

DOL Pig Weight System

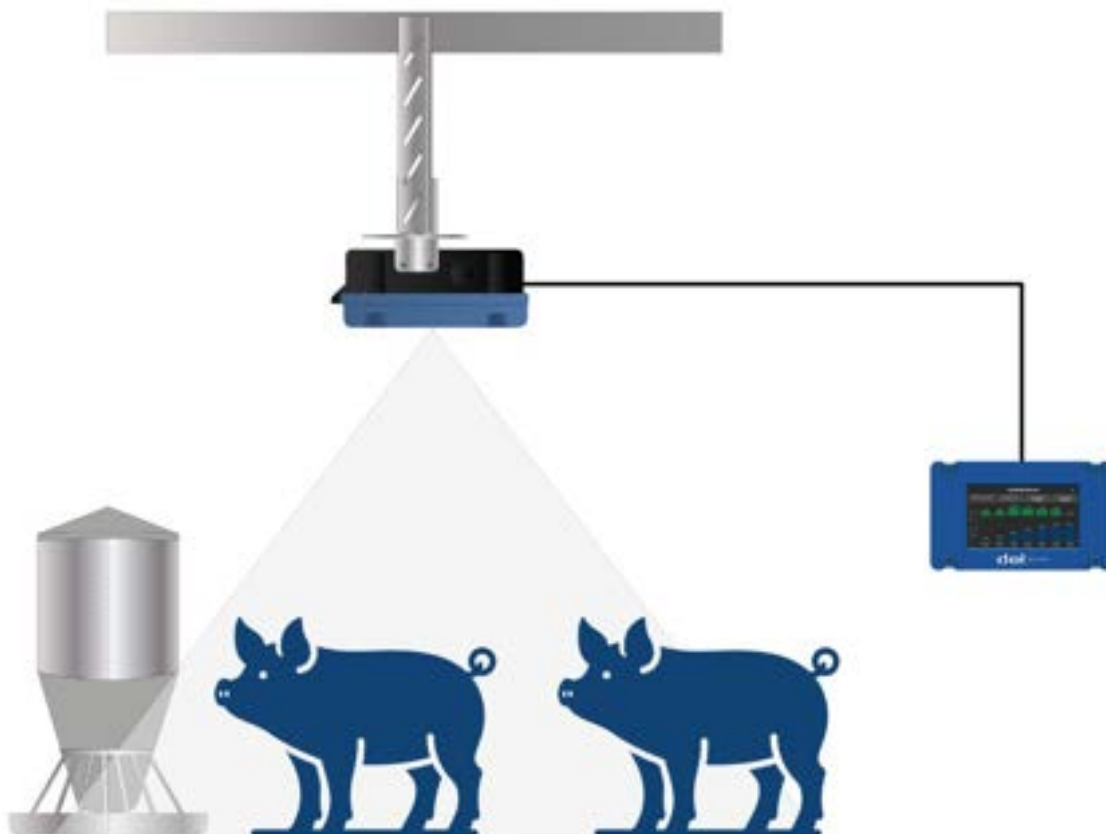


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1 Product description

DOL Pig Weight System calculates the weight of the finishers. The system uses a 3D camera to calculate the weight based on the shape and size of the pig, and displays the data directly on a screen. Weighing accuracy has been tested and verified on piglets and pigs for slaughter in the weight range from 7-110 kg.

The technical user manual covers installation, electrical installation and system start-up. It provides the user, installer and electrician with the basic knowledge of how to install and connect the system.



2 Product survey

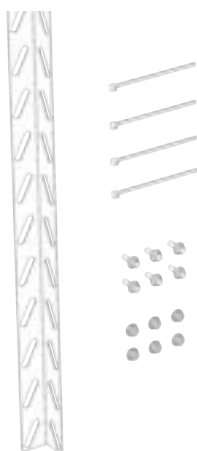


140347 DOL Pig Weight System

The DOL pig weight System consists of a DOL pig weight camera and a DOL display where the weight is displayed.

Supplied with plastic glands, sealing plugs, split seals, mounting brackets, mounting profile w/holes, screw kit, 30 m shielded Ethernet cable (RJ45) and 30 m power cable.

2.1 Accessories



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 Installation



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.

