Manual

Weight controller type Flex-CK

Actual weight

−0,002 kg

| Zero | Tare |

Low level: 0,102 kg
High level: 0,300 kg

Recipe: Recipe 01
Status: Program stopped

60

0

0,0 Pcs/min

| Return | Start | Recipe |

PENKO

INDICATOR / CONTROLLER

FLEX III

INDUSTRIAL INSTRUMENTATION

Table of contents.

Explanation of production screen.

Possible Indicator Errors:
```
------------   : Indicator not available.
= = = = =      : Maximum display value exceeded.
UUUUU          : Hardware Under load (loadcell defect?).
OOOOO          : Hardware Over load (loadcell defect?).
CCCCC          : No valid calibration available
```

Run mode
Rejector Low output on
Check OK output on
Rejector High output on

Tare active
Zero active
Indicator stable

Sign

Actual weight

$-0,002$ kg

Create new zero level

Zero

Tare

Create new Tare level

Actual Low level — Low level: 0,102 kg

Actual High level — High level: 0,300 kg

Speed bar maximum — 60

Actual recipe — Recipe: Recipe 01

Actual status — Status: Program stopped

Actual production speed — 0,0 Pcs/min — 0

Return to main menu

<< Return

Start

Recipe

Select/edit recipe

Start controller in run mode

PENKO

INDICATOR / CONTROLLER

FLEX

Wiring connection for Flex-CK model Flex.

Loadcell connection

Loadcell connection,
15p sub-D Female:

1. + Excitation
2. + sense
3. – Excitation
4. – Sense
5. + Signal
6. – Signal

Housing. Shield
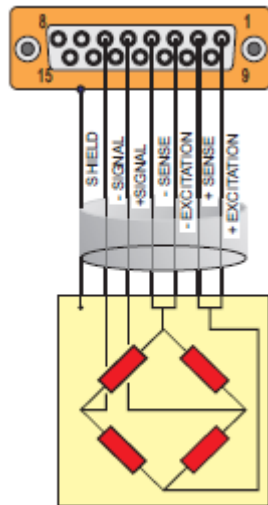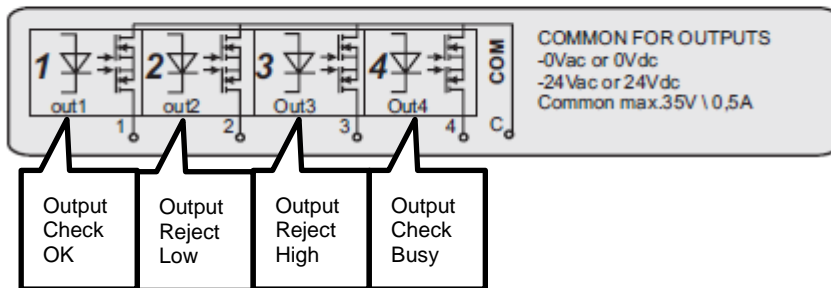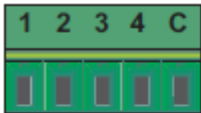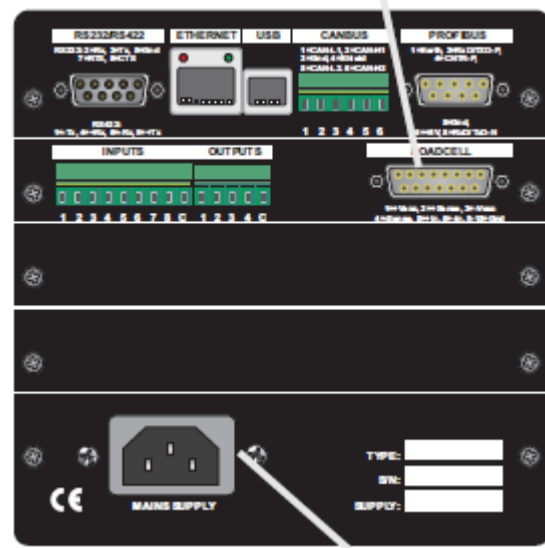
**AC Power supply
230 Vac   50/60 Hz**

Digital Outputs:

COMMON FOR OUTPUTS
-0Vac or 0Vdc
-24Vac or 24Vdc
Common max.35V \ 0,5A

| Output Check OK | Output Reject Low | Output Reject High | Output Check Busy |
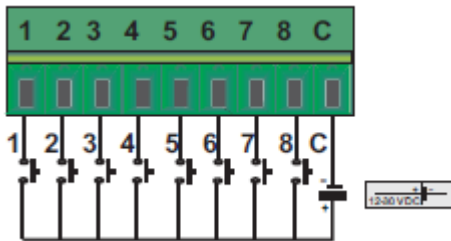
Digital Inputs:

Input 1: Start (option)
Input 2: Stop (option)
Input 3: Start Check
Input 4-8: Not used

Wiring connection for Flex-CK model Flex-2100.

