BlueControl Pig

Climate and Production Controller

Technical Info

TI • 2025-09-26

Software version 9.1

1 Product description

BlueControl Pig is a series of one- and two-house controllers designed especially for pig houses. The controller series are available in several variants. Each of them meets the different requirements for climate and production control in each type of production and geographical, climatic conditions.

BlueControl pig is available in the following climate software variants:

- LPV
- Tunnel
- Combi-Tunnel
- Natural

It has light, water, and a 24-hour clock.

If additional production functionality is desired, the following add-on production software with dry feeding and pig weighing is furthermore available:

- BlueControl Pig production S (small)
- BlueControl Pig production L (large)

In addition to the standard version, BlueControl is available in a one-house BlueControl Mini version with very limited climate and production control. BlueControl Mini is supplied with a 7” display and pre-installed software for LPV, Tunnel, or Natural ventilation. The desired variant, including the choice between broilers/pigs is selected at the startup of the controller.

The controller is operated via a large touch display with graphical views of the ventilation status, icons and curves, among other things. The pages shown on the display are adapted to the different variants where the most relevant functions are easily accessible. A wide range of functions such as 24-hour clock, light, water meter, and auxiliary sensor can be named by the user to suit the individual house and functions can be easily recognized in menus and alarms.

The software can be freely combined with the associated hardware.

BlueControl pig variants are available in combination of the following hardware:

- 12, 22 or 32 relays
- Large or small box
- With or without fan speed controller
- 7” or 10” display

1.1 Climate control

Precise Climate Control

The functionality of the controller enables the farmer to adapt the house climate precisely to the animals’ requirements. Thus, spraying and cooling are efficient in providing the animals with the required climate. Spraying can be regulated based on temperature and time and can also be set so that it works to control behaviour, for e.g. by improving the distribution of animals in the livestock house.

The controller offers an extended curve control of the house climate so that it adapts currently to the changes of animal age and requirements. The controller can automatically curve regulate, for example, inside temperature and minimum ventilation, and it can adapt a total climate course to the specific requirements in the house. History curves curves of the temperature, humidity and outside temperature during the last 24 hours make it possible to follow the development of the house climate very closely.

The method is based on heating and ventilation as the crucial regulation parameters. Based on the calculated relationship between the humidity and temperature regulation, a soft and smooth regulation is achieved.

Dynamic Air

When a Dynamic Air sensor is mounted on the stepless air outlets, the ventilation output can be measured. This makes it possible to optimize air change in the house, also under changing pressure conditions. The Dynamic Air measuring principle is very precise, which also ensures correct minimum ventilation.

Dynamic MultiStep

Dynamic MultiStep makes it possible to reduce current consumption for the fans in the MultiStep system. The fans can run as stepless between two areas (Low speed and High speed) and will run for as long as possible in the low area.

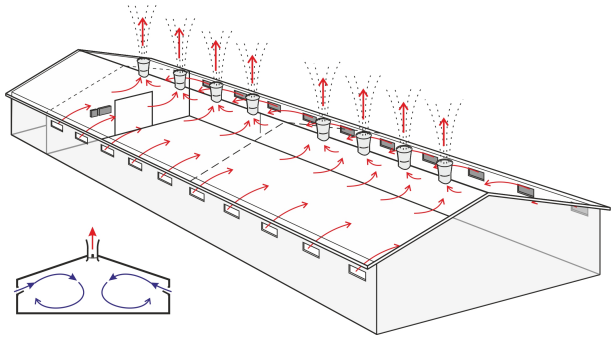
When a low level of ventilation is needed ventilation is carried out as an ordinary MultiStep system, but the fan output is limited so that it can only provide a percentage of the fan's maximum capacity.

1.1.1 LPV (Low Power Ventilation) pig

The LPV variant is a classic control for a low-pressure system. The system can be suited for most barns. The system is designed for the temperate parts of the world. Fresh air is supplied to the house by means of either wall, ceiling or roof inlets, and the climate is regulated by adjusting the air volume supplied to the house, among other things.

LPV ventilation works according to the mixing principle. Fresh air from the inlets is mixed with the housing air before it is extracted through the exhaust units in the roof or wall.

- Fresh air at low outside temperature (Minimum ventilation)
- Cooling at high outside temperatures (Extra ventilation)



Air intake: Inlets positioned in outer wall or ceiling.

Air outlet: Exhaust units positioned in the roof or wall.

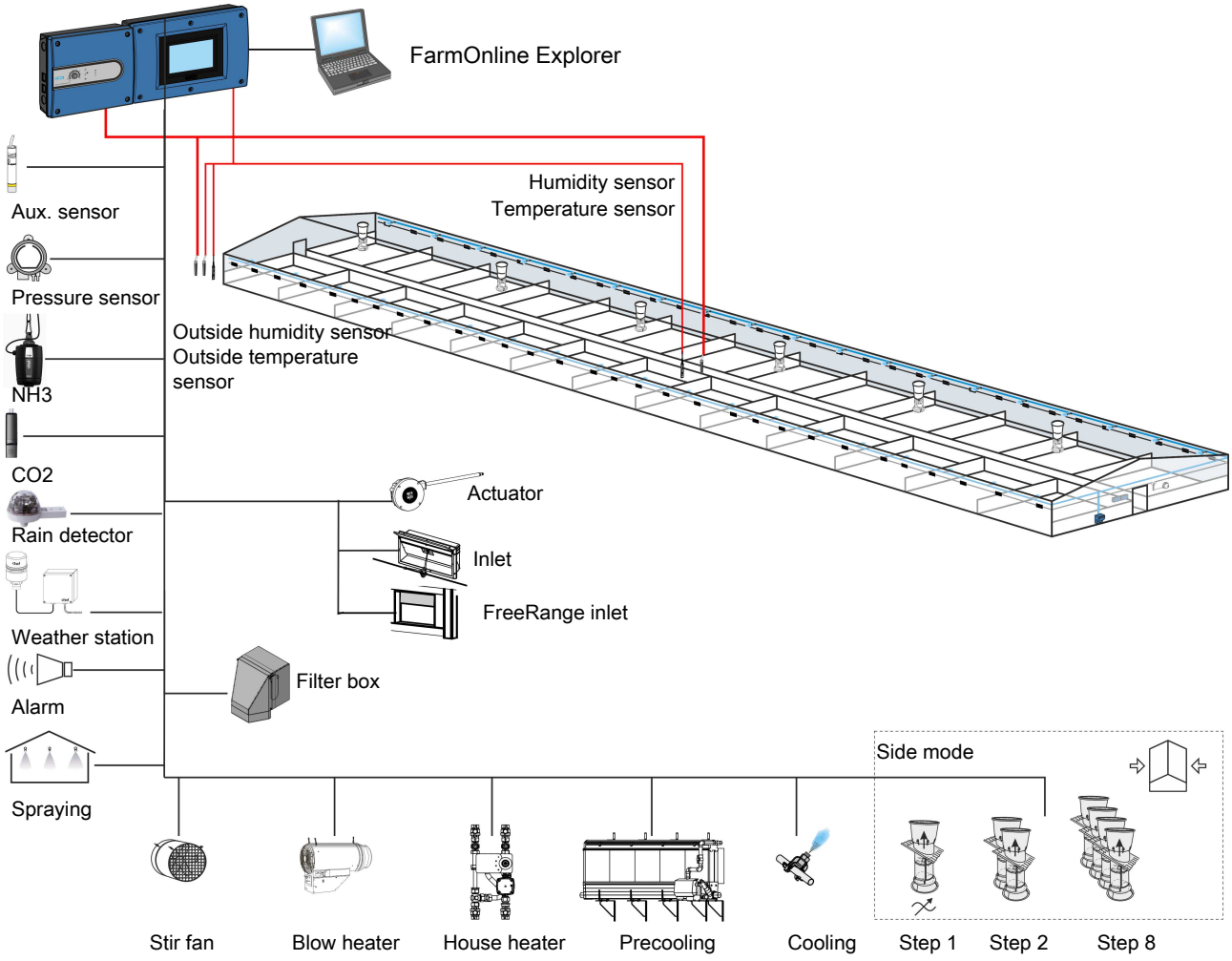
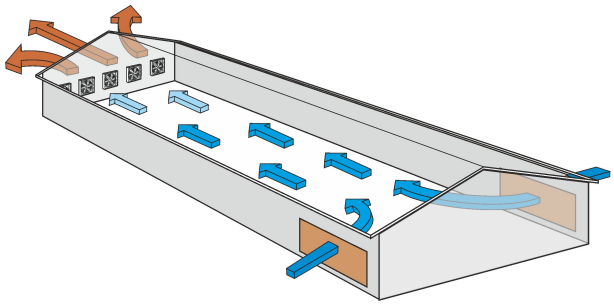


Figure 1: Examples of connections in an LPV house

1.1.2 Tunnel

The T variant has been designed for application in houses in parts of the world, where it is constantly hot. In order to achieve a cooling effect for the animals, an air current is created lengthwise in the house. In other words, the air speed cools the animals, and the higher the speed, the lower is the temperature perceived by the animals.



