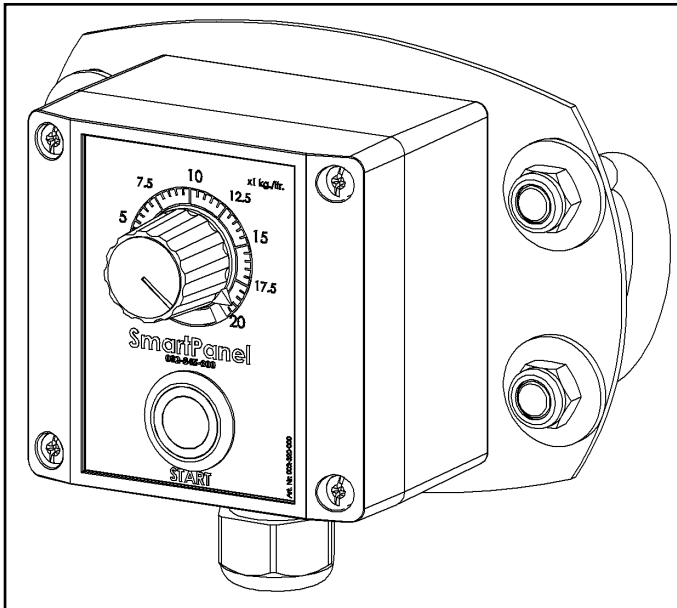


# SmartPanel

002-345-000



**Stand-Alone besturingseenheid**

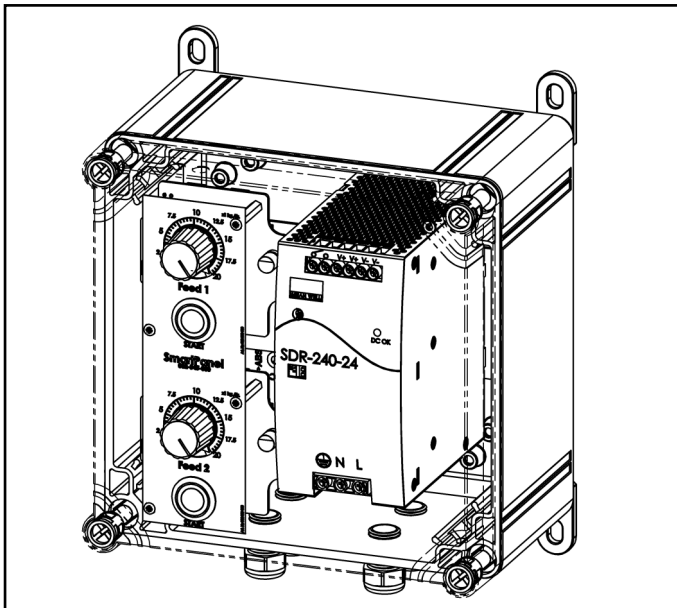
**Stand-alone controller**

**Stand-alone Steuereinheit**

**Boitier de commande**

Installation- and operation manual

EN



Article number: 010-230-000

Date: January 2017

Version 1.2 - Translation of original manual

According to Annex 1 chapter 1.7.4 Machine guideline 2006/42/EG



**HANSKAMP**

Innovation for dairy farming

Doetinchem,  
The Netherlands  
[www.hanskamp.nl/en](http://www.hanskamp.nl/en)

## Preface

### Manual Contents

This manual contains the information necessary for the correct installation and operation of a Hanskamp SmartPanel.

Study and understand this information thoroughly before configuration of the SmartPanel. Failure to do so could result in damage to equipment. Please consult your milking equipment dealer if you do not understand the information in this manual, or if you need additional information.

All information in this manual has been compiled with care. Hanskamp shall not be liable for errors or faults in this manual. The recommendations are meant to serve as guidelines. All instructions, pictures and specifications in this manual are based on the latest information that was available at the time of publication. Your SmartPanel may comprise improvements, features or options that are not covered in this manual.

### Applicability

The table below shows the type numbers of the SmartPanel for which this manual is applicable. This number can vary, according to the type of power supply, the number of feed types that should be controlled, and the scale that is used on the SmartPanel's sticker. These variations in the type number are indicated with the letters A, B and C, in the table below.

### Model designation

Model	Type number	Number of feed types (A)	Power supply (B)	Scale (C)
SmartPanel	002-345-ABC		0: None	0: none
		1: 1 feed type	1: Tractor connection(14VDC COBO-plug)	1: 0 - 800 gr/ml
		2: 2 feed types	2: Mounted inside PowerUnit 10A 24VDC with position switch	2: 0 - 2 kg/L
		3: 3 feed types	3: Mounted inside PowerUnit 20A 24VDC with position switch	3: 0 - 4 kg/L
		4: 4 feed types	4: Trafo 1.6A 24VDC (Only 10/28 RPM motors)	4: 0 - 8 kg/L
				5: 0 - 12 kg/L
			6: 0 - 20 kg/L	

### Contact number Local Service Provider

We suggest you write the name, address and telephone number of your local service provider contact in the table below. This makes sure you can easily find the information.

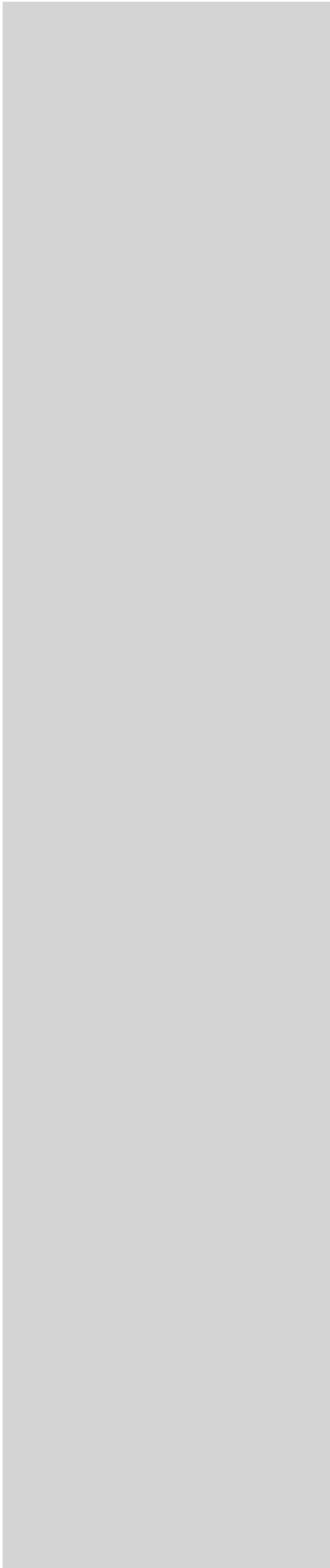
Name	
Address	
Telephone number	
E-mail address	

## 1. Introduction

The SmartPanel of Hanskamp is a control unit, which is used to control several stand-alone feeding systems made by Hanskamp, such as the MultiDos HighSpeed and Pipefeeder HighSpeed, for example mounted in a milking parlour, milking carousel, or feed robot. On a single SmartPanel, one feeding dosator can be controlled. It is driven by a 12-24V DC power supply. Additionally, up to four SmartPanels can be mounted inside a single PowerUnit, which is then acting as the SmartPanels' power supply. The amount of feed that is to be distributed by the dosator can be controlled by using the potentiometer located on the SmartPanel. Additionally, a position switch can be connected to send a feed-start signal.

The information in this manual is for farmers and technicians.

- Dairy farmers use the information to test and adjust the SmartPanel or to list overviews.
- Technicians use the information to install and setup the SmartPanel.



## 2. Safety

### 2.1 Introduction

The safety alert symbol identifies important safety messages on your SmartPanel and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instruction of the safety message.



*Safety alert symbol*

### 2.2 Signal Words

Note the use of the signal words DANGER, WARNING and CAUTION with the safety messages. The signal word for each message uses the following guidelines:



**Warning!** *Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed.*



**Danger!** *Indicates a imminently hazardous situation that, if not avoided, will result in death or serious injury.*

### 2.3 Safety Instructions

YOU are responsible for the SAFE operation and maintenance of your SmartPanel . YOU must make sure that you and anyone else who is going to operate, maintain or work in the vicinity of the SmartPanel knows all the related SAFETY information in this manual. YOU are the key to safety. Good safety practices protect you and the people around you. Make these practices a working part of your safety program. Make sure EVERYONE who operates, maintains or works near the SmartPanel obeys the safety precautions. Do not risk injury or death by ignoring good safety practices.