Loadcell connection,
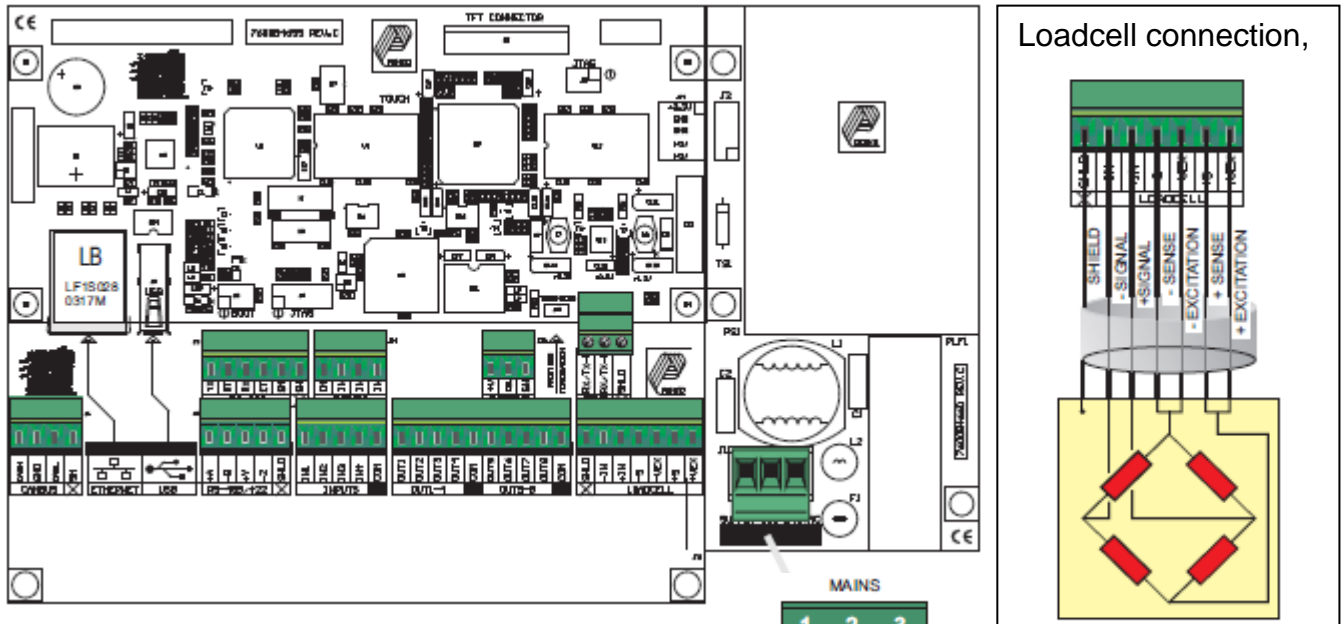
Digital Outputs:

AC Power supply
230 Vac   50/60 Hz
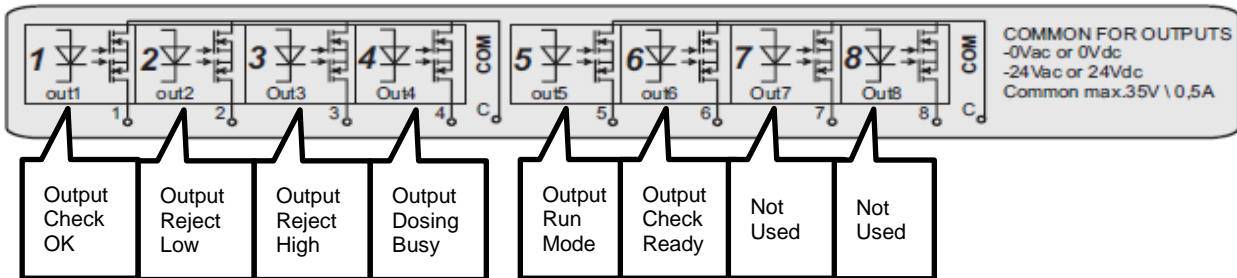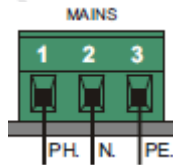
| Output Check OK | Output Reject Low | Output Reject High | Output Dosing Busy | Output Run Mode | Output Check Ready | Not Used | Not Used |

COMMON FOR OUTPUTS
-0Vac or 0Vdc
-24Vac or 24Vdc
Common max.35V \ 0,5A

Digital Inputs:

Input 1: Start (option)
Input 2: Stop (option)
Input 3: Start Check
Input 4-8: Not used

Selection Menu.

From the Selection menu it's possible to enter the several Screens.

The Configuration and System setting are locked by a password, log-in with the Log-in button first. To log-out, press the Log-out button.
The overall password is "25630".

Screen if Configuration and System settings are disabled:

Screen if Configuration and System settings are enabled:

First use of the indicator.

Before using the controller, please setup the internal indicator first.