Air intake: Tunnel opening with cooling pads

Air outlet: Wall Fans

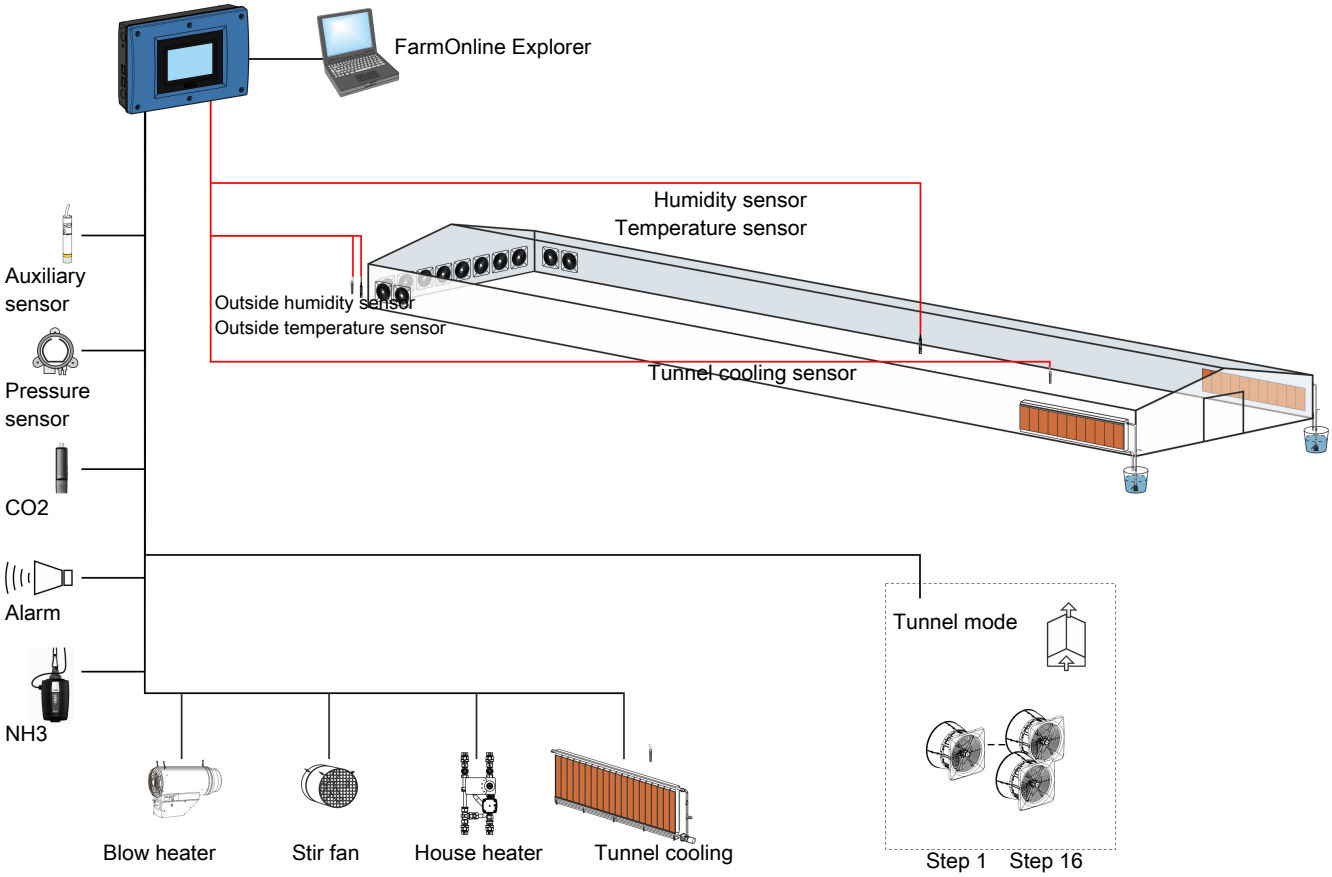


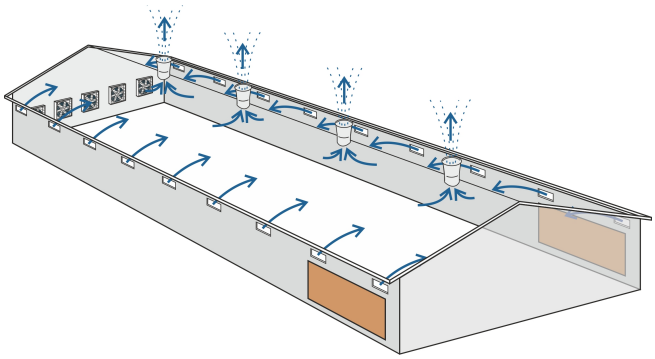
Figure 2: Examples of connections in a Tunnel house

1.1.3 Combi-Tunnel

The CT variant is a low pressure system designed for climatic zones with daily and seasonal temperature fluctuations. It combines the LPV and Tunnel systems, in order to ensure optimal growth conditions for the animals even at very high outdoor temperatures.

The combination of side and tunnel ventilation provides:

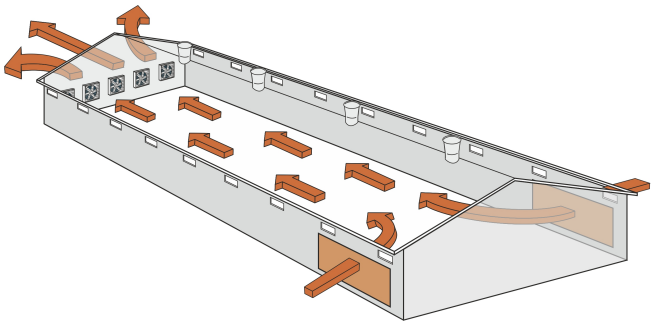
- side mode ventilation at low outside temperature.
- tunnel mode ventilation at high outside temperature.



Side mode

Air intake: Inlets positioned in outer wall or ceiling.

Air outlet: Exhaust units positioned in the roof or wall.



Tunnel mode

Air intake: Tunnel opening with cooling pads or side cooling.

Air outlet: Wall fans.

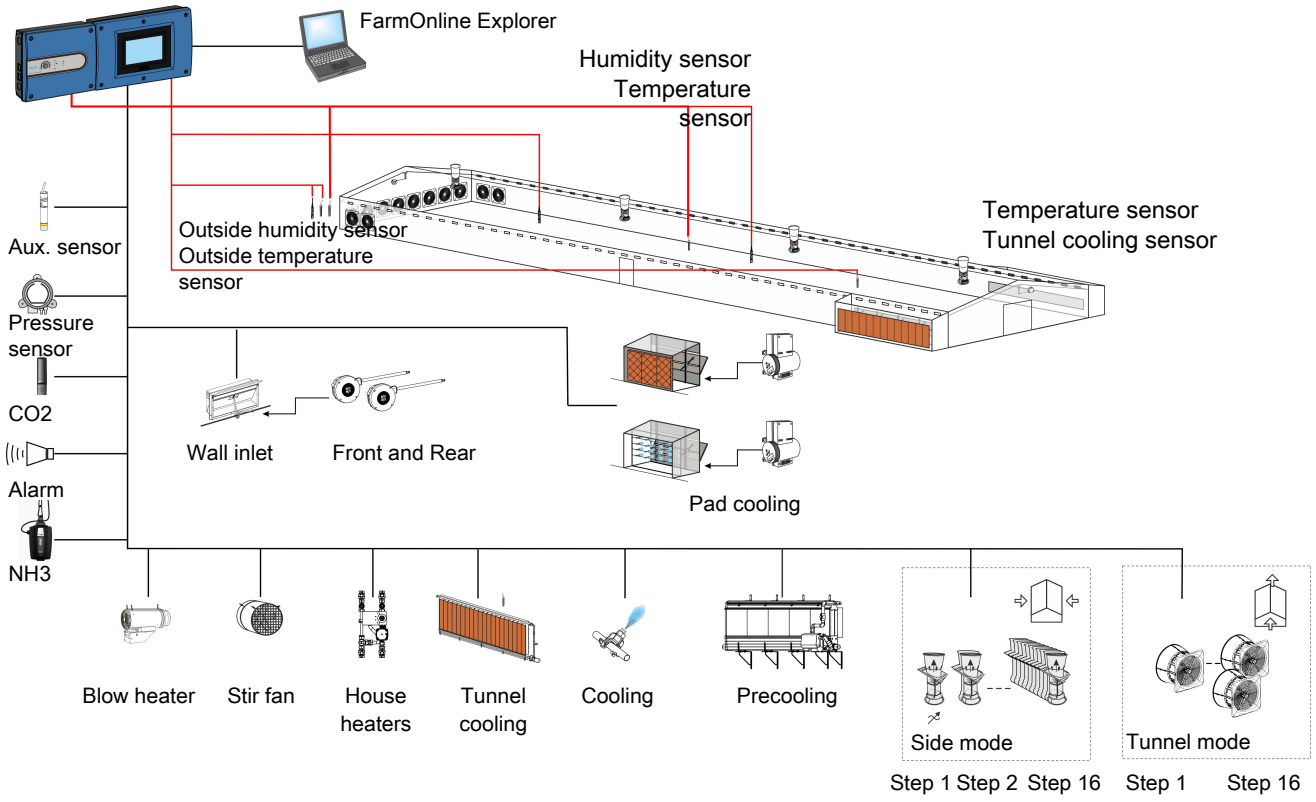


Figure 3: Example of connections in a Combi-Tunnel house

1.1.4 Central in/out

BlueControl pig central in/out is specially designed for regulation of houses where you want to regulate a common air intake and/or air outlet.

Central exhaust

The central exhaust regulates the exhaust output in relation to the pressure measured in the central duct. More house sections can be connected to the central duct.

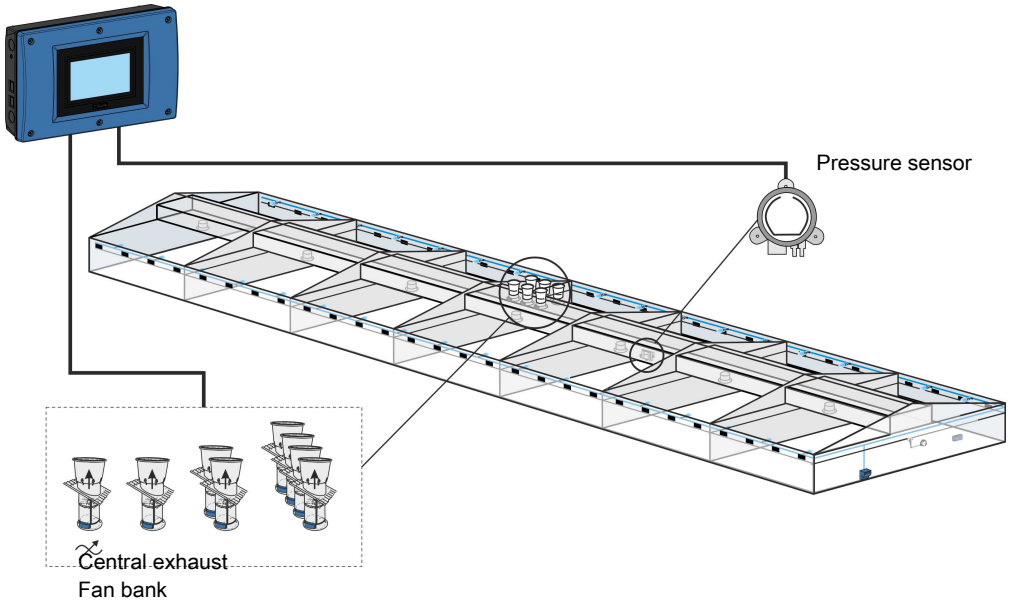


Figure 4: Central exhaust: Exhaust unit in fan bank

Central air intake

The central air intake function is used to adjust the temperature of the fresh air before it enters the sections. The air is taken into an air mixing room where it may be heated up or cooled down.

