POLA

VENTILATION
25.3° Temperature
68% Humidity
Out. temp. 12.3°
25.0° Temp. Set
100% Maximum set
0% Minimum set
8%
Off Air exchange
Off Auxil. vent.
Off Heating
Alarm   Settings   Installat   Archive   View

A B C D E

XP SF Ventilation control
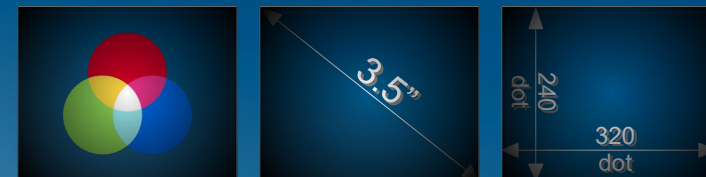
XPSF   pig house environmental control unit

main feature

The main feature of the XPSF is the color display screen (3.5") with 320x240 dots resolution with led backlighting. XPSF is made in DIN 96x96 format and the module dimensions are 96x96mm.
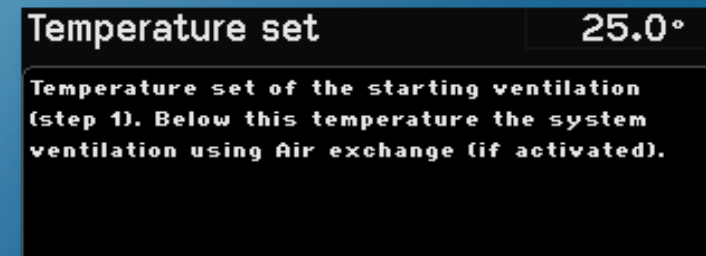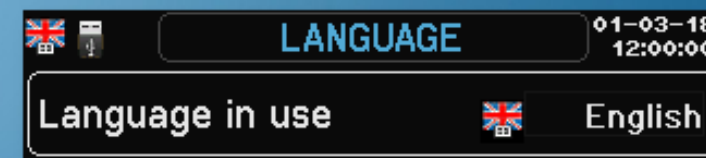

3.5"

240 dot
320 dot

The user interface is easy and friendly.
The easy touch screen system gives both the typical "easy to use" approach of a touch screen system and the strength and mechanical protection of a polycarbonate IP54 keyboard.

At every screen the function keys display a different graphic making the program very user friendly.

0k Alarm	Settings	Installat	Archive	Check
A	B	C	D	E

The user can select the display language: all the wordings, acronyms and "help" texts for programming assistance will be displayed in the chosen language.

LANGUAGE   01-03-18
                  12:00:00

Language in use   English

Each programming step has its own help screen so the program has a "built in" instruction manual.

Temperature set   25.0°

Temperature set of the starting ventilation (step 1). Below this temperature the system ventilation using Air exchange (if activated).

