TRÄDGÅRDSTEKNIK ®

XP31 Installation

To download the complete manual

XP31 Greenhouse control
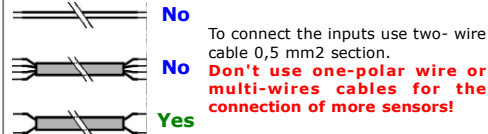
A B C D E

POLA®

---

1 Installation

⚠ This symbol indicates safety-related parts.

⚠ This symbol indicates a danger to people or animals.

⚠ The installation and the connection of the **XP31** must be realized in strict compliance to the local laws and regulations in use in the country of installation and by well trained personnel only.
Read carefully the installation manual before performing the use and installation of the **XP31**.

⚠ Install the **XP31** in a dry place, clean and easily accessible.
When water cleaning, don't splash the box with water and keep the electronic module always clean.
Insert the module in a 90x90mm slot and fix it to the back using the 4 plastic posts and the 4 thumb screws supplied.
In the unlikely event of replacement due to a fault in the **XP31**, cut off the supply voltage, then remove the connection connectors, unscrew the 4 wing screws on the back of the module, remove the fixing columns and remove the module from the front.

⚠ Check periodically the functionality of the module. Unit break down might happen suddenly!
To prevent damages always include in the system an independent alarm and check it minimally once daily.

⚠ Keep voltage off before making any operation on the system; always provide the system with a suitable automatic switch or disconnector on the primary side of the mains supply.
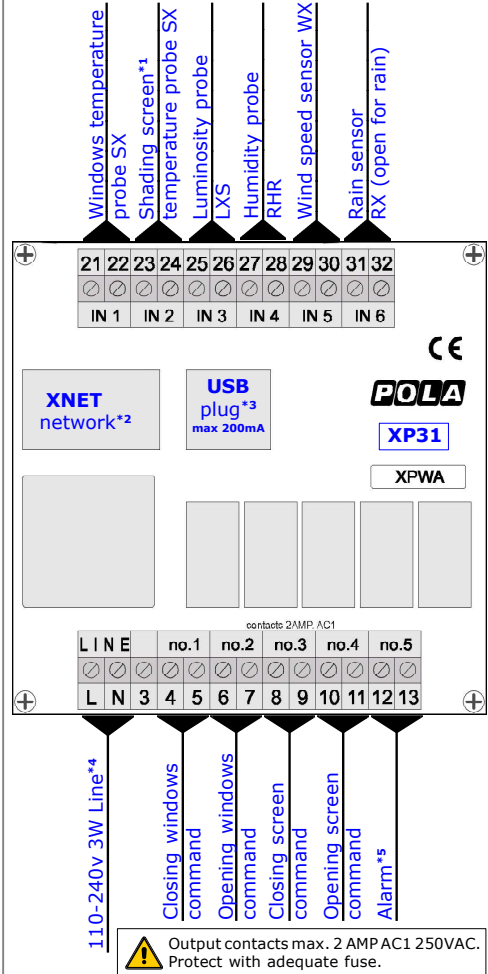
Put the **XP31** on a wall lower level than the operator eyes.
This is the best location.
Keep it in a dry and safe place.
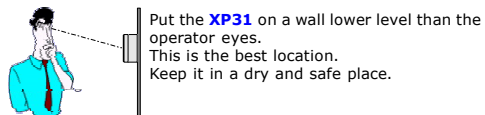
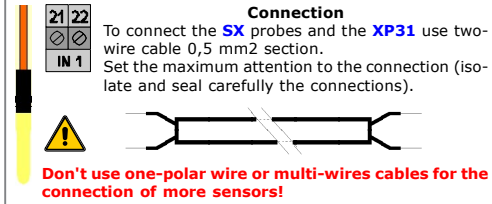## 2 XP31 connection

Connection of inputs

No

No

Yes

To connect the inputs use two-wire cable 0,5 mm2 section.
Don't use one-polar wire or multi-wires cables for the connection of more sensors!

Inputs (top labels):
- Windows temperature probe SX
- Shading screen*1 temperature probe SX
- Luminosity probe LXS
- Humidity probe RHR
- Wind speed sensor WX
- Rain sensor RX (open for rain)

21	22	23	24	25	26	27	28	29	30	31	32
IN 1		IN 2		IN 3		IN 4		IN 5		IN 6	

XNET network*2

USB plug*3 max 200mA

POLA

XP31

XPWA

contacts 2AMP AC1

LINE		no.1	no.2	no.3	no.4	no.5
L	N	3	4	5	6	7	8	9	10	11	12	13

Outputs (bottom labels):
- 110-240v 3W Line*4
- Closing windows command
- Opening windows command
- Closing screen command
- Opening screen command
- Alarm*5

⚠ Output contacts max. 2 AMP AC1 250VAC. Protect with adequate fuse.