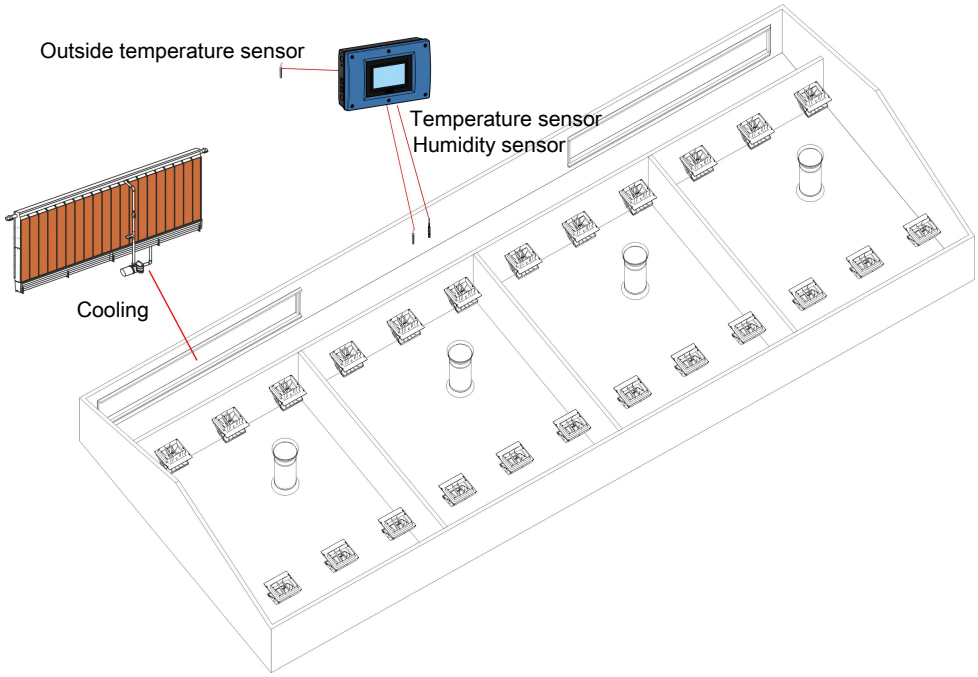


Figure 5: Central air intake Air intake from service room with cooling

1.1.5 Natural ventilation

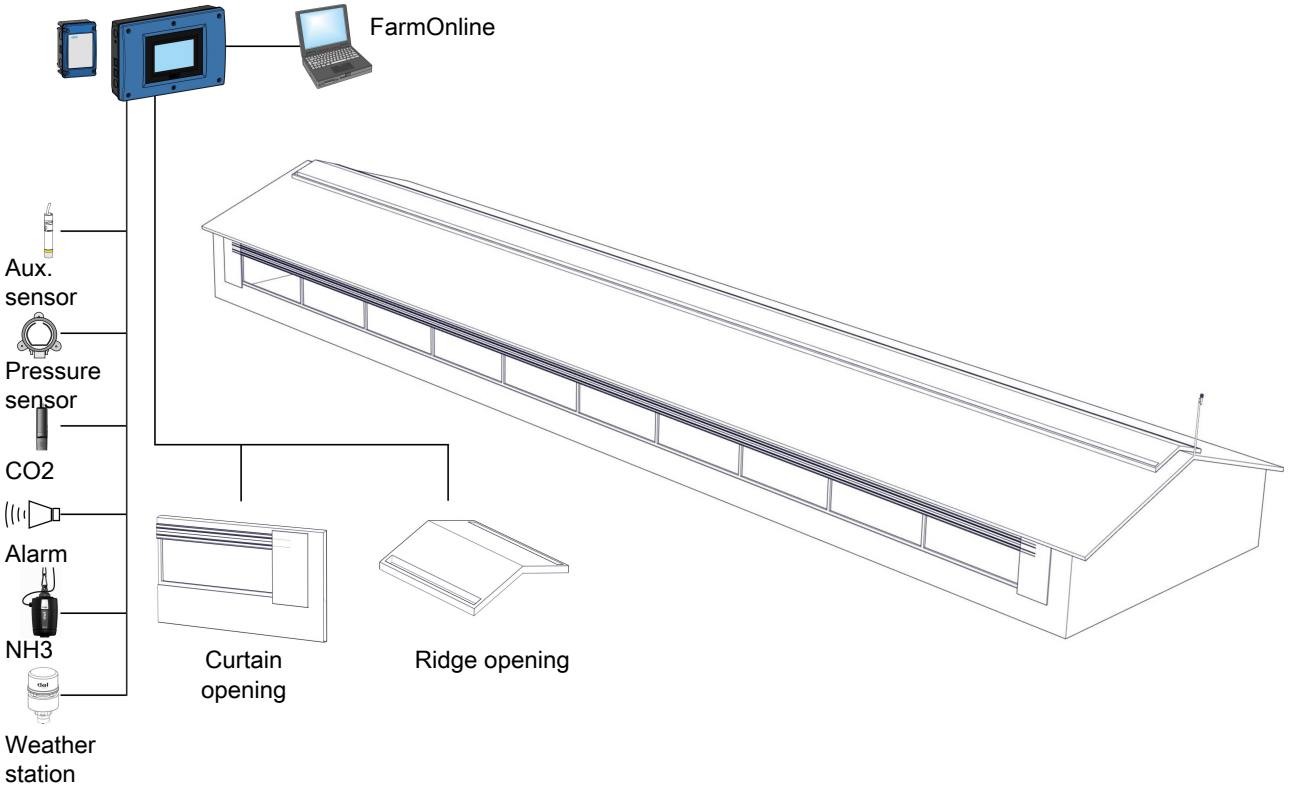


Figure 6: Example of connections in a house with natural ventilation

Pure natural ventilation

Using natural ventilation, the air change takes place when air currents move between the adjustable air intake and the air outlet without any assistance of fans. Curtain openings on the sides of the livestock house are typically used as both air intake and the air outlet. You can also use tunnel opening, open flap in exhaust unit or ridge opening as air outlet. The mechanical regulation is solely opening and closing of the inlets and outlets. Since no exhaustion takes place by means of fans, an energy saving is achieved and the noise level in the livestock house is reduced.

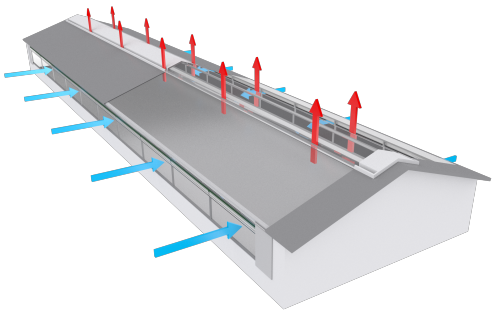


Figure 7: Example of a naturally ventilated livestock house with curtain openings on the sides of the house and ridge opening in the roof

Natural ventilation in combination

Natural ventilation can be combined with other ventilation principles (LPV, Tunnel, and heat recovery) depending on how the ventilation system is constructed. When the required climate can no longer be sustained using natural ventilation, the ventilation system switches to a different ventilation principle, for instance on the basis of too high or low outside temperature, too high CO2 level in the livestock house or too high wind velocities.

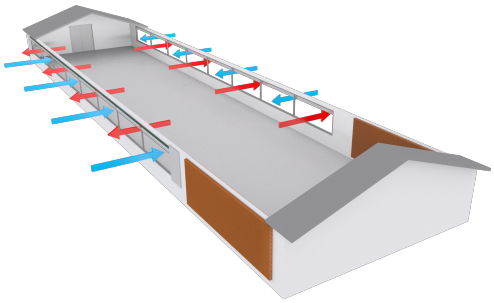


Figure 8: Example of naturally ventilated livestock house in combination with tunnel ventilation. Natural ventilation

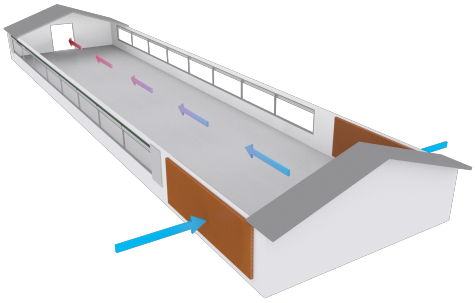


Figure 9: Example of naturally ventilated livestock house in combination with tunnel ventilation. Tunnel ventilation

1.2 Production control

BlueControl pig includes the basic production functions light, water and 24-hour clock. BlueControl pig production add-on adds the possibility for dry feeding, deployment of up to 5 feed components and feed mixture.

The controller offers the opportunity for efficient production control and systematic supervision. It therefore provides a detailed picture of productivity as well as an indication of any problems in the house, for instance deficiencies in feed consumption.

To provide the best results it is necessary to monitor production continuously and take corrective actions if productivity is not as expected. It is important to monitor the animals' gain as well as to ensure the correct amount of feed.

Light control - BlueControl pig climate

Automatic light control can be implemented that is adapted to the needs of the type of animal. The amount of light can be measured with light sensors and is controlled with light dimmers to achieve the required amount of light.

Water control - BlueControl pig climate

The animals' water consumption is registered and displayed as both current and historical figures, for example water per animal. It is also possible to monitor leaks and receive early warnings if blockages occur in the water system.

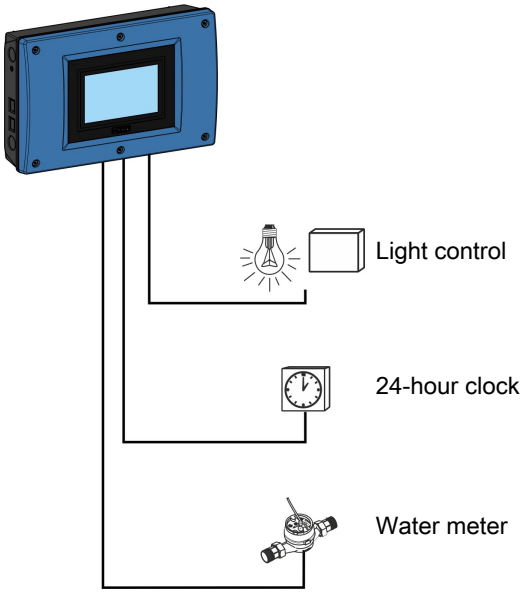


Figure 10: Functions with BlueControl pig climate

Feed control - BlueControl pig production add-on

BlueControl pig production add-on can ensure the precise dosing of feed. The feed is weighed out and delivered in the dry feeding system. The feed can be supplied from up to 5 silos and the feed can be mixed prior to feeding. Feed and water consumption is precisely registered. BlueControl pig production controls 2 dry feeding systems per house/section with separate feed programs and with different feed mixes for the 2 feeding systems. This supports houses with very large capacity demands for feed, and houses where 2 separate feed programs are required, e.g. for piglets or slaughter pigs sorted by gender or size.

