

IDOL 65

EN

Technical User's Guide



For **other language variants** of this document we refer to www.dol-sensors.com or your local dealer.

INTRODUCTION

This manual covers the installation; mounting, electrical installation and setup of the iDOL 65 Camera. The manual provides the user, installer and electrician with the basic knowledge on how to mount and connect the iDOL 65 to the cloud.

The electrical installation section is intended primarily for electricians commissioning and servicing the system.

Please be aware that the iDOL 65 may not be opened without first removing the supply voltage, and that service and troubleshooting may only be done by qualified personnel.

Due to the calibration procedure of the camera, the pen in which the iDOL 65 is installed, must be empty until the calibration procedure has been completed and confirmed by the Omni cloud/dol-sensors. This process can take up to 24 hours.

How to setup the cloud and viewing the weight data is documented in the Users Guide for DOL Omni. The DOL Omni API is described in the Developers Guide for DOL Omni API.

PRODUCT DESCRIPTION

The iDOL 65 Camera measures the weight of finishers. The iDOL 65 uses a camera to estimate the weight based on the size of the pig, i.e. height, width and length etc.

The weight data is automatically uploaded to the DOL Omni cloud and can be viewed either in an internet browser on the DOL Omni web-page or through any supported farm management systems.

SETUP

The full process for unboxing the iDOL 65 to fully operational is for short described by the following steps:

- Unbox and install the iDOL 65 as described in this manual. This includes mounting, electrical installation and registration of location
- Install local network in the stable and connect in to the Internet/WAN
- Document location of the iDOL 65 and handover this information to the administrative personnel managing the farmers account in DOL Omni
- The administrative personnel configure the farmers account in DOL Omni, as described by the Users Guide for DOL Omni
- Wait for notification from dol-sensors on successful calibration of the iDOL 65. The calibration process may take up to 24 hours
- Led pigs into the pen and the system is fully operational

Make sure to read the full guide before you start mounting the iDOL 65.

MOUNTING

The iDOL 65 must be mounted above the feed dispenser as described in Figure 1 and illustrated in **Figure 2** below.

No.:	Description:	Value:
1	The box front must be facing the pen floor. Maximum angle compared to vertical (perpendicular to pen floor).	< +/- 5° (around both axis in the floor plane)
2	Height above the floor (measured from the front of the box)	2.2-2.4 m
3	Distance from pen wall	0.5-0.7m
4	Displacement compared to center of feed dispenser	+/- 0.5m
5	The largest side of the box must be roughly parallel to the side wall containing the feed dispenser. Maximum angle between these two.	+/- 15°
6	Horizontal Field of View (FOV)	65°
7	Vertical FOV	40°
8	Make sure that no pipes, wires, etc. are occluding (blocking) the view	

Figure 1: Criteria for correct iDOL 65 mounting

The mounting should be done a manner that minimizes any movement and vibrations. It is advised to use a ceiling mount. Direct sunlight into the pen should be avoided.

