication:	The nominal value 0 itself does not result in an error message.			

P3130	**Set to zero:**			**INT**
	Unit:	%	Range:	0,00 - 50,00
Cold start:	2,00			
Description:	This parameter describes the lowest permitted nominal value. If the current nominal value plummets below this value, it is automatically set to zero.			
Indication:	This parameter permits a suppression of low values and is primarily relevant for analogue sources of nominal values.			

P3170	**Test-Tare Speed:**			**INT**
	Unit:	%	Range:	0,00 - 120,00
Cold start:	50,00			
Description:	The speed of taring and test with test weight is determined with this parameter. The switchover from operational speed to the speed adjusted here is done after the start of tare- and test procedure.			
Indication:	---			

P3170	**Test-Tare Speed:**			**INT**
	Unit:	%	Range:	0,00 - 100,00

Cold start:	50,00
Description:	The speed of taring and test with test weight is set with this parameter. The switchover from operational speed to the speed adjusted here is done after the start of the tare or test procedure.
Indication:	---

4.3.1 P33xx Feeder Parameters

P3300	SetPoint Load:		INT
	Selection: 00: not Active 01: Pre set 1 02: Pre set 2 03: Auto Sg 04: Bus 1 [%] 05: Bus 2 [%] 06: Bus 3 [%] 07: Bus 4 [%] 08: AI00 09: AI01 10: AI10 11: AI11 12: AI00 x AI01 13: AI10 x AI11 14: AI01 x Bus Prozent 1 15: AI00 x Panel 16: AI01 x Panel 17: Bus Prozent 2 x Panel 18: Bus Prozent 3 x Panel 19: P4701 Fixed value 1 20: P4702 Fixed value 2 21: WC 1 22: WC 2 23: WC 3 24: WC 4 25: WC 5 26: Bin-Sim 27: PB total in pr 28: --- 29: --- 30: Transfer value 1 31: Transfer value 2 32: --- 33: DWC3/5 SW1 34: DWC3/5 SW2 35: DWC3/5 SW3 36: DWC3/5 SW4 37: DWC3/5 SL1 38: DWC3/5 SL2	Range:	0-38
Cold start:	01: Pre set 1		
Description:	This parameter determines the source of nominal values for the feeder regulator. A pre-installed feeder will always try to achieve as much as possible the load adjusted here on the conveyor belt, in order to enable preferably small speed changes for the output dosing at belt end. The load nominal value should ideally be in the middle of the permitted integration range.		
Indication:	For controlled belt scales with an integration range of 1,0 this parameter is not relevant, since it is tried to get as close as possible to a capacity value.		

P3305	Funct. at Off:		INT
	Selection: 00: last Value 01: Mean Value 02: SetPoint out	Range:	0-2

Cold start:	0
Description:	This parameter determines the behaviour of the feeder regulator in case of a missing control release (e.g. in case of plant stop). It can be determined with which dosing factor a restart is done. For adjustment 0 the ratio for the feeder correcting variable will be set to the mean value between „Feeder-Min-Limit" and „Feeder-Max-Limit". Alternatively, it is possible to keep the last calculated ratio or to take over the current nominal value.
Indication:	---

P3310	**Feeder-Min-Limit:**		**INT**
	Unit: %	Range:	0,00 - 90,00
Cold start:	50,00		
Description:	This value determines the smallest possible feeder factor. If the feeder regulator calculates a value smaller than the value adjusted here, this value is limited by the value adjusted here. Basically, this limit should never be reached by the feeder regulator in normal operation, thus, also a message in the status/error message system indicates that the feeder has reached one of the limits.		
Indication:	---		

P3312	**Feeder-Max-Limit:**		**INT**
	Unit: %	Range:	50,00 - 180,00
Cold start:	100,00		
Description:	This value determines the greatest possible feeder factor. If the feeder regulator calculates a value greater than the value adjusted here, this value is limited by the value adjusted here. Basically, this limit should never be reached by the feeder regulator in normal operation, thus, also a message in the status/error message system indicates that the feeder has reached one of the limits.		
Indication:	---		

P3320	**F RegulationLimit-DOWN:**		**INT**
	Unit: %	Range:	50,00 - 100,00
Cold start:	70,00		
Description:	For adjustment 100% at each control process the entire deviation is reduced. If the feeder does not behave linearly to the feeder correcting variable, such as in case of a conveyor trough, an improvement of control behaviour can be obtained by reducing the readjustment factor.		
Indication:	Experience has shown that values between 70 and 90% almost always result in a significant reassurance of the control process, since the feeder accelerates rather conservatively.		

P3322	**F RegulationLimit-UP:**		**INT**
	Unit: %	Range:	50,00 - 100,00
Cold start:	70,00		

Description:	This parameter is functionally equivalent to the previous parameter, but is responsible for delaying the feeder speed.
Indication:	Also here rather values between 70 and 90% should be used.

P3332	Feeder controller enable:		INT
	Selection: 00: not Active 01: Active 02: Greater min	Range:	0-2
Cold start:	02: Greater min		
Description:	This parameter determines when and how the feeder regulator is enabled. This prevents undesired material flow at a change of the operation mode.		
Indication:	For the adjustment “01: Active” the release must be activated via the associated, digital command bit.		

P3340	FeederEnableLevel:		INT
	Unit: %	Range:	50,00 - 100,00
Cold start:	30,00		
Description:	If the feeder is set to „02: Greater min “, the feeder regulator is only released if the load of the measuring length is greater than the value adjusted here.		
Indication:	This value should be adjusted to the set integration range.		

P3342	F- regular window:		INT
	Unit: %	Range:	50,00 - 100,00
Cold start:	---		
Description:	This parameter determines up to what percentage in metering controls no manipulated variable changes are made, in order to avoid micro-vibrations.		
Indication:	---		

P3350	Feeder delay way:		INT
	Unit: m	Range:	0,01 - 50,00
Cold start:	30,00		
Description:	At the end of the dead length the feeder regulator always implements a recalculation.		
Indication:	The distance between feeder and middle of measuring length in discharge direction plus approx. 10% reserve should be entered. In case of a stronger averaging of the weighing signal, this parameter has to be selected correspondingly longer.		

P3355	Fv_Follower:		INT
	Unit: Checkbox	Range:	0-1
Cold start:	0		
Description:	Parameter for special applications		

Indication:	Only use after consultation with the manufacturer.

P3360	Pre-bin source:		INT
	Selection: see P3300	Range:	0-38
Cold start:	21: WC1		
Description:	This parameter determines the source of actual values of the pre-bin weight signal.		
Indication:	---		

P3362	DelayTime of Pre-bin:		INT
	Unit: s	Range:	1 - 500
Cold start:	2		
Description:	It is determined how fast the pre-bin control works. After this time a new regulation step is executed.		
Indication:	---		

P3368	PBv regulator:		INT
	Unit: Checkbox	Range:	0-1
Cold start:	0		
Description:	It can be prescribed here that the pre-bin set point should act proportionally to the actual speed of the conveyor belt.		
Indication:	---		

4.3.2 P36xx Automatic adjustment of the occupancy set point / AutoSg

P3600	Feeder reduction:		INT
	Selection: 00: not active 01: Pr pre set1 02: Pr pre set2 03: --- 04: Bus 1 [%] 05: Bus 2 [%] 06: Bus 3 [%] 07: Bus 4 [%] 08: AI00 09: AI01 10: AI10 11: AI11 12: AI00 x AI01 13: AI10 x AI11 14: AI01 x Bus 1 [%] 15: AI00 x Panel 16: AI01 x Panel 17: Bus 2 [%] x Panel 18: Bus 3 [%] x Panel 19: P4701 Fixed value 1 20: P4702 Fixed value 2 21: WC 1 22: WC 2 23: WC 3 24: WC 4 25: WC 5 26: Bin-Sim 27: PB total in pr 28: --- 29: --- 30: Transfer value 1 31: Transfer value 2 32: --- 33: DWC3/5 SW1 34: DWC3/5 SW2 35: DWC3/5 SW3 36: DWC3/5 SW4 37: DWC3/5 SL1 38: DWC3/5 SL2	Range:	0-38
Cold start:	00: not active		
Description:	---		
Indication:	---		

P3601	Sg at 20%:		INT
	Unit: %	Range:	0-100,00
Cold start:	50,00		
Description:	The desired occupancy set point at 20% nominal capacity must be set here. This value is never fallen below and is interpolated upwards to the 100% value.		
Indication:	---		

P3602	Sg at 100%:		INT
	Unit:	Range:	0-100,00
Cold start:	40,00		
Description:	The desired occupancy set point at 100% nominal capacity must be set here. This value is never exceeded and is interpolated downwards to the 20% value.		
Indication:	This value should be adjusted to the set integration range.		

P3605	Total time:		INT
	Unit: s	Range:	10-1000
Cold start:	300		
Description:	Describes the total time after which a new regulation step is performed.		
Indication:	---		

P3610	Step minus:		INT
	Unit: s	Range:	10-1000
Cold start:	200		
Description:	Defines when the set point should be reduced by one step value (0,1). If the reduction probe is covered longer than the here set number of seconds within a total time, the correction factor will immediately be reduced by 0,1% after the expiration of the total time.		
Indication:	This value must be absolutely **greater** than „Step plus”!		

P3611	Step plus:		INT
	Unit: s	Range:	10-1000
Cold start:	10		
Description:	Defines when the set point should be increased by one step value (0,1). If the reduction probe is covered less than the here set number of seconds within a total time, the correction factor will immediately be increased by 0,1% after the expiration of the total time.		
Indication:	This value must be absolutely **less** than „Step minus”!		