3.1 Installation and installation of DOL pig weight

See the DOL pig weight Technical User Guide for mounting and installing the camera.

3.2 Installation of DOL Display



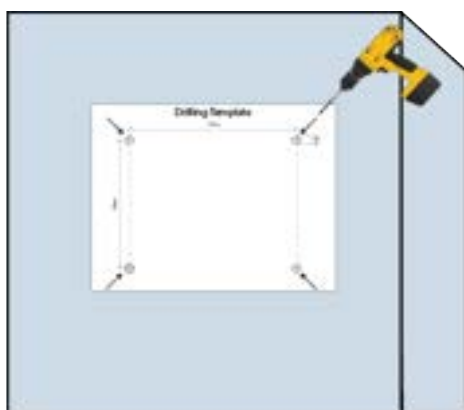
Loosen the 4 screws. Disconnect the flat cable and Ethernet cable from the base plate to move the front panel.



Remove the 3 designated knockouts in the box.

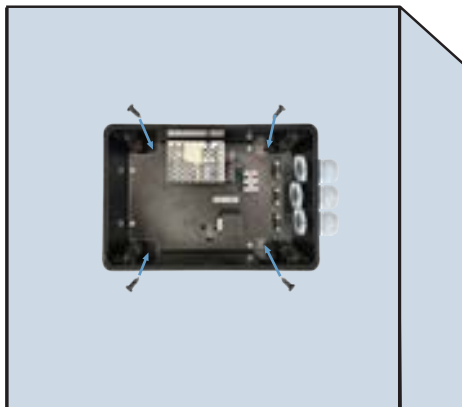


Install cable glands.



It is recommended to place the display in the corridor and at eye level. Drill holes in the display wall using the drill template.

See the section Drilling template [► 15].



Mount bottom cover on the wall with wall plugs and screws.

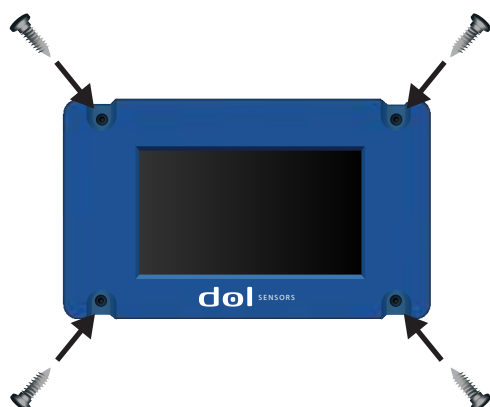


Route the power cable and Ethernet cable through cable glands into the box.

Connect the power cable and Ethernet cable to the base plate in the box.