XPSF
pig house environmental control unit

XPSF manages the climate control of the Ventilation system (0 ... 100% speed adjustment), of the Heating system of the Flaps (air inlet).
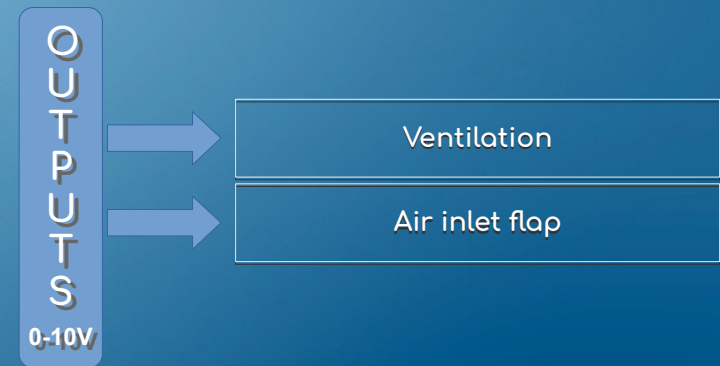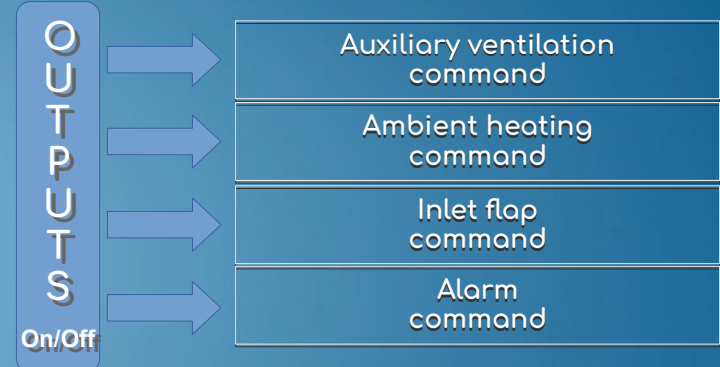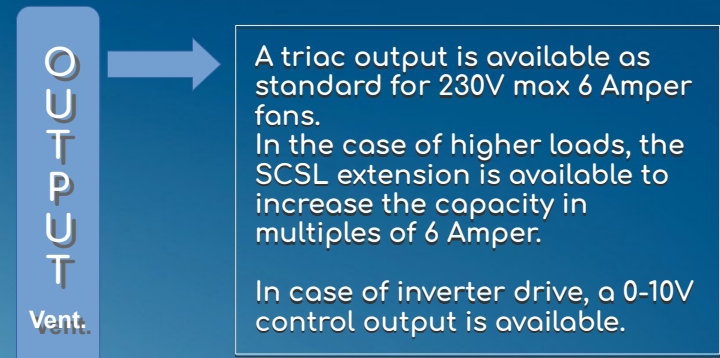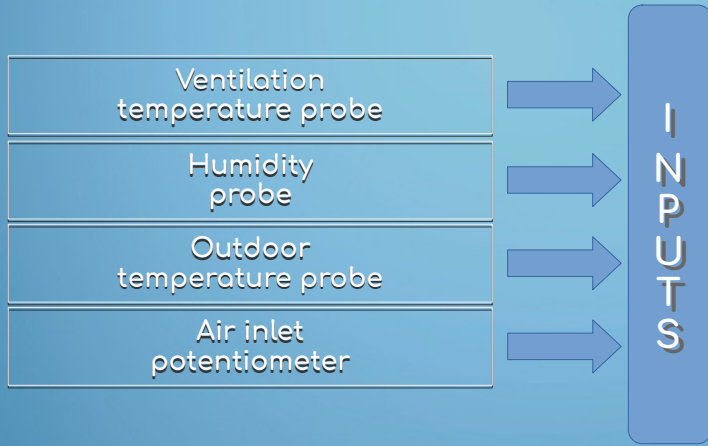
In addition to ambient temperature, ventilation can be affected by humidity and external temperature.

You can program the operating calendar so that the program automatically adapts to the animal growth curve day by day.