Login first to enter the System settings,
Default no password is selected.
The overall password is "25630".

```
┌─────────────────────────┐
│  Enter the System       │
│  settings.              │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐   ┌─────────────────────────────────────────┐
│  Set the display        │   │ The step size defines the scaled parts   │
│  stepsize in the        │   │ of the weight value.                      │
│  indicator format menu. │   │ The display value will be round off to    │
└─────────────────────────┘   │ the nearest value with a valid step size. │
            │                 │ Step size can be set at 1, 2, 5, 10, 20,  │
            ▼                 │ 50, 100, 200, 500, 1000, 2000 or 5000.    │
                              └─────────────────────────────────────────┘
```
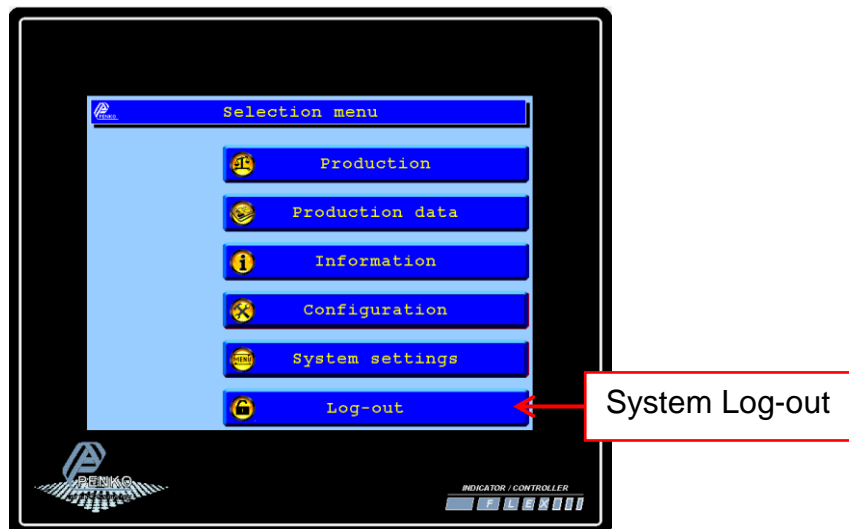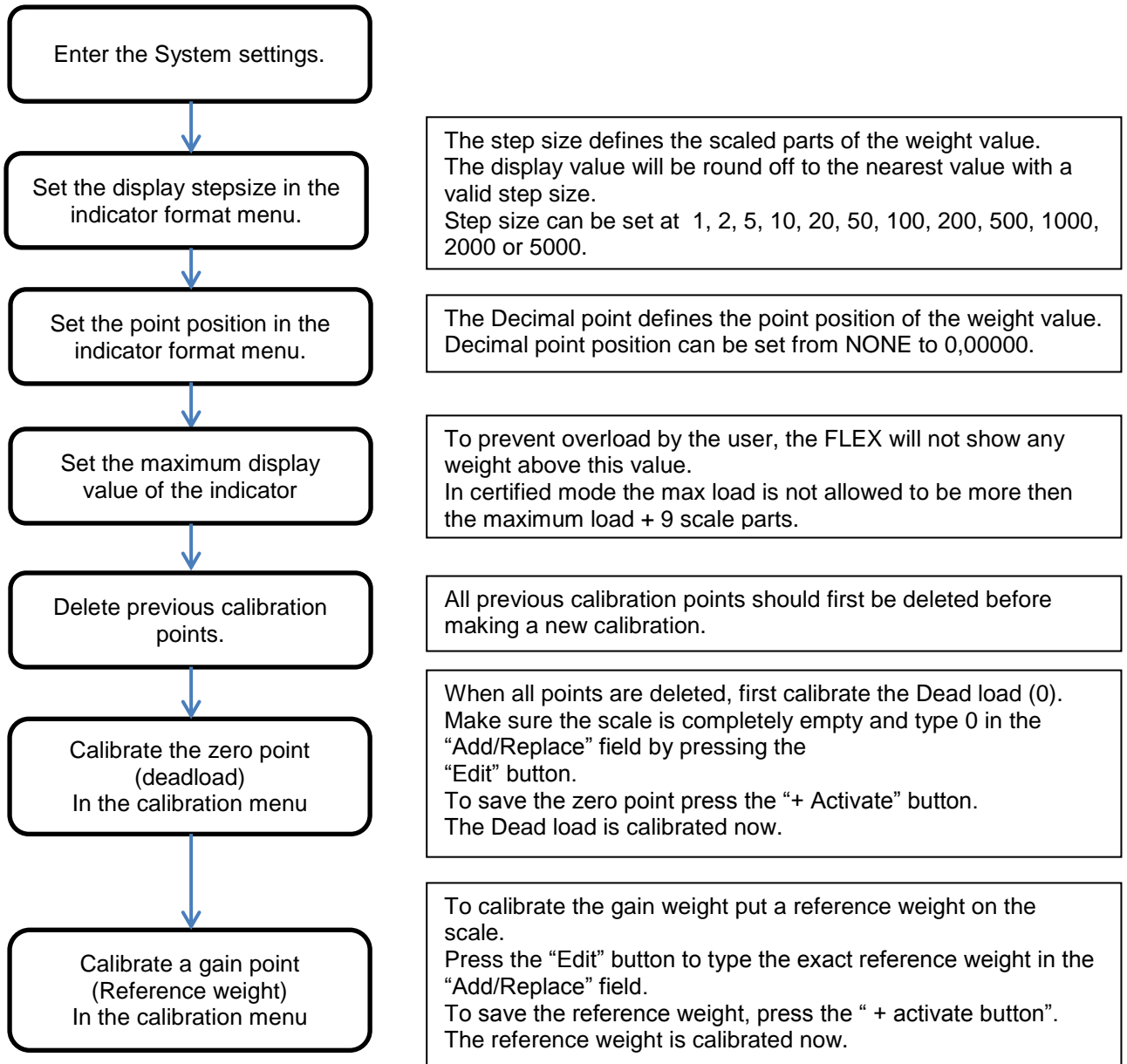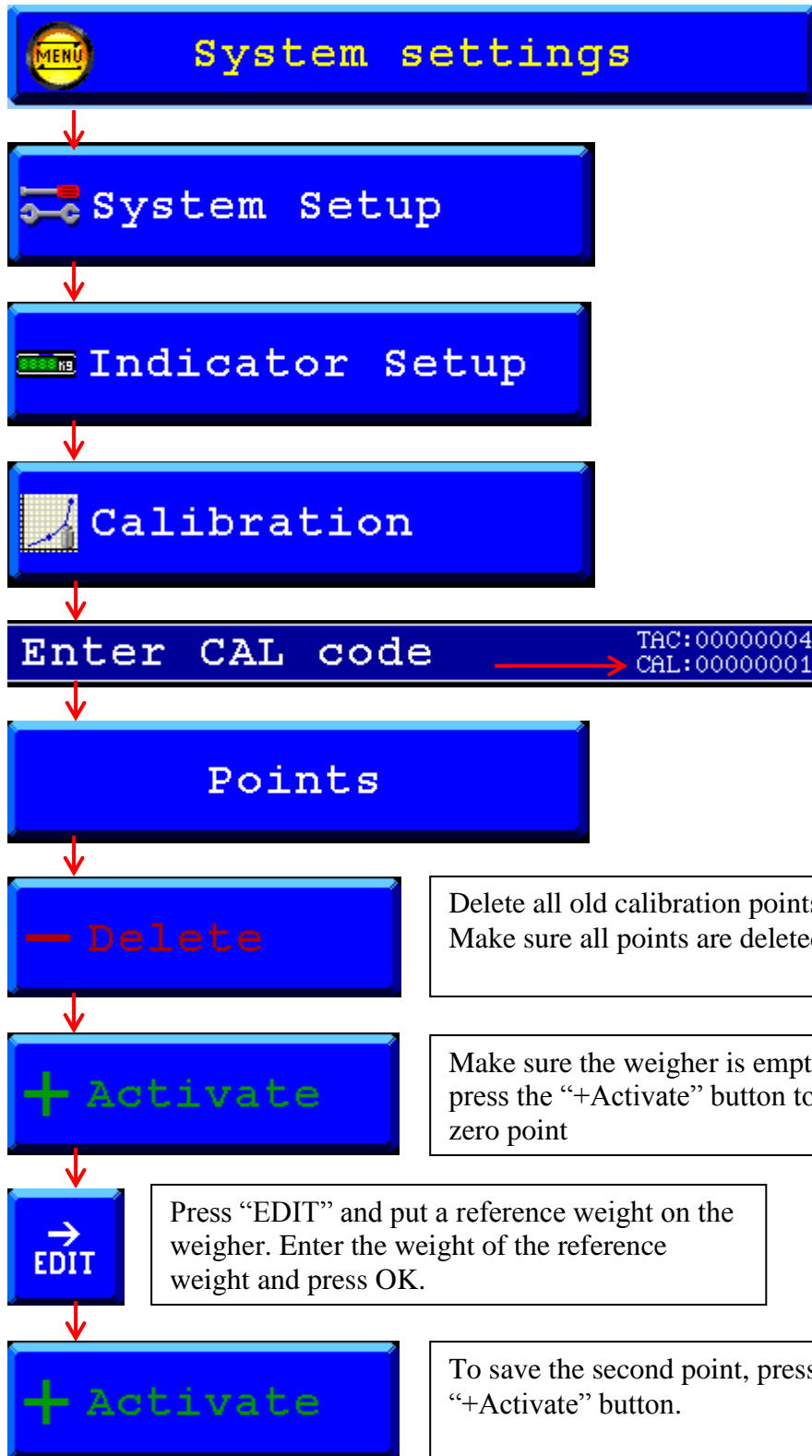
The step size defines the scaled parts of the weight value.
The display value will be round off to the nearest value with a valid step size.
Step size can be set at 1, 2, 5, 10, 20, 50, 100, 200, 500, 1000, 2000 or 5000.