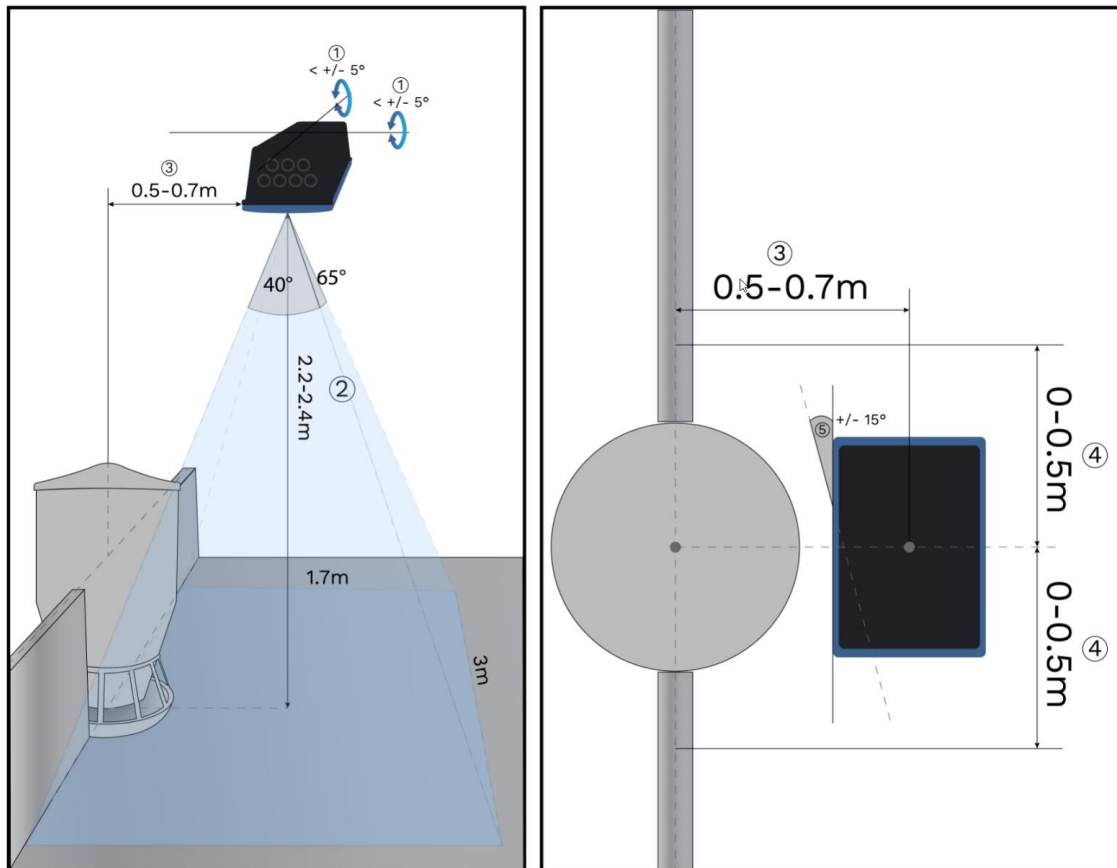


Figure 2: Graphical illustration of how to mount the iDOL 65

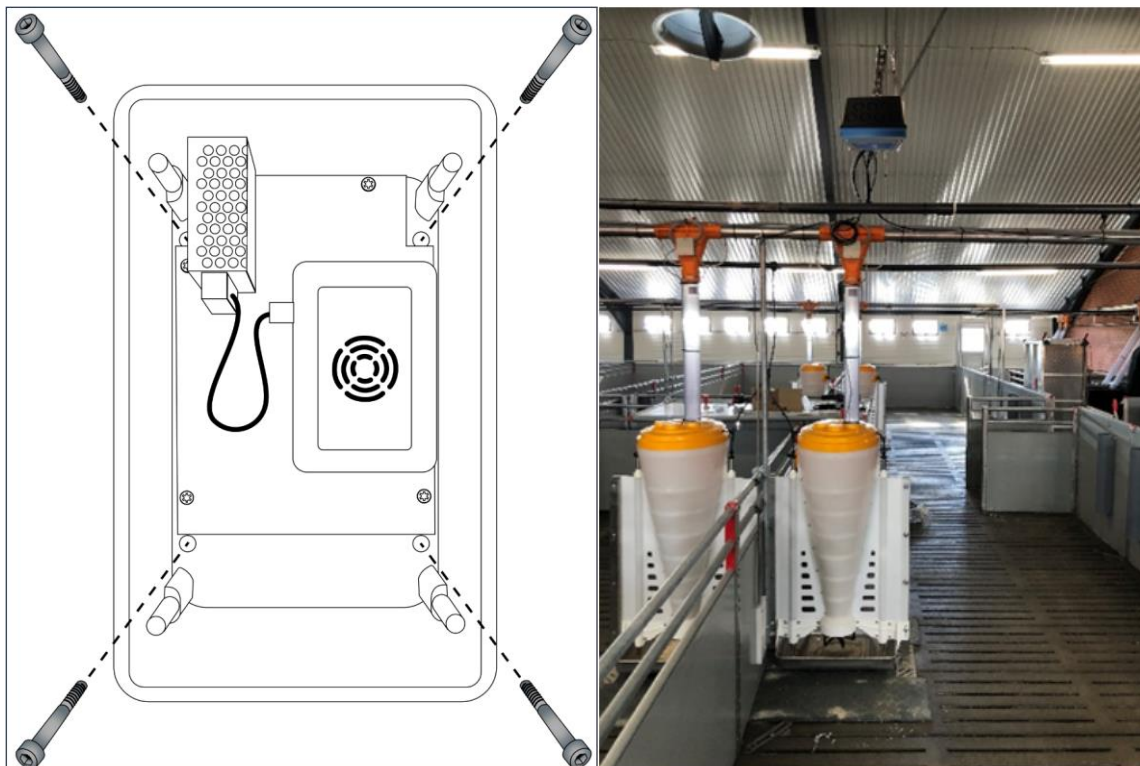


Figure 3: Left: Preferred position of bolt/screw holds for mounting and Right: Picture of mounted iDOL 65

ELECTRICAL INSTALLATION

The electrical connections shall be done as specified below.