*1 Thermal trip external contact: closing this input activates the **Motor protection intervention** alarm.
During this condition the temperature probe will not be shown (**T. Block** will appear).
*2 Optional: for details see **XP31 Net** manual.
*3 **XP31** has a USB plug on the back. When selecting the **USBP** option you can get a USB plug with a (IP65) protection cap externally mounted so you can access the USB without having to go to the back of the unit.
*4 Always provide the system with a suitable automatic switch or disconnector on the primary side of the mains supply.
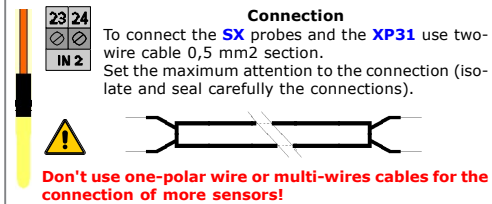*5 Alarm contact that open for intervention alarm or for black-out.

---

3 Windows temperature probe connection SX (if any)

*Activable in Installation> Plant constan> Plant data> Windows presence= YES*

21	22
IN 1	

Connection
To connect the **SX** probes and the **XP31** use two-wire cable 0,5 mm2 section.
Set the maximum attention to the connection (isolate and seal carefully the connections).

⚠ **Don't use one-polar wire or multi-wires cables for the connection of more sensors!**

---

4 Screen temperature probe connection SX (if any)

Activable in Installation> Plant constan> Plant data> Screen temperatura probe= YES

23	24
IN 2	

Connection
To connect the **SX** probes and the **XP31** use two-wire cable 0,5 mm2 section.
Set the maximum attention to the connection (isolate and seal carefully the connections).

⚠ **Don't use one-polar wire or multi-wires cables for the connection of more sensors!**

---

5 Motor thermal signal contact connection (if any)

The intervention of the external thermal snap contact of the motors triggers the alarm and it is recorded in the archives.
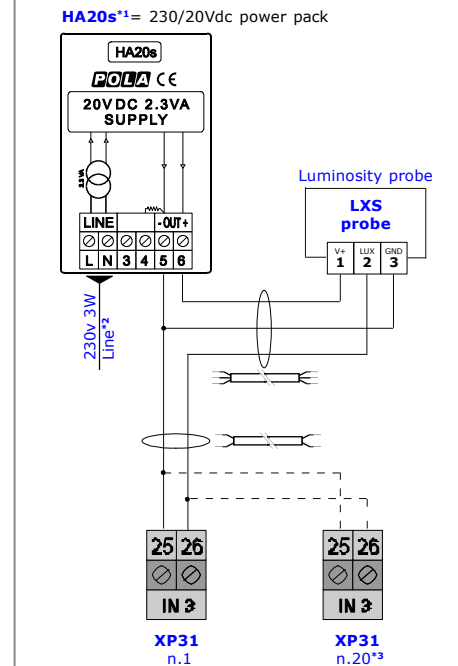
23	24
IN 2	

Thermal release external contact: It closes due to intervention.
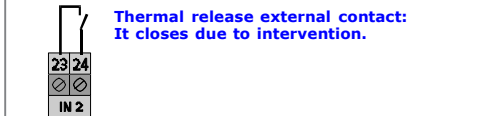
Note: the **IN 2** input (terminals **23-24**) is the same used for the connecting the screen temperature probe (if present in the system): in this case both must be connected to this output (in parallel).

⚠ **Don't use one-polar wire or multi-wires cables for the connection of more sensors!**

---
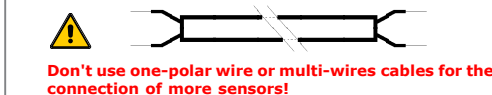
6 Luminosity probe connection LXS (if any)

Activable in Installation> Plant constan> Plant data> Screen presence= YES

HA20s*1= 230/20Vdc power pack

HA20s
POLA CE
20VDC 2.3VA SUPPLY

LINE		-OUT+
L	N	3	4	5	6

230v 3W Line*2

Luminosity probe
LXS probe

V+	LUX	GND
1	2	3

25	26
IN 3	

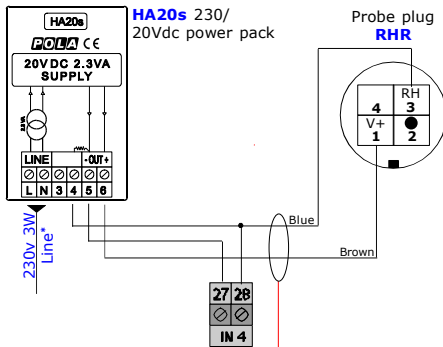**XP31 n.1**

25	26
IN 3	

XP31 n.20*3

*1 **LXS** (brightness), **RHR** (humidity), **RX** (rain), they all share the same **HA20s** power supply.