- SmartPanel owners must train operators before they operate the SmartPanel . This training must be repeated at least annually.
- The operator must read, understand and obey all safety and operating instructions in the manual.
- A person who has not read and understood all safety and operating instructions is not permitted to operate the SmartPanel .
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment, and persons.
- Only use approved spare parts, and make sure they are only installed by authorized technicians.

### 2.3.1 General Safety

- Read and understand the manual and all safety signs before you connect power supplies to operate or adjust the SmartPanel.
- Only trained persons are permitted to operate the SmartPanel. A first-aid kit must be available near the SmartPanel. Store in a highly visible place.
- A carbon dioxide or foam fire extinguisher must be available near the SmartPanel. Store the fire extinguisher in a highly visible place.
- Install all protective covers and guards before you operate the SmartPanel.
- Wear the correct protective clothing and equipment. Disconnect and isolate the electrical power supply before you clean or do maintenance on the SmartPanel.
- Know the emergency medical centre number for your area.
- Contact your nearest milking equipment dealer provider if you have any questions
- Review safety related items with all operators frequently (annually).

### 2.3.2 Electrical Safety

- Only an authorized electrician must install the electrical power supply for the SmartPanel.
- Make sure the electrical grounding of the electrical system and all parts of the SmartPanel meet the local rules and regulations.
- Replace any damaged electrical lines, conduits, switches and components immediately.
- Isolate the electrical power supply before you open the SmartPanel to work on the electrical system.

### 2.3.3 Installation Safety

- Read and understand the instructions in this manual.
- Make sure the SmartPanel is correctly installed.

### 2.3.4 Operating Safety

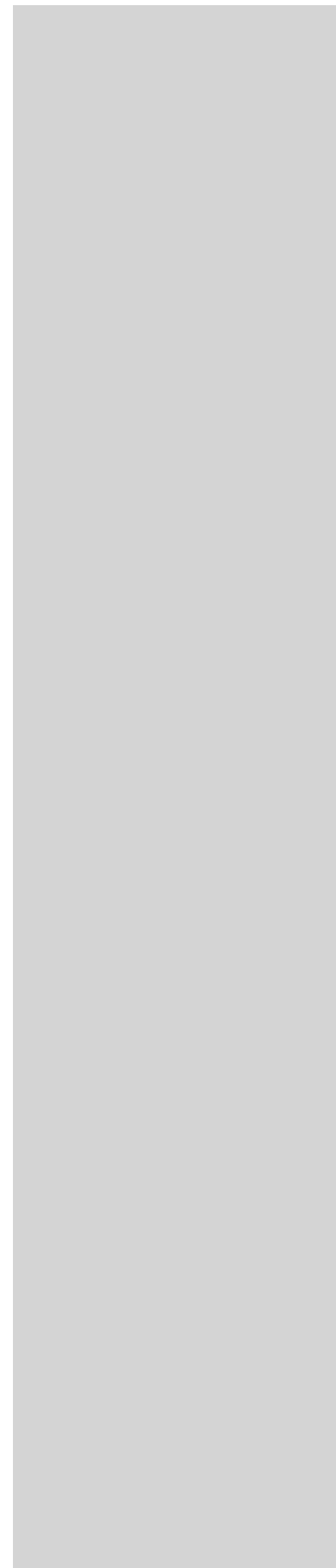
- Read and understand the applicable and all safety signs before you connect power supplies to operate, maintain or adjust the SmartPanel.
- Only trained persons are permitted to operate the SmartPanel.
- Switch off the electrical power supply by taking plug out of the power point and secure the plug before you clean or do maintenance on the SmartPanel.
- Install the covers and guards before you operate the SmartPanel.
- Keep hands, feet, hair and clothing away from all the electrical parts.
- Keep unauthorized persons, especially small children away from the SmartPanel at all times.
- Before the electrical supply is attached to the SmartPanel, make sure all parts are tight and that all the parts are in good condition.
- Contact your nearest milking equipment dealer if you have any questions.

### 2.3.5 Maintenance Safety

- Read and understand the applicable manual and all safety signs before you connect power supplies to operate or adjust the SmartPanel.
- Only trained persons are permitted to maintain the SmartPanel.
- Switch off the electrical power supply by taking plug out of the power point and secure the plug before you clean or do maintenance on the SmartPanel.
- Wear protective clothing and safety goggles when you do work on the electrical system.
- Make sure all the covers and guards are installed when maintenance work is complete.

### 2.3.6 Safety Decals

- General safety messages appear in this safety messages section. Specific safety messages are in applicable parts of this manual when potential hazards may occur if the instructions or procedures are not followed.



### 3. Installation instructions

#### General description:

The SmartPanel (see *fig. 1&2*) of Hanskamp is a stand-alone control unit, used to control feedings dosators. It has got a potentiometer and a push button, which respectively can be used for setting the required feed volume and for signaling the dosator to start feeding. The SmartPanel is driven by a 12-24V DC power input. Additionally, up to four SmartPanels can be mounted inside a single PowerUnit, which is functioning as the SmartPanels' power supply. The SmartPanel can be used for controlling one feeding dosator. Additionally, a position switch can be connected to send a feed-start signal.

This installation instruction will guide you through the installation of the SmartPanel. Please read the whole installation instruction and keep the safety instructions in mind. Examples for mounting can be seen on [www.hanskamp.nl/en](http://www.hanskamp.nl/en)

Order numbers and names of the product parts are shown in Annex 1 to 4.

#### Transport and storage:

The SmartPanel will be transported in a sealed box. Sealing is done with tape and the inside of the box is covered with protection foil to prevent damaging the SmartPanel. The storage of the SmartPanel is also handled in a similar way.

**Warning! Always move the box very carefully!**

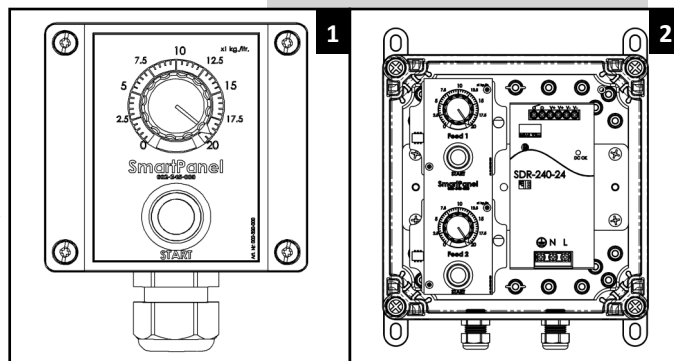


**Warning! When unpacking the box there are different parts that may fall out of the box! Always keep the box stable with the opening on top!**

**Warning! Watch out for damages or lose ends that could suffer injuries.**

#### Stickers:

The user and installer are responsible for the safe operation and maintenance of the SmartPanel. Two stickers need to be placed on the SmartPanel, namely the product specification sticker and a sticker with a scale (fig. 3&4 show the sticker for the small housing). These will be placed respectively on the side and front of the SmartPanel. When SmartPanels are mounted inside the PowerUnit, a combined sticker is used, as shown in figure 5. The right location is indicated in figure 6, using a dotted outline. Next to that, the sticker with scale is shown in figure 7. The scale on the scale sticker can deviate from the shown stickers, as this can be modified to meet specific requirements.