All the climate parameters controlled by the XPSF are recorded and can be exported via USB key.
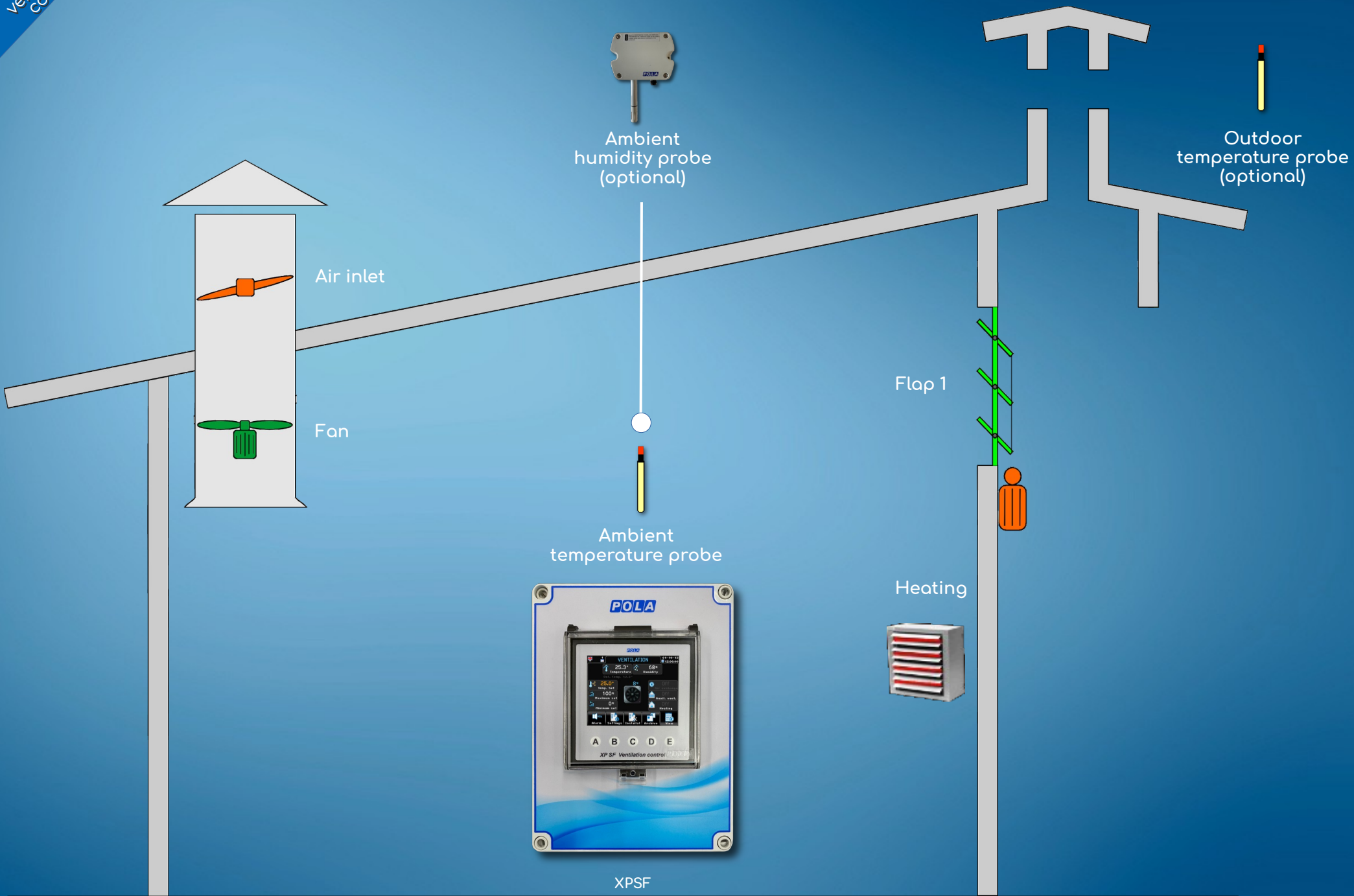
Remote supervision ensures complete PC management of all XPSF connected in the network.

inputs and outputs

INPUTS

- Ventilation temperature probe
- Humidity probe
- Outdoor temperature probe
- Air inlet potentiometer

OUTPUT — Vent.

A triac output is available as standard for 230V max 6 Amper fans.
In the case of higher loads, the SCSL extension is available to increase the capacity in multiples of 6 Amper.

In case of inverter drive, a 0-10V control output is available.

OUTPUTS — On/Off

- Auxiliary ventilation command
- Ambient heating command
- Inlet flap command
- Alarm command

OUTPUTS — 0-10V

- Ventilation
- Air inlet flap

Other available connections
- **USB plug**
  XPSF has a USB plug inside.
- **XNET**
  Network connection card (optional) for XPFC processor (see remote supervision).

delivery room / weaning example

XPSF ventilation control

Ambient humidity probe (optional)

Outdoor temperature probe (optional)