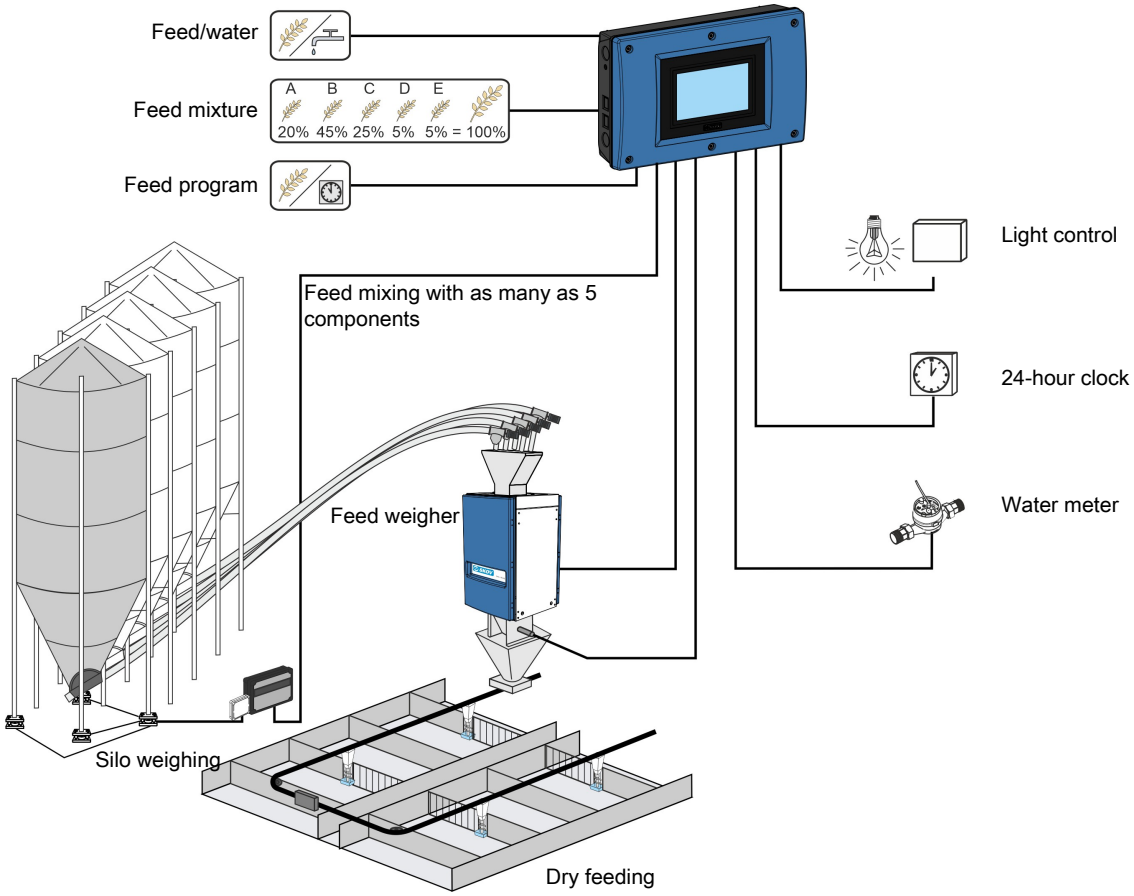


Figure 11: Functions with BlueControl pig production add-on

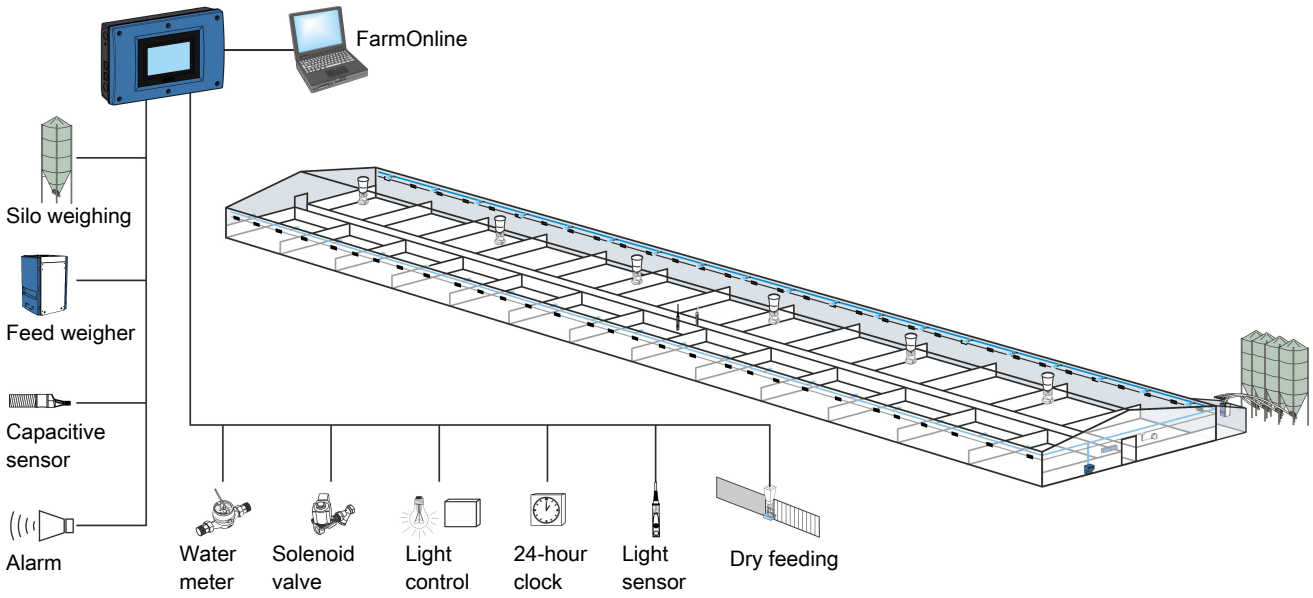


Figure 12: Example of connections

1.3 Functionality

System software	BlueControl system software					BlueControl add-on software	
	LPV	T	CT	CE	Nat.	Prod. Large	Prod. Small
Ventilation systems							
LPV	X		X		X		
Tunnel		X	X		X		
Tunnel-Plus			X				
Combi-Tunnel (tunnel + side)			X				
Natural	X	X	X		X		
Ventilation and temperature							
Inside temperature sensor	X	X	X	X	X		
Outside temperature sensor	X	X	X	X	X		
2-zone (* not LPV variants with 1 or 3 Multi-Step)	X *		X		X		
Dynamic Air	X		X	X			
MultiStep	X	X	X	X			
Dynamic MultiStep (side and tunnel)	X	X	X	X			
Side MultiStep	1/3/8		16	8			
Tunnel MultiStep		8/16	16				
Combi diffuse	X						
Adaptive ventilation	X	X	X				
PID control (or P-band)	X	X	X	X	X		
Minimum ventilation in % and m^3/animal	X	X	X		X		
Reduced minimum ventilation (according to outside temp.)	X	X	X		X		
Number of stepless groups controlled separately	2		2	2			
Number of flaps in each stepless group	2		2	1			
Parking of ON/OFF-MultiStep	X		X				
Cycle timer minimum side ventilation	X		X				
Cycle timer minimum tunnel ventilation		X	X				
Active pressure control - inlets	X		X				
Pressure control according to outside temperature				X			
Positive pressure control (filtering fresh air)	X			X			
Stepless opening of combi-diffuse ceiling inlets	X						
Comfort control	X		X				
Heat wave comfort control (batch production)	X		X				
Day and night adjustment	X		X		X		
De-ice function for inlets	X		X				
Zone controlled inlets	X		X				
Shared air outlets (between side and tunnel)			X				

	BlueControl system software					BlueControl add-on software	
System software	**LPV**	**T**	**CT**	**CE**	**Nat.**	**Prod. Large**	**Prod. Small**
Central exhaust control (duct pressure control)				X			
Dynamic pressure control for central exhaust duct				X			
Extra ventilation (*CT variant in side mode)	X		X *				
CO_2 minimum ventilation control	X	X	X				
NH_3 ventilation	X	X	X				
Rain detector	X						
FreeRange inlet	8						
Stir fan control	4	4	4		4		
Display of user offset for set temperature (**only variants with 8 MultiStep)	X		X **				
Heating							
House heaters							
Number of units	6	6	6	2	6		
SmartHeat units (0-10V heating)	6	6	6		6		
Adaptive control	X	X	X		X		
Stand-alone heating							
Number of units	4	4	4		4		
Adaptive control	X	X	X		X		
Floor heating							
SmartHeat unit (0-10V floor heating)	X		X		X		
Control of floor heating (by outside temperature)	X		X		X		
Display of floor heating return temperature (relay floor heating	X		X		X		
Adaptive control	X		X		X		
Humidity							
Inside humidity sensor	X	X	X	X	X		
Outside humidity sensor	X	X	X		X		
Humidity control via "humidity ventilation”	X		X				
Humidity control via “temperature reduction”	X		X				
Humidity control via "heat control”	X	X	X		X		
Humidification control	X		X		X		
Adaptive humidity control	X	X	X		X		
Intelligent humidity control by outdoor conditions	X	X	X		X		
Cooling							
Side cooling	3		3				
Precooling	X		X				
Tunnel cooling		6	6				
Adaptive tunnel cooling	X		X				
Cooling before maximum ventilation	X	X	X				

	BlueControl system software					BlueControl add-on software	
System software	**LPV**	**T**	**CT**	**CE**	**Nat.**	**Prod. Large**	**Prod. Small**
Cooling pad cleaning function		X	X				
Nozzle cleaning (side cooling)	X		X				
Use effect curve		X	X				
Production							
Feed weigher:							
Drum weigher (DOL 99B):						X	X
- shared feed weigher						X	X
- feed mixing						X	X
- number of feed components						5	1
DOL 9940:						X	X
- shared feed weigher						X	X
- feed mixing						X	
- number of feed components						5	1
Electronic silo weigher						X	X
Electronic silo weigher common auger						X	X
Day silo weigher						X	X
Tip weigher						X	X
Time-controlled weigher						X	X
Time-controlled weigher with cross auger						X	X
BinTrac feature software (silo weighing)	X	X	X	X	X	X	X
Feed control							
Silos						5	2
Shared silo via LAN						X	X
Dry feeding						X	X
Two feed lines						X	
Subcircuits						X	
Chain fault detection						X	X
Feed mixture according to graph						X	
Naming of feed types						X	X
Automatic silo change to silo with the same feed type						X	X
Combined feed weigher and silo weigher						X	X
Shared feed weigher with calculated silo content						X	X
Empty silo sensor						X	X
Volume dispenser						X	X
Water							
Water meter	4	4	4		4	4	4
Stop relay for water consumption						X	X
Leakage control	X		X			X	X
Light							