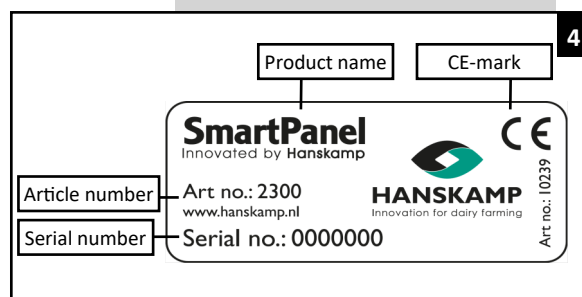
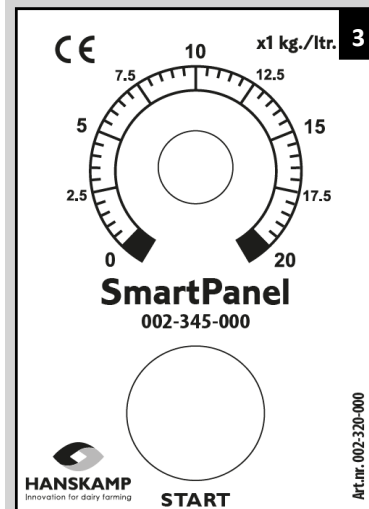
#### Delivery specifications

##### The box contains

- 002-345-01X SmartPanel
- or:
- 002-345-X2X SmartPanel in PowerUnit

##### Optional parts:

- 002-327-000 Mounting bracket



**Applying the stickers:**

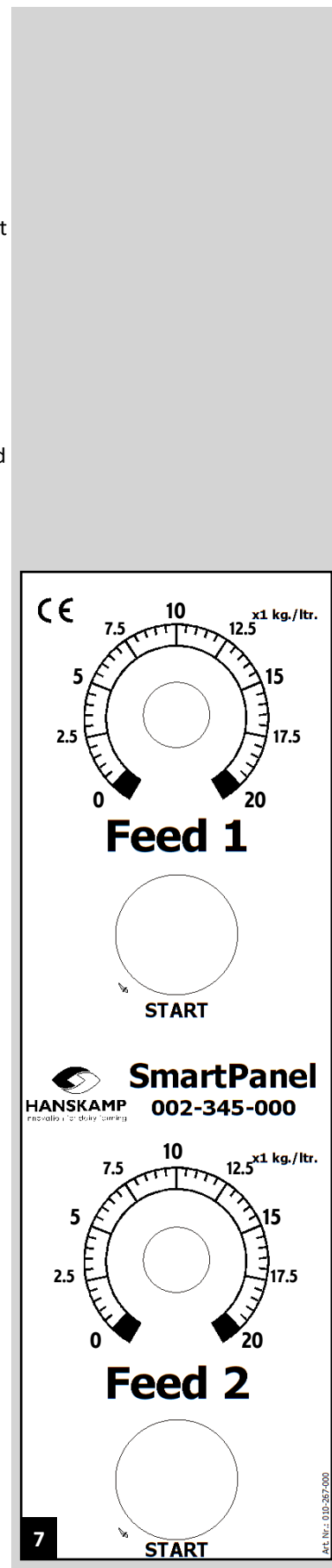
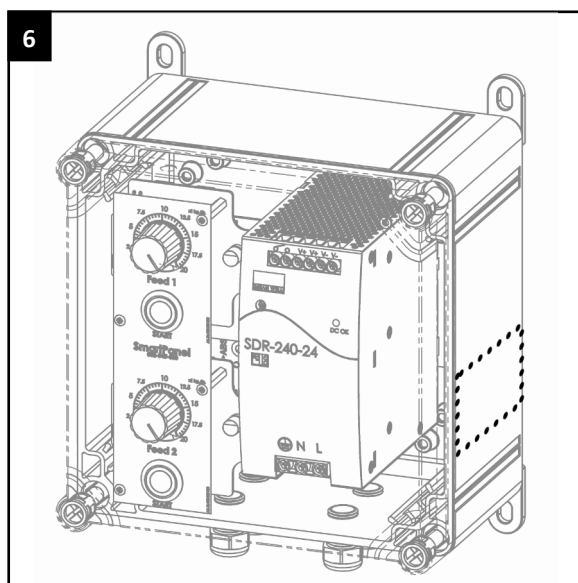
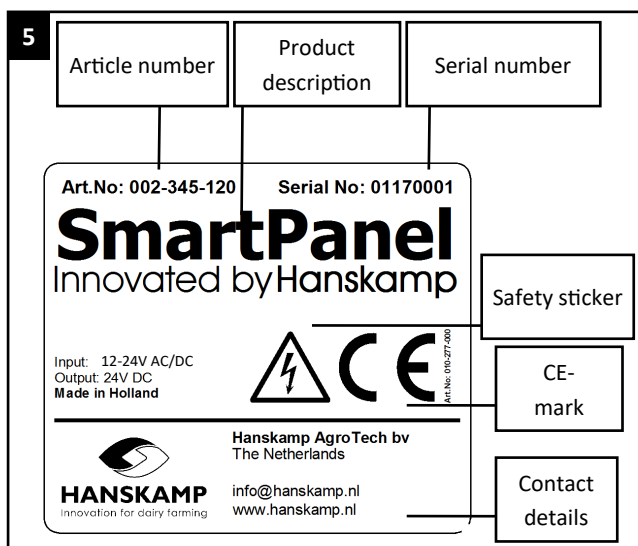
- Make sure the surface is dry and clean.
- Ensure that the surface temperature doesn't get below 5°C.
- Find the right position for the sticker.
- Remove a small part of the film on the backside of the sticker.
- Place the sticker on the surface. Next, press a small part of the adhesive layer on the surface.
- Remove the foil carefully and apply the whole sticker on the surface.
- Use a needle to make small air holes in the sticker and use the foil to smoothen out the sticker.

**Maintenance of the safety stickers**

The safety stickers on the SmartPanel give you important and helpful information which will help you to control and maintain the SmartPanel safely and correctly.

Follow the instructions below to make sure that the stickers will stay at the right position and in the right condition.

- Keep the safety stickers clean and readable. Clean the safety stickers with soap and water. Do not use solvents and/or abrasives that can damage the safety stickers.
- Replace missing or illegible safety stickers.
- Safety stickers are available at Hanskamp. Make sure to use the item numbers for correspondence.





**Installation:**

1. Check if all the assembly parts are present. The list of materials can be found in the appendix.
2. Determine the right place in the area of the milking parlour for mounting the SmartPanel on the wall. This place must be equipped with a power supply (12-24V DC, or 230V in case of using a PowerUnit as power supply for the SmartPanel), accessible and free of moisture. When this place is found, the SmartPanel can be attached to the wall. Use the mounting feet at the outside of the SmartPanel. In figure 9 on the next page, an overview is shown of a possible SmartPanel setup.



**Attention! No fastening material is supplied to mount the PowerUnit with mounted SmartPanels on the wall.**



**Warning! In order to prevent cows from damaging cables, manoeuvre away the cables carefully. Always use a protective tube or cable tray.**

3. Mount all the dosators according the enclosed manual. Slide the cables that come from the dosators through the couplings at the bottom of the SmartPanel into the housing (annex 1&3). In annex 7 can be seen how the dosator cables should be connected to the SmartPanel.



**Warning! Turn off the power of the SmartPanel before attaching/installing the cables.**

3. If a position switch is used, the incoming feed signal is first stored in the memory of the circuit board of the SmartPanel. When the position switch is then actuated, the stored signal will be passed through to the connected feed dosator. This allows for delayed feeding. Mount the position switch in such a way that it will be actuated as soon as the feed trough is located right beneath the feed dosator (see fig. 8). The cable of the switch can be passed through the couplings of the SmartPanel, into the housing. It is possible to connect multiple feed types to a single position switch. When liquid feed is dispensed (e.g. using a MultiDos), and the feeding system is equipped with a feed dump valve, place the position switch in such a way that the liquid is dispensed on top of other feed stuff (e.g. concentrate). This ensures a better feed uptake. If necessary, use a separate switch for the MultiDos HighSpeed.