Set the point position in the indicator format menu.

The Decimal point defines the point position of the weight value.
Decimal point position can be set from NONE to 0,00000.

Set the maximum display value of the indicator

To prevent overload by the user, the FLEX will not show any weight above this value.
In certified mode the max load is not allowed to be more then the maximum load + 9 scale parts.

Delete previous calibration points.

All previous calibration points should first be deleted before making a new calibration.

Calibrate the zero point (deadload) In the calibration menu

When all points are deleted, first calibrate the Dead load (0).
Make sure the scale is completely empty and type 0 in the "Add/Replace" field by pressing the "Edit" button.
To save the zero point press the "+ Activate" button.
The Dead load is calibrated now.

Calibrate a gain point (Reference weight) In the calibration menu

To calibrate the gain weight put a reference weight on the scale.
Press the "Edit" button to type the exact reference weight in the "Add/Replace" field.
To save the reference weight, press the " + activate button".
The reference weight is calibrated now.

Calibration.

To calibrate the indicator, follow the next steps:

System settings

↓

System Setup

↓

Indicator Setup

↓

Calibration

↓

Enter CAL code ⟶ TAC:00000004 CAL:00000001

> Enter the "CAL" code and press OK.
> This "CAL" code is shown in the right upper corner.

↓

Points

↓

— Delete

> Delete all old calibration points.
> Make sure all points are deleted.