	BlueControl system software					BlueControl add-on software	
System software	**LPV**	**T**	**CT**	**CE**	**Nat.**	**Prod. Large**	**Prod. Small**
Light	X	X	X		X	X	X
Light dimmer	X	X	X		X	X	X
Light program						X	X
Light sensor	5	5	5		5	5	5
Boost function	X	X	X		X	X	X
Light dimmer controlled by light sensor	X	X	X		X	X	X
24-hour clocks							
24-hour clocks	4	4	4	4	4	4	4
Misc							
Control of spraying	X	X	X				
Behavior control via spraying	X	X	X				
Aux. sensor	8	8	8	16	4		
Reference values	X	X	X	X	X		
Curve control (temp., humidity, floor heat, min. vent, max. vent.)	X	X	X		X		
History curves	X	X	X	X	X	X	X
Ventilation boost (Staff comfort)	X		X				
Pause functions (soaking/washing/drying/dis-infection)	X	X	X		X		
Delivery function	X		X				
User-defined report view	X	X	X	X	X	X	X
Safety							
Frost protection of empty section	X		X		X		
Batch-stop security: by temperature or at 2-house control	X		X				
Three password levels	X	X	X	X	X	X	X
Comprehensive alarm functions	X	X	X	X	X	X	X
Operation and alarm logs	X	X	X	X	X	X	X
Support of emergency opening DOL 278T	X		X		X		
Energy consumption monitoring	2		2	2	X	2	2
Status on equipment (current sensor)	64	64	64				
Remote Access (via FarmOnline)	X	X	X	X	X	X	X

1.4 Functionality Mini Pig

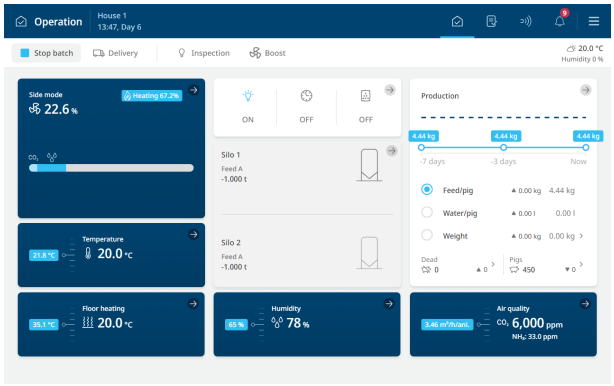
	BlueControl Mini Pig		
System software	**LPV**	**T**	**Nat.**
Ventilation systems			
LPV	**X**		
Tunnel		**X**	
Natural			**X**
Ventilation and temperature			
Inside temperature sensor	**2**	**2**	**2**
Outside temperature sensor	**X**	**X**	**X**
Side inlet	**2**		
Tunnel inlet		**2**	
Natural inlet			**4**
MultiStep			
Dynamic MultiStep		**X**	
Tunnel MultiStep		**8**	
Combi diffuse	**X**		
Adaptive ventilation	**X**	**X**	
PID control (or P-band)	**X**	**X**	**X**
Minimum ventilation in % and m^3/animal	**X**	**X**	
Minimum ventilation in %			**X**
Reduced minimum ventilation (according to outside temp.)	**X**		**X**
Number of stepless groups controlled separately	**2**	**1**	
Number of flaps in each stepless group	**1**	**1**	
Cycle timer minimum side ventilation	**X**		
Cycle timer minimum tunnel ventilation		**X**	
Stepless opening of combi-diffuse ceiling inlets	**X**		
Comfort control	**X**		
Heat wave comfort control (batch production)	**X**		
Day and night adjustment	**X**		
De-ice function for inlets	**X**		
Stir fan	**2**	**4**	**2**
Heating			
House heaters			
Number of units	**2**	**2**	**2**
SmartHeat units (0-10V heating)	**2**	**2**	**2**
Adaptive control	**X**	**X**	**X**
Floor heating			
SmartHeat unit (0-10 V floor heating)	**X**		**X**
Control of floor heating (by outside temperature)	**X**		**X**
Display of floor heating return temperature (relay floor heating)	**X**		**X**
Adaptive control	**X**		**X**
Humidity			

	BlueControl Mini Pig		
System software	**LPV**	**T**	**Nat.**
Inside humidity sensor	X	X	X
Outside humidity sensor	X	X	X
Humidity control via "humidity ventilation”	X	X	
Humidity control via “temperature reduction”	X	X	X
Humidity control via "heat control”	X	X	
Adaptive humidity control	X	X	X
Cooling			
Side cooling	1		1
Tunnel cooling		2	
Adaptive tunnel cooling		X	
Cooling pad cleaning function		X	
Nozzle cleaning (side cooling)	X		
Use effect curve		X	
Production			
Water			
Water meter	2	2	2
Leakage control	X	X	X
Light			
Light	X	X	X
Light dimmer	X	X	X
Light dimmer controlled by light sensor	X	X	X
24-hour clocks			
24-hour clocks	2	2	2
Misc			
Spraying	X		
Behavior control via spraying	X		
Reference values	X	X	X
Curve control (temp., humidity, floor heat, min. vent, max. vent.)	X	X	X
History curves	X	X	X
Ventilation boost (Staff comfort)	X		
Pause functions (soaking/washing/drying/disinfection)	X	X	X
Delivery function	X		
User-defined report view	X	X	X
Safety			
Three password levels	X	X	X
Comprehensive alarm functions	X	X	X
Operation and alarm logs	X	X	X
Support of emergency opening DOL 278T	X		
Energy consumption monitoring	1	1	1

	BlueControl Mini Pig		
System software	**LPV**	**T**	**Nat.**
Status on equipment (current sensor)	**1**	**1**	**1**
Remote Access (via FarmOnline)	**X**	**X**	**X**

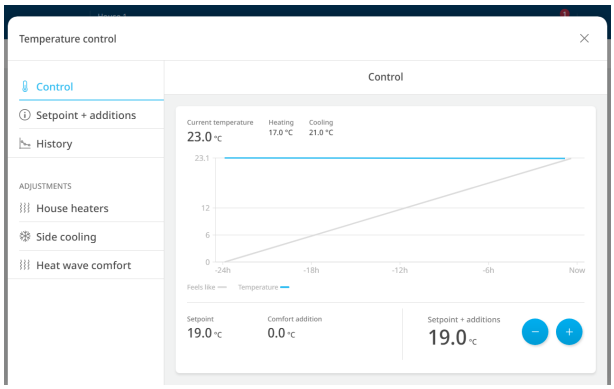
Page views

The controller has a number of pages which contain exactly the functions and values that are needed in the daily work.



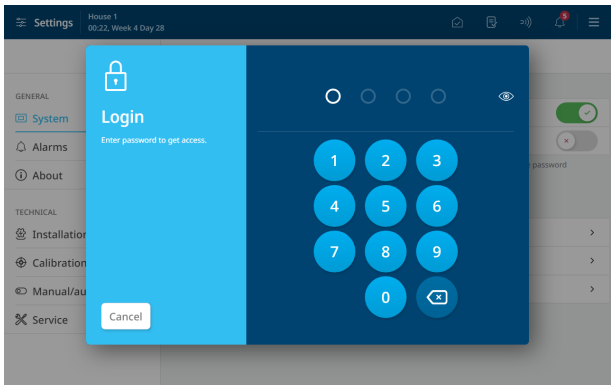
Climate control

Dynamic setpoint continuously takes into account both the current ventilation and the settings you make. It will thus adapt so that there is always the optimum temperature at the given level of ventilation.



Password

Each user level can be protected against unauthorised changes with a password.



USB stick/SD card

Using a USB stick enables you to copy the current setting of the controller. This way it is possible to save a backup copy of the setup and also to copy the setup to other controllers.

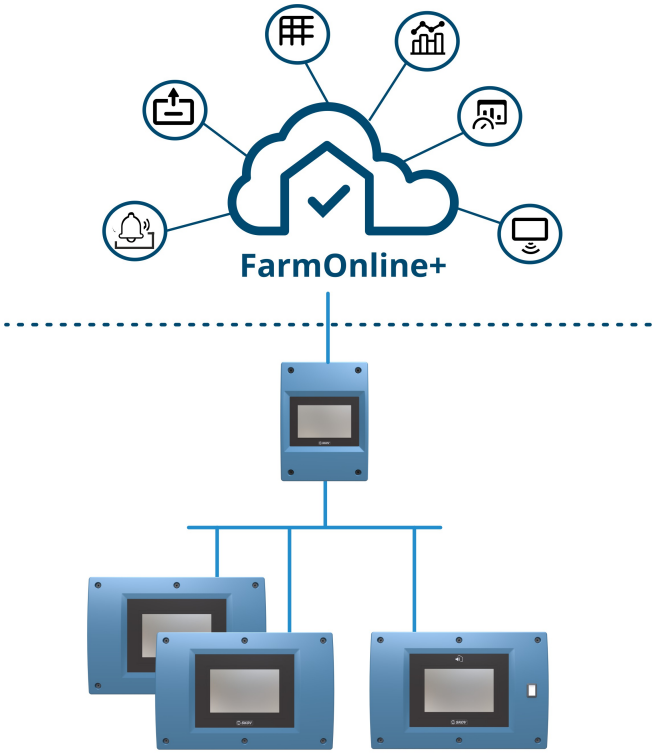
It is also possible to make a backup of historic data on the SD card.

Safety

- Three access user levels requiring password
- Comprehensive alarm functions
- Operation and alarm logs
- Emergency opening as the standard function

FarmOnline+

Using the FarmOnline+ management system, the producer can access the controllers' data and setup from any PC with an internet connection and from the system's mobile app.



Remote Access

The function Remote Access enables FarmOnline+ direct access to operate the controller, which can be operated as if you were standing right next to it. Therefore, the function will also facilitate service access to the controllers in connection with troubleshooting and other support.

2 Product survey

A BlueControl controller consists of a number of hardware variants (BlueControl HW), which can be freely combined with the desired functionality (BlueControl SW).

In addition, a variant with limited functionality is available. BlueControl Mini Pig with a 7” display and either LPV, Tunnel, or Natural ventilation.

2.1 Hardware

The standard hardware has a 10" display or a 7" display.

It contains a main module with 12 relays and 0-10 V inputs and outputs, which can be configured as follows:

- 11 inputs and 2 output - or
- 9 inputs and 4 output - or
- 7 inputs and 6 outputs

In addition, it can contain a number of I/O modules type 3. The number of inputs and outputs and relays on the I/O module is described below for each variant.