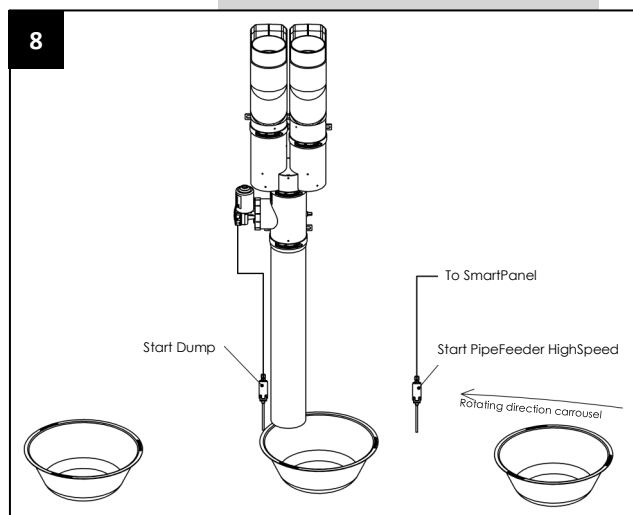


**Warning! For a correct operation, you have to install the dispensers subsequent at the SmartPanel.**

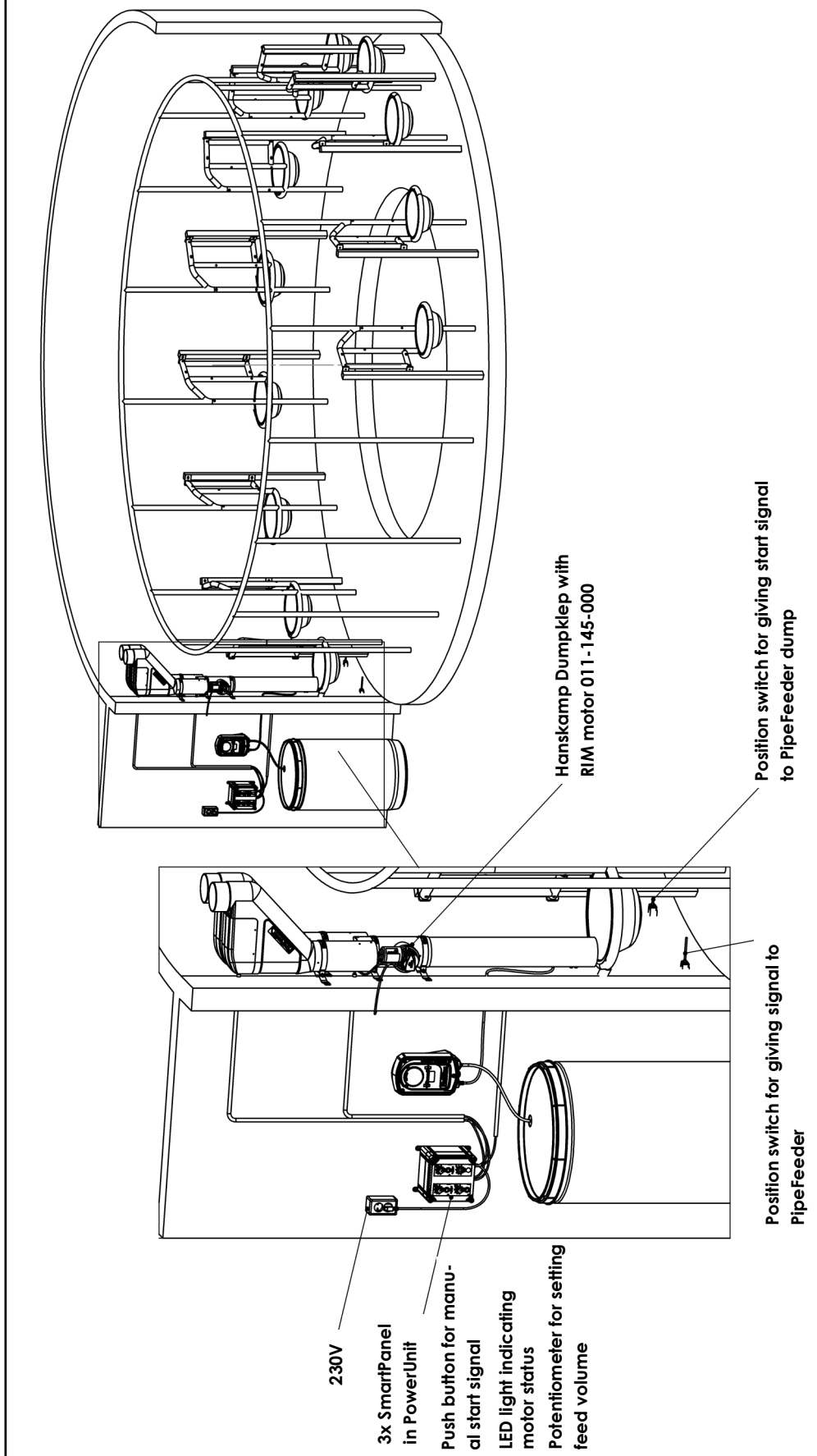
6. Carefully mount the cover on the housing. Make sure cables do not get stuck between the cover and the housing.
7. Insert the plug into the wall socket.



**Warning! The SmartPanel is now under electrical voltage.**



9 Overview of a possible setup: feeding using 2 PipeFeeders, 1 MultiDos., in combination with a PipeFeeder Dump dumpvalve



8. In order to calibrate the SmartPanel, a potentiometer (1) and a push button (2) are used (see fig. 10). Using the following steps, you will teach the SmartPanel to actuate the feeding dosator for a required duration, in order to dispense the required amount of feed:
- Place a measuring cup or bucket underneath the dosator, to catch and measure the dispensed amount of feed.
  - Press the push button (LED lights up), and keep pressing it for 5 sec. (LED starts flashing).
  - Release the push button; the dosator motor will start to run.
  - Let the dosator run, until an amount of feed is dispensed that can be easily measured.
  - Briefly press the push button (LED starts flashing rapidly); the dosator motor stops running.
  - Measure/weigh the dispensed amount of feed.
  - Select the measured amount of feed, using the rotary knob on the SmartPanel, and briefly press the pushbutton afterwards to confirm settings (LED turns off).
  - The values are now saved; the calibration is finished.

In annex 8, a schematic overview of the different calibration steps are shown. As an example, 4 kg of feed is measured, during 15 seconds.



**Warning! The system can only work correctly if it is calibrated carefully. Repeat the calibration proceedings every time when the pallet silo is refilled to make sure the system works in a correct way.**

9. If the SmartPanel is correctly mounted and calibrated, it is ready to be used. This is done in the following way:
- Select the required amount of feed, using the rotary knob.
  - Briefly press the push button (LED lights up); the selected amount of feed is now being dispensed.
  - Afterwards, the dosator will stop on its own (LED turns off).

In order to cancel the feed dispense:

- turn the rotary knob to zero.
- briefly press the push button; the dosator stops running.

*Attention:*

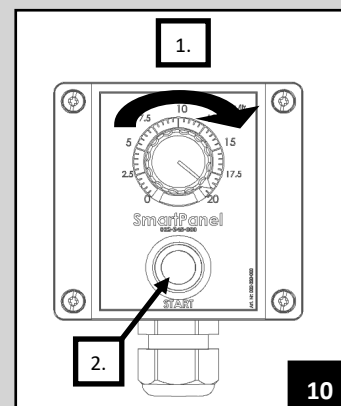
- During dispensing of feed, turning the rotary knob will have no effect on the amount of dispensed feed.
- When a new feeding command is given, using the push button, the SmartPanel will handle as a new dispensing command, and the selected amount of feed is dispensed, starting from the moment the button is pressed.



**Warning! Make sure that the person who is operating the SmartPanel, is always on assafe place**

**When the SmartPanel is in operation, it isn't allowed to mount or install at the SmartPanel.**

Make sure that there is no power at all the components during the installation or maintenance. It is very important that the cover of the SmartPanel is always mounted correctly to prevent unsafe situations. It is advisable to let the installation and the maintenance be done by a specialist. The owner/user of the product needs to follow the advises and indications in this manual so that everybody's safety is guaranteed. The warranty does not cover consequential damages not related to the machine itself. All systems are tested. In case of failures, however, Hanskamp is not liable for consequential damages.



**Maintenance:**

Calibrate the system every week to prevent deviations. When there is a change in the type of feed, the system also must be recalibrated.



**Warning! When some changes are made in the SmartPanel in the installation/mounting, make sure the power is switched off to prevent accidents and damage.**

**Disassembly:**

In case of disassembly, all parts should be separated on material type and should be processed in the right type of waste management system.



**Warning! In case of disassembly make sure to always first switch off the power of the SmartPanel by taking out the connection cable at the power point.**

**Overview of the included changes in these installation and operating instruction:**

Nr.	Release date	Chapter(s)	Comments
1.1	05/2016		First publication
1.2	01/2017	All	Expanding functionality

**Warranty limitations:**

Excluded from warranty are costs and expenses resulting from:

- Improper use of the equipment, not according to the specifications in the installation and operating instructions.
- The consequences of any intervention by technicians other than mechanics approved by Hanskamp to do certain actions.
- Incidents such as freezing, ice, fire, flooding, inundation or any other form of extreme flooding, lightning.
- Defects in the electrical or earthing system.
- Damage to the electrical system caused by vermin, etcetera.

