

DOL Pig Weight



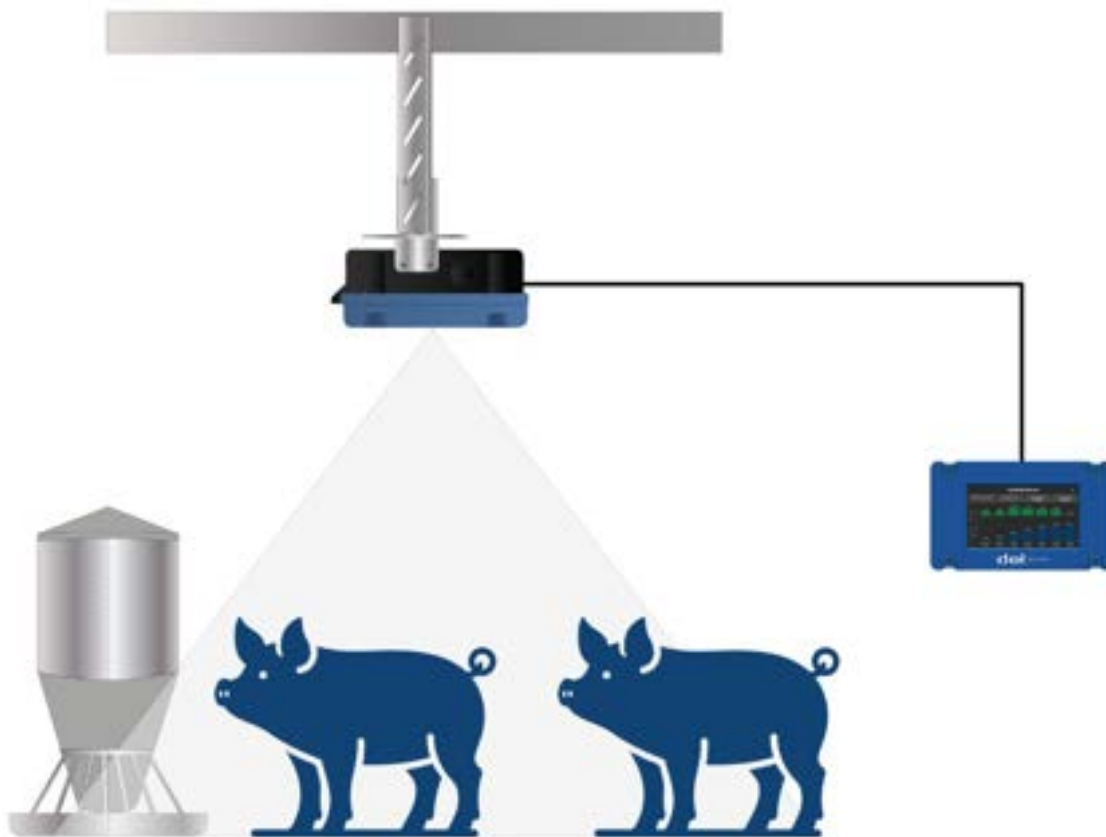
1 Product description

DOL Pig Weight calculates the weight of slaughter pigs. DOL Pig Weight uses a 3d camera to calculate the weight based on the shape and size of the pig,

DOL Pig Weight weighing precision has been tested and verified on piglets and pigs for slaughter in the weight range 7-110 kg.

This guide covers installation and maintenance of DOL Pig Weight. The guide provides the user, installer and electrician with the basic knowledge on how to install and connect DOL Pig Weight to DOL Display.

All actions after installation are performed via DOL Display.



