

Imposta l'indirizzo desiderato (l'impostazione possibile è compresa tra 1 e 247) per l'interfaccia utente. L'utente può configurare nuovamente l'indirizzo, nel caso in cui questo sia stato sovrascritto in un sistema a pompa multipla.

## 1 Operation

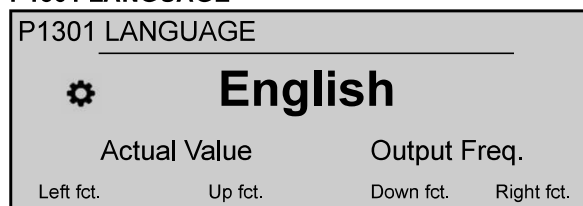


### 1.1 Startup checklist

1. Install the unit on the motor fan cover, keeping motor cable as short as possible.
2. Fasten the unit using the mounting clamps and relative screws
3. Connect the drive to the power supply ; connect, if necessary, all the needed auxiliary input/output signals of the drive. See [Figure 1](#) (page 30).
4. Take care of some particular connection examples, related to sensors:
  - a) using an active sensor, see [Figure 2](#) (page 31).
  - b) using a passive sensor, see [Figure 3](#) (page 31).
  - c) using 2 passive sensors, see [Figure 4](#) (page 32).
5. In case a serial communication is required, take care of some particular connection examples:
  - a) for a serial connection to an external device, see [Figure 5](#) (page 32).
  - b) for a serial connection for multi-pump application, see [Figure 6](#) (page 33).
6. If the application requires to use the status relay contacts, follow the connection example in [Figure 7](#) (page 33).
7. When the Premium Card is available, connect, if necessary, all the needed auxiliary input/output signals of the card. See [Figure 8](#) (page 34).
8. If HYDROVAR is fitted with the additional Premium Card, take care of the connection example to connect 3 fixed speed pumps to the Premium Card: see [Figure 9](#) (page 35).
9. Power the drive, wait for Xylem logo to disappear and then proceed with configuring the Startup Submenu M1300.

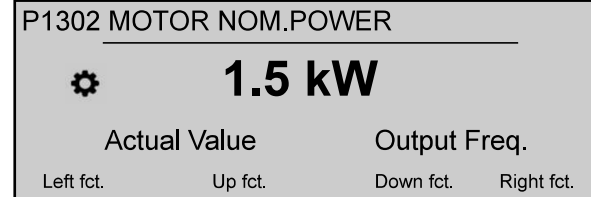
### 1.2 Submenu M1300

#### P1301 LANGUAGE



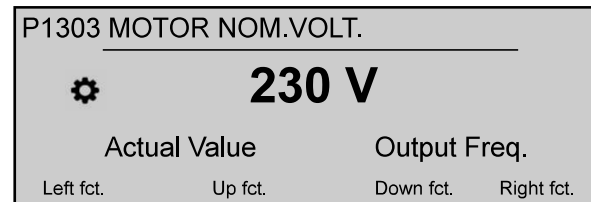
This parameter selects the display language.

#### P1302 MOTOR NOM.POWER



This parameter sets the nominal power of the motor coupled with HYDROVAR, as reported on the motor nameplate.

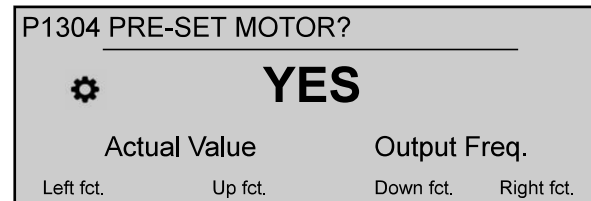
#### P1303 MOTOR NOM.VOLT.