Air inlet

Fan

Flap 1

Ambient temperature probe

Heating

POLA

XPSF

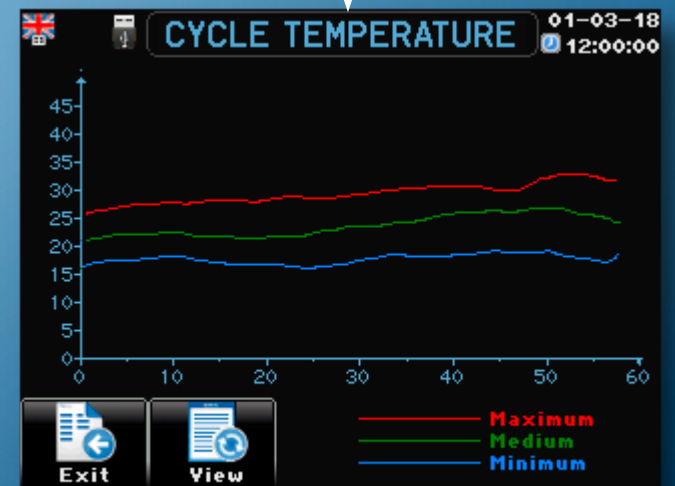# XPSF records all the parameters of the environment
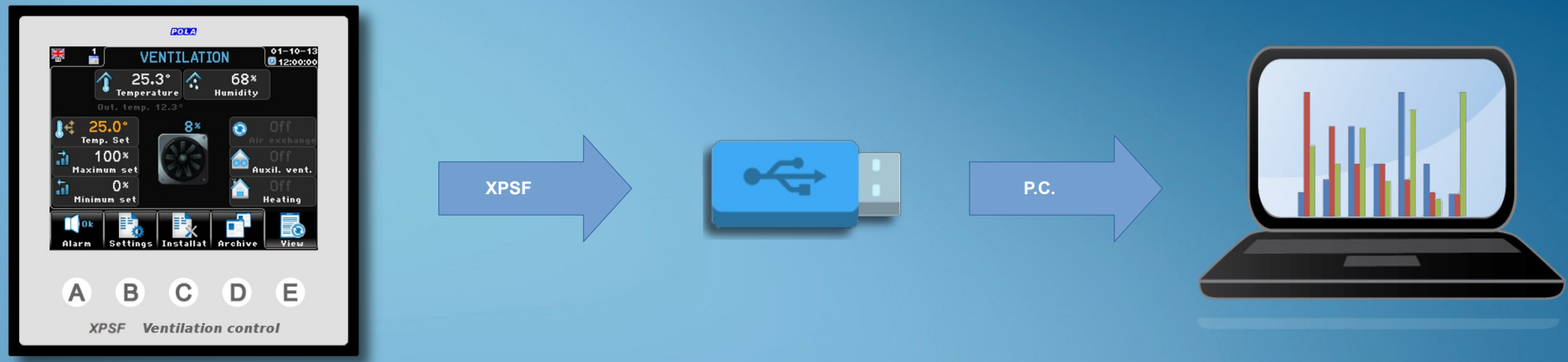
Multiple levels of registrations:

- Daily data, a recording for each day of the cycle
- Data of every single day with sampling every 15 minutes
- Full cycle data

The daily archive records the following parameters:

- Temperature
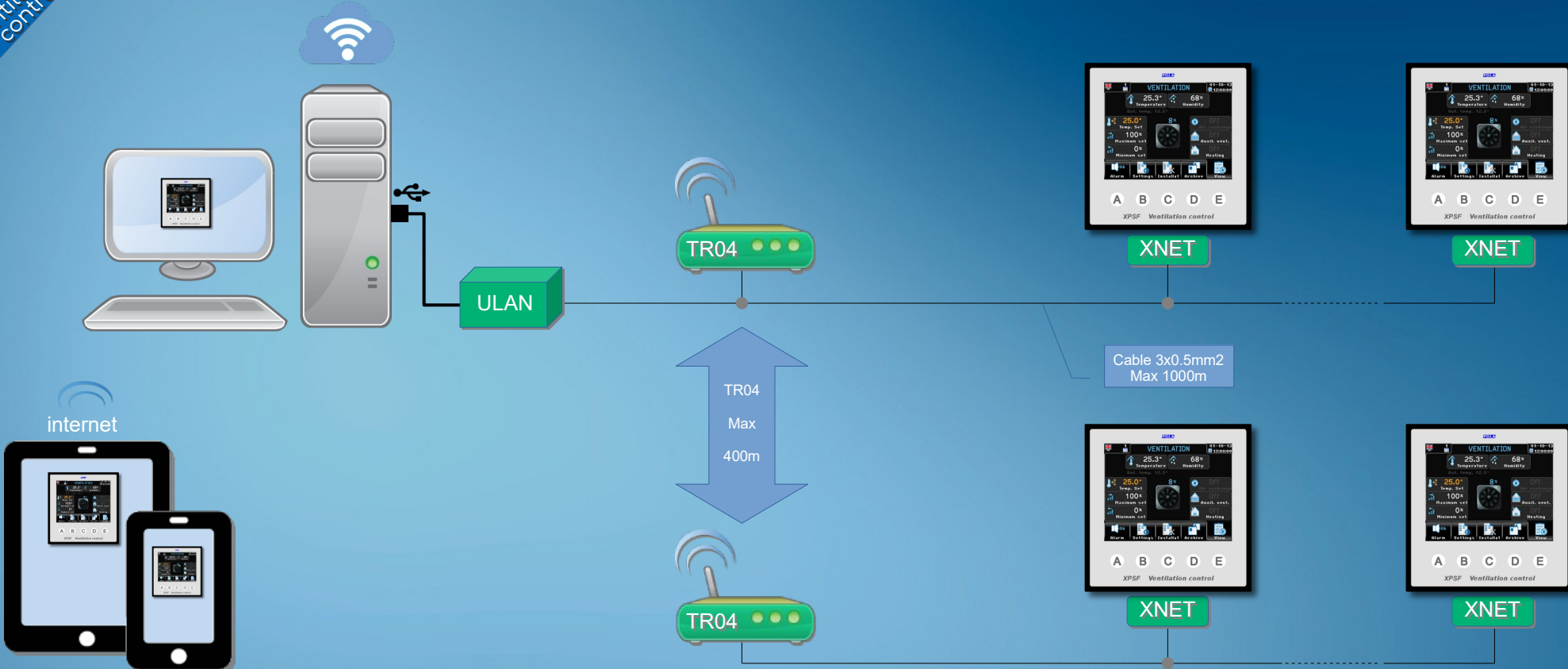- Humidity
  Outside temperature

data transfer

XPSF ventilation control

XPSF → (USB) → **P.C.**

The communication with the outside world is performed by USB key.

→ **Export archives**
   XPSF save in the USB memory a file containing all the day by day recorded data of the cycle.
   Connecting the USB key to a PC and by using the XPSF **Dialogue** software you can browse the recorded data in grid or graph formats.

→ **Importing / saving the setting**
   You can save a file with all back-up infos on a USB file.
   Saved settings can be uploaded on **XPSF** anytime by a user friendly procedure.

remote supervision

XPSF ventilation control

ULAN

TR04

XNET

XNET

internet

TR04 Max 400m

Cable 3x0.5mm2 Max 1000m

XNET

XNET

Remote supervision of **XPSF** processors grants the full management of system by PC.

The XPSF **Net Pro** supervision software enables the full remote control of network connected processors.
ULAN peripheral is connected to PC through a USB connection. XPSF – **ULAN** connection is done by a simple 3 wires cable.
In all cases where **ULAN** cannot be cabled to XPSF we can supply **TR04** radio-modems with a reach of 400 mt.