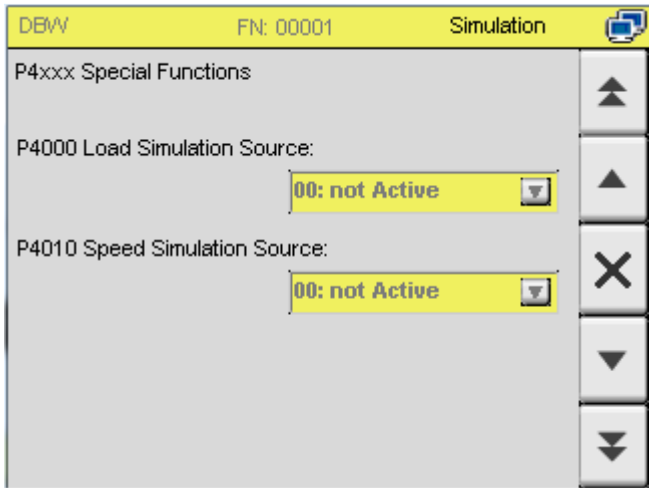
P3615	Max Step:		INT
	Unit: %	Range:	10-100,00
Cold start:	10,00		
Description:	With this parameter the correction value can be limited. This value acts in positive as well as in negative direction.		
Indication:	This value should be adjusted to the set integration range.		

The regulation time only counts when the conveyor belt RUNS and the actual load g1 is greater than the “feeder release” percentage value.

If the actual load g1 falls below the adjusted release threshold, the correction factor is set to 0. Thereby, the entire system will start from a neutral level and so it is able to find again the perfect level by itself.

P3620	**Auto Sg Correction 1:**		**INT**
P3621	**Auto Sg Correction 2:**		**INT**
	Unit: %	Range:	10-100,00
Cold start:	10,00		
Description:	These two parameters allow an increase or reduction of the setpoint value for up to 2 different materials. The material is selected via the digital input.		
Indication:	-		

4.4 Parameter group P4xxx / Special functions



The parameter group **„Special functions"** includes parameters, which cannot be allocated to another group.

Mostly, they describe special options of the weighing system, which are primarily needed for specific special applications.

P4000	Load Simulation Source:		INT
Selection:	00: not active 01: Pr pre set1 02: Pr pre Set2 03: --- 04: Bus 1 [%] 05: Bus 2 [%] 06: Bus 3 [%] 07: Bus 4 [%] 08: AI00 09: AI01 10: AI10 11: AI11 12: AI00 x AI01 13: AI10 x AI11 14: AI01 x Bus 1 [%] 15: AI00 x Panel 16: AI01 x Panel 17: Bus 2 [%] x Panel 18: Bus 3 [%] x Panel 19: P4701 Fixed value 1 20: P4702 Fixed value 2 21: WC 1 22: WC 2 23: WC 3 24: WC 4 25: WC 5 26: Bin-Sim 27: PB total in pr 28: --- 29: --- 30: Transfer value 1 31: Transfer value 2 32: --- 33: DWC3/5 SW1 34: DWC3/5 SW2 35: DWC3/5 SW3 36: DWC3/5 SW4	Range:	0-38

	37: DWC3/5 SL1 38: DWC3/5 SL2
Cold start:	00: not active
Description:	This parameter describes the source of nominal values for a weight simulation. This option permits an emergency operation of weigh feeders or is sometimes also used for presentations and Fieldbus tests of weighing systems, in order to simulate a not existing load cell.
Indication:	---

P4010	Speed Simulation Source:		INT
	Selection: see previous parameter	Range:	0-38
Cold start:	00: not active		
Description:	This parameter describes the source of nominal values for a speed simulation. This option permits an emergency operation of weigh feeders or is sometimes also used for presentations and Fieldbus tests of weighing systems, in order to simulate a not existing tachometer.		
Indication:	The speed simulation is only active if the associated input „System runs" is active, otherwise a 0-simulation is done. For impact flow meters a speed simulation is absolutely necessary, since these devices do not have a tachometer. The feedback is usually derived from the run message of the feeding device.		

4.4.1 P41xx Electric or pneumatic belt steering control

P4100	Belt steering device:		INT
	selection: 00: inactive 01: Delaytime regulator 02: 2-Point control 03: Electrical steering device	Range:	0-3
Cold start:	00: inactive		
Description:	Belt steering devices are able to reliably prevent a lateral leaving of a conveyor belt's permitted working area. It is important to distinguish if it is a pure mechanic solution (adjustment "00: inactive") or an electric / pneumatic solution. In this case it is distinguished whether only one belt edge is scanned ("01: Delaytime regulator"), whereby the belt steering signal counter regulates automatically after a period adjustable in the following parameters, or whether there is really a switchover between the sensors of each side of the belt.		
Indication:	It must be noted that the correct digital inputs and outputs are used.		
Dependency:	Binary inputs for belt steering sensors (P60xx) or via Fieldbus Bus Command Binary output for belt steering signal (P64xx) or via Fieldbus BusControlBits		

P4110	Steering delay off:		INT
	Unit: s	Range:	-1 - 600
Cold start:	2,0		

Description:	This parameter describes after how many seconds at the adjustment “01: Delaytime regulator” in the previous parameter the automatic counter regulation starts.
Indication:	---

P4111	Steering delay on:		INT
	Unit: s	Range:	-1 - 600

Cold start:	2,0
Description:	This parameter describes after how many seconds at the adjustment “01: Delaytime regulator” in parameter P4100 the steering direction will be automatically reversed.
Indication:	---

P4120	Delaytime v=100%:		INT
	Unit: s	Range:	-1 - 600

Cold start:	0,0
Description:	This parameter describes the delay time between two steering commands.
Indication:	---

P4121	Working time:		INT
	Unit: s	Range:	-1 - 600

Cold start:	0,0
Description:	This parameter describes the duration of the active time per steering command.
Indication:	---

4.4.2 P413x Loosening injector

Belt Weighers often convey material with difficult flow properties. Air injectors or vibrators are often used to improve that flow properties. These systems can be controlled directly via the corresponding output. The timing of this output can be controlled by the following parameter group.

P4130	Loosening injector active:		INT
	Unit: s	Range:	

Cold start:	0.0 s
Description:	Duration of the on signal
Indication:	The value usually determines the air volume for air injectors.

P4132	Loosening injector delaytime:		INT
	Unit: s	Range:	

Cold start:	0.0 s
Description:	Duration of the pause time between two on-signals

Indication:	

P4134	Loosening injector min limit:		INT
	Unit: %	Range:	
Cold start:	0.0 s		
Description:	Sometimes the flow characteristics of the material are very different. If there is already a lot of material on / in the measuring system, an additional loosening would be counterproductive. If the g1 value is above this parameter, the loosening output will be DEACTIVATED to prevent overfilling.		
Indication:	0.0 disables this function		

4.4.3 P414x Cleaning device

A cleaning device is usually made of scratch strips on both sides guided by chains.

This device is arranged underneath the conveyor belt and thus allows to remove dropped product.

The following parameters determine how often and for how long the drive of the cleaning system is switched on and off.

P4140	Cleaning device active:		INT
	Unit: Min.	Range:	0-999
Cold start:	0		
Description:	Duration of ON-period (cleaning is running)		
Indication:			

P4142	Cleaning device delaytime:		INT
	Unit: Min.	Range:	
Cold start:	0		
Description:	Duration of the OFF period (cleaning process stopped)		
Indication:	This parameter should not be chosen too high as otherwise very much dust may have accumulated which is then pushed directly into the discharge area and thus leads to a higher dosing performance at short time!		

4.4.4 P415x Slip tachometer

Unlike to commercial evaluation systems, slip detection is not implemented on time basis, but distance based.

P4150	Slip tacho:		INT
	Unit: Pulses	Range:	1- 100000
Cold start:	0		
Description:	By means of the binary input „Slip" a run monitoring can be realised. Thereby the number of tacho pulses is adjusted, after which one control pulse must occur. If more tacho pulses than adjusted here are counted, the corresponding status message is set as well as the associated binary output.		
Indication:	---		

4.4.5 P419x AW g Config (Area weight display)

Sometimes, instead of the typical weight display for the material load in percent, an alternative display of, for example, g / m2 or kg / m3 is desired. This can be realized with the following parameters.

P4190	AW g weight:		INT
	Unit:	Range:	
Cold start:	0		
Description:	This parameter determines which absolute number corresponds to 100% of the measured output value.		
Indication:	---		

P4192	AW g unit:		INT
	Selection: 0: 1[g/m²] 1: 0,01[kg/m²] 2: 0,1[kg/m²] 3: 1[kg/m²] 4: 1[l]	Range:	0-4
Cold start:	0		
Description:	This parameter defines the unit and the comma scaling of the desired value.		
Indication:	---		

P4194	Grafikbildanzeige:		INT
	Auswahl: 0: inaktiv 1: AW p 2: AW g1 3: AW p / AW g1	Bereich:	0-3
Kaltstart:			
Beschreibung:	This parameter defines which value is used as the basis for the display.		
Hinweis:	It is possible to select both, the material load and the flow capacity as the basis for the desired display in the graphic screen.		

4.4.6 P42xx Weighing bin

This parameter group allows the additional integration of a container which is equipped with a level measurement.

P4200	Bin 100%:		INT
	Unit: g	Range:	0-100000
Cold start:	0		
Description:	This parameter describes the nominal range of a weighing bin, which might be used for instance, for a checkweigher.		
Indication:	---		

P4202	Display unit bin:		INT
	Selection: 00: [g] 01: [kg] 02: [t]	Range:	0-2
Cold start:	00		
Description:	The display unit is already roughly defined by the size of the bin. While the setting 00: [g] can be meaningful for very small bins, this would not make sense for a huge bin with many tonnes.		
Indication:	---		

P4205	WC number for container:		INT
	Unit: Absolut	Range:	0-4
Cold start:	0		
Description:	This parameter describes the number of weighchannels used for the weighing bin.		
Indication:	---		

P4210	Fill on:		INT
	Unit: %	Range:	0-150,00
Cold start:	0,00		
Description:	Limit for the activation of the weighing bin refilling.		
Indication:	---		

P4215	Fill off:		INT
	Unit: %	Range:	0-150,00
Cold start:	0,00		
Description:	Limit for the deactivation of the weighing bin refilling.		
Indication:	---		

P4220	Bin empty at:		INT
	Unit: %	Range:	0-150,00
Cold start:	0,00		
Description:	Limit for the empty detection of the weighing bin.		
Indication:	---		

4.4.7 P43xx Checkscale

P4300	Checkscale:		INT
	Selection: 00: inactive 01: Checkscale active	Range:	0-1
Cold start:	00: inactive		
Description:	This option enables the semi-automatic correction of the weighing system via a re-measuring by a pre-installed weighing bin. The real correction must be initiated via a binary input.		
Indication:	The application of this option requires a very specific structure of the entire system.		