136750 BlueControl HW, 10" 12RL

One-house
0-10 V input or 0-10 V output (2+2)
0-10 V input or DOL 12 input or digital input (4)
0-10 V input (2)
0-10 V output (2)
Relays (12)

Two-house
0-10 V input or 0-10 V output (1+1)
0-10 V input or DOL 12 input or digital input (2)
0-10 V input (1)
0-10 V output (1)
Relays (6)

Temperature sensors must be ordered separately.

No documentation is supplied with the controller. Manual packages must be ordered separately in the relevant language.

136751 BlueControl HW, 10" 12RL w/sp.

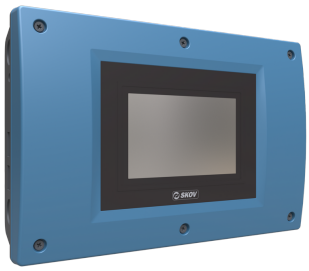
Speed controller (w/sp.) (2)

One-house
0-10 V input or 0-10 V output (2+2)
0-10 V input or DOL 12 input or digital input (4)
0-10 V input (2)
0-10 V output (2)
Relays (12)

Two-house
0-10 V input or 0-10 V output (1+1)
0-10 V input or DOL 12 input or digital input (2)
0-10 V input (1)
0-10 V output (1)
Relays (6)

Temperature sensors must be ordered separately.

No documentation is supplied with the controller. Manual packages must be ordered separately in the relevant language.



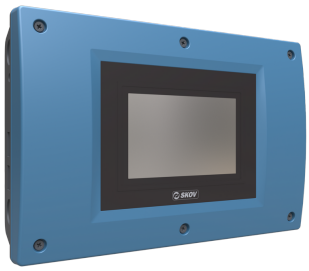
136752 BlueControl HW, 10" 22RL

One-house
0-10 V input or 0-10 V output (2+2)
0-10 V input or DOL 12 input or digital input (12)
0-10 V input (2)
0-10 V output (10)
Relays (22)

Two-house
0-10 V input or 0-10 V output (1+1)
0-10 V input or DOL 12 input or digital input (6)
0-10 V input (1)
0-10 V output (5)
Relays (11)

Temperature sensors must be ordered separately.

No documentation is supplied with the controller. Manual packages must be ordered separately in the relevant language.



136753 BlueControl HW, 10" 22RL w/sp.

Speed controller (w/sp.) (2)

One-house
0-10 V input or 0-10 V output (2+2)
0-10 V input or DOL 12 input or digital input (12)
0-10 V input (2)
0-10 V output (10)
Relays (22)

Two-house
0-10 V input or 0-10 V output (1+1)
0-10 V input or DOL 12 input or digital input (6)
0-10 V input (1)
0-10 V output (5)
Relays (11)

Temperature sensors must be ordered separately.

No documentation is supplied with the controller. Manual packages must be ordered separately in the relevant language.

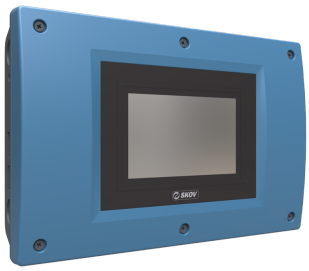
136754 BlueControl HW, 10" 32RL

One-house
0-10 V input or 0-10 V output (2+2)
0-10 V input or DOL 12 input or digital input (20)
0-10 V input (2)
0-10 V output (18)
Relays (32)

Two-house
0-10 V input or 0-10 V output (1+1)
0-10 V input or DOL 12 input or digital input (10)
0-10 V input (1)
0-10 V output (9)
Relays (16)

Temperature sensors must be ordered separately.

No documentation is supplied with the controller. Manual packages must be ordered separately in the relevant language.



136755 BlueControl HW, 10" 32RL w/sp.

Speed controller (w/sp.) (2)

One-house
0-10 V input or 0-10 V output (2+2)
0-10 V input or DOL 12 input or digital input (20)
0-10 V input (2)
0-10 V output (18)
Relays (32)

Two-house
0-10 V input or 0-10 V output (1+1)
0-10 V input or DOL 12 input or digital input (10)
0-10 V input (1)
0-10 V output (9)
Relays (16)

Temperature sensors must be ordered separately.

No documentation is supplied with the controller. Manual packages must be ordered separately in the relevant language.

136746 BlueControl pig HW, 7" 12RL

One-house
0-10 V input or 0-10 V output (2+2)
0-10 V input or DOL 12 input (4)
0-10 V input (2)
0-10 V output (2)
Relays (12)

Two-house
0-10 V input or 0-10 V output (1+1)
0-10 V input or DOL 12 input (2)
0-10 V input (1)
0-10 V output (1)
Relays (6)

Temperature sensors must be ordered separately.

No documentation is supplied with the controller. Manual packages must be ordered separately in the relevant language.

136747 BlueControl pig HW, 7" 12RL w/sp.

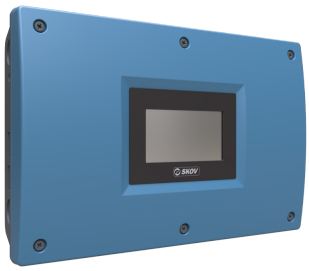
Speed controller (w/sp.) (2)

One-house
0-10 V input or 0-10 V output (2+2)
0-10 V input or DOL 12 input (4)
0-10 V input (2)
0-10 V output (2)
Relays (12)

Two-house
0-10 V input or 0-10 V output (1+1)
0-10 V input or DOL 12 input (2)
0-10 V input (1)
0-10 V output (1)
Relays (6)

Temperature sensors must be ordered separately.

No documentation is supplied with the controller. Manual packages must be ordered separately in the relevant language.



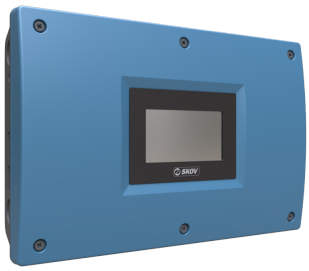
136748 BlueControl pig HW, 7" 22RL

One-house
0-10 V input or 0-10 V output (2+2)
0-10 V input or DOL 12 input (12)
0-10 V input (2)
0-10 V output (10)
Relays (22)

Two-house
0-10 V input or 0-10 V output (1+1)
0-10 V input or DOL 12 input (6)
0-10 V input (1)
0-10 V output (5)
Relays (11)

Temperature sensors must be ordered separately.

No documentation is supplied with the controller. Manual packages must be ordered separately in the relevant language.



136749 BlueControl pig HW, 7" 22RL w/sp.

Speed controller (w/sp.) (2)

One-house
0-10 V input or 0-10 V output (2+2)
0-10 V input or DOL 12 input (12)
0-10 V input (2)
0-10 V output (10)
Relays (22)

Two-house
0-10 V input or 0-10 V output (1+1)
0-10 V input or DOL 12 input (6)
0-10 V input (1)
0-10 V output (5)
Relays (11)

Temperature sensors must be ordered separately.

No documentation is supplied with the controller. Manual packages must be ordered separately in the relevant language.

2.2 Software

BlueControl pig is available as a one-house and a two-house controller.

Software is available in different versions:

- Stand-alone software with climate functionality, e.g. LPV (side), Combi-Tunnel, Tunnel or Natural. The software also contains limited production functionality.
- Add-on software with production functionality, e.g. dry feeding. Cannot be installed alone.
- Feature software: Can only be installed together with stand-alone software with add-on software. Cannot be installed alone.
- It is not possible to combine one- and two-house software, eg. One-house climate software and two-house production software.

136770 BlueControl pig-1 SW, LPV MS-1

136771 BlueControl pig-2 SW, LPV MS-1

136772 BlueControl pig-1 SW, LPV MS-3

136773 BlueControl pig-2 SW, LPV MS-3

136774 BlueControl pig-1 SW, LPV MS-8

136775 BlueControl pig-2 SW, LPV MS-8

Software for LPV ventilation.

136776 BlueControl pig-1 SW, Combi-Tunnel MS-16

Software for Combi-Tunnel ventilation.

Supplied with a DOL 10 temperature sensor, which is used as a tunnel cooling sensor.

136777 BlueControl pig-1 SW, Tunnel MS-16

Software for Tunnel ventilation.

Supplied with a DOL 10 temperature sensor, which is used as a tunnel cooling sensor.

136779 BlueControl pig-2 SW, Tunnel MS-8

Software for Tunnel ventilation.

Supplied with a DOL 10 temperature sensor, which is used as a tunnel cooling sensor.

136778 BlueControl pig-1 SW Central in/out MS-8

Software for central exhaust and for central air Intake.

136780 BlueControl pig-1 SW, Natural

Software for for natural ventilation.

136781 BlueControl pig-1 SW, production-S add-on

136782 BlueControl pig-2 SW, production-S add-on

Dry feeding. 1 feed component. 2 Silos. Stop relay for water. Light program

136783 BlueControl pig-1 SW, production-L add-on

136784 BlueControl pig-2 SW, production-L add-on

Dry feeding. Feed mixture. 5 feed components. 5 Silos. 2 feed lines. Secondary feed lines. Feed mixture according to a curve. Stop relay for water. Light program

Add-on software for production.

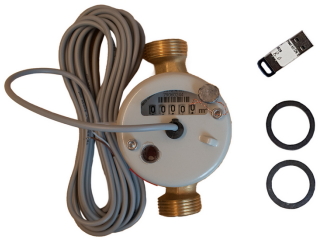
2.2.1 Feature software

136799 BlueControl BinTrac, feature SW

BinTrac is a feature for after-installation in a controller with production system software. When loading the feature software, new functions are added to the menus of the controller.

Feature software can be installed in controllers with version 7.3 software or higher. If the controller software version is older than version 7.3, it requires update to the latest version before installing the feature software.

It is supplied with English documentation.



439304 DA 4200 SmartHeat kit DN 25

DA 4200 SmartHeat kit is an add-on that includes a flow sensor and a software extension of the controller. SmartHeat kit is used together with DA 4200 room heating/floor heating units DN 25.

After updating and mounting of a flow sensor, the controller can measure water flow and flow and return temperatures to a house/section. Based on these recordings, the controller and FarmOnline can calculate and record the instantaneous heat consumption in kilowatts (kW) and the number of used kilowatt-hours (kWh) for the current house/section.

The controller generates an alarm if the water flow is too low and if the flow temperature is too low.

The kit includes flow sensor and USB stick with SmartHeat software.