Components for creating a supervision system:

- ➔ **ULAN**: Network server Pc (with USB connection)
- ➔ **XNET**: Network adapter card (one for each XPSF)
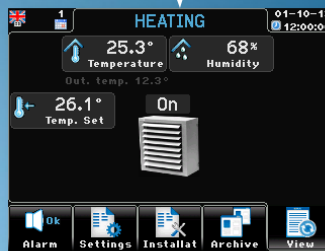- ➔ **TR04**: Radio-modem 485 (optional, to be used only when it is not possible to use the cable)

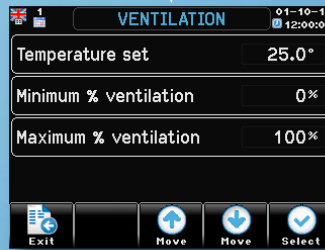# sample screenshots

view screens

VENTILATION — ventilation view

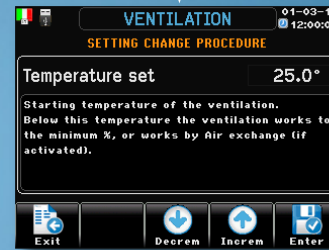**HEATING** — heating view

FLAP — inlet flap view

setting screens

SETTINGS — settings selection
- Heating
- Ventilation
- Alarm
- Calendar

VENTILATION — temperature set selection
- Temperature set — 25.0°
- Minimum % ventilation — 0%
- Maximum % ventilation — 100%

VENTILATION — SETTING CHANGE PROCEDURE — temperature set settings
- Temperature set — 25.0°
- Starting temperature of the ventilation. Below this temperature the ventilation works to the minimum %, or works by Air exchange (if activated).

check control screens
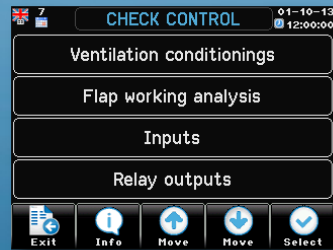
CHECK CONTROL — check ventilation selection
- Ventilation conditionings
- Flap working analysis
- Inputs
- Relay outputs
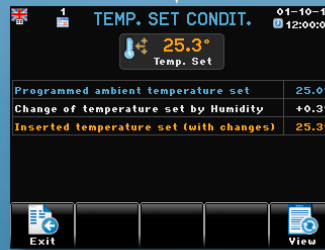
TEMP. SET CONDIT. — temperature set conditioning
- 25.3° Temp. Set
- Programmed ambient temperature set — 25.0°
- Change of temperature set by Humidity — +0.3°
- Inserted temperature set (with changes) — 25.3°
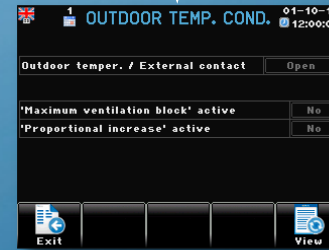
OUTDOOR TEMP. COND. — outdoor temperature conditioning
- Outdoor temper. / External contact — Open
- 'Maximum ventilation block' active — No
- 'Proportional increase' active — No
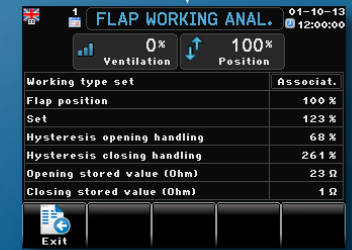
FLAP WORKING ANAL. — inlet flap working analysing
- 0% Ventilation — 100% Position
- Working type set — Associat.
- Flap position — 100 %
- Set — 123 %
- Hysteresis opening handling — 68 %
- Hysteresis closing handling — 261 %
- Opening stored value (Ohm) — 23 Ω
- Closing stored value (Ohm) — 1 Ω