4.4.8 P45xx Batchmode Parameters

P4510	Batch Setpoint Internal:		INT
P4511	**Batch Setpoint External:**		**INT**
	Selection: 00: not Active 01: Charge 1 02: Charge 2 03: Bus 1 [kg] 04: Bus 2 [kg] 05: Bus 3 [kg] 06: Bus 4 [kg] 07: Bus 1 [kg] 08: Bus 2 [kg] 09: Bus 3 [kg] 10: Bus 4 [kg] 11: Bus 1 [1/10kg] 12: Bus 2 [1/10kg] 13: Bus 3 [1/10kg] 14: Bus 4 [1/10kg] 15: Transfer value 1 16: Transfer value 2	Range:	0-16
Cold start:	---		
Description:	This parameter determines the source of nominal values for the internal/external batch set point.		
Indication:	Percentages like at the selection „02: Panel %" are not useful. It is only reasonable to use absolute values.		

P4520	Pre-switch-off-quantity1:		INT
P4521	**Pre-switch-off-quantity2:**		**INT**
P4522	**Pre-switch-off-quantity3:**		**INT**
P4523	**Pre-switch-off-quantity4:**		**INT**
	Unite: depending on P1310	Range:	0-100000
Cold start:	---		
Description:	These parameters determine the source of nominal values for the external batch set point.		
Indication:	Percentages like at the selection „02: Panel %" are not useful. It is only reasonable to use absolute values.		

P4530	Post-Runtime:		INT
	Unit: s	Range:	-1 - 600
Cold start:	2,0		
Description:	This parameter describes how long the conveyor drive of the weighing system remains activated after EMPTY was recognized at g3-point.		
Indication:	---		

4.4.9 P47xx Fixed and Transfervalues

P4701	Fixed value 1:		INT
P4702	**Fixed value 2:**		**INT**
	Unit: %	Range:	0,00 - 150,00
Cold start:	0,00		
Description:	These parameters permit the deposit of fix adjusted percentages in the parameter level. They can be used in almost all nominal value selection windows by the selection of „30: Fixed value 1“ or “31: Fixed value 2”.		
Indication:	As pre-set nominal value this parameter can reliably prevent a subsequent change by the user in normal operation mode.		

P4711	Transfer value 1:		INT
P4712	**Transfer value 2:**		**INT**
	Selection: 00: not active 01: Pr pre set1 02: Pr pre set2 03: --- 04: Bus 1 [%] 05: Bus 2 [%] 06: Bus 3 [%] 07: Bus 4 [%] 08: AI00 09: AI01 10: AI10 11: AI11 12: AI00 x AI01 13: AI10 x AI11 14: AI01 x Bus 1 [%] 15: AI00 x Panel 16: AI01 x Panel 17: Bus 2 [%] x Panel 18: Bus 3 [%] x Panel 19: P4701 Fixed value 1 20: P4702 Fixed value 2 21: WC 1 22: WC 2 23: WC 3 24: WC 4 25: WC 5 26: Bin-Sim 27: PB total in pr 28: --- 29: --- 30: --- 31: --- 32: --- 33: DWC3/5 SW1 34: DWC3/5 SW2 35: DWC3/5 SW3 36: DWC3/5 SW4 37: DWC3/5 SL1 38: DWC3/5 SL2	Range:	0-46

	39: --- 40: Bus ABS 1 41: Bus ABS 2 42: Bus ABS 3 43: Bus ABS 4 44: --- 45: BCD0 46: BCD1
Cold start:	00: not active
Description:	These parameters allow setpoint formation from the listed sources.
Indication:	The two transfer values can then in turn be used as setpoint sources for analog outputs or fieldbus communication. This results in an extremely flexible structure as data can be passed on.

4.4.10 P48xx Linearisation – Parameter

P4800	Lineartable 0:		INT
	Unit: %	Range:	-50,00 - 50,00
Cold start:	0,00		
Description:	Some weighing systems have due to the internal structure no linear characteristic curve of the weight signal. The parameter group P48xx permits a corresponding adaption of the weight signal subtractive as well as additive. Each parameter is responsible for a specific weight measuring area.		
Indication:	If a measured actual weight is between two characteristic curve points, a linear interpolation is done. Thus, the Linearisationtable, which is located nearer to the raw signal, is considered more.		

P4801	Lineartable 1:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 8.0%.	

P4802	Lineartable 2:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 16.0%.	

P4803	Lineartable 3:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 24.0%.	

P4804	Lineartable 4:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 32.0%.	

P4805	Lineartable 5:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 40.0%.	

P4806	Lineartable 6:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 48.0%.	

P4807	Lineartable 7:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 56.0%.	

P4808	Lineartable 8:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 64.0%.	

P4809	Lineartable 9:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 72.0%.	

P4810	Lineartable 10:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 80.0%.	

P4811	Lineartable 11:	INT

Description:	see P4800 / Parameter is relevant for load raw signals of 88.0%.

P4812	Lineartable 12:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 96.0%.	

P4813	Lineartable 13:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 104.0%.	

P4814	Lineartable 14:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 112.0%.	

P4815	Lineartable 15:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 120.0%.	

P4816	Lineartable 16:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 128.0%.	

P4817	Lineartable 17:	INT
Description:	see P4800 / Parameter is relevant for load raw signals of 136.0%.	

4.4.11 P485x Subtraction system

P4850	Sub g:		INT
Selection:	00: not active 01: Pr pre set1 02: Pr pre set2 03: --- 04: Bus 1 [%] 05: Bus 2 [%] 06: Bus 3 [%] 07: Bus 4 [%] 08: AI00 09: AI01 10: AI10 11: AI11 12: AI00 x AI01 13: AI10 x AI11 14: AI01 x Bus 1 [%] 15: AI00 x Panel 16: AI01 x Panel 17: Bus 2 [%] x Panel 18: Bus 3 [%] x Panel 19: P4701 Fixed value 1 20: P4702 Fixed value 2 21: WC 1 22: WC 2 23: WC 3 24: WC 4 25: WC 5 26: Bin-Sim 27: PB total in pr 28: --- 29: --- 30: Transfer value 1 31: Transfer value 2 32: --- 33: DWC3/5 SW1 34: DWC3/5 SW2 35: DWC3/5 SW3 36: DWC3/5 SW4 37: DWC3/5 SL1 38: DWC3/5 SL2	Range:	0-38

Cold start:	00: not active
Description:	This parameter is used when several belt scales are installed in the same conveyor belt. Normally the following belt weigher always measures the material of the previous belt weigher. With this parameter, a net display can be realized.
Indication:	Due to the internal complexity of such a net system, it is strongly discouraged to use it. Such net displays can be realized much more easily in modern visualization systems and PLC's. This parameter has been mainly integrated for compatibility with previous devices.

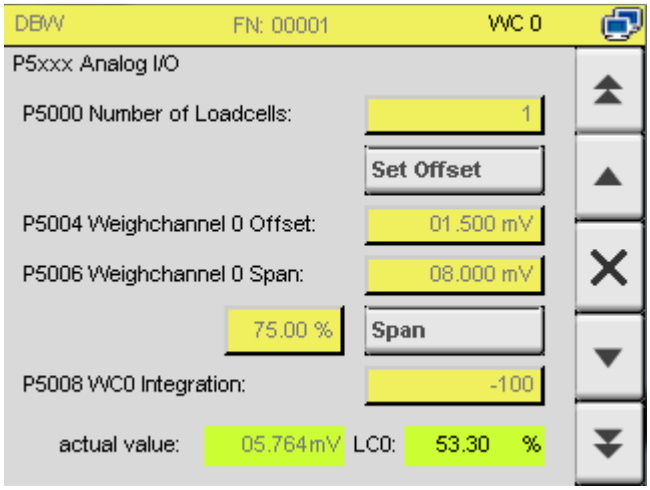
4.4.12 P486x Dry weight calculation

P4860	Moisture source:		INT
	Selection: see P4850	Range:	0-38
Cold start:	00: not active		
Description:	If the weighing system should detect the dry weight of a product, this option can be activated here. This parameter determines which source is used for the actual moisture value. This value is usually determined by a product moisture sensor, which is connected via an analogue input. Alternatively, this value also can be transmitted via Fieldbus.		
Indication:	A dry weight calculation without continuous moisture sensor is usually not reasonable.		

P4862	Moisture baselevel:		INT
	Unit: %	Range:	0,00 - 50,00
Cold start:	0,00		
Description:	The basic moisture adjusted here is always subtracted from the moisture weight measured. This is done independently from the measured actual value of the product moisture sensor.		
Indication:	---		

P4864	Moisture spanlevel:		INT
	Unit: %	Range:	0,00 - 80,00
Cold start:	0,00		
Description:	The moisture range adjusted here is subtracted at 100% (full) input signal from the product moisture sensor additionally to the basic moisture. A correspondingly lower value is subtracted from the measured moisture weight if the sensor signal indicates a lower value.		
Indication:	---		

4.5 Parameter group P5xxx / Analog I/O



The parameter group **„Analog I/O"** includes all parameters, which are relevant for the connected load cell inputs as well as for the conventional analogue inputs and outputs.