The SmartHeat software can only be installed on controllers with software version 8.0 or later.

439305 DA 4200 SmartHeat kit DN 32

DA 4200 SmartHeat kit is an add-on that includes a flow sensor and a software extension of the controller. SmartHeat kit is used together with DA 4200 room heating/floor heating units DN 32.

After updating and mounting of a flow sensor, the controller can measure water flow and flow and return temperatures to a house/section. Based on these recordings, the controller and FarmOnline can calculate and record the instantaneous heat consumption in kilowatts (kW) and the number of used kilowatt-hours (kWh) for the current house/section.

The controller generates an alarm if the water flow is too low and if the flow temperature is too low.

The kit includes flow sensor and USB stick with SmartHeat software.

The SmartHeat software can only be installed on controllers with software version 8.0 or later.

2.3 Hardware and software

136196 BlueControl Mini

7” display
2.1 A power supply
1 x DOL 10 (only used for tunnel cooling with tunnel variant)

0-10 V input or 0-10 V output (2+2)
0-10 V input or DOL 12 input (4)
0-10 V input (2)
0-10 V output (2)
Relays (12)

Is supplied with BlueControl Mini software with LPV ventilation, Tunnel ventilation, and Natural ventilation. Cannot be combined with feature software.

Temperature sensors for inside and outside temperature recording must be ordered separately.

No documentation is supplied with the controller. Manual packages must be ordered separately in the relevant language.

2.4 Language

137460 BlueControl Pig manual package DA
137461 BlueControl Pig manual package EN
137476 BlueControl Pig manual package EN (US units)
137462 BlueControl Pig manual package DE
137464 BlueControl Pig manual package FR
137465 BlueControl Pig manual package ES
137467 BlueControl Pig manual package SV
137469 BlueControl Pig manual package CS
137470 BlueControl Pig manual package PL
137471 BlueControl Pig manual package RU
137472 BlueControl Pig manual package HU
137479 BlueControl Pig manual package JA

137560 BlueControl Pig CE manual package DA
137561 BlueControl Pig CE manual package EN
137562 BlueControl Pig CE manual package DE

137800 BlueControl Mini Pig manual package DA
137801 BlueControl Mini Pig manual package EN
137802 BlueControl Mini Pig manual package DE
137803 BlueControl Mini Pig manual package FR
137804 BlueControl Mini Pig manual package ES
137805 BlueControl Mini Pig manual package IT
137806 BlueControl Mini Pig manual package TH

137807 BlueControl Mini Pig manual package PT

The manual package contains user documentation in the selected language and technical manuals in English. Some manual packages include the technical documentation in the selected language.

Language in the controller display	DA	Danish	IT	Italian	KO	Korean
	EN	English	RO	Romanian	FA	Farsi
	DE	German	SL	Slovakian	AR	Arabic
	NL	Dutch	HR	Croatian	SQ	Albanian
	FR	French	TR	Turkish	BG	Bulgarian
	ES	Spanish	JA	Japanese	VI	Vietnamese
	FI	Finnish	TH	Thai	UR	Urdu
	SV	Swedish	ZH	Chinese	KH	Khmer
	NO	Norwegian	SR	Serbian	IS	Icelandic
	CS	Czech	ET	Estonian	UK	Ukranian
	PL	Polish	PT	Portuguese	EL	Greek
	RU	Russian	ID	Indonesian	LT	Lithuanian
	HU	Hungarian				

2.5 Accessories

140252 DOL 114 humidity and temperature sensor, 2 m cable

140253 DOL 114 humidity and temperature sensor, 5 m cable

The DOL 114 is a dual-purpose temperature and humidity sensor that can be used to regulate the livestock house relative air humidity and temperature.

The DOL 114 is a high-quality sensor which is especially useful under particularly harsh conditions and in areas of high air humidity.

The DOL 114 comes with a protective cap.

In general, SKOV A/S recommends that a humidity sensor be installed in livestock houses integrating heat supply.

Climate controllers on the same LAN network can share an outside humidity sensor.

140263 DOL 104 humidity sensor 0-10 V

DOL 104 is a high-precision humidity sensor that can be used for regulating the relative air humidity in the livestock house.

The DOL 104 is a high-quality sensor which is especially useful under particularly harsh conditions and in areas of high air humidity.

DOL 104 has full protection against short circuits and wiring failures.

The DOL 104 comes with a protective cap.

If you want humidity and temperature measurement on two individual sensors DOL 104 can i.a. be used.

In general, SKOV A/S recommends that a humidity sensor be installed in livestock houses integrating heat supply.

140200 DOL 12 temperature sensor, 1.4 m cable

140210 DOL 12 temperature sensor, 5 m cable

The temperature sensor can be used both outside and inside.

Order the required number of sensors for registration of inside temperature and outside temperature.

In large houses, up to eight extra temperature sensors can be connected, resulting in an average measurement by several sensors per zone.

When using pad cooling, order additional DOL 12 sensors if an alarm is required for no cooling at pads - e.g. one per pump.

140246 DOL 10 temperature sensor

Used as pad cooling sensor in tunnel, combi-tunnel and LPV systems.

140245 Radiation shield for climate sensors

Used in Combi-Tunnel ventilation systems in order to ensure a proper switch between side and tunnel ventilation.

Used in natural ventilation to ensure correct regulation.

The radiation shield protects an outside temperature and/or humidity sensor from rain and radiant heat.

We recommend that the radiation shield is positioned 2 m above the roof. Alternatively 2 m above the ground and 2 m from other building elements (walls etc.)

The radiation shield is supplied with a mounting bracket.

It may be necessary to order a climate sensor with a long cable when using the radiation shield.

140331 DOL 119 CO2 sensor 5000/10000 ppm

Sensor for measuring the CO2 content in the air.

Registration of the CO2 content of the air allows the controller to regulate the minimum ventilation.

If a CO2 sensor has not been installed, the controller regulates the minimum ventilation on the basis of the set values (m3/h per animal).

Supplied with a M12 plug and sealing plug as well as protection cap for DOL 119.

140247 DOL 53 ammonia sensor

140236 DOL 53 dust filter (5 pcs)

DOL 53 measures the ammonia in the house's air.

Can be used for registration and control of ammonia levels in the air.

140268 DOL 16 Light Sensor 0-100/1000LUX 0-10V

Output 1: 0-100 lux. Output 2: 0-1000 lux.

140270 DOL 16 Light Sensor 0-50/1000LUX 0-10V

Output 1: 0-50 lux. Output 2: 0-1000 lux.

The sensor can be used to measure the light intensity for primary light and slave light, respectively.

Select the type of sensor that corresponds to the current brightness in the livestock house (measuring area).

Sensor with fixed cable.

140266 DOL 16 light sensor 0-100/1000LUX 0-10V M12

Output 1: 0-100 lux. Output 2: 0-1000 lux.

The sensor can be used for measuring light intensity.

Select the type of sensor that corresponds to the current brightness in the livestock house (measuring area).

Sensor with M12 connector/cable.

This sensor can be dismounted during cleaning and disinfection of the house.

140269 Cable 2 m M12 plug incl. sealing plug

2 meter cable for DOL 119/DOL 16 with M12 plug and sealing plug.

When replacing DOL 19 with DOL 119, the cable must be replaced or the connection must be moved.

380101 Bracket for DOL 16/104/114

Mounting brackets are used if the sensor is to be mounted in an accurate position.

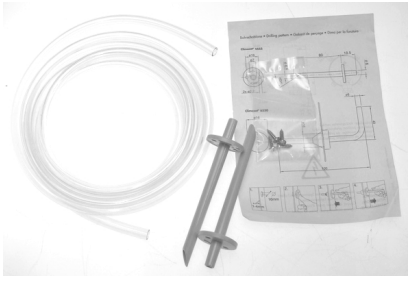
140333 DOL 18 v2 elec. sub-pressure sensor 100 Pa

140234 DOL 18 elec. sub-pressure sensor 300 Pa

Sensor for measuring the pressure level in the house.

The electronic pressure sensor is used for active pressure control and systems for central exhaustion.

DOL 18 hose set must be ordered separately.



140235 DOL 18 hose set

Hose set for DOL 18 electronic sub-pressure sensor.

Supplied with 2 m plastic hose, 2 static pressure tip with flange and screws.

300085 Transparent plastic hose ø7x5

To be used if additional plastic hose is needed.

Ordered by the meter.

437672 Extension nipple & 5/7 PVC tube set

Extension nipples must be ordered if another hose type than 300085/140235 is used.

140232 DOL 58 weather sensor

The DOL 58 measures wind direction, wind speed and air pressure/temperature (optional). Wind speed and direction are measured using ultrasound.

Can be used as an extra sensor.

413232 House board

For mounting of climate sensors.

100609 DOL 44R capacitive sensor 10-30V AC/DC

100610 DOL 44R capacitive sensor, 90-265V AC

Capacitive sensor for use inside containers - e.g., with grain, feed, and granules.

Setting via trimmer.

100651 DOL 45R capacitive sensor

Capacitive sensor for use inside containers - e.g., with grain, feed, and granules.

Setting via push buttons.

140107 Plastic gland for DOL 40 series

Screwed flanges are the easiest way of mounting capacitive sensors

130183 DOL 100 digital 8I box

130184 DOL 100 digital 16I box

130191 DOL 100 digital 24I box

130192 DOL 100 digital 32I box

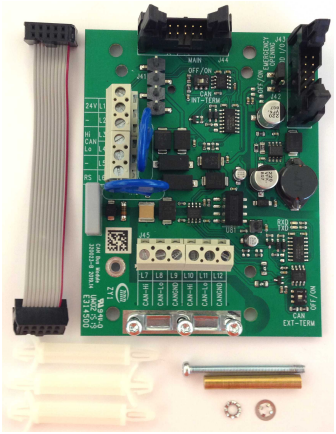
External I/O box for connection of water meter, egg counter, or capacitive sensor.

The DOL 100 converts the signals into digital signals and transmits them to the production controller using CAN bus communication.

The standard software/hardware of the BlueControl series supports 13 I/O modules in total. DOL 100 counts as one module.

0-24 V inputs terminals: 8, 16, 24 or 32.

Is used with the CAN bus module (132245) and a CAN bus cable (130121-130128).



132245 CAN-bus module

Always use the CAN-bus module when using external CAN bus communication.

One for each controller.

130121 CAN bus cable 50 m
130125 CAN bus cable 100 m
130126 CAN bus cable 250 m

For indoor use.

Must be used with external units using CAN bus communication.

130123 CAN bus cable UV 50 m
130127 CAN bus cable UV 100 m
130128 CAN bus cable UV 250 m

For outdoor use.