Sets the motor nominal voltage, as reported in the motor nameplate, according to

- the chosen motor connection
- the output voltage of the HYDROVAR

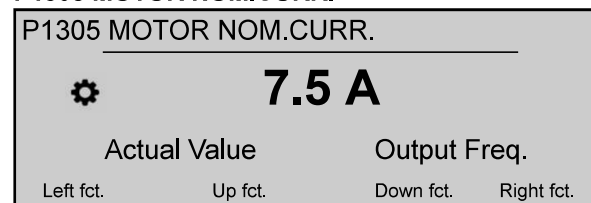
#### P1304 PRE-SET MOTOR ?



By selecting "Yes", the user is declaring the use of a Lowara IE3 surface 2-poles motor 50Hz (without Motor Filter): in this case, the motor's electrical parameters are already available to HYDROVAR, so the start-up procedure skips to P1308 **STC MOTOR PROT.**

By selecting "NO", the user is declaring the use of any other motor: in this case the motor's electrical parameters need to be set into HYDROVAR, so the start-up procedure goes to the next step (P1305 **MOTOR NOM.CURR.**)

#### P1305 MOTOR NOM.CURR.




Sets the motor nominal current, as reported in the motor nameplate, according to

- the chosen motor connection
- the output voltage of the HYDROVAR

**P1306 MOTOR NOM.SPEED**

P1306 MOTOR NOM.SPEED

 **3000 rpm**


Actual Value                      Output Freq.

Left fct.                      Up fct.                      Down fct.                      Right fct.

Sets the motor nominal speed, as reported in the motor nameplate.

**P1307 AMPI**

P1307 AMPI

 **Full**

Actual Value                      Output Freq.


Left fct.                      Up fct.                      Down fct.                      Right fct.

This parameter activates the Automatic Motor Parameter Identification; possible settings are "Off" (**AMPI** not active), "Full" or "Reduced" (procedure to be performed only in case LC filters are applied on the motor cable).

For this parameter please note that, once entered into edit mode (by pressing the provided push button), the user can confirm the new value by pressing for 3 sec the right (▶) push button.

**P1308 STC MOTOR PROT.**

P1308 STC MOTOR PROT.

 **STC Trip**


Actual Value                      Output Freq.

Left fct.                      Up fct.                      Down fct.                      Right fct.

This parameter sets the protection technique against motor overheating; possible the settings are "Thermistor trip" or "STC trip" (default).

**P1309 MODE**

P1309 MODE

 **Controller**


Actual Value                      Output Freq.

Left fct.                      Up fct.                      Down fct.                      Right fct.

This parameter selects which operating mode to set the unit to.

**P1310 PUMP ADDR.**

P1310 PUMP ADDR.

 **1**

Actual Value                      Output Freq.


Left fct.                      Up fct.                      Down fct.                      Right fct.

This parameter selects an address (1-8) for each HYDROVAR. If several inverters are connected via the internal RS-485 connection (maximum eight in Cascade serial mode), then the following must apply:

- Each HYDROVAR needs an individual pump-address (1–8)
- Each address can only be used once.

**P1311 CONTROL MODE**

P1311 CONTROL MODE

 **Constant**

Actual Value                      Output Freq.

Left fct.                      Up fct.                      Down fct.                      Right fct.

For this parameter please note that, once entered into edit mode (by pressing the provided push button), the user can confirm the new value by pressing for 3 sec the right (▶) push button.


This parameter sets the pressure control mode for the pump system (single and multi pump); depending on the setting ("Constant" or "Differential") a set of further parameters are automatically configured.

Whenever P1311 **CONTROL MODE** is set to a new value, each parameter in the below table is overwritten to its own specified value, regardless of previous different settings.

	<b>P1311 = Constant</b>	<b>P1311 = Differential</b>
P225 <b>RAMP 3</b>	70 sec	90 sec
P230 <b>RAMP 4</b>	70 sec	90 sec
P250 <b>MIN.FREQ.</b>	20 Hz	25 Hz
P315 <b>HYSTERESIS</b>	80%	90%
P410 <b>CONF.SENSOR</b>	<b>Sensor 1</b>	<b>Sens.1 - Sens. 2</b>

**P1312 DIMENSION UNIT**

P1312 DIMENSION UNIT

 **bar**


Actual Value                      Output Freq.

Left fct.                      Up fct.                      Down fct.                      Right fct.

Selects the unit of measure for the system.

**P1313 START-UP COMPLETED?**

P1313 START-UP COMPLETED?

 **No**

Actual Value                      Output Freq.


Left fct.                      Up fct.                      Down fct.                      Right fct.

If the application is a multi-pump, then the startup procedure for the first [N-1] pumps is stopped here when selecting Yes.

If the application is a single-pump or the last pump of a Multi-pump, then select No .

**P1314 SENSOR RANGE**

P1314 SENSOR RANGE

 **20mA - 10.00bar**


Actual Value                      Output Freq.

Left fct.                      Up fct.                      Down fct.                      Right fct.

Sets the end range value (20 mA or 10 V) of the connected sensor. In particular, the end range value (20 mA or 10 V) must be always equal to the 100% of the sensor range (that is, for a 0.4 bar differential pressure sensor, is 20 mA=0.4 bar).

**P1315 REQUIRED VAL.**

P1315 REQUIRED VAL.

 **XXXXX bar**


Actual Value                      Output Freq.

Left fct.                      Up fct.                      Down fct.                      Right fct.

The information shown on the display depend on the selection done in parameter 1309: when parameter P1309 **MODE** is set to **Controller**, **Cascade Relay**, **Cascade Serial** or **Cascade Synchron**, display shows **REQUIRED VAL.** as the parameter description. When parameter P1309 **MODE** is set to **Actuator**, display shows **ACTUAT.FRQ.1** as the parameter description.

**P1316 START VALUE**

P1316 START VALUE

 **100 %**

Actual Value                      Output Freq.


Left fct.                      Up fct.                      Down fct.                      Right fct.

Sets the end range value (20 mA or 10 V) of the connected sensor. In particular, the end range. This parameter defines, in percentage (0-100%) of the required value (P1315 **REQUIRED VAL.**), the start value after pump stops.

If P1315 **REQUIRED VAL.** is met and there is no more consumption, then the pump stops. The pump starts again when the pressure drops below P04 **START VALUE**. Value 100% makes this parameter not effective (100%=off)!

**P1317 MIN.THRESH.**

P1317 MIN.THRESH.

 **Disabled**


Actual Value                      Output Freq.

Left fct.                      Up fct.                      Down fct.                      Right fct.

Selects the minimum threshold limit: if an adjusted value > 0.00 is not reached within the P1318 **DELAY-TIME**, then the unit stops (failure message: MIN.THRESH.ERROR).

**P1318 DELAY-TIME**

P1318 DELAY-TIME

 **2 sec**


Actual Value                      Output Freq.

Left fct.                      Up fct.                      Down fct.                      Right fct.

Selects the delay time of the minimum threshold limit: it shuts off the HYDROVAR if the actual value drops below P1317 **MIN.THRESH.** or if a low-water protection (at terminals X1/16–17) becomes open.

**P1319 DATE**

P1319 DATE

 **XX.XX.20XX**


Actual Value                      Output Freq.

Left fct.                      Up fct.                      Down fct.                      Right fct.

Using this parameter current date can be set.

**P1320 TIME**

P1320 TIME

 **HH.MM**

Actual Value                      Output Freq.

Left fct.                      Up fct.                      Down fct.                      Right fct.

Using this parameter current time can be set.

**P1321 AUTO-START**

P1321 AUTO-START

 **ON**


Actual Value                      Output Freq.

Left fct.                      Up fct.                      Down fct.                      Right fct.

If **AUTO-START = ON**, then the HYDROVAR starts automatically (in case of demand) after reconnection of power following disconnection.

**P1322 START-UP COMPLETED?**

P1322 STARTUP COMPLETED?

 **No**

Actual Value                      Output Freq.

Left fct.                      Up fct.                      Down fct.                      Right fct.

If the user configured the whole application by selecting "YES" then the HYDROVAR will not make available the Start-up menu at every power-on.

By selecting "NO" at next power-on, the HYDROVAR will offer to the user the start-up procedure.

**P1323 ADDRESS**

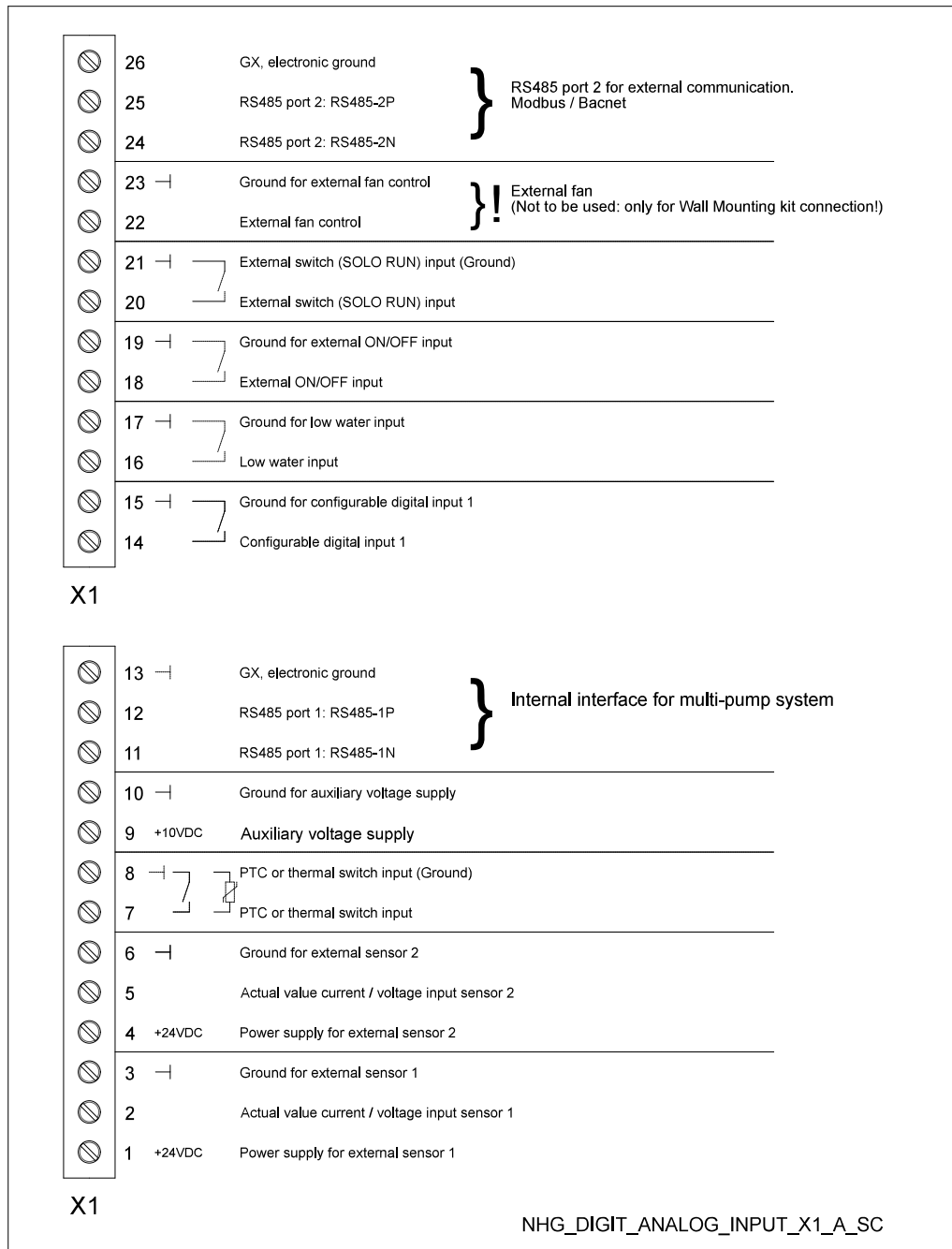
P1323 ADDRESS

**1**