4.5.1 P50xx Weighchannel - Parameters

P5000	**Number of Loadcells:**		**INT**
	Unit: Absolute	Range:	1-4
Cold start:	1		
Description:	This parameter describes how many load cells are reserved for the measuring of the actual weight on the measuring length (main measuring). All following load cells are used for optional measurements, such as pre-bin weight or similar.		
Indication:	---		

P5004	**Weighchannel 0 Offset:**		**INT**
P5014	**Weighchannel 1 Offset:**		**INT**
P5024	**Weighchannel 2 Offset:**		**INT**
P5034	**Weighchannel 3 Offset:**		**INT**
P5044	**Weighchannel 4 Offset:**		**INT**
P5054	**Weighchannel 5 Offset:**		**INT**
	Unit: mV	Range:	0,550 - 10,000
Cold start:	1,000		
Description:	This parameter describes the zero point of the respective mV-input. Via the grey key „Set Offset" the actually measured value can be automatically transferred into the parameter.		
Indication:	How many load cell cards are inserted? (R9500)		

P5006	**Weighchannel 0 Span:**	**INT**
P5016	**Weighchannel 1 Span:**	**INT**
P5026	**Weighchannel 2 Span:**	**INT**

P5036	**Weighchannel 3 Span:**	**INT**
P5046	**Weighchannel 4 Span:**	**INT**
P5056	**Weighchannel 5 Span:**	**INT**

	Unit: mV	Range:	0,500 - 12,000

Cold start:	2,000
Description:	This parameter describes the measuring span (100%) of the respective mV-input. Via the grey key „Span" the actually measured value can be automatically transferred into the parameter. Thereby the value is automatically scaled with the adjustable percentage next to it.
Indication:	This parameter is the most important parameter for the measuring of the entire weighing system. In general, a reduction of the parameter causes that the weighing system measures resp. counts MORE. Vice versa a raise of the parameter causes that the weighing system detects LESS, since due to the higher measuring range also a higher input signal gets necessary.

P5008	**WC0 Integration:**	**INT**
P5018	**WC1 Integration:**	**INT**
P5028	**WC2 Integration:**	**INT**
P5038	**WC3 Integration:**	**INT**
P5048	**WC4 Integration:**	**INT**
P5058	**WC5 Integration:**	**INT**

	Unit: Absolute	Range:	-1000 - 1000

Description:	This parameter permits the smoothing of the input signal. Positive numbers smooth the signal by means of an additive averaging. Continuously, n-values are added and after expiration it is divided by this number. With negative values, the steepness of a signal change can be limited. Thus, small changes are completely controlled and larger changes are limited.
Indication:	This parameter is only offered if the associated input card is inserted and recognized by the system.

P5019	**WC1 Tara:**	**INT**
P5029	**WC2 Tara:**	**INT**
P5039	**WC3 Tara:**	**INT**
P5049	**WC4 Tara:**	**INT**
P5059	**WC5 Tara:**	**INT**

	Unit: Checkbox	Range:	0/1

Cold start:	0
Description:	Describes how the tare of a weighing canal is formed. This may vary depending on the application. (e.g. Bin solution or Left/Right detection)
Indication:	---

4.5.2 P52xx Analog input channels - Parameters

P5202	**AI 00 Signaltype:**	**INT**
P5212	**AI 01 Signaltype:**	**INT**
P5222	**AI 10 Signaltype:**	**INT**
P5232	**AI 11 Signaltype:**	**INT**

	Selection:	00: U / Voltage 01: I / Current (mA)	Range: 0-1

Description:	This parameter describes the operation mode of the respective analogue input channel. It is possible to select between voltage signal (V) and current signal (mA), whereby it has to be noted that also the input contact on the card is different for the two adjustments.
Indication:	This parameter is only offered if the associated input card is inserted and recognized by the system.
Dependency:	Analog input card inserted? (R9520)

P5204	**AI 00 Offset:**	**INT**
P5214	**AI 01 Offset:**	**INT**
P5224	**AI 10 Offset:**	**INT**
P5234	**AI 11 Offset:**	**INT**

	Unit:	Absolute	Range: -200 - 5000

Description:	This parameter describes the zero point of the respective analogue input channel. Via the grey key „Set Offset" the actually measured value can be automatically transferred into the parameter. If a 4..20mA - output is desired, this parameter has to be adjusted to 2000 (20.00%), in order to set the basic signal to 4mA.
Indication:	This parameter is only offered if the associated input card is inserted and recognized by the system.

P5206	**AI 00 Span:**	**INT**
P5216	**AI 01 Span:**	**INT**
P5226	**AI 10 Span:**	**INT**
P5236	**AI 11 Span:**	**INT**

	Unit:	Absolute	Range: 1000 - 12000

Description:	This parameter describes the range of the output span of the respective analogue input channel. Via the grey key „Span" the actually measured value (full scale deflection) can be automatically transferred into the parameter. If a 4..20mA - output is desired, this parameter has to be adjusted to 8000 (80.00%), in order to set the working range of the signal to 16mA.
Indication:	This parameter is only offered if the associated input card is inserted and recognized by the system.

P5208	**AI 00 Integration:**	**INT**
P5218	**AI 01 Integration:**	**INT**

P5228	**AI 10 Integration:**			**INT**
P5238	**AI 11 Integration:**			**INT**
	Unit:	Absolute	Range:	-1000 - 1000
Description:	This parameter permits the smoothing of the input signal. Positive numbers smooth the signal by means of an additive averaging. Continuously, n-values are added and after expiration it is divided by this number. With negative values, the steepness of a signal change can be limited. Thus, small changes are completely controlled and larger changes are limited.			
Indication:	This parameter is only offered if the associated input card is inserted and recognized by the system.			

4.5.3 P55xx Analog output channels - Parameters

P5500	**AO 00:**			**INT**
P5510	**AO 01:**			**INT**
P5520	**AO 02:**			**INT**
P5530	**AO 03:**			**INT**
P5540	**AO10:**			**INT**
P5550	**AO11:**			**INT**
P5560	**AO12:**			**INT**
P5570	**AO13:**			**INT**
	Selection:	00: P3 Capacity 01: Feeder setpoint 02: Drive WB 03: 0% output 04: 50% output 05: 100% output 06: g1-load 07: g2-load 08: g3-load 09: Scaling 2 10: Setpoint output 11: P2 Capacity 12: P1 Capacity 13: Deviation % 14: Batch Finestream 15: Feeder Deviation 16: g3 - brutto-Load 17: Transfervalue 1 18: Transfervalue 2 19: Brutto-Load 20: Bin Load % 21: PreBin-Regulator 22: Speed 23: AW 24: Test weight 25: g1RR-Load 26: g1R-Load 27: g1L-Load	Range:	0-31

	28: g1LL-Load 29: g1 total [g] 30: g3 total [g] 31: ---

Cold start:	06: g1-load
Description:	This parameter determines the output signal, which is displayed on the channel.
Indication:	This parameter is only offered if the associated output card is inserted and recognized by the system.
Dependency:	Analog output card inserted? (R9550)

P5502	**AO 00 Signaltype:**	**INT**
P5512	**AO 01 Signaltype:**	**INT**
P5522	**AO 02 Signaltype:**	**INT**
P5532	**AO 03 Signaltype:**	**INT**
P5542	**AO10 Signaltype:**	**INT**
P5552	**AO11 Signaltype:**	**INT**
P5562	**AO12 Signaltype:**	**INT**
P5572	**AO13 Signaltype:**	**INT**
	Selection: 00: U / Voltage 01: I / Current (mA)	Range: 0-1

Description:	This parameter describes the operation mode of the respective analogue output channel. It is possible to select between voltage signal (V) and current signal (mA), whereby it has to noted that also the output pin on the card is different for the two adjustments.
Indication:	This parameter is only offered if the associated output card is inserted and recognized by the system.

P5504	**AO 00 Offset:**	**INT**
P5514	**AO 01 Offset:**	**INT**
P5524	**AO 02 Offset:**	**INT**
P5534	**AO 03 Offset:**	**INT**
P5544	**AO10 Offset:**	**INT**
P5554	**AO11 Offset:**	**INT**
P5564	**AO12 Offset:**	**INT**
P5574	**AO13 Offset:**	**INT**
	Unit: Absolute	Range: 0 - 5000

Description:	This parameter describes the zero point of the respective analogue output channel. If a 4..20mA - output is desired, this parameter has to be adjusted to 2000 (20.00%), in order to set the basic signal to 4mA.
Indication:	This parameter is only offered if the associated output card is inserted and recognized by the system.

P5506	**AO 00 Span:**	**INT**
P5516	**AO 01 Span:**	**INT**
P5526	**AO 02 Span:**	**INT**
P5536	**AO 03 Span:**	**INT**
P5546	**AO10 Span:**	**INT**
P5556	**AO11 Span:**	**INT**
P5566	**AO12 Span:**	**INT**
P5576	**AO13 Span:**	**INT**

	Unit: Absolute	Range:	0 - 10000

Description:	This parameter describes the range of the output span of the respective analogue output channel. If a 4..20mA - output is desired, this parameter has to be adjusted to 8000 (80.00%), in order to set the working range of the signal to 16mA.
Indication:	This parameter is only offered if the associated output card is inserted and recognized by the system.

P5508	**AO 00 Integration:**	**INT**
P5518	**AO 01 Integration:**	**INT**
P5528	**AO 02 Integration:**	**INT**
P5538	**AO 03 Integration:**	**INT**
P5548	**AO10 Integration:**	**INT**
P5558	**AO11 Integration:**	**INT**
P5568	**AO12 Integration:**	**INT**
P5578	**AO13 Integration:**	**INT**

	Unit: Absolute	Range:	-1000 - 1000

Description:	This parameter permits the smoothing of the output signal. Positive numbers smooth the signal by means of an additive averaging. Continuously, n-values are added and after expiration it is divided by this number. With negative values the steepness of a signal change can be limited. Thus, small changes are completely controlled and larger changes are limited.
Indication:	This parameter is only offered if the associated output card is inserted and recognized by the system.