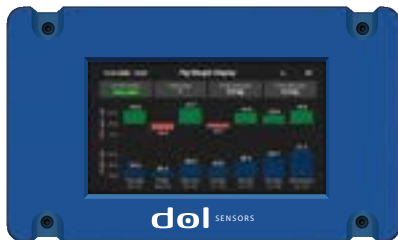
2 Product survey



140345 DOL Pig Weight

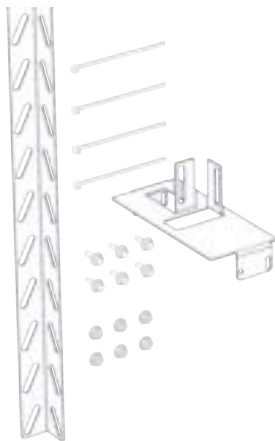
DOL Pig Weight calculates the weight of slaughter pigs. DOL Pig Weight uses a 3d camera to calculate the weight based on the size of the pig.

2.1 Accessories



140346 DOL Display

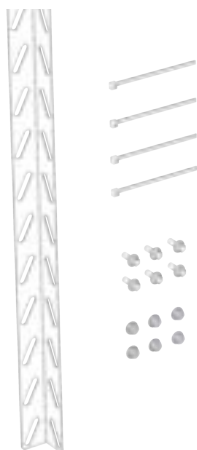
DOL Display is a user-friendly display solution that displays the weight measurements calculated by DOL pig weight. The display gives a quick overview of the pig's current weight, daily gain and average weight over several days.



140322 iDOL 65 mounting kit base

Used when installing iDOL 65 camera in stables with ceiling height between 2400 mm and 2700 mm.

The kit consists of mounting brackets, mounting profile w/holes and iDOL 65 screw set.



140323 iDOL 65 camera Mounting kit next

Used when mounting iDOL 65 camera with ceiling height above 2700 mm.

The kit consists of mounting profile w/holes and iDOL 65 screw set.

3 Mounting

DOL Pig Weight should be placed at an exact height and relative to the housing equipment in the pen. Mount DOL Pig Weight over a feed dispenser for dry feeding or over a drinking nipple for wet feeding.

The floor in the area where the DOL Pig Weight (1700 x 3000 mm) is to be installed must be flat and DOL Pig Weight must be installed parallel to the floor.

The minimum ceiling height is 2390 mm and DOL Pig Weight must be mounted with the front facing the pigs at a height of 2300 mm. There must be no pipes, wires, or anything else that can block the field of view of DOL Pig Weight.

The camera must be stable. Both during installation and operation, movements and vibrations must be minimized.

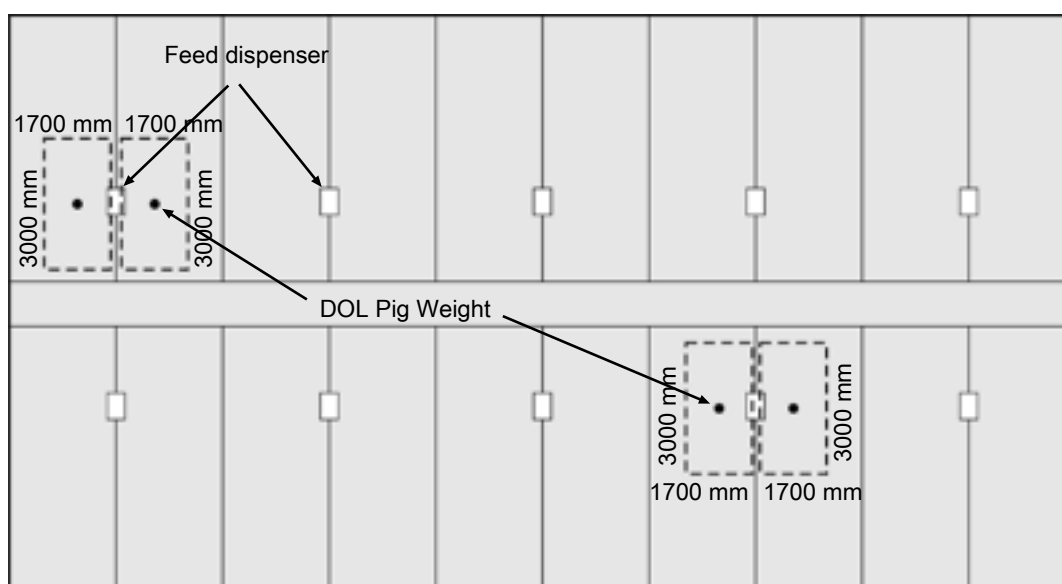


Figure 1: Example of placement in a dry feeding section.