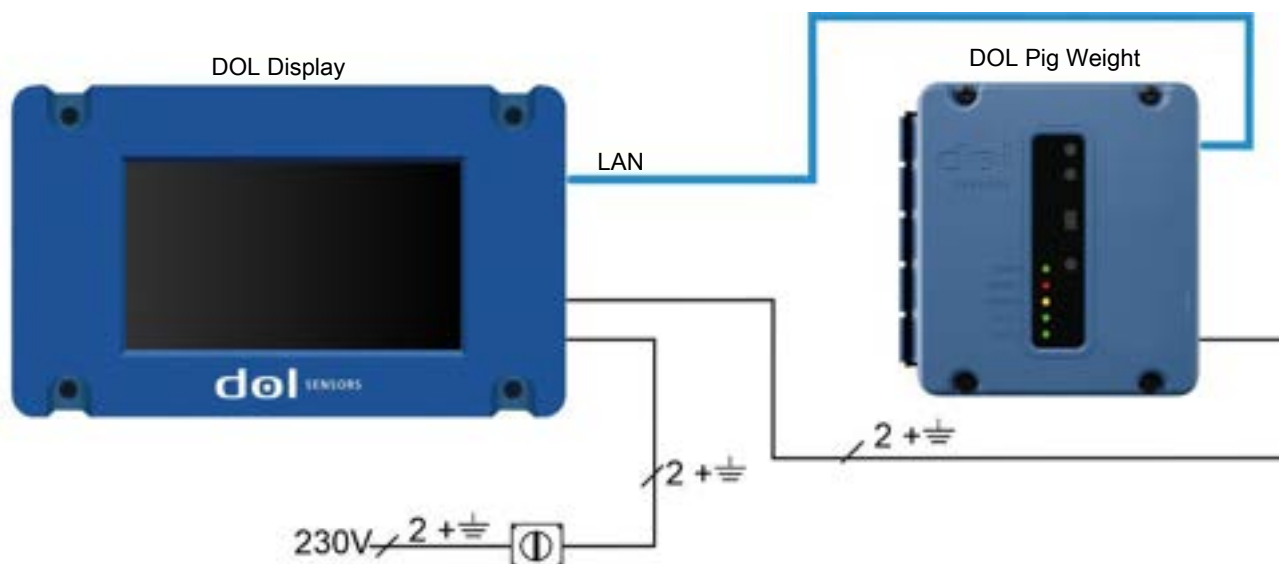


Connect the flat cable and Ethernet cable from the display PCB on the base plate of the box.



Attach the front panel using 4 screws.

3.3 Cable plan



4 Startup DOL Display



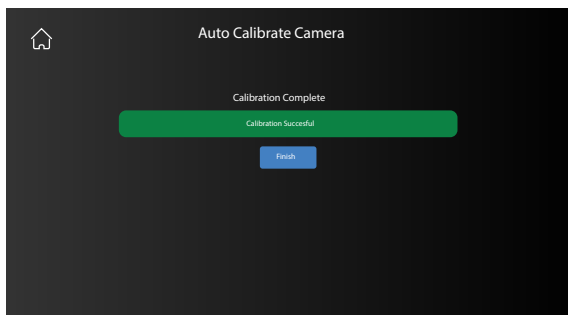
Turn on the DOL Display.

Select the date and time and press **Save**.

Automatic calibration



Remove all pigs from the path before calibrating the camera.



When calibration is complete, a confirmation message appears.

If the calibration fails, an error message is sent and can choose to either repeat auto calibration or go to manual calibration.

The system is now ready for use and starts weight measurements

Display view

The DOL Display shows daily weight measurements and averages.



Green bars show weight gain compared to the previous day.

Blue bars show weight measurements for each date.

The view is intended for tracking growth trends and monitoring the overall condition of the animals.

3 days daily gain: Calculated from now and 3 days back i.e. 3×24 hours = 72 hours.

7 days daily gain: Calculated from now and 7 days back i.e. 7×24 hours = 168 hours.

5 DOL Display Menus



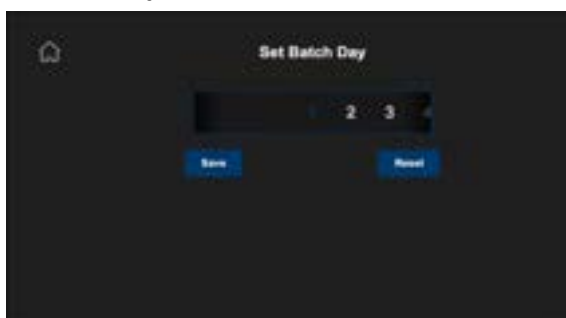
The menu includes options to refresh the page, restart the application, and reboot the entire system.

Manual calibration



Adjust the camera height and start manual calibration.

Set the day number for the team



Set the day number and press **Save**.

Device information



Shows the platform software version, display software version, camera software version, and the unit's unique serial number.

This information is typically used for troubleshooting, support, and firmware updates.

6 Maintenance

The device requires no maintenance to function correctly.

Note that the service life is extended if it stays connected all the time, as this keeps it dry and free from condensation.