The warranty does not cover consequential damages not related to the machine itself. All systems are tested. In case of failures, however, Hanskamp is not liable for consequential damages.

**Copyright and disclaimer**

The information in this publication is intended for information purposes only and is not intended as sales quote. Products may differ to those illustrated. No part of this publication may be reproduced or transmitted without the prior written consent of Hanskamp AgroTech BV. Although this publication has been compiled with the utmost care, Hanskamp AgroTech is not liable for any damage that may result from errors or omissions in this publication. The Dutch installation and operating instruction is the original installation and operating instruction. Translations in other languages, than Dutch, use the Dutch installation and operating instruction as source document. Hanskamp AgroTech accepts no liability for differences between translations. If there are any doubts about the content and the accuracy of the translated installation and operating instructions, the Dutch installation and operating instructions is the authoritative document.

**Declaration of incorporation of completed machinery IIA  
(According to annex VIIA of machine directive 2006/42/EC, for completed machinery)**

We,  
Hanskamp AgroTech BV  
Broekstraat 17  
7009 ZB Doetinchem  
Nederland

Authorised compiler(s) of the technical dossier:

H.J. Hanskamp

State, entirely under their own responsibility, that the product:

SmartPanel 002-345-000  
Controlling unit for several feeding systems by Hanskamp Agrotech B.V.

to which this declaration pertains, does meet the stipulations of the following directive (s):

- Machine Directive 2006/42/EG

and completely or partially meets the following essential requirements and that the relevant technical documents were drawn up in accordance with Annex VIIA. The product also complies with the stipulations in the following annex(es):

- NEN-EN-ISO 12100
- NEN-EN-IEC 60204-1
- NEN-EN-IEC 13849-1

**We call your attention to the fact that where a SmartPanel has not been installed or has not been installed in accordance with safety measures in these installation and operating instructions, this declaration of stipulations is null and void and so no rights can be derived from this declaration.**

The Netherlands, Doetinchem, 04-01-2017

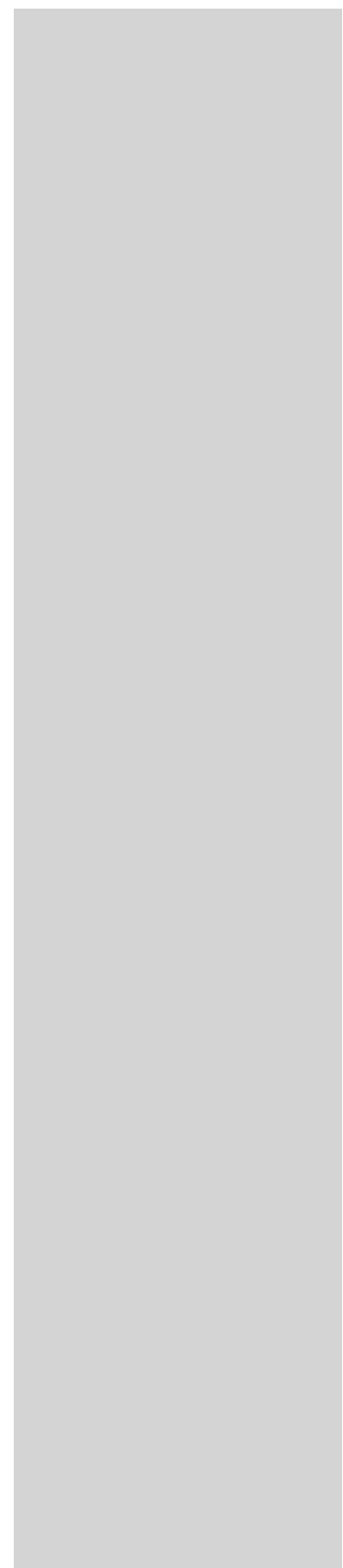
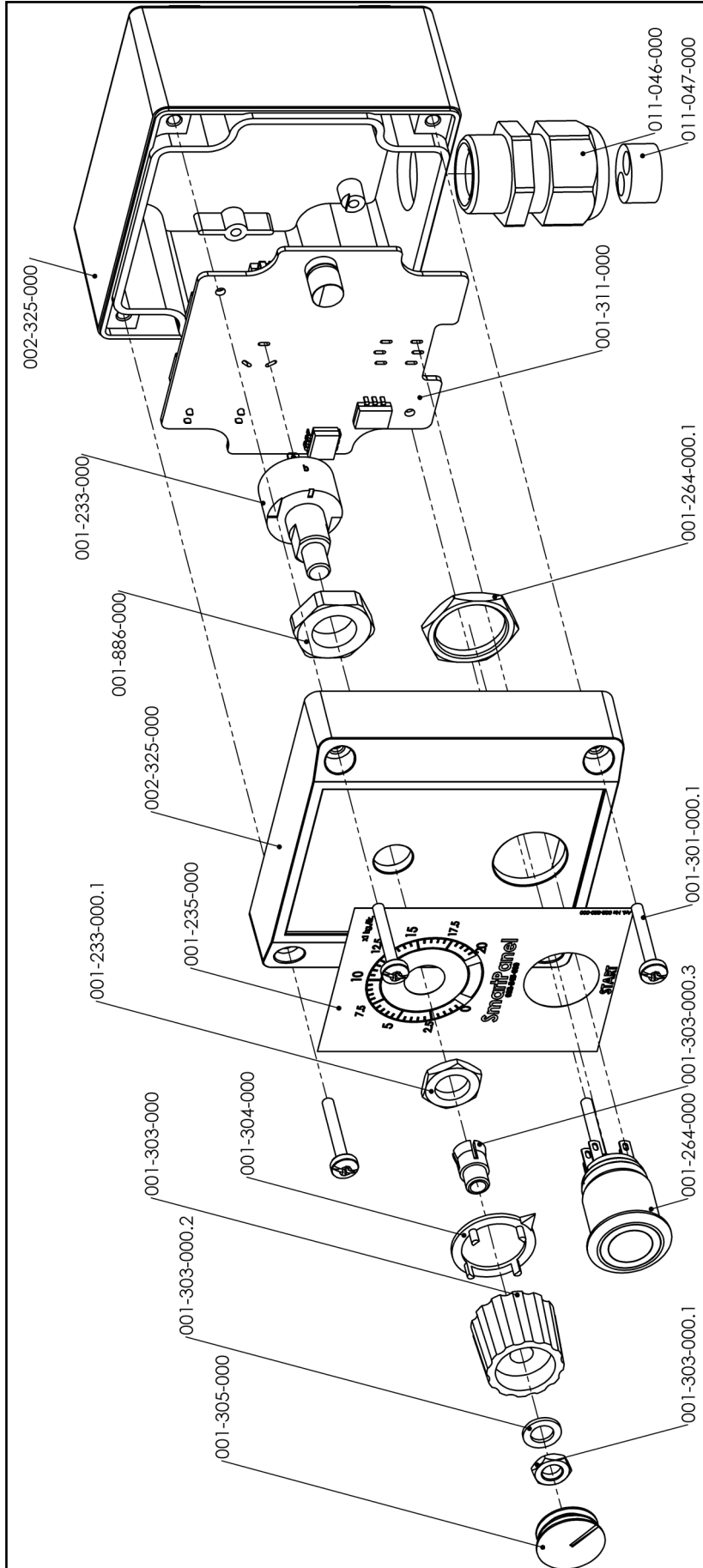
H.J. Hanskamp



## 4. FAQ

Occurring problem:	Possible cause:	Solution
Dosator motor keeps running.	<ul style="list-style-type: none"> <li>– Push button is pressed too long, causing the SmartPanel to be in calibration mode.</li> <li>– A too high feed amount is selected during calibration.</li> </ul>	<ul style="list-style-type: none"> <li>– Briefly press button 1x.</li> <li>– Recalibrate device.</li> </ul>
Dosator is actuated, but is not running.	<ul style="list-style-type: none"> <li>– Cable break</li> </ul>	<ul style="list-style-type: none"> <li>– Replace broken cables.</li> </ul>
Dosator dispenses feed at the wrong moment, and not in the feed trough.	<ul style="list-style-type: none"> <li>– Position switch located at wrong location.</li> </ul>	<ul style="list-style-type: none"> <li>– Relocate position switch at the right location.</li> </ul>
Calibration mode cannot be reached	<ul style="list-style-type: none"> <li>– Turning knob/potentiometer is turned towards 0.</li> </ul>	<ul style="list-style-type: none"> <li>– Turn knob clockwise, and press push button for 5 seconds, until LED starts to flash.</li> </ul>