Home — view screens
Imposta — setting screens
Check — check control screens

options available

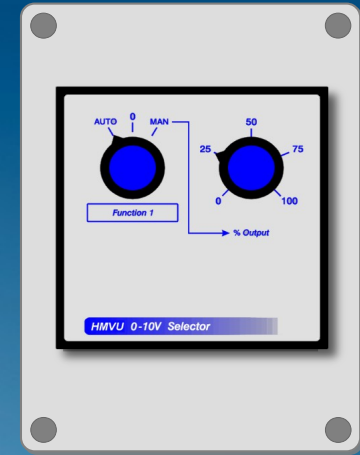| Model	Description
XPSF	Pig house environmental control unit
--- *Options* ---	
SX	Temperature probe. XPSF is supplied with 1 SX: any other probe must be ordered separately
RHR	Humidity probe 0...100%
HA20s	Power supply for RHR
PT	Flap response potentiometer (1 KOhm)
USBP	External IP65 USB socket (to be mounted externally, to access the USB without the need to access inside the XPSF)
SCSL	6A power extension module for continuous control of single-phase fans
FX01	Drive electrical box for three-phase gear-motor (specify motor power), with 1 SX temperature probe included
CSTX	Thermal trip contact (FX01 option). The intervention of the thermal shutter flap is signaled and managed by the XPSF
HMVU	0-10V gear-motor / ventilation control manualizer
HMVU/W	0-10V gear-motor / ventilation control manualizer (with IP54 box for wall mounting + gasket + transparent cover)
XNET	Network nodal point
ULAN	Network server Pc (with USB connection)
TR04	Radio-modem 485 (IP55 junction box with power supply 230/12v)

options available

FX line   WINDOWS AUTOMATIC CONTROLLER

GENERAL SWITCH

POLA   CE   CEI EN 61439-2   IP54
IEC 61439-2
FX01   400V 50/60Hz 5A

AUTO

A   C

POLA   CF02

AUTO / MAN
SELECTOR

POLA

FX01

POLA

SCSL   SOLID STATE SLAVE CONTROLLER

SCSL

AUTO   0   MAN   50
25   75
Function 1   0   100
% Output
HMVU 0-10V Selector

HMVU/W

SX

POLA

RHR

PT

POLA   HA20s
LINE   OUT

HA20s

ULAN
CE
LINE   RS485

ULAN

RS485
XNET

XNET

USBP
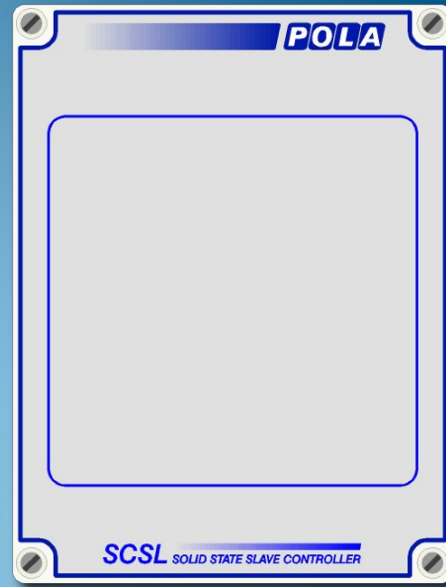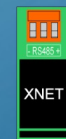
TR04

TR04

XPSF performance comparison with Our other models

Performance	Models					
	XPSG	XPSF	SC6G	SC6F	SC6E	SC6D
Color graphic display	Yes	Yes	No	No	No	No
Fan speed triac control 230V 6A (on board)	No	Yes	Yes	Yes	Yes	Yes
0-10V inverter output	Yes	Yes	Yes	Yes	Yes	Yes
Auxiliary ventilation	Yes	Yes	Yes	Yes	No	No
Tachometer input	Yes	No	No	No	No	No
Ambient heating	Yes	Yes	Yes	Yes	Yes	Yes
Floor heating	Yes	No	Yes	No	No	No
IR lamps heating	Yes	No	Yes	Yes	Yes	No
Flap	Yes (2)	Yes (1)	Yes (2)	Yes (1)	No	No
Cooling	Yes	No	Yes	No	No	No
Humidity probe (provision)	Yes	Yes	Yes	Yes	No	No
Outdoor temperatrure probe (provision)	Yes	Yes	Yes	Yes	No	No
CO2/NH3 probes (provision)	Yes	No	No	No	No	No
Alarm	Yes	Yes	Yes	Yes	Yes	Yes
Growth curve calendar	Yes	Yes	Yes	Yes	No	No
Daily data archive	Yes	Yes	Yes	Yes	No	No
Export / import data with USB stick	Yes	Yes	No	No	No	No
PC network connection	Yes	Yes	No	No	No	No

XPSF ventilation control

POLA

www.pola.it

40th

40 YEARS OF INNOVATION