Must be used with external units using CAN bus communication.


135752 Power supply 24V, 2.1A in box

An external power supply is used if the current consumption of the chosen 24 V components exceeds 0.8 A, as the maximum supply of the internal controller's power supply is 0.8 A.

Voltage 90–264 V
Frequency 47-63 Hz
Power 160 VA/80 W
Current 0.7 A

Output
Voltage 24 V +/- 10 %
Current 2.1 A


134718 Mini power backup unit, 20V 1A

The mini power backup unit is designed to be installed at the side of and connected to a controller.

The mini power backup unit safeguards the controller against disturbances from brief supply outage of supply-interruptions at 115 V / 230 V, where the controller would otherwise restart.

The mini power backup unit is typically used where there is no emergency opening.

To be connected to a controller only if:

- the controller has a maximum of 6 I/O modules *and*
- consumption from the main module does not exceed 0.4 A *and*
- consumption from the +24 V terminals of the loop module does not exceed 0.8 A.

Sequential restarting of fans
Can in the event of a power failure give an alarm signal to SKOV controllers that the fans are without power. The controller switches all MultiStep OFF and ensures a sequential restart when the power supply returns. This will ensure the power supply against overload.

Backup time
Average backup time: 5 minutes per hour
Maximum backup time: 0.5 – 3 hours with fully charged battery

136470 BlueControl extension box 10RL

Extension box with 1 pcs. I/O module, 10RL 8AI 8AO, type 3.

0-10 V input or DOL 12 input or digital input (8)
0-10 V outputs (8)
Relays (10)

Used when more I/O modules are needed than are available in the standard hardware.

The inputs can with a jumper be configured individually for either DOL 12, DI (digital input) for water meters or AI (analog input, 0-10 V).

Includes rubber sleeves and ribbon cable

The controller's standard software/hardware supports 13 I/O modules in total. BlueControl extension box 10RL counts for 1 module.

136471 BlueControl extension box 20RL

Extension box with 2 pcs. I/O module, 10RL 8AI 10RL, type 3.

0-10 V input or DOL 12 input or digital input (16)
0-10 V outputs (16)
Relays (20)

Used when more I/O modules are needed than are available in the standard hardware.

The inputs can with a jumper be configured individually for either DOL 12, DI (digital input) for water meters or AI (analog input, 0-10 V).

Includes rubber sleeves and ribbon cable

The controller's standard software/hardware supports 13 I/O modules in total. BlueControl extension box 20RL counts for 2 modules.

134731 Multipurpose housing blue 380 x 400

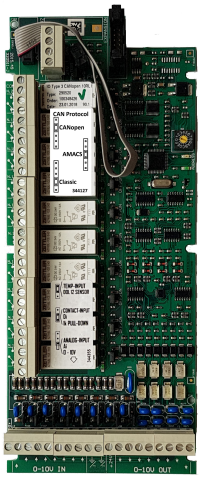
134732 Multipurpose housing blue 380 x 566

Box for placement of an extra I/O module.

There is room for 2 I/O modules in a small box.

There is room for 3 I/O modules in a large box.

Used together with I/O module (136659), ribbon cable (136508) and rubber sleeves (345425).



136659 IO type 3 CANopen 10RL 8AI 8AO

The controller's standard software/hardware supports 13 I/O modules in total.

There is room for the following number of I/O modules in the various cabinets:

Controller Small (1)
Controller Small w/sp. (0)
Controller Large (2)
Controller Large w/sp. (2)

If more I/O modules are needed, you can use xtension boxes (136470 with 10 relays and 136471 with 20 relays), or alternatively extra modules can be put in a multipurpose housing (134731 and 134732).

Relays (10)
0-10 V input or DOL 12 input or digital input (8)
0-10 V output (8)

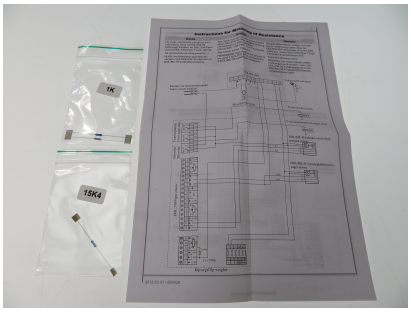
The inputs can be configured individually for either DOL 12, DI (for water meters) or AI (0-10 V input).

When temperature-controlled emergency opening (DOL 278T) activates, you can use a jumper to configure which relays to interrupt.

Using a jumper, all 0-10 V inputs can be configured as either a DOL 12 input or a digital input.

134941 Set for installation in more levels

Used when two I/O modules are mounted above each other, or when the I/O module is mounted above the internal speed control.



560098 Resistance set

Used for the following purposes:

- Series resistance (500 ohm) used when a 0-10 V input is used for a sensor 4-20 mA output.
- Resistor (15K ohm) is used for connection of the DOL 99B feed weigher.
- A Tranzorb diode for the protection of the relay when the relay activates a coil.

Order resistor sets if additional resistors are needed.

134703 M25 cable glands (30 pcs.)

Plastic gland and plastic nut for mounting in a controller or box.

Used when mounting cables in size ø7-14mm.

3 Technical data

Electrical		
Rated voltage	V AC	115*, 200* and 230/240 (*not speed controller)
Operating voltage	V AC	103.5-264
Frequency	Hz	50/60
Output	W	75
Max. current consumption	A	0.7
RCD		To be installed in accordance with applicable laws and standards. RCCB can be used in front of the controller.
Max. fuse in front of the controller	A	10
Main module		
Configurable main module		Number 0-10 V: -11 inputs and 2 outputs – or - 9 inputs and 4 outputs – or - 7 inputs and 6 outputs
Inputs		7 x 0-10 V DC input impedance 2.1 MOhm.
Pulsing Inputs (E.g., water meter, energy meter)		Minimum pulse length: 75 ms. Minimum pulse interval: 75 ms. Maximum frequency/pulse per sec.: 6 Hz.
Outputs/power supply		2 x 15 V DC power supply +/- 10 % max. 40 mA in total.
		2 x motor supply 24 V DC +/- 20 % max. 0.4 A (in total for the entire controller).
		2 x supply for winch motor potentiometer 10 V DC max. 40 mA in total.
		2 x 0-10 V DC. Output impedance 100 Ohm.
Relays		12 x NO/NC potential free. Max. voltage/current at resistive load (**resistive load**) 250 V AC / 5 A AC. Max. voltage/current at inductive load (**inductive load**) 250 V AC / 2 A AC CosPhi 0.8.
		1 x alarm relay NC, max. 24 V 2 A. Min. 12 V 10 mA (**resistive load**).
I/O module type 3		
IO type 3, 10RL 8AI 8AO		With jumpers for configuration of inputs.
Inputs		8 x 0-10 V DC input impedance 2.1 MOhm.
Pulsing Inputs (E.g., water meter, energy meter)		Minimum pulse length: 75 ms. Minimum pulse interval: 75 ms. Maximum frequency/pulse per sec.: 6 Hz.
Outputs/power supply		8 x 0-10 V DC output impedance 10 Ohm.
		1 x motor supply 24V DC +/- 20% 0.4 A
Relays		10 x NO/NC potential free max. Max. voltage/current at resistive load (**resistive load**) 250 V AC / 5 A AC. Max. voltage/current at inductive load (**inductive load**) 250 V AC / 2 A AC CosPhi 0.8.
Network		
Network interface		2 x 10/100 BASE+TX RJ 45
USB		2 x USB 2.0 A type

Accessories				
Speed control (output)		Motor load max. 6.8 A 230-240 V AC/min. 150 W.		
Environment				
Temperature, operation	°C	-10 to +45		
Temperature, storage	°C	-25 to +60		
Ambient humidity, operation	% RH	0-80		
Protection class	IP	54 (splashproof) It is assumed that the base surface is level, i.e. ≤ 1.5 mm height difference, and the front panel screws are tightened to a minimum of 1.5 Nm.		
Mechanical				
Cable knock-out punches (for metrical cable glands)		Large	Small	Mini
		30 x M25	20 x M25	4 x M25 10 x M20
Shipment				
		Large	Small	Mini
Dimensions (HxWxD)	mm	381x568x170	381x400x170	381x280x150
Dimensions crated HxWxD	mm	421x608x230	425x555x195	425x555x195
Weight	g	7800	5800	4500
Shipping weight	g	9200	6900	

3.1 Dimensioned sketch

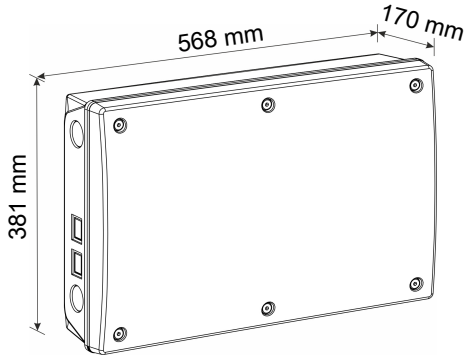


Figure 13: Large box

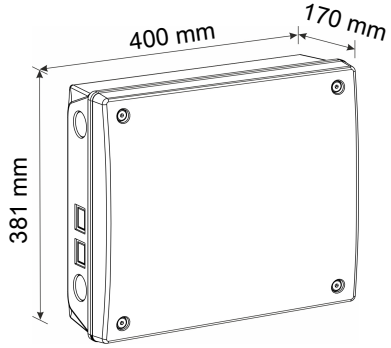


Figure 14: Small box

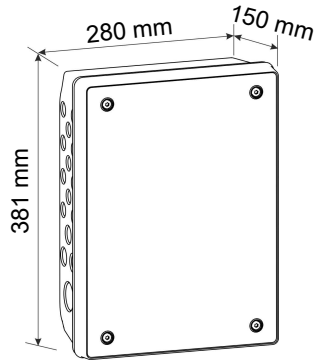


Figure 15: Mini box

3.2 Minimum requirements with shared equipment

Controllers that are connected to a common network (LAN) can share equipment such as sensors with each other. Thus, several controllers can receive registrations from one outside temperature sensor.

BlueControl pig can share:

- Outside temperature sensor
- Outside humidity sensor
- Feed weigher (DOL 9940, DOL 99B and electronic silo weigher)

Sharing requires:

- A cabled LAN between the controller providing the shared equipment and the controller also using it.
- A stable network.
  If the management program FarmOnline Explorer is used on the farm, you can see in the menu Network information if there are warnings regarding stability.

Specifications for LAN network	
Speed	100 Mbps
Delay	Maximum 100 ms
Average delay	< 5 ms (status can be seen in FarmOnline Explorer Network Information)
Packet drop	<1% (status can be seen in FarmOnline Explorer Network Information)

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