**Annex 1: Overview of product parts**  
For maintenance or other reasons, it is possible to order spare parts at your supplier.  
Please use the article numbers as shown on the drawing



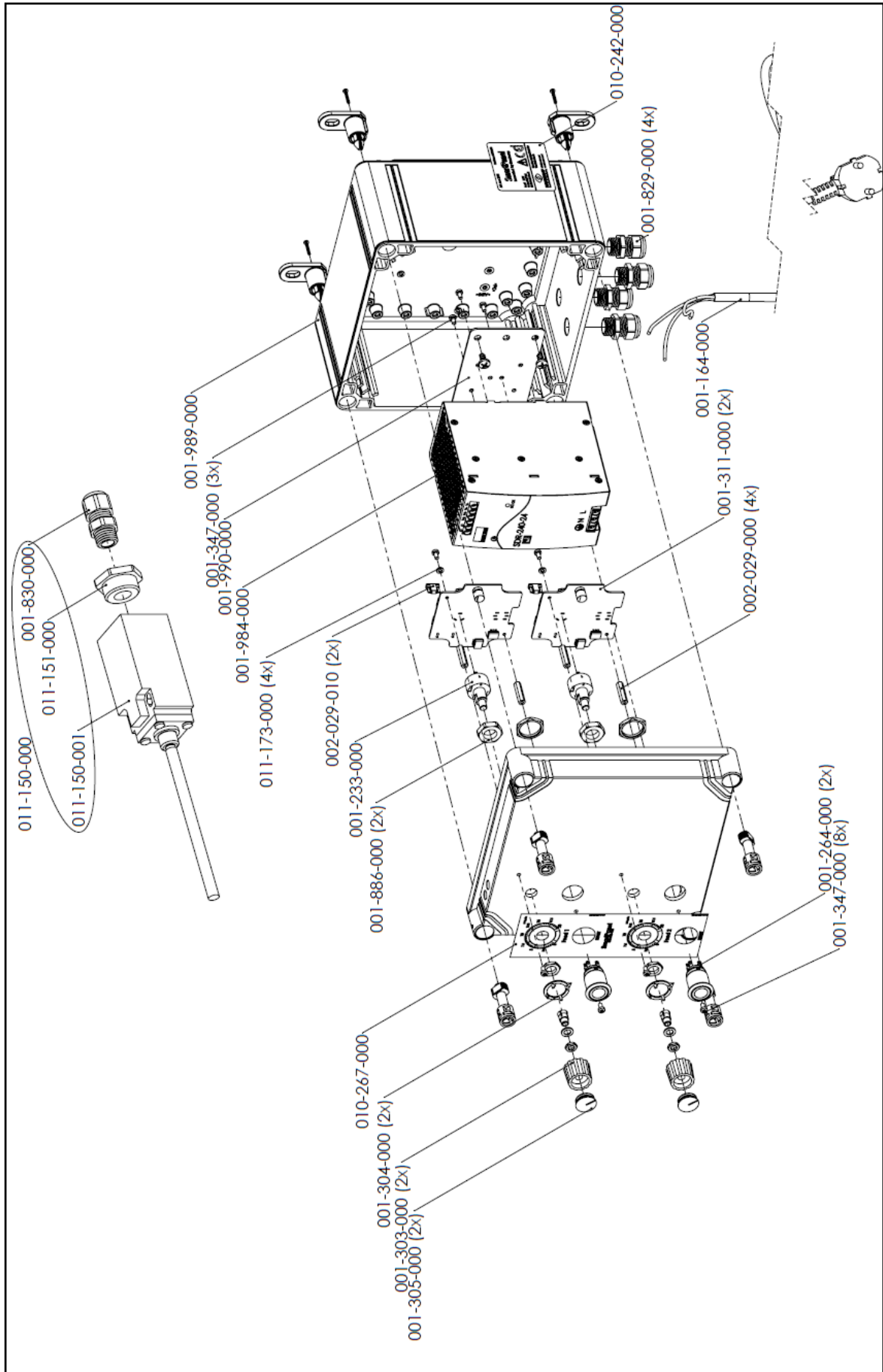
Annex 2: Description of parts SmartPanel:

<i>Article number</i>	<i>Description</i>	<i>Amount</i>
<b>001-233-000</b>	Potentiometer 2K2 with 8mm spindle length IP67	1
<b>001-264-000</b>	Push button Velleman green LED	1
<b>001-303-000</b>	Rotary knob 21mm	1
<b>001-304-000</b>	Pointer underneath rotary knob	1
<b>001-305-000</b>	Cover plate for rotary knob	1
<b>001-311-000</b>	Control PCB SmartPanel	1
<b>001-753-000</b>	Cable 2x1mm LiYY / 100mtr	0,05
<b>002-029-010</b>	Fuse 10A slow 58V Low profile MINI	1
<b>002-320-000</b>	Sticker with scale for SmartPanel	1
<b>002-325-000</b>	Enclosure for SmartPanel	1
<b>011-046-000</b>	Cable gland M20x1.5	1
<b>011-047-000</b>	Insert double Ø6 for cable gland M20x1.5	1
<b>011-055-000</b>	Plug 3-pol. DIN9680	1



**Annex 3: Overview individual parts of SmartPanel mounted in PowerUnit.**

For maintenance or other reasons, it is possible to order spare parts at your supplier. Please use the article numbers as shown on the drawing



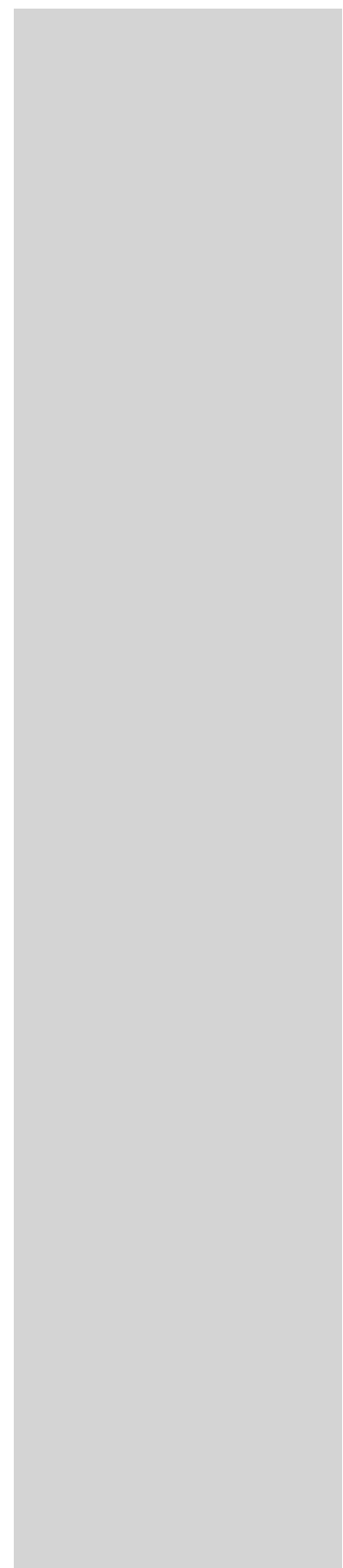
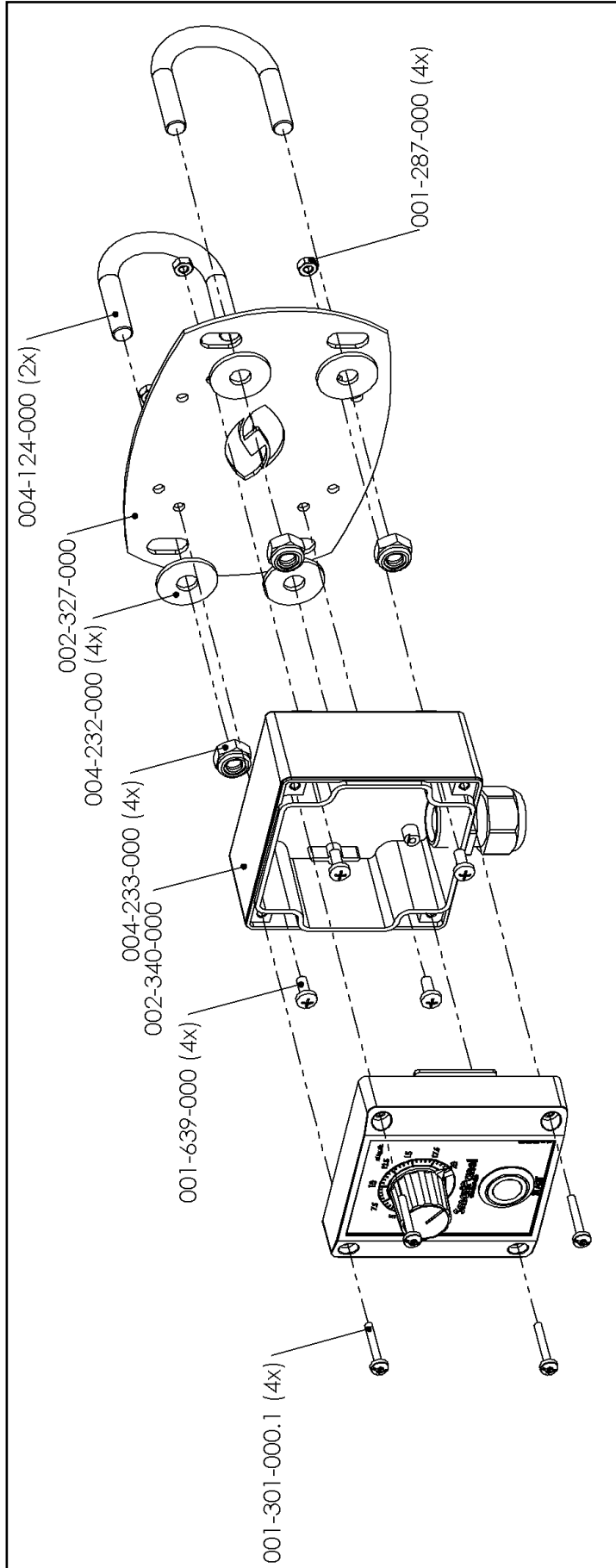
## Annex 4: Description parts of SmartPanel mounted inside PowerUnit (4 feedtypes)