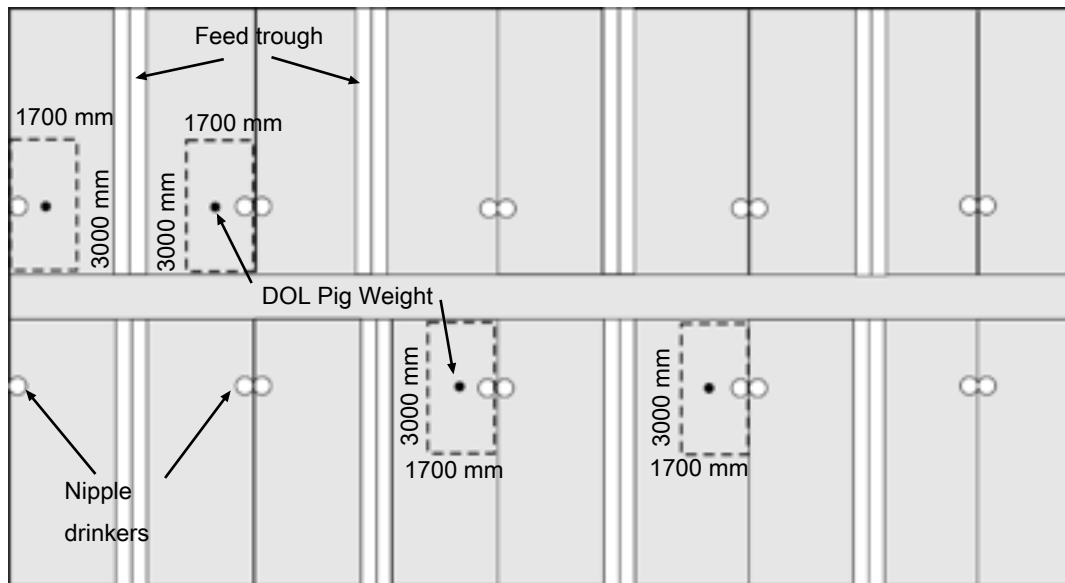
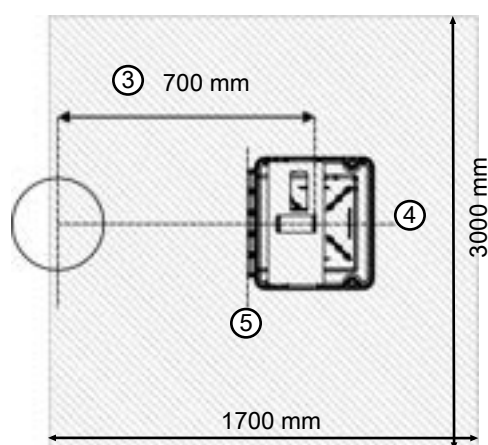
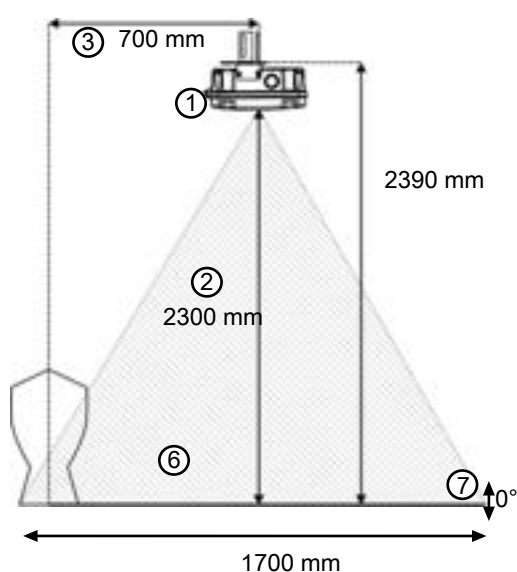
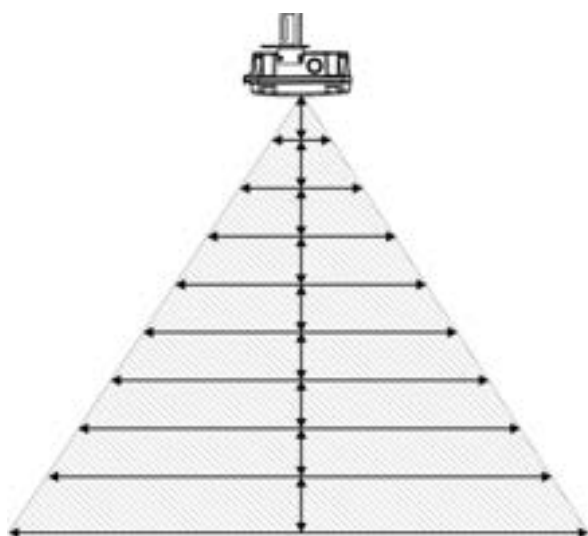