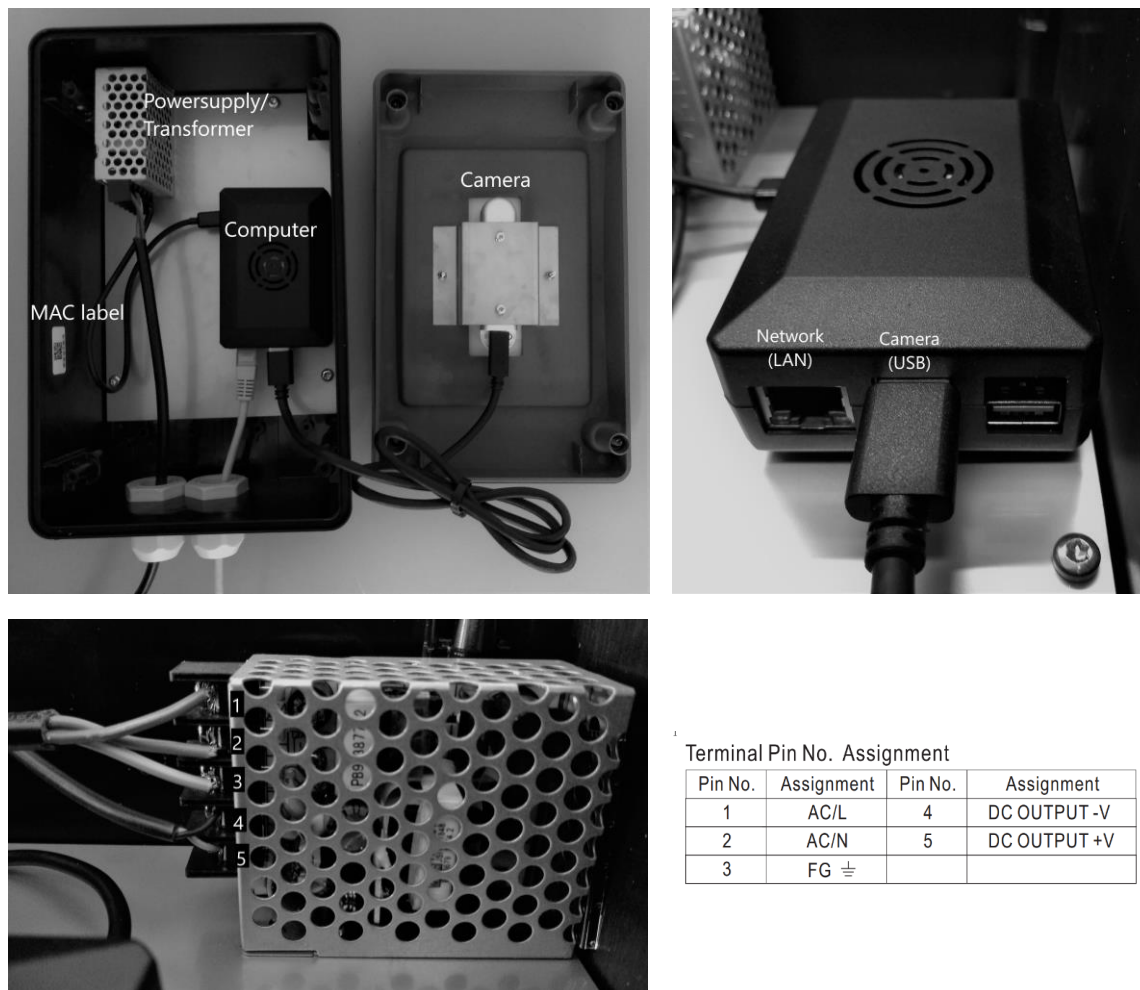


Figure 4: Inside of the iDOL 65 box. Make sure that cables and wires are connected as illustrated

The camera needs access to the internet via the ethernet port. The ethernet cable must not exceed 100m. The network must provide a dynamic allocated IP for the iDOL 65.

The ethernet cable should be connected to the ethernet port as pictured above.

The iDOL 65 requires a stable connection with a minimum bandwidth of 1Mbit/sec. download and 0.5Mbit/sec. upload.

The network (connection to internet) must allow for:

- TCP I/O access to port 8883 (secure MQTT)
- TCP I/O access to port 443 (secure HTTP)
- TCP/UDP I/O access to port 53 (DNS)

Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4	DC OUTPUT -V
2	AC/N	5	DC OUTPUT +V
3	FG \perp		

REGISTRATION OF LOCATION

As a part of the installation it must be registered where the individual iDOL 65 is mounted. This information must be handed over to the administrative personnel managing the farmers account in the DOL Omni cloud.

Fill in the table below as follows:

- Farm: Insert the name/number of the farm.
- Stable: Insert the name/number of the stable. This column may be omitted if there only are cameras installed in one stable on the farm
- Section: Insert the name/number of the section. This column may be omitted if there only are cameras installed in one section on the farm
- Pen: Insert the name/number of the pen. As the iDOL is installed in the pens you need to name/number the pens individually