↓

+ Activate

> Make sure the weigher is empty and press the "+Activate" button to save the zero point

↓

→ EDIT

> Press "EDIT" and put a reference weight on the weigher. Enter the weight of the reference weight and press OK.

↓

+ Activate

> To save the second point, press the "+Activate" button.

Setup the Checkweigher configuration.

Before using the controller, please setup the configuration for your application first.

Login first to enter the System settings,
Default no password is selected.
The overall password is "25630".

Press the blue "Edit" fields to enter the needed values.
Press the question marks to open information about the parameter.
Press the "OK" button to return to the previous screen and save the settings.

Open parameter information

Edit parameters

Factory settings:

Stability	:OFF
Hold time	:0.00 sec (disabled)
Display hold time	:2.00 sec
Max. Speedbar	:120 pcs/min
Password	:0 (disabled)

Quit without saving

Quit and save

Configuration Parameters.

```
                    Stability
Weigher stablility (Check delay time)
can be switched on or off.
It selects the type of delay time
before sampling starts.

This parameter works together with
the H-Time.

OFF = No delay
H+S = First H-Time then Stable
H = Only H-Time
H/S = H-Time or Stable
S+H =First Stable then H-Time
                   ✔ Ok
```

```
                    H-Time
This is the time the controller waits
before sampling starts.

The H-Time works together with the
stability parameter.
                   ✔ Ok
```

```
                 Display Hold
After sampling is finished the
display hold time starts.
The sampled value will be froozen on
the display for this time.
After this time the display is "Live"
again.
When a new package arives during this
time the hold time will be stopped.
                   ✔ Ok
```

```
                 Max. Speedbar
The max value of the speedbar on the
production screen.
                   ✔ Ok
```

```
                   Password
Password to protect the system
settings, configuration setting and
edit recipe parameters.
When this parameter is set to zero no
password is active.
                   ✔ Ok
```

Select/Edit Recipe.

To select a recipe, press the "recipe" button from the production screen.

Select a recipe by pressing on the recipe name in the blue fields.
Use the scroll bar to select the next recipes.
The screen will automatically return to the production screen after selection.

To edit a recipe Press the recipe number in the gray fields.
To enter the recipe edit screen the user must be logged in.
To return to the production screen without changes, press the "Return" button.
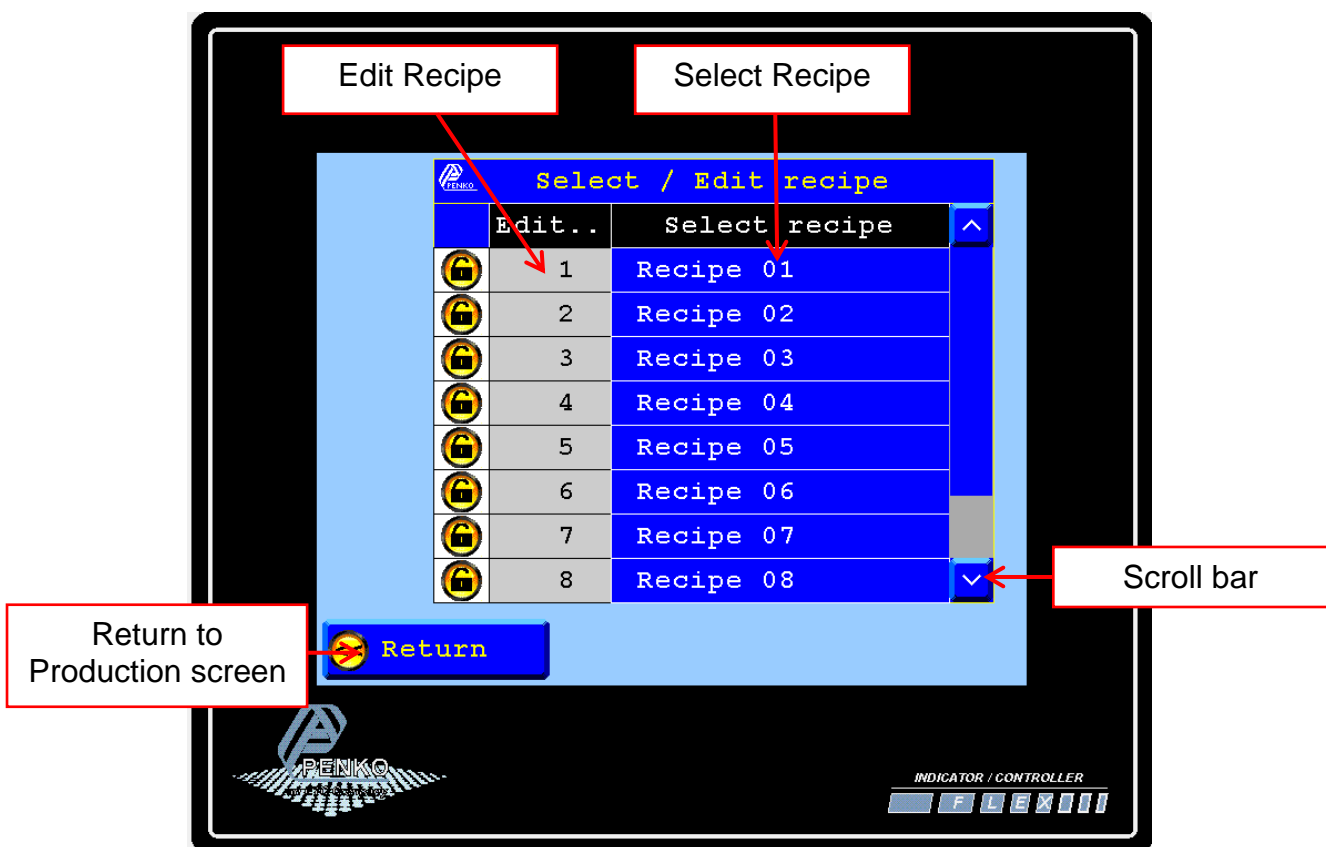
Edit Recipe parameters.