Figure 2: Example of placement in a section with wet feeding.

Criteria for correct DOL Pig Weight installation.

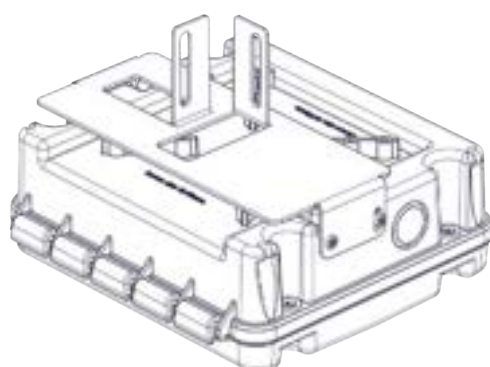
No.:	Description:	Value:	Tolerance
1	The box front must be facing the pen floor. The camera must be hung horizontally, parallel to the floor.	0°	+/- 4°
2	Height above the floor (measured from the front of the box)	2300 mm	+/- 50 mm
3	Distance from pen wall / center of the feed dispenser	700 mm	+/- 100 mm
4	The box must be centered in relation to the center of the feed dispenser	0 mm	+/- 300 mm
5	The hinge of the box must face the feed dispenser and must be parallel to the partition wall	0°	+/- 10°
6	The camera's field of view, the shaded area, must not be blocked by pipes, wires or anything else		
7	The camera's field of view, the shaded area, shall be horizontal.	0°	+/- 2°





Check the camera's field of view in the table below if you need to position the camera close to objects hanging from the ceiling.

Distance under camera (mm)	Width X (mm)	Length Y (mm)
250	185	326
500	370	652
750	554	978
1000	739	1304
1250	924	1630
1500	1109	1956
1750	1293	2283
2000	1478	2609
2300	1700	3000



The iDOL 65 mounting bracket is mounted using the screws supplied.

Figure 3: iDOL 65 mounting brackets.

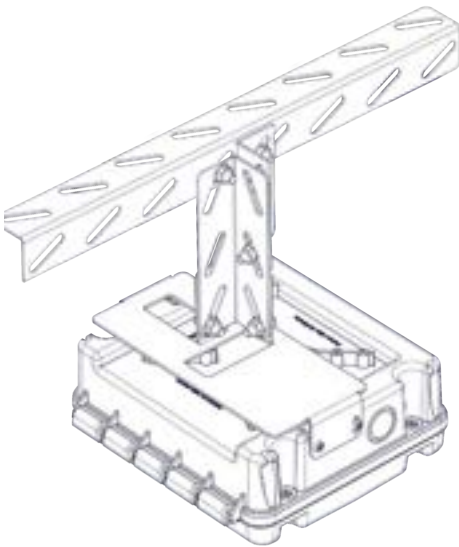


Figure 4: Mounting example



For correct mounting height and stability, mounting kit iDOL 65 can be used.