4.5.4 P58xx MoviMot – Parameters

The following parameter group describes the direct control of a SEW-MoviMot frequency converter via RS485 communication module. Logically, the control is primarily comparable to an analog output. Instead of a volt or milli-amp signal, the digital value is transmitted digitally.
Offset, span and averaging can be adapted for signal optimization as with a conventional analog output.
The first communication card MM1yx can control two MoviMots (MM00 - MM01).
The second communication card MM2yx can also control two MoviMots (MM02 - MM03).

P5800	**MM00 set value:**	**INT**
P5810	**MM01 set value:**	**INT**
P5820	**MM10 set value:**	**INT**
P5830	**MM11 set value:**	**INT**

Selection: 00: P3 Capacity
01: Feeder setpoint
02: Drive WB
03: 0% output
04: 50% output
05: 100% output
06: g1-load
07: g2-load
08: g3-load
09: Scaling 2
10: Setpoint output
11: P2 Capacity
12: P1 Capacity
13: Deviation %
14: Batch Finestream
15: Feeder Deviation
16: g3 - brutto-Load
17: Transfervalue 1
18: Transfervalue 2
19: Brutto-Load
20: Bin Load %
21: PreBin-Regulator
22: Speed
23: AW
24: Test weight
25: g1RR-Load
26: g1R-Load
27: g1L-Load
28: g1LL-Load
29: g1 total [g]
30: g3 total [g]
31: ---

Range: 0-31

Cold start:	00: P3 Capacity
Description:	This parameter determines the output signal, which is transferred as number to the inverter.
Indication:	Most common Setpoints are no 03: for the Conveyor Belt drive and 01: for a feeder setpoint
Dependency:	This parameter is only offered if the associated MoviMot card is plugged in and detected by the system.

P5801	**MM00 switch on by:**	**INT**

P5811	**MM01 switch on by:**	**INT**
P5821	**MM10 switch on by:**	**INT**
P5831	**MM11 switch on by:**	**INT**

Selection:

00: ---
01: Warning
02: Ready to operate
03: Stopped
04: Empty
05: g3 - min load
06: g3 - max load
07: Panel
08: Remote
09: Deviation
10: Slip
11: Test/tare runs
12: Lay on testweight
13: Main drive on
14: Feeder on
15: Feeder reduction
16: Direction
17: Feeder open
18: Feeder closed
19: REM/RDY
20: Motor scale
21: Batch enable
22: Coarse stream
23: Fine stream
24: ---
25: Filling weighing bin
26: Bin empty
27: Movement error
28: Deviation detected
29: ---
30: Counter signal
31: Live bit
32: Fieldrelais1
33: Fieldrelais2
34: Fieldrelais3
35: Fieldrelais4
36: Fieldrelais5
37: Fieldrelais6
38: Fieldrelais7
39: ---
40: ---
41: Steering-Command
42: ---
43: Belt misrun
44: ---
45: Local
46: ACK OUT
47: Drives locked
48: ---
49: Beltsteering pull
50: Beltsteering push
51: XD1 Auxiliary drive 1 on
52: XD2 Auxiliary drive 2 on
53: XD3 Auxiliary drive 3 on

Range: 0-95

	54: XD4 Auxiliary drive 4 on 55: XD5 Auxiliary drive 5 on 56: --- 57: --- 58: Parmode active 59: Save parameters 60: Bin max 61: Bin min 62: SF Main drive on 1 63: SF Main drive on 2 64 – 87: --- 88: BCD0_Scan_XXX1 89: BCD0_Scan_XX1X 90: BCD0_Scan_X1XX 91: BCD0_Scan_1XXX 92: BCD1_Scan_XXX1 93: BCD1_Scan_XX1X 94: BCD1_Scan_X1XX 95: BCD1_Scan_1XXX
Cold start:	00: ---
Description:	This parameter describes the enable signal (ON) with which the MoviMot drive is started and stopped.
Indication:	The most common setpoints are number 13: for the main drive and 14: for the MoviMot of the arbiter.
Dependency:	This parameter is only offered if the associated MoviMot card is plugged in and detected by the system.

P5802	**MM00 Direction of rot:**	**INT**
P5812	**MM01 Direction of rot:**	**INT**
P5822	**MM10 Direction of rot:**	**INT**
P5832	**MM11 Direction of rot:**	**INT**
	Selection: 00: CW (clockwise) 01: CCW (counter clockwise)	Range: 0-1
Cold start:	00: CW	
Description:	Depending on the mechanical arrangement of the drive, the direction of rotation must be determined so that the conveyor belt or the screw turnes forward in the correct direction.	
Indication:	It is not possible to change the phase sequence on the MoviMot!	

P5804	**MM00 Offset:**	**INT**
P5814	**MM01 Offset:**	**INT**
P5824	**MM10 Offset:**	**INT**
P5834	**MM11 Offset:**	**INT**
	Unit:	Range: -1000 - +1000
Cold start:	0	
Description:	This parameter defines the zero point of the MoviMot channel.	

Indication:	The output signal is normalized as a number from 0 - 10000 for 0.00 -100.00%.
Dependency:	This parameter is only offered if the associated MoviMot card is plugged in and detected by the system.

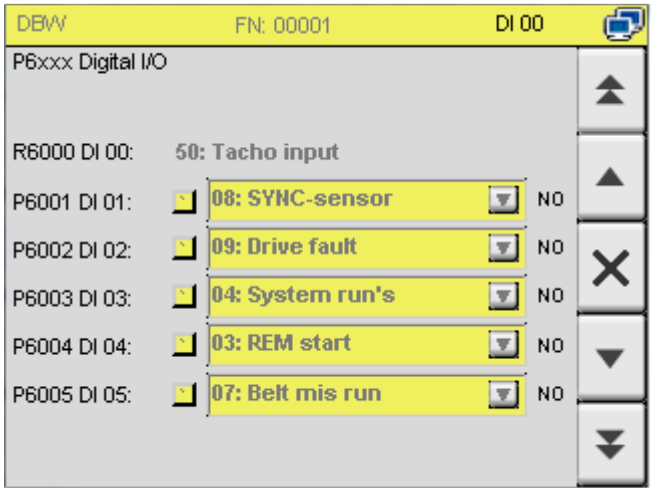
P5806	**MM00 Span:**	**INT**
P5816	**MM01 Span:**	**INT**
P5826	**MM10 Span:**	**INT**
P5836	**MM11 Span:**	**INT**
	Unit:	Range: 8000 – 12000

Cold start:	10000
Description:	This parameter defines the span of the MoviMot channel.
Indication:	The output signal is normalized as a number from 0 - 10000 for 0.00 -100.00%.
Dependency:	This parameter is only offered if the associated MoviMot card is plugged in and detected by the system.

P5808	**MM00 Integration:**	**INT**
P5818	**MM01 Integration:**	**INT**
P5828	**MM10 Integration:**	**INT**
P5838	**MM11 Integration:**	**INT**
	Unit:	Range: -1000 - 1,000

Description:	-1
Indication:	This parameter permits the smoothing of the output signal. Positive numbers smooth the signal by means of an additive averaging. Continuously, n-values are added and after expiration it is divided by this number. With negative values the steepness of a signal change can be limited. Thus, small changes are completely controlled and larger changes are limited.
Dependency:	This parameter is only offered if the associated MoviMot card is plugged in and detected by the system.

4.6 Parameter group P6xxx / Digital In- and Output



The parameter group **„Digital I/O"** permits the parameterisation of all digital inputs and outputs.

4.6.1 P60xx Digital inputs - Parameters

R6000	**DI 00:**		**INT**
	Selection: 50: Tacho input	Range:	50

Cold start:	---
Description:	This parameter describes the tacho input.
Indication:	For internal reasons the tacho has to be located on the DI00-channel and CANNOT be changed by the user.

P6001	**DI 01:**		**INT**
	Selection: 00: --- 01: Counter B clear 02: Counter C clear 03: REM start 04: System runs 05: Remote 06: Panel 07: Belt mis run 08: SYNC-Sensor 09: Drive fault 10: Delete errors 11: Panel start 12: Field input 1 13: Field input 2 14: Field input 3 15: Field input 4 16: Field input 5 17: Field input 6 18: Field input 7 19: Live Bit 20: Tension cleaning chain 21: Start >0< 22: Start TEST (Testweight)	Range:	0-127

23: Start Materialtest
24: Suspend measuring
25: Enable regulator
26: Feeder reduction
27: JOG Feeder
28: ---
29: Refilling Indicator
30: Start Batch
31: Interrupt Batch
32: Emptying system
33: Fine stream
34: Batch Remote setpoint
35: Feedingchannel x 01
36: Feedingchannel x 02
37: Panel stop
38: Counting at g2
39: Calculate dry material
40: Adapt span
41: ---
42: Belt misrun LEFT
43: Belt misrun RIGHT
44: Beltedgesensor on
45: Beltedgesensor off
46: Steering dev extended
47: Steering dev retracted
48: ---
49: Slipdetection
50: Tacho input (not usable!)
51: Emergency device
52: ---
53: ---
54: Drive lock
55: Local
56: LOC start
57: LOC stop
58: Central operation
59: ---
60: JOG main drive
61: ---
62: ---
63: ---
64: Channel 1 start
65: Channel 1 stop
66: ---
67: ---
68: Channel 2 start
69: Channel 2 stop
70: ---
71: ---
72: Channel 3 start
73: Channel 3 stop
74: ---
75: ---
76: Channel 4 start
77: Channel 4 stop
78: ---
79: ---
80: Channel 5 start
81: Channel 5 stop

82 – 91: ---
92: BCD_IN_1
93: BCD_IN_2
94: BCD_IN_4
95: BCD_IN_8
96: XD1 pulse
97: XD1 run
98: XD1 fault
99: ---
100: ---
101: XD2 pulse
102: XD2 run
103: XD2 fault
104: ---
105: ---
106: XD3 pulse
107: XD3 run
108: XD3 fault
109: ---
110: ---
111: XD4 pulse
112: XD4 run
113: XD4 fault
114: ---
115: ---
116: XD5 pulse
117: XD5 run
118: XD5 fault
119 – 127: ---

Cold start:	08: SYNC Sensor
Description:	This parameter describes how the digital input DI01 is used in the weighing system.
Indication:	This input is arranged on the TM1yx card.