- MAC Address: Insert the MAC address. The MAC address can be found on a label inside the iDOL 65 box.

Farm	Stable	Section	Pen	MAC Address	Comment

Figure 5: Table for registration of location

MAINTENANCE

The iDOL 65 itself do not need maintenance, but needs to be cleaned from time as dust and excrements from flies etc. might block the sight of the camera and hinder heat produced by the iDOL 65 to be led away.

Clean iDOL 65 using water and a brush. Do not use:

- High-pressure cleaner
- Highly compressed air
- Solvents
- Corrosive/caustic agents
- Alcohol-based disinfectants

Make sure not to move the camera during the cleaning. If the position of the iDOL 65 is changed, the camera needs to be re-calibrated. If re-calibration is necessary, the Camera will (continue to) generate a "poor image quality error" and display this error to the administrative personnel.

TROUBLESHOOTING

Please refer to DOL Omni Users Guide. The iDOL65 and DOL Omni cloud will generate errors to the administrative personnel if the iDOL 65 stops working

TECHNICAL DATA

Supply Voltage	85 – 264VAC	120 – 370VDC
Supply Frequency	47 – 63Hz	
Supply Current	50 mA	
Ambient temperature, operation	0°C – 50°C	
Ambient temperature, storage	-20°C – 60°C	
Ambient humidity, operation	10 - 90%RH	
Classification	IP 54	
Connection	Power: 3 x 0.75mm ² /AWG 18	LAN: CAT5e
Weight	1500 g	
Dimensions	H x W x D: 120 x 162 x 261 mm	
Dimensions, shipment	H x W x D: 165 x 230 x 310 mm	

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