Figure 5: Example of mounting with iDOL 65 mounting kit

4 Electrical connection



Installation, servicing, and troubleshooting of all electrical equipment must be carried out by qualified personnel in compliance with the applicable national and international standard EN 60204-1 and any other EU standards that are applicable in Europe.

The installation of a power supply isolator is required for each motor and power supply to facilitate voltage-free work on the electrical equipment. The power supply isolator is not included.

4.1 Electrical Installation

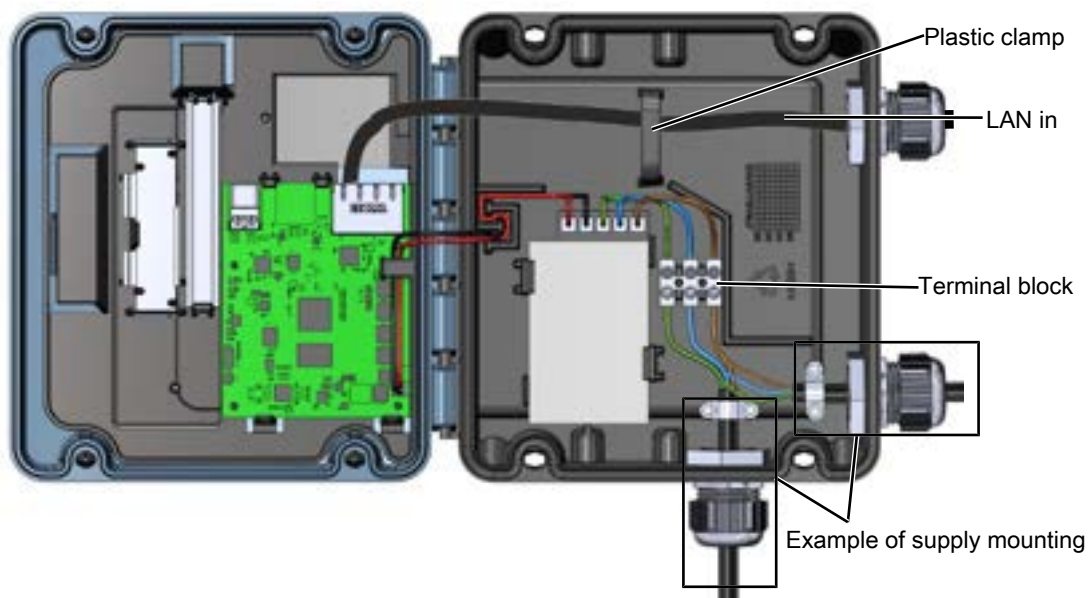


Figure 6: Connection in the DOL Pig Weight box

Mains supply

The box is prepared so that the supply can be fed into the box at the bottom or on the side. Secure the supply cable with the relief clamp and connect it to the terminal block as illustrated.

Color codes:

- Yellow/green (PE) for ground
- Blue (N) for neutral
- Brown (P) for phase

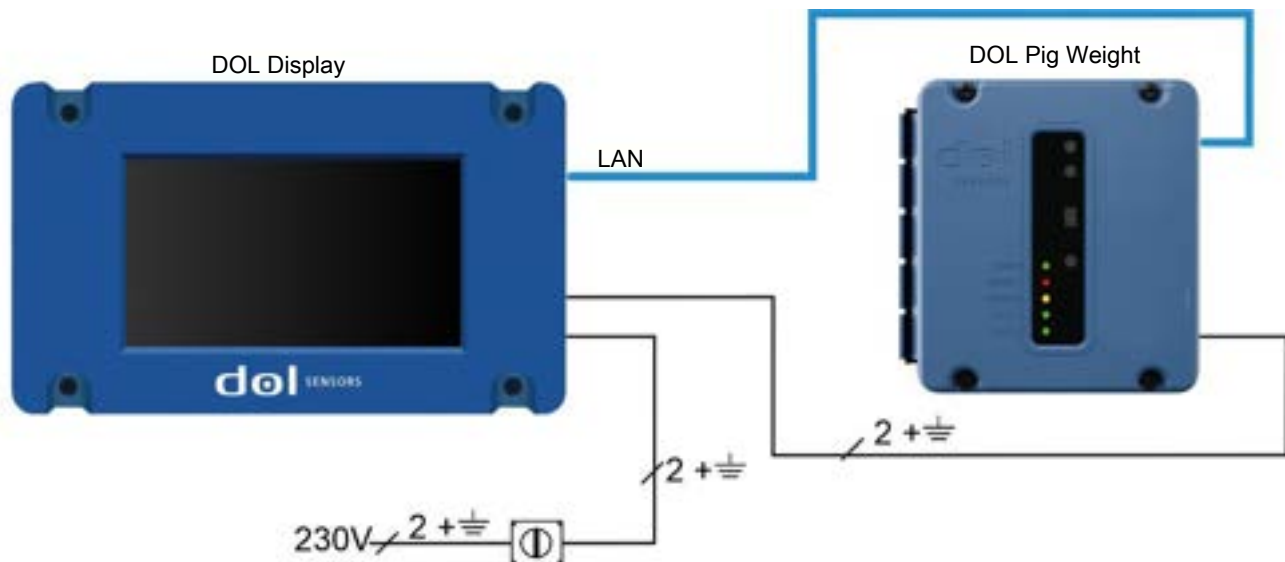


The enclosed cable glands can be used for cables with an outer diameter of 6 to 13 mm.

If thinner cables with an outer diameter of 4-6 mm are used, the enclosed split sealing ring (343288) must be mounted, see picture to the left.

Network

4.1.1 Cable plan



5 DOL pig weight – operation, status and troubleshooting

Operation

DOL pig weight is operated via DOL Display. Actions, menus, and workflows are described in the DOL Display Technical User Guide.

Status and troubleshooting

the status of the DOL pig weight is displayed via the LED's on the unit and via information displayed on the DOL Display. in troubleshooting, the LEDs can be used in situations where the DOL Display is disconnected or damaged. LED-modes are as follows:



LED	POWER	ERROR 1	ERROR 2
Start-up			
Self-test (10 sec.)	ON	ON	ON
Starting up	Flashing (slowly)		
Troubleshooting			
No connection to display	Flashing (slowly)		
Connected to display	ON		
Calibration required			Flashing (slowly)
Calibration in progress			ON
Camera dirty		Flashing (slowly)	
Firmware update status			
Firmware update in progress	Flashing (slowly) in sequence	Flashing (slowly) in sequence	Flashing (slowly) in sequence
Firmware update complete – Remove the update media	Flashing (slowly) in sync	Flashing (slowly) in sync	Flashing (slowly) in sync

LAN 1 / LAN 2 LED is on/flashing when there is active connection through the network to another device, only the port connected to the DOL Display should be active.

6 Maintenance

DOL pig weight should be cleaned after each batch and cleaned as needed, as dust and flies etc. can block the camera's field of view (resulting in blurred images and thus less accurate weights). LED ERROR 1 lights up solid red when DOL pig weight's view is blocked. In such cases, remove obstacles and clean the camera lenses. No later than 20 minutes after DOL pig weight has a clear view of the pigs again, LED ERROR 1 will switch off, indicating normal operation.

Make sure not to move DOL pig weight during cleaning. If the height or orientation of DOL pig weight changes, the camera must be recalibrated via DOL Display.

6.1 Firmware updating

If errors are found in the DOL Pig Weight software or the DOL Display software, a firmware update will be made available via the dol-sensors' website.

- **Download the latest firmware**

- Go to <https://firmware.dol-sensors.com> or the DOL pig weight System product page at the dol-sensor website: <https://www.dol-sensors.com/products/sensors/dol-pig-weight-with-display> to find and download new firmware.
- The package includes the latest firmware version for both DOL pig weight and DOL Display as well as release notes for both versions.