To edit the recipe name, press the recipe name button.
To edit a recipe parameter, press the value in the blue fields.
Press the question marks to open information about the parameter.
To return to the previous screen and save the recipe, press the "Return" button.
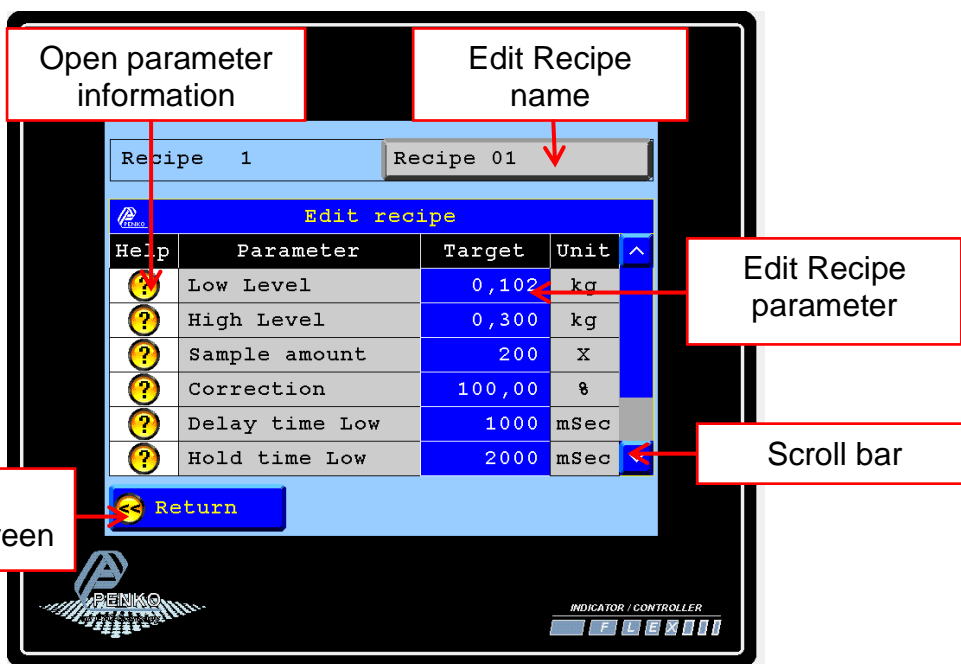
Use the scroll bar to enter the next values.
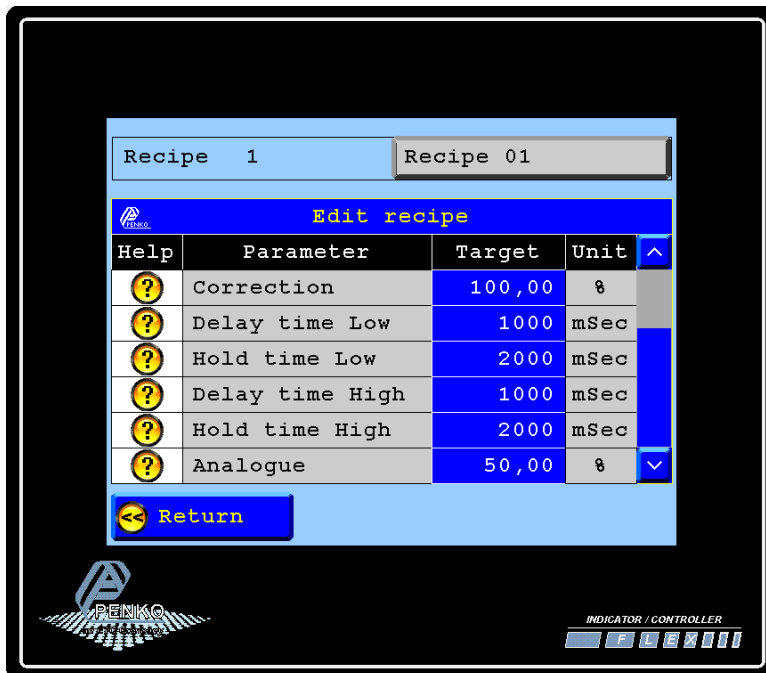
Recipe parameters.

Low level   X

If the checked weight is below this value, the package will be rejected by output low.

High level   X

If the checked weight is above this value, the package will be rejected by output high.

Sample amount   X

Sample amount is the amount of samples to take during the check of the package.

Correction   X

With the Correction factor it's possible to correct the fault caused by the dynamic caristics of the machine.

Correction is possible from 0,00 to 200,00 %.

100,00 % means no correction

Delay time low   X

Delay time for output low after low level detection.

Hold time low   X

Hold time for output low after activating the output.