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

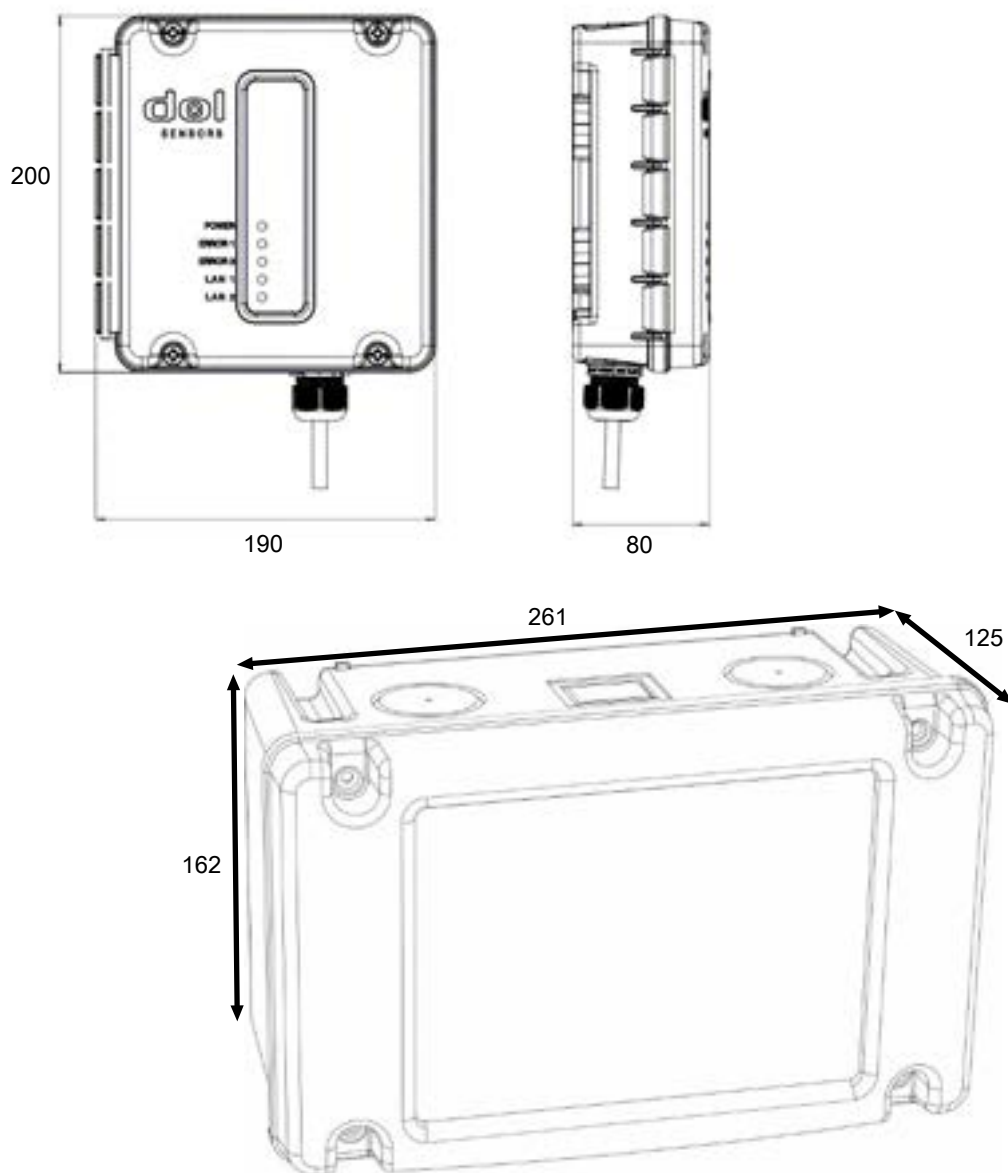
Electrical		
Supply voltage	VAC	100 - 240
Frequency range	Hz	50/60
Max. Power consumption DOL Display	W	13
Max. Power consumption DOL Pig Weight	W	13
Cable	mm ²	3 x 0.75
Mechanical		
Cable gland M25 DOL Display	Pcs.	3
Cable gland M25 DOL Pig Weight	Pcs.	4
Network		
Network interface		2 x 10/100 BASE+TX RJ 45

Minimum data speed	Mbps	100 (full-duplex)
LAN cable		Minimum CAT6 shielded
Max. LAN cable length	m	100
Environment		
Ambient temperature, operation	°C	-10 - +40
Ambient temperature, storage	°C	-25 - +60
Ambient humidity, operation	%RH	10 - 90
Protection degree DOL Display	IP	54
Protection degree DOL Pig Weight	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)
Shipment		
Weight	g	7000
Dimensions LxWxD	mm	1010x285x180
Physical dimensions DOL Display		
Weight	g	1500
Dimensions LxWxD	mm	261x162x125
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.



8 Drilling template