Article number	Description	Amount
001-164-000	Connection cable 5m with plug (230V)	1
001-233-000	Potentiometer 2K2, 8mm axle length*	4
001-248-000	Mounting cable brown 1mm*	1
001-256-000	Mounting cable white 1mm*	1
001-264-000	Push button LED green*	4
001-303-000	Turning knob 21mm*	4
001-304-000	Pointer underneath turning knob*	4
001-305-000	Cover turning knob*	4
001-311-000	Control PCB SmartPanel*	4
001-347-000	Tab bolt M3x6 a2 cross recessed*	19
001-753-000	Cable 2x1mm LiYY /100m	1
001-829-000	Cable gland M16*	6
001-836-000	Ferrule 1,0mm red*	16
001-984-000	Power supply SDR-240 24VDC 10A Powerboost	1
001-989-000	Housing 200x200x132mm	1
001-990-000	Mounting plate for power supply	1
002-029-000	Plastic spacer, 22mm, M3*	8
002-029-010	Fuse 10A slow58V Low Profile MINI*	4
010-277-000	Serialnumber sticker SmartPanel incl. CE	1
010-267-000	SmartPanel sticker feed type 1 & 2	1
010-268-000	SmartPanel sticker feed type 3 & 4**	1
011-150-000	Position switch with flexible rod, 15m cable*	1
011-173-000	Plastic ring M3 3,2x6x1mm*	8

\* Amount may vary between 1 and 4 (depending on the number of feeding types)

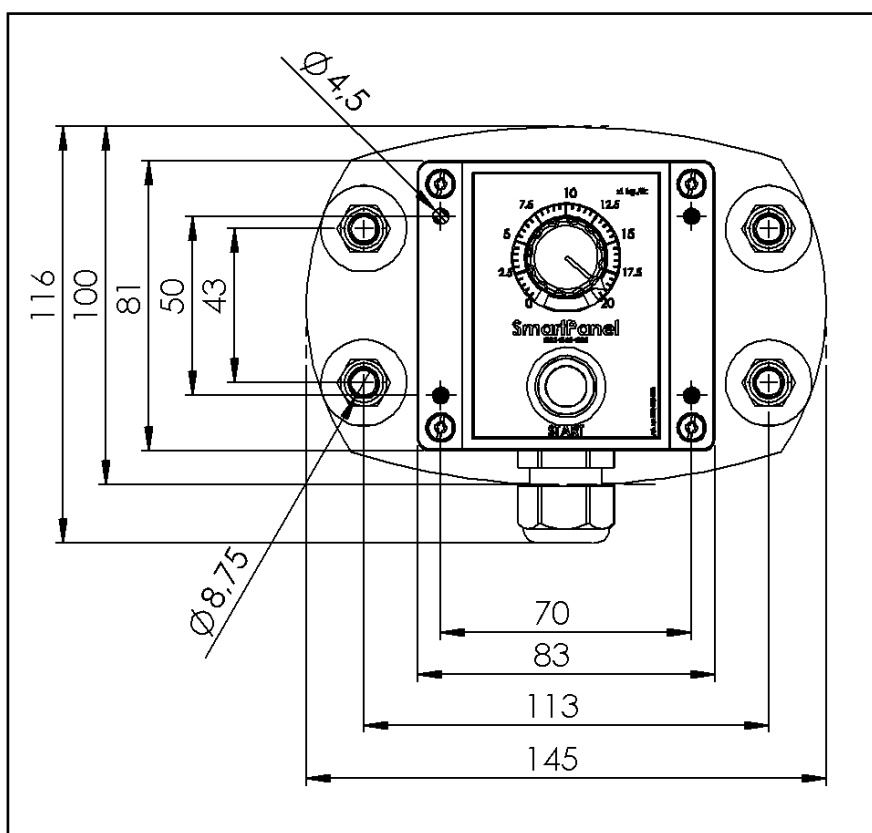
\*\* Only when more than 2 SmartPanels are mounted in PowerUnit.

Annex 5: Mounting bracket for SmartPanel.