Delay time high   X

Delay time for output high after high level detection.

Hold time high   X

Hold time for output high after activating the output.

Analogue Speed   X

Set the value for the analogue output, in 0,01%
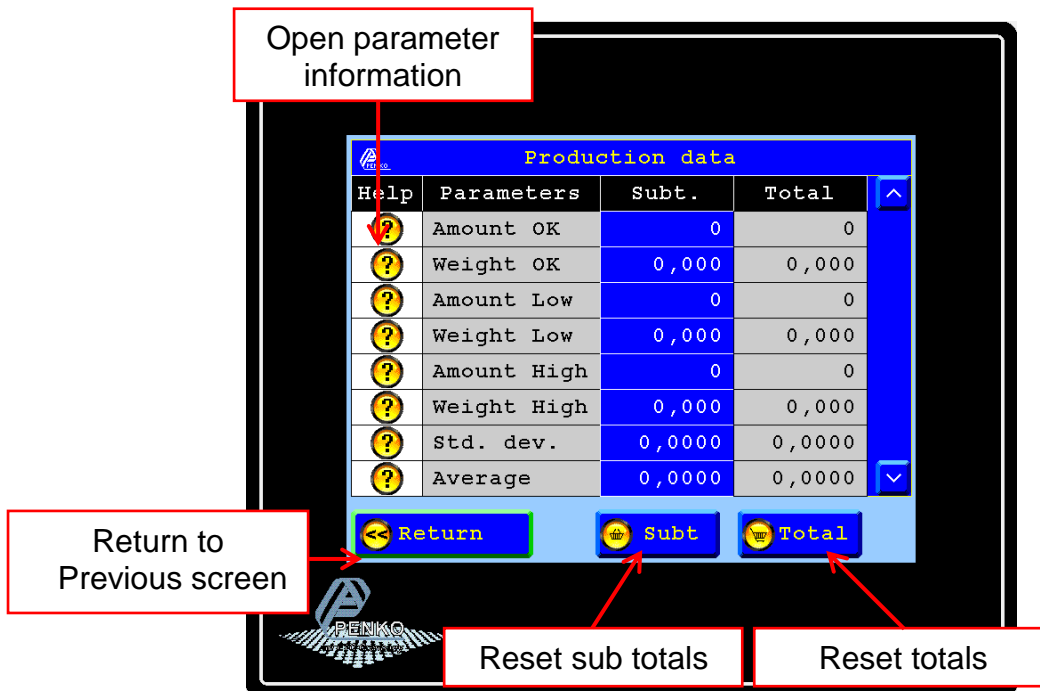

Production data.

To view the total checked values, press the "production data" button.

To reset the subtotals, press the Subt." Button
To reset the totals and subtotals, press the "Total" button.
Press the Question marks to open information about the parameter.
To return to the previous screen, press the "Return" button.

Open parameter information

Help	Parameters	Subt.	Total
?	Amount OK	0	0
?	Weight OK	0,000	0,000
?	Amount Low	0	0
?	Weight Low	0,000	0,000
?	Amount High	0	0
?	Weight High	0,000	0,000
?	Std. dev.	0,0000	0,0000
?	Average	0,0000	0,0000

Production data

`<< Return`   `Subt`   `Total`

Return to Previous screen

Reset sub totals   Reset totals

Amount high   X

The amount high shows the total pieces of the too high checked packages.

Amount OK   X

The amount OK shows the total pieces of the OK checked packages.

Weight OK   X

The weight OK shows the total weight of the OK checked packages.

Weight high   X

The weight high shows the total weight of the too high checked packages.

Amount low   X

The amount low shows the total pieces of the too low checked packages.

Standard deviation   X

The standard deviation shows how much variation there is from the average.
A low standard deviation indicates a high repeatability.

Weight low   X

The weight low shows the total weight of the too low checked packages.

Average   X

This is the average value from the checked OK values.

The average should be as close as possible to the Setpoint.

Information.