P6002	**DI 02:**		**INT**
	Selection: see P6001	Range:	0-127

Cold start:	09: Drive fault
Description:	This parameter describes how the digital input DI02 is used in the weighing system.
Indication:	This input is arranged on the TM1yx card.

P6003	**DI 03:**		**INT**
	Selection: see P6001	Range:	0-127

Cold start:	04: System runs
Description:	This parameter describes how the digital input DI03 is used in the weighing system.
Indication:	This input is arranged on the TM1yx card.

P6004	**DI 04:**		**INT**
	Selection: see P6001	Range:	0-127

Cold start:	00: ---
Description:	This parameter describes how the digital input DI04 is used in the weighing system.
Indication:	This input is arranged on the TM1yx card.

P6005	**DI 05:**		**INT**
	Selection: see P6001	Range:	0-127

Cold start:	07: Belt mis run
Description:	This parameter describes how the digital input DI05 is used in the weighing system.
Indication:	This input is arranged on the TM1yx card.

P6010	**DI 10:**		**INT**
P6011	**DI 11:**		**INT**
P6012	**DI 12:**		**INT**
P6013	**DI 13:**		**INT**
	Selection: see P6001	Range:	0-127

Cold start:	00: ---
Description:	This parameter describes how the digital input DI10 – DI13 is used in the weighing system.
Indication:	This input is arranged on the first DI1yx card.

P6020	**DI 20:**		**INT**
P6021	**DI 21:**		**INT**
P6022	**DI 22:**		**INT**
P6023	**DI 23:**		**INT**
	Selection: see P6001	Range:	0-127

Cold start:	00: ---
Description:	This parameter describes how the digital inputs DI20 - DI23 are used in the weighing system.
Indication:	These inputs are arranged on the second DI2yx card if this card is inserted and recognized by the system.
Dependency:	Input card inserted? (R9600)

P6030	**DI 30:**		**INT**
P6031	**DI 31:**		**INT**
P6032	**DI 32:**		**INT**
P6033	**DI 33:**		**INT**
	Selection: see P6001	Range:	0-127

Cold start:	00: ---
Description:	This parameter describes how the digital inputs DI30 – DI33 are used in the weighing system.

Indication:	These inputs are arranged on the third DI3yx card if this card is inserted and recognized by the system.
Dependency:	Input card inserted? (R9600)

P6040	**DI 40:**	**INT**
P6041	**DI 41:**	**INT**
P6042	**DI 42:**	**INT**
P6043	**DI 43:**	**INT**
	Selection: see P6001 Range:	0-127

Cold start:	00: ---
Description:	This parameter describes how the digital inputs DI40 – DI43 are used in the weighing system.
Indication:	These inputs are arranged on the fourth DI4yx card if this card is inserted and recognized by the system.
Dependency:	Input card inserted? (R9600)

P6050	**DI 50:**	**INT**
P6051	**DI 51:**	**INT**
P6052	**DI 52:**	**INT**
P6053	**DI 53:**	**INT**
	Selection: see P6001 Range:	0-127

Cold start:	00: ---
Description:	This parameter describes how the digital inputs DI50 – DI53 are used in the weighing system.
Indication:	These inputs are arranged on the fifth DI5yx card if this card is inserted and recognized by the system.
Dependency:	Input card inserted? (R9600)

R6100	**DI 00 Inverter:**	**INT**
	Selection: 00: normally open Range:	0-3

Description:	This parameter cannot be changed.
Indication:	see Tacho input (R6000)

P6101	**DI 01 Inverter:**	**INT**
P6102	**DI 02 Inverter:**	**INT**
P6103	**DI 03 Inverter:**	**INT**
P6104	**DI 04 Inverter:**	**INT**
P6105	**DI 05 Inverter:**	**INT**
	Selection: 00: normally open 01: normally closed 02: forced to 1: 03: forced to 0: Range:	0-3

Description:	This parameter permits a change of switching characteristics as well as a forced setting (force) to the values 0 or 1.
Indication:	The forced-functions primarily serve for simulation tests, but can also be used, in order to activate certain functionalities permanently.

P6110	**DI 10 Inverter:**	**INT**
P6111	**DI 11 Inverter:**	**INT**
P6112	**DI 12 Inverter:**	**INT**
P6113	**DI 13 Inverter:**	**INT**
	Selection: see P6101 Range:	0-3

Description:	This parameter describes the input characteristics of the digital inputs DI10 - DI13.
Indication:	These inputs are arranged on the first DI1xx card.

P6120	**DI 20 Inverter:**	**INT**
P6121	**DI 21 Inverter:**	**INT**
P6122	**DI 22 Inverter:**	**INT**
P6123	**DI 23 Inverter:**	**INT**
	Selection: see P6101 Range:	0-3

Description:	This parameter describes the input characteristics of the digital inputs DI20 - DI23.
Indication:	This input is arranged on the second DI2xx card if this card is inserted and recognized by the system.

P6130	**DI 30 Inverter:**	**INT**
P6131	**DI 31 Inverter:**	**INT**
P6132	**DI 32 Inverter:**	**INT**
P6133	**DI 33 Inverter:**	**INT**
	Selection: see P6101 Range:	0-3

Description:	This parameter describes the input characteristics of the digital inputs DI20 - DI23.
Indication:	This input is arranged on the third DI3yx card if this card is inserted and recognized by the system.

P6140	**DI 40 Inverter:**	**INT**
P6141	**DI 41 Inverter:**	**INT**
P6142	**DI 42 Inverter:**	**INT**
P6143	**DI 43 Inverter:**	**INT**
	Selection: see P6101 Range:	0-3

Description:	This parameter describes the input characteristics of the digital inputs DI20 - DI23.

Indication:	This input is arranged on the fourth DI4yx card if this card is inserted and recognized by the system.

P6150	**DI 50 Inverter:**		**INT**
P6151	**DI 51 Inverter:**		**INT**
P6152	**DI 52 Inverter:**		**INT**
P6153	**DI 53 Inverter:**		**INT**
	Selection: see P6101	Range:	0-3

Description:	This parameter describes the input characteristics of the digital inputs DI20 - DI23.
Indication:	This input is arranged on the fifth DI5yx card if this card is inserted and recognized by the system.

4.6.2 P64xx Digital outputs - Parameters

P6400	DO 00:			INT
	Selection:	00: --- 01: Warning 02: Ready to operate 03: Stopped 04: Empty 05: g3 - min load 06: g3 - max load 07: Panel 08: Remote 09: Deviation 10: Slip 11: Test/tare runs 12: Lay on testweight 13: Main drive on 14: Feeder on 15: Feeder reduction 16: Direction 17: Feeder open 18: Feeder closed 19: REM/RDY 20: Motor scale 21: Batch enable 22: Coarse stream 23: Fine stream 24: --- 25: Filling weighing bin 26: Bin empty 27: Movement error 28: Deviation detected 29: --- 30: Counter signal 31: Live bit 32: Fieldrelais1 33: Fieldrelais2 34: Fieldrelais3 35: Fieldrelais4 36: Fieldrelais5 37: Fieldrelais6 38: Fieldrelais7 39: --- 40: --- 41: Steering-Command 42: --- 43: Belt misrun 44: --- 45: Local 46: ACK OUT 47: Drives locked 48: --- 49: Beltsteering pull 50: Beltsteering push 51: XD1 Auxiliary drive 1 on 52: XD2 Auxiliary drive 2 on 53: XD3 Auxiliary drive 3 on 54: XD4 Auxiliary drive 4 on 55: XD5 Auxiliary drive 5 on	Range:	0-95

56: --- 57: --- 58: Parmode active 59: Save parameters 60: Bin max 61: Bin min 62: SF Main drive on 1 63: SF Main drive on 2 64 – 87: --- 88: BCD0_Scan_XXX1 89: BCD0_Scan_XX1X 90: BCD0_Scan_X1XX 91: BCD0_Scan_1XXX 92: BCD1_Scan_XXX1 93: BCD1_Scan_XX1X 94: BCD1_Scan_X1XX 95: BCD1_Scan_1XXX

Cold start:	01: Warning
Description:	This parameter describes how the digital output DO00 is used in the weighing system.
Indication:	This output is arranged on the TM1yx card.

P6401	**DO 01:**		**INT**
	selection: see P6400	Range:	0-95

Cold start:	02: Ready to operate
Description:	This parameter describes how the digital output DO01 is used in the weighing system.
Indication:	This output is arranged on the TM1yx card.

P6410	**DO 10:**		**INT**
	Selection: see P6400	Range:	0-95

Cold start:	30: Counter signal
Description:	This parameter describes how the digital output DO10 is used in the weighing system.
Indication:	This output is arranged on the first DO1yx card.
dependency:	Output card installed? (R9640)

P6411	**DO 11:**		**INT**
	Selection: see P6400	Range:	0-95

Cold start:	03: Stopped
Description:	This parameter describes how the digital output DO11 is used in the weighing system.
Indication:	This output is arranged on the first DO1yx card.

P6412	**DO 12:**		**INT**
	Selection: see P6400	Range:	0-95

Cold start:	06: g3 - max load
Description:	This parameter describes how the digital output DO12 is used in the weighing system.
Indication:	This output is arranged on the first DO1yx card.