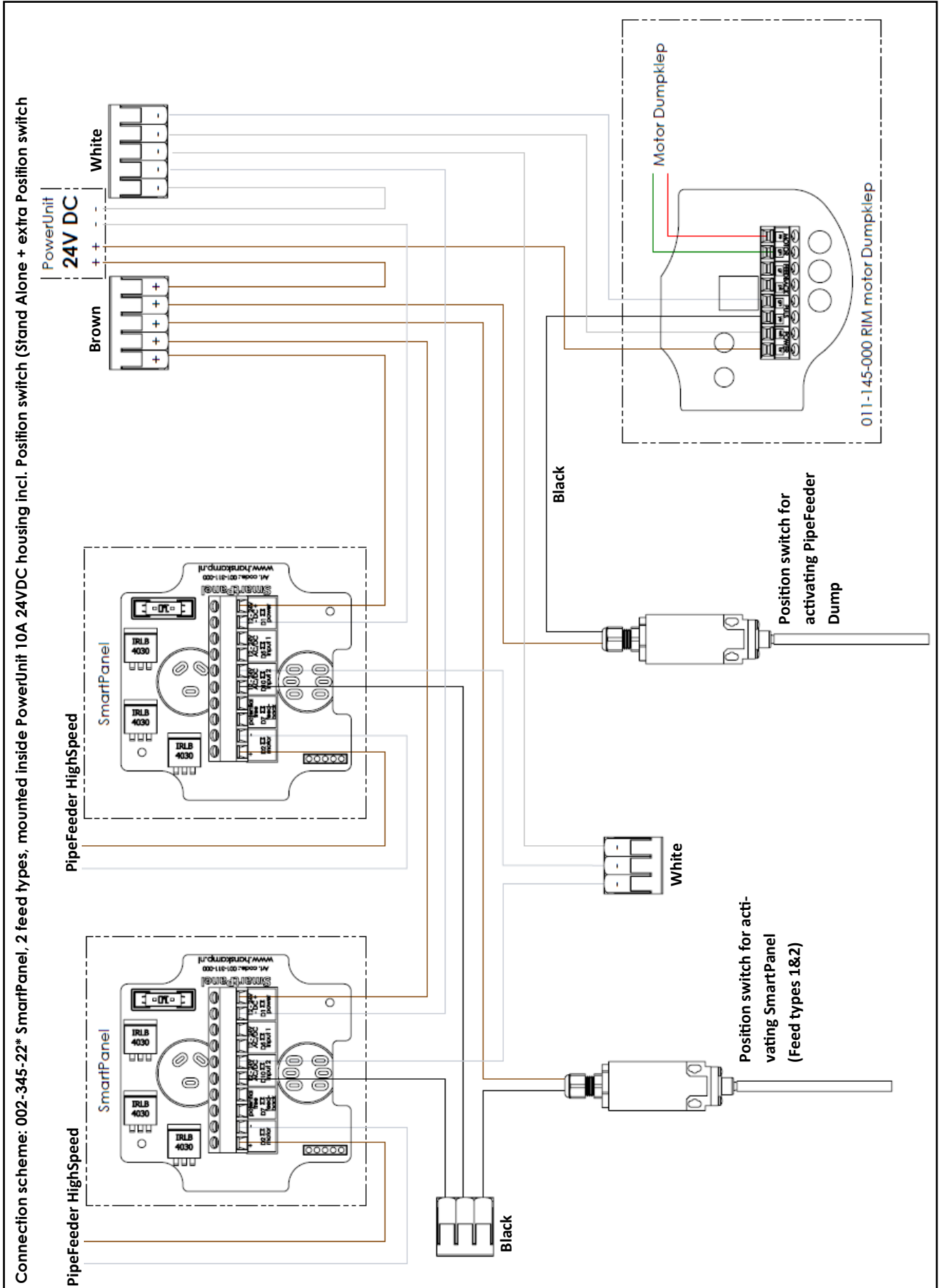


## Annex 6: Mounting bracket parts

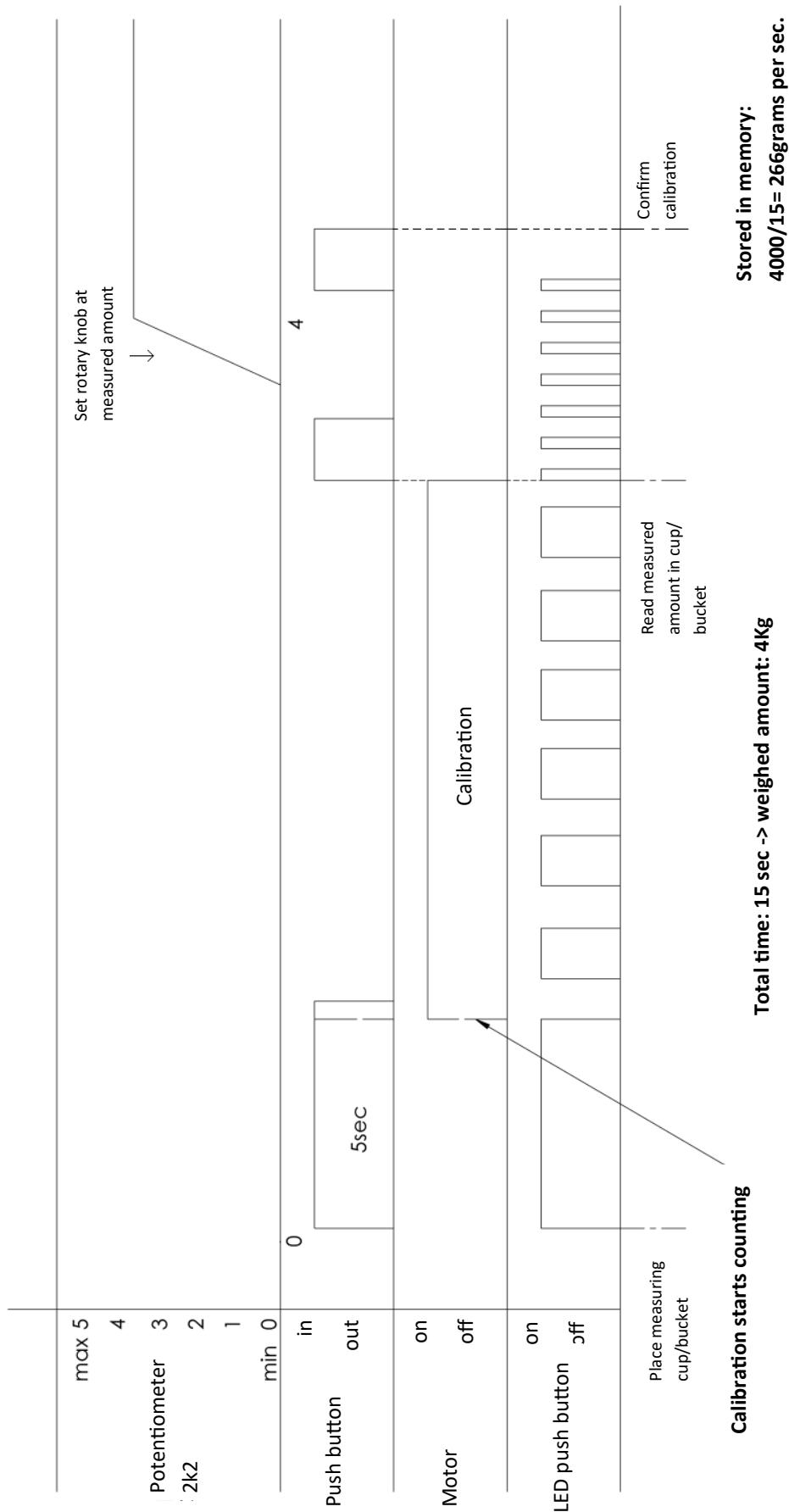
Article number	Description	Amount
001-639-000	Tap bolt M4x10 a2 cross recessed	4
001-856-000	Self-locking nut M4 a2 DIN 985 coat	4
002-327-001	Mounting bracket 2mm for SmartPanel	1
004-124-000	Wire bracket, galvanized, without nuts M8	2
004-232-000	Washer M8 DIN 9021 8.8 ev	4
004-233-000	Self-locking bolt M8 DIN 985 8.8 ev	4

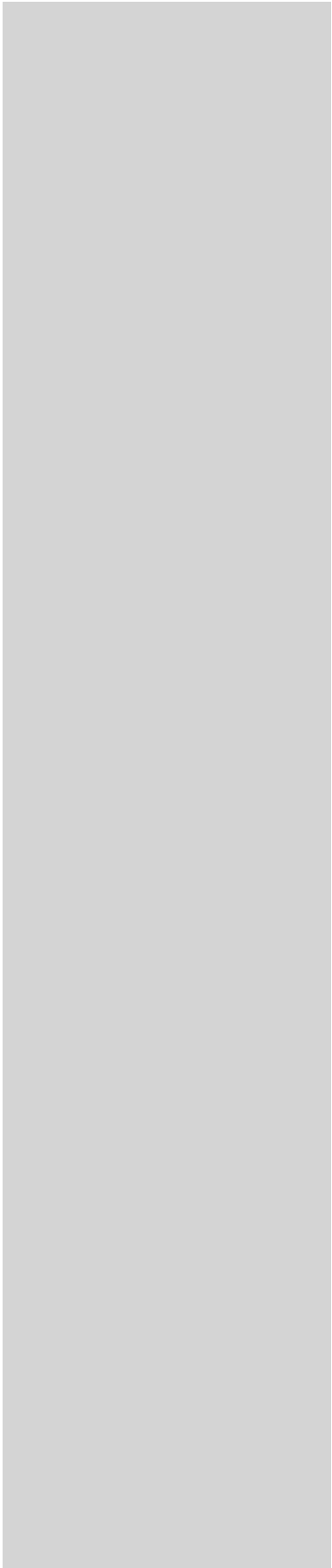


Annex 7: Connection scheme



Annex 8: Calibration scheme SmartPanel.





**Hanskamp AgroTech B.V.**  
Broekstraat 17  
7009 ZB Doetinchem  
The Netherlands  
Tel: +31 (0)314 - 393 797  
Fax: +31 (0)314 - 393 826  
[www.hanskamp.nl/en](http://www.hanskamp.nl/en)