*2 Always provide the system with a suitable automatic switch or disconnector on the primary side of the mains supply.

*3 Wiring to be done when connecting one brightness probe only to several **XP31** units (max 20 units).

If the **W02** option is present (IP54 box for wall mounting of the **XP31** module), the **HA20s** power supply can be hooked inside the box on the din rail in the position shown in figure.

7 Humidity probe connection RHR (if any)

Activable in Installation> Plant constan> Plant data> Humidity probe= YES

HA20s 230/20Vdc power pack

Probe plug **RHR**

```
HA20s
POLA CE
20VDC 2.3VA
SUPPLY
LINE   -OUT+
L N 3 4 5 6
```

230v 3W Line*

Blue
Brown

```
27 28
IN 4
```

Probe plug RHR
```
      RH
  4    3
  V+   ●
  1    2
      ■
```

Connection
To connect the **RHR** probes and the **XP31** use two-wire cable 0,5 mm2 section.
Set the maximum attention to the connection (isolate and seal carefully the connections).
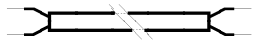
Don't use one-polar wire or multi-wires cables for the connection of more sensors!

* Always provide the system with a suitable automatic switch or disconnector on the primary side of the mains supply.

INSTALLATION
For optimum measurements **RHR** should be installed at the centre of the area to be monitored, accessible for maintenance work.

CLEANING
Remove the sensor before cleaning and disinfection. Remember to attach the sealing plug to the connector when the sensor has been removed. A missing screw plug leads to corrosion of the connector.
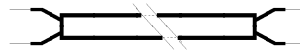

---

8 Wind sensor connection WX (if any)

Activable in Installation> Plant constan> Plant data> Wind sensor= YES


```
29 30
IN 5
```

The **WX** wind sensor has to be positioned outdoor so it can detect the wind speed.
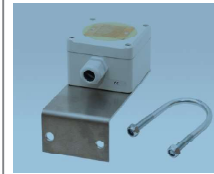
To connect the **WX** sensor and the **XP31** use two-wire cable 0,5 mm2 section.
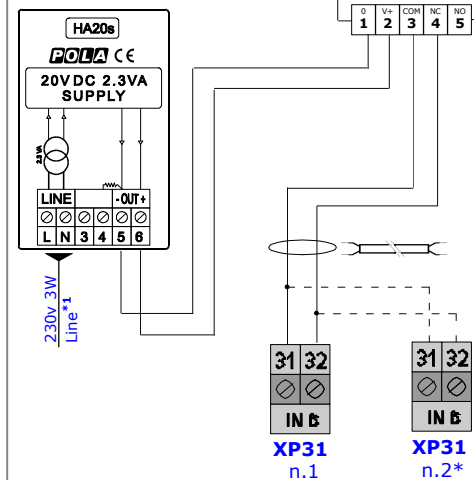Set the maximum attention to the connection (isolate and seal carefully the connections).

⚠️ **Don't use one-polar wire or multi-wires cables for the connection of more sensors!**

---

10 Rain sensor connection RX (if any)

Activable in Installation> Plant constan> Plant data> Rain sensor= YES


```
31 32
IN 6
```

HA20s*1 = 230/20Vdc power pack

```
HA20s
POLA CE
20VDC 2.3VA
SUPPLY
LINE   -OUT+
L N 3 4 5 6
```

230v 3W Line*1

Rain sensor
RX sensor
```
 0  V+ COM NC NO
 1  2   3   4  5
```

```
31 32      31 32
IN 6       IN 6
XP31       XP31
n.1        n.2*
```

* Wiring to be done when connecting one luminosity probe only to several **XP31** units (max 10 units).

RX is a rain sensor designed to detect rainfall (rain, snow). A heating element is incorporated in the sensor.
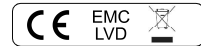**NOTE**: the sensor reacts even in the presence of snow.
If the snow is "dry" and falls along with strong wind, it will not function properly.
The sensor can be installed on the wall by screws or on a pole by the supplied bracket.
Mount the sensor with 5° angle.
If necessary, clean the sensor surface. It is recommended to clean it once a year, based on the environmental conditions.
IMPORTANT: do not use aggressive detergents or sharp tools.

*1 Always provide the system with a suitable automatic switch or disconnector on the primary side of the mains supply.
*2 **LXS** (brightness), **RHR** (humidity), **RX** (rain), they all share the same **HA20s** power supply.

CE EMC
    LVD

XP31	
Power supply	
Line voltage	110-240Vac
Frequency	50/60Hz
Power consumption	3W
Case	
Case material	ABS
Dimensions	96x96x53mm
Weight	Kg 0,25
Protection degree	IP54
Temperature range	
Operational (maximum altitude 2000mt)	-10...50℃
Storage	-40...+80℃
Relative humidity	<95%, uncondensed

POLA®