P6413	DO 13:		INT
	Selection: see P6400	Range:	0-95

Cold start:	00: ---
Description:	This parameter describes how the digital output DO13 is used in the weighing system.
Indication:	This output is arranged on the first DO1yx card.

P6414	DO 14:		INT
	Selection: see P6400	Range:	0-95

Cold start:	08: Remote
Description:	This parameter describes how the digital output DO14 is used in the weighing system.
Indication:	This output is arranged on the first DO1yx card.

P6415	DO 15:		INT
	Selection: see P6400	Range:	0-95

Cold start:	09: Deviation
Description:	This parameter describes how the digital output DO15 is used in the weighing system.
Indication:	This output is arranged on the first DO1yx card.

P6420	DO 20:		INT
P6421	DO 21:		INT
P6422	DO 22:		INT
P6423	DO 23:		INT
P6424	DO 24:		INT
P6425	DO 25:		INT
	Selection: see P6400	Range:	0-95

Cold start:	00: ---
Description:	This parameter describes how the digital outputs DO20 – DO25 is used in the weighing system.
Indication:	This output is arranged on the second DO2yx card.

P6430	DO 30:	INT
P6431	DO 31:	INT
P6432	DO 32:	INT
P6433	DO 33:	INT
P6434	DO 34:	INT

P6435	DO 35:		INT
	Selection: see P6400	Range:	0-95

Cold start:	00: ---
Description:	This parameter describes how the digital outputs DO30 – DO35 is used in the weighing system.
Indication:	This output is arranged on the second DO3yx card.

P6500	DO 00 Inv:		INT
	Selection: 00: normally open 01: normally closed 02: forced to 1: 03: forced to 0:	Range:	0-3

Description:	This parameter permits a change of the switching characteristics as well as a forced setting (force) to the values 0 or 1.
Indication:	The forced-functions primarily serve for simulation tests, but can also be used, in order to activate certain functionalities permanently.

P6501	DO 01 Inv:		INT
	Selection: see P6500	Range:	0-3

Description:	This parameter describes the output characteristics of the digital output DO01.
Indication:	This output is arranged on the TM1yx card.

P6510	DO 10 Inv:		INT
P6511	DO 11 Inv:		INT
P6512	DO 12 Inv:		INT
P6513	DO 13 Inv:		INT
P6514	DO 14 Inv:		INT
P6515	DO 15 Inv:		INT
	Selection: see P6500	Range:	0-3

Description:	This parameter describes the output characteristics of the digital outputs DO10 - DO15.
Indication:	These outputs are arranged on the first DO1yx card.

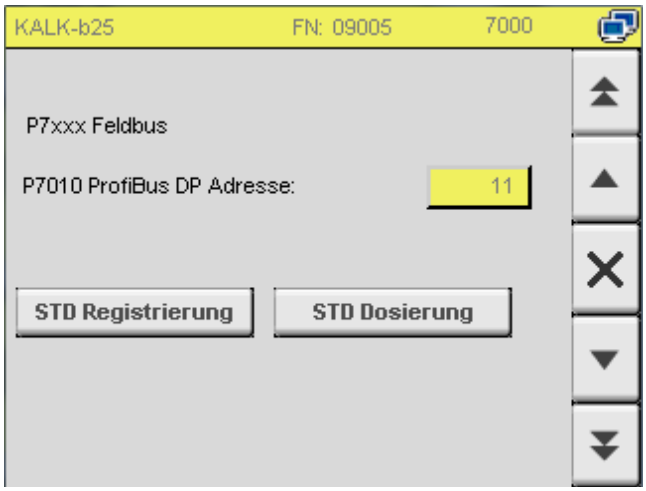
P6520	DO 20 Inv:		INT
P6521	DO 21 Inv:		INT
P6522	DO 22 Inv:		INT
P6523	DO 23 Inv:		INT
P6524	DO 24 Inv:		INT
P6525	DO 25 Inv:		INT
	Selection: see P6500	Range:	0-3

Description:	This parameter describes the output characteristics of the digital outputs DO20 - DO25.
Indication:	These outputs are arranged on the second DO2yx card if this card is inserted and recognized by the system.

P6530	**DO 30 Inv:**		**INT**
P6531	**DO 31 Inv:**		**INT**
P6532	**DO 32 Inv:**		**INT**
P6533	**DO 33 Inv:**		**INT**
P6534	**DO 34 Inv:**		**INT**
P6535	**DO 35 Inv:**		**INT**
	Selection: see P6500	Range:	0-3

Description:	This parameter describes the output characteristics of the digital outputs DO30 – DO35.
Indication:	These outputs are arranged on the third DO3yx card if this card is inserted and recognized by the system.

4.7 Parameter group P7xxx / Fieldbus



The parameter group **„Fieldbus"** permits the adjustment and change of communication possibilities to a central control.

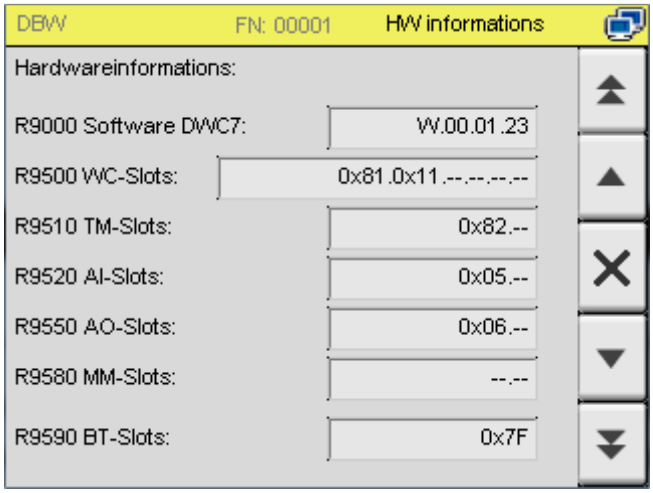
Please, find details on configuration in

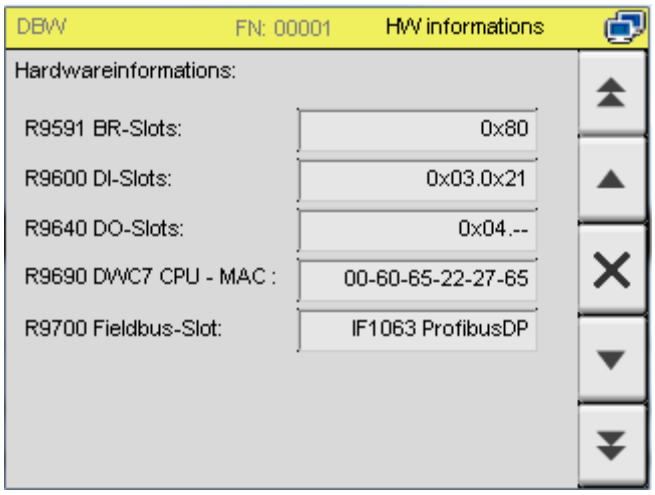
T3-Fieldbus manual.

These functions are only available if a Fieldbus option was acquired and licensed by the manufacturer.
Since the parameters of this group partly interact very detailed with the Fieldbus inserted, the description of the parameter group P7xxx is done in the Fieldbus manual.

4.8 Parameter group P8xxx / reserved for future use

4.9 Parameter group P9xxx / Hardware and Operating Unit Parameters





The parameter group **„Hardware information"** provides information about the current structure of the weighing system.

These parameters cannot be changed. Thus, they are labelled as „R" for "ReadOnly" (only read rights).

R9000	**Software DWC7:**		**String[16]**
	Unit: ---	Range:	A-Z,a-z,0-9, Special character
Description:	Describes the currently installed program version on the digital weighing computer DWC-7A. Usually, the number standing behind must coincide with the program version of the operator panel (R9700). Deviations are only possible after consultation with the manufacturer.		
Indication:	Program versions of the weighing computer DWC-7A are always prefixed with the letter „W".		

4.9.1 P95xx Detailed information about the actually detected Hardware Structure

Especial regulations apply for the slot numbers. The system can be established centrally in one rack as well as decentral solution two racks. The maximum distance between the main rack and the local E/A rack is 100m. For more information please contact KUKLA as manufacturer.

R9500	WC-Slots:	String[16]
	Unit: --- Range:	0-9, Special character
Description:	Shows the slot numbers of the load cell cards (WMxyx) currently recognized by the system.	

R9510	TM-Slots:	String[16]
	Unit: --- Range:	0-9, Special character
Description:	Shows the slot number of the tacho combi card (TMxyx) currently recognized by the system. Usually, also some digital inputs and outputs are located on this card.	

R9520	AI-Slots:	String[16]
	Unit: --- Range:	0-9, Special character
Description:	Shows the slot numbers of the analogue input cards (AIxyx) currently recognized by the system.	

R9550	AO-Slots:	String[16]
	Unit: --- Range:	0-9, Special character
Description:	Shows the slot numbers of the analogue output cards (AOxyx) currently recognized by the system.	

R9580	MM-Slots:	String[16]
	Unit: --- Range:	0-9, Special character
Description:	Shows the slot numbers of the MoviMot output cards (MMyxy) currently recognized by the system. Actually, communication with MoviMot frequency converters is made via RS485 interface, but functionally seen it is an analogue data output.	

R9590 R9591	BT-Slots: BR-Slots:	String[16] String[16]
	Unit: --- Range:	0-9, Special character
Description:	Shows the slot numbers of the bus transmitters (BT1C1) and bus receivers (BR1N1) interface cards. These cards are only installed in systems with an optional cable reduction package.	

R9600	DI-Slots:		String[16]
	Unit: ---	Range:	0-9, Special character
Description:	Shows the slot numbers of the digital input cards (DIxyx) currently recognized by the system.		