Figure 1: DOL Pig Weight System product page.



Figure 2: Windows USB drive formatting message.

- **Prepare the USB drive**

- USB drive formatted in FAT32 with at least 4 GB of free space
- Unzip the zip file into the root of the USB drive so that the 'DOL' folder contains two subfolders: 'PIGWEIGHT' and 'DISPLAY'.



Figure 3: Device information screen on DOL Display.

• Update the device

- Check the current version via the menu on the DOL display for camera.
- Disconnect the power to the device.
- Open the DOL Pig Weight or DOL Display by unscrewing the four front screws
- Insert the USB drive into one of the available USB ports inside the DOL Pig Weight or DOL Display. Note: Do not disconnect the internal USB cable.
- Switch on the power.

DOL Pig Weight

- Within 1 minute, THE POWER, ERROR1, and ERROR2 LEDs should start flashing in an alternating “1-2-3” pattern, signaling that the update is being installed.
- Within 10 minutes, all LEDs should start to flash synchronously, signaling that the update is complete.
- Remove the USB drive and close the DOL Pig Weight again.
 - Note: Be sure to tighten all four screws properly!
- Restart the DOL pig weight system by selecting Restart System from the menu.
- Wait 5 min and then confirm that the version has been updated by checking the DOL Display menu.

NOTE: After a firmware update, DOL Pig Weight must be run for 24 hours before the generated weights are within tolerance.

DOL Display

- Select **Firmware Update** from the menu and follow the instructions on the display.
 - It is VERY important not to disconnect the power supply during update. This may damage the system.
- Restart the DOL Display by pressing Restart on the screen.
- When the restart is complete, remove the USB drive and close the DOL Display again.
 - Note: Be sure to tighten all four screws properly!

6.2 Cleaning

Clean the DOL Pig Weight with:

- Water with a small amount of dishwashing liquid
- Soft brush or a cloth

Do not use:

- High-pressure cleaner

- Highly compressed air
- Window cleaning spray
- Solvents such as acetone, benzene, Carbon Tetrachloride and the like
- Corrosive/caustic agents
- Alcohol-based disinfectants

Wipe the front dry after cleaning.

6.3 Recycling/Disposal



The label indicates that the product must not be disposed of as general refuse disposal and must be treated as electronic waste.



The label indicates that the product is suitable for recycling.

It must be possible for customers to deliver the products to local collection sites/recycling stations in accordance with local instructions. The recycling station will then arrange for further transport to a certified plant for reuse, recovery and recycling.

7 Technical data

Electrical		
Supply voltage	VAC	100 - 240
Frequency range	Hz	50/60
Max. power consumption	W	13
Cable	mm ²	3 x 0.75
Mechanical		
Cable gland M25	Pcs.	4
Network		
Network interface		2 x 10/100 BASE+TX RJ 45
Minimum data speed	Mbps	100 (full-duplex)
LAN cable		Minimum CAT5e
Max. LAN cable length	m	100
Environment		
Ambient temperature, operation	°C	-10 - +40

Electrical		
Ambient temperature, storage	°C	-25 - +60
Ambient humidity, operation	%RH	10 - 90
Degree of protection	IP	65
Weighing		
Breeding species (DanBred)		Large white x Yorkshire
		Duroc
Calculation area	kg	7 - 110
Weighing accuracy 7-30 kg (weaners)	%	+/- 5 (MAPE* after 24 hours)
Weighing accuracy 30-110 kg (finishing pigs)	%	+/- 3 (MAPE* after 24 hours)
Calculations sent to DOL Display		Every hour
Shipment		
Weight	g	1100
Dimensions LxWxD	mm	200x190x80
Dimensions when packaged LxWxD	mm	315x250x180
Approvals		EN IEC 63000:2018 EN IEC 61000-6-2:2019 EN IEC 61000-6-4:2019

*Mean absolute percentage error

7.1 Dimensions

Dimensions in mm.