To view the Penko contact information, press the "information" button from the selection menu.
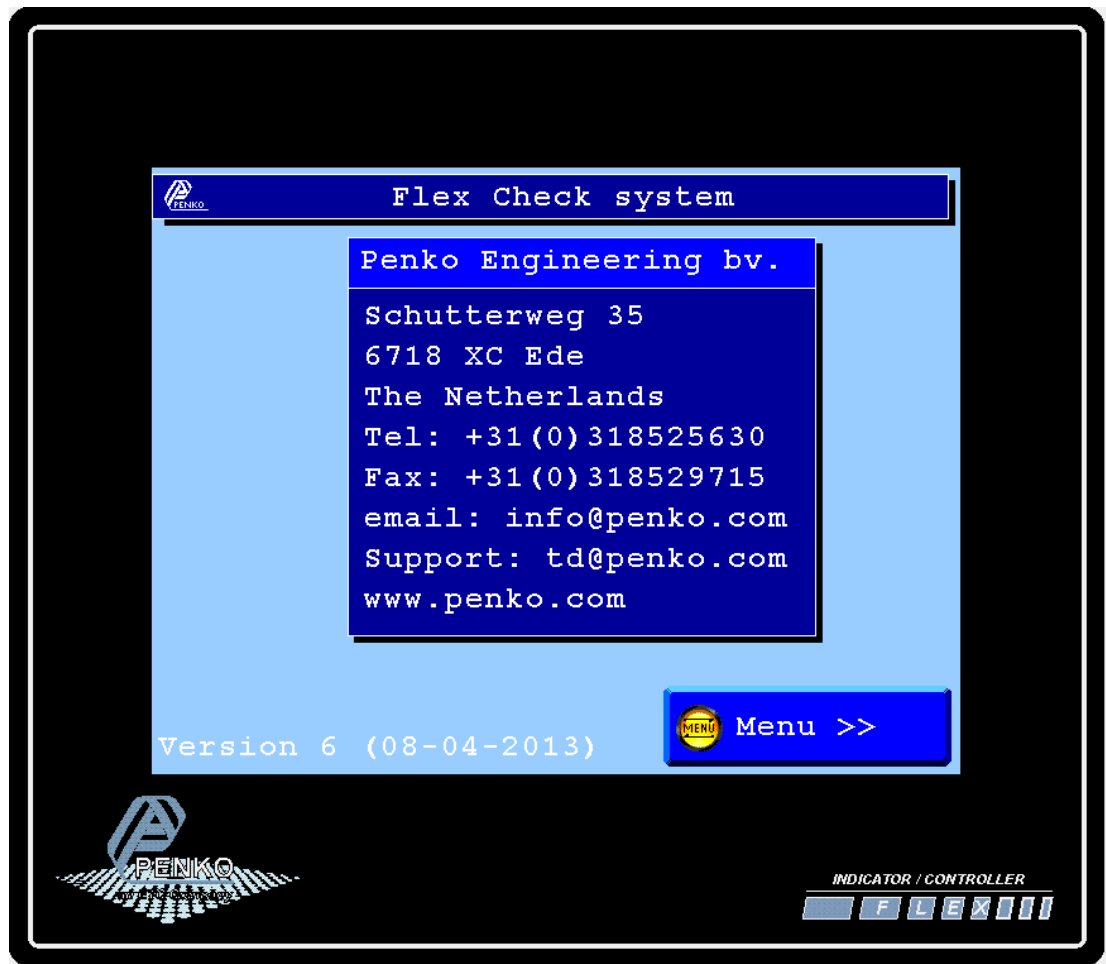
Sequence example.
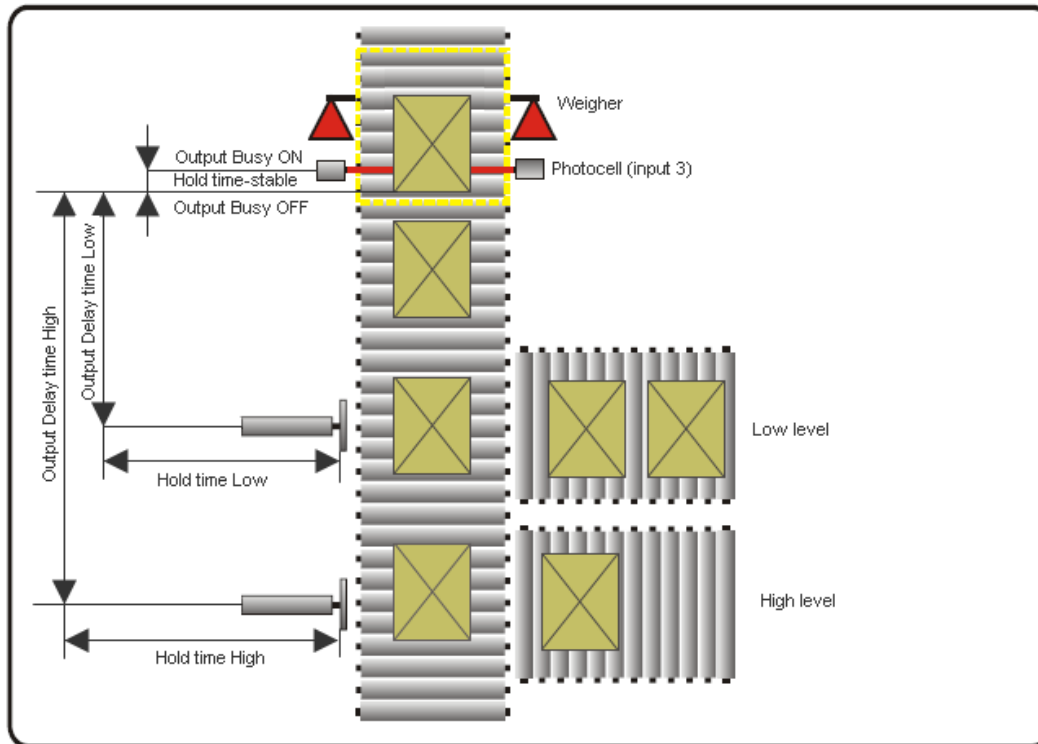
Sequence:

1. Start.
2. Wait for Start
3. Start Check (Input 3).
4. Check busy ON
5. Wait for stable and Holdtime parameter.
6. Take amount of Samples.
7. Check if weight is too low
   a. No, to point 8
   b. yes, start Delay time low
8. Check if weight is too High
   a. No, to point 9
   b. Yes, start delay time high
9. If weight OK, output OK ON
10. Check busy OFF
11. Dosing ready ON.
12. Wait till input start OFF.
13. Dosing ready OFF.
14. Restart.