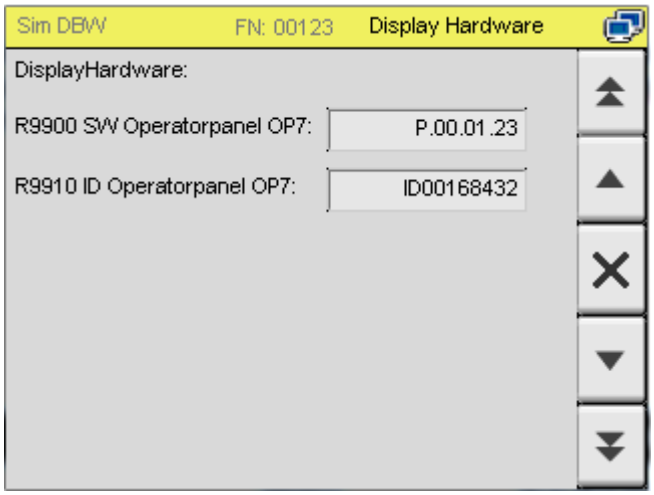
R9640	DO-Slots:		String[16]
	Unit: ---	Range:	0-9, Special character
Description:	Shows the slot numbers of the digital output cards (DOxyx) currently recognized by the system.		

R9690	DWC7 CPU - MAC:		String[16]
	Unit: MAC-ID (hex)	Range:	xx-xx-xx-xx-xx-xx
Description:	The MAC (media access control address) of the first Ethernet interface is displayed on the CPU of the base unit.		

R9700	Fieldbus-Slot:		String[16]
	Unit: ---	Range:	Text
Description:	Displays which Fieldbus module is inserted at the slot on the left side of the CPU and is recognized.		
Indication:	For internal reasons, if a fieldbus module is plugged in, always the fieldbus type is displayed which is stored in the internal firmware of the base unit. Example: Profinet module is physically plugged in, basic device has a Profibus software loaded, so "IF1063 ProfibusDP" is displayed.		

4.9.2 P99xx Software Version OP-7A

The following parameters refer to the operator panel unit and **NOT** to the base unit (belt scale). They can therefore appear in the parameter lists of several basic units, depending on where they were requested.



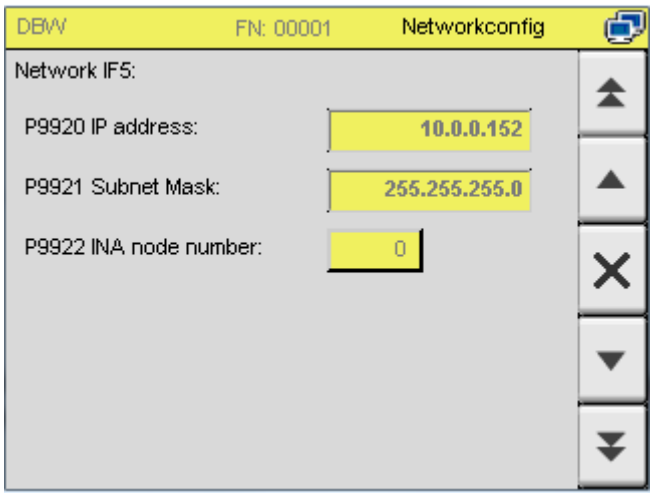
The parameter group **"Display Hardware"** provides information exclusively relating to the current operator panel.
These parameters get NOT stored in the base unit.

These parameters cannot be changed. Thus, they are labelled as „R" for "ReadOnly" (only read rights).

R9900	**SW Operatorpanel OP7:**		**String[16]**
	Unit: ---	Range:	A-Z,a-z,0-9,
Description:	Describes the currently installed software version of the program on the operating unit.		
Indication	Program versions of the operating unit OP-7A are always prefixed with the letter "P". Normally, the number standing behind must coincide with the program version of the connected base unit (R9000). Deviations are only possible after consultation with the manufacturer.		

R9910	**ID Operatorpanel OP7:**		**String[16]**
	Unit: ---	Range:	ID,0-9
Description:	Shows the internal serial number of the OP7 operating unit.		
Indication	This number is NOT identical with the fabrication number (FN)!		

4.9.3 P992x IP-Settings for LAN – Access to local IT Network



The parameter group P992x is relevant for the connection into a IT network provided by the costumer. This communication is made via the Ethernet interface IF5.

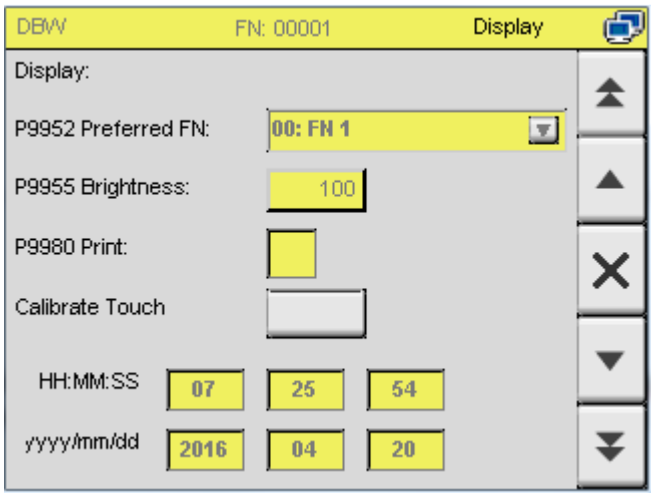
The internal communication between the operator panel and the base unit is only possible via the interface IF4.

P9920	IP Address:		String[16]
	Selection: IP	Range:	xxx.xxx.xxx.xxx
Description:	This parameter permits the setting of the IP address, by which the operating unit OP7 connects to the customer's network.		
Indication	It must be noted that an access from the customer's network (e.g. via VNC) always leads to the operating unit OP-7A. A direct access to the actual base unit (DWC-7A) is not possible.		

P9921	Subnet Mask:		String[16]
	Selection: IP-Subnet-Mask	Range:	xxx.xxx.xxx.xxx
Description:	In this parameter, the system-wide Subnet mask of the superordinate IP system must be entered.		
Indication	---		

P9922	INA Node number:		INT
	Selection:	Range:	0-19
Description:	This parameter is usually used for the manufacturer´s routing requirements (e.g. for software updates) and should not be changed by the costumer.		
Indication:	---		

4.9.4 P995x Display - Basic Settings



This parameter group contains settings, which are only relevant for the display.

P9952	Preferred FN:		String[16]
	Selection:	Range:	0-15
Description:	This parameter determines which basic unit is the initial favorite communication partner after a restart.		
Indication	In this way it can be achieved that different control units in the SAME network primarily connect to different base units. Thereby, it is prevented that all displays only show the first scale and all others have to be selected manually after a general power failure.		

P9955	Brightness:		INT
	Selection: ---	Range:	20 - 100
Cold start:	---		
Description:	With this parameter the brightness of the backlight of the display is determined.		
Indication	---		

4.9.5 P998x External process data printout

P9980	Print:			INT
	Unit:	Checkbox	Range:	0/1
Cold start:	0			
Description:	A special print log, which uses an optional, serial interface in the OP-7A can be activated.			
Indication	---			

For printing a document, a text file named "Print.txt" is required. Note that the file name is case sensitive. The text file can be created in an editor like Notepad. The file size of the text document must be at least 31 bytes. The content of this file is basically arbitrary. Certain wildcards, which are always prefixed with a percent sign, are replaced by the actual values from the control during the transformation process (creation of the log). Thus, the actual printout with the included process data results.

The most important wildcards are:

%RA	Counter A
%RB	Counter B
%RC	Counter C
%RP	Capacity
%Rp	Capacity in percent
%Rg	Actual load in percent (g1)
%RV	Actual speed absolute
%Rv	Actual speed in percent
%RT	Time
%Rd	Date
%RF	Fabrication number FN
%RN	Counting ID

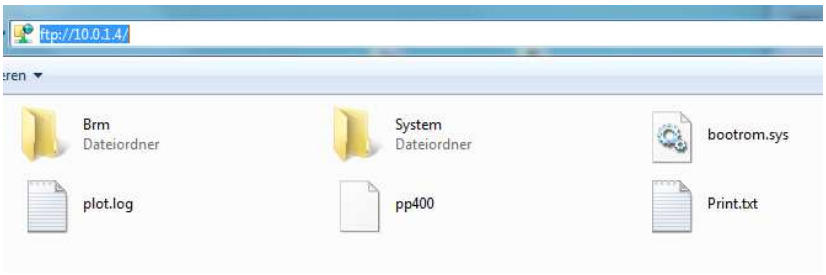
Note that wildcards are case sensitive!

A print file might look as follows:

Rawdata (not transformed):	Transformed:
Kukla Count A: %RA Count B: %RB Count C: %RC Set value: %RP Set value: %Rp Load: %Rg Speed: %RV Speed: %Rv Time: %RT FM: %RF Pressure number: %RN Datum: %Rd ----------	Kukla Count A: 2544kg Count B: 2544kg Count C: 2544kg Set value: 20,00 t/h Set value: 100% Load: 63,54% Speed: 192,0 m/s Speed: 76,80% Time: 08:51 FM: 9597 Pressure number: 12 Datum: 26.02.2015 ----------

The IP Address (see R9920) of the Panel must be known, in order to be able to copy the file to the Panel.

Via Windows, the Explorer permits a connection by means of "ftp://IP address/".
Simply copy the file into the main directory of the Panel by drag and drop.



When counter B or counter C are cleared, the actual printing is performed.

4.9.6 Touchscreen Calibration

Via the key 

a calibration of the touch screen can be performed.

In order to perform the operation, the four calibration points must be pressed as precisely and centrally as possible successively.

Logically, this calibration can only be performed locally on the display and NOT via the VNC remote connection.

4.9.7 Clock setup at Operator Panel

In the represented area the time can be adjusted manually.

An automatic setting via time server and an automatic switchover to winter / summer time can be expected in future versions.

5 Annex

5.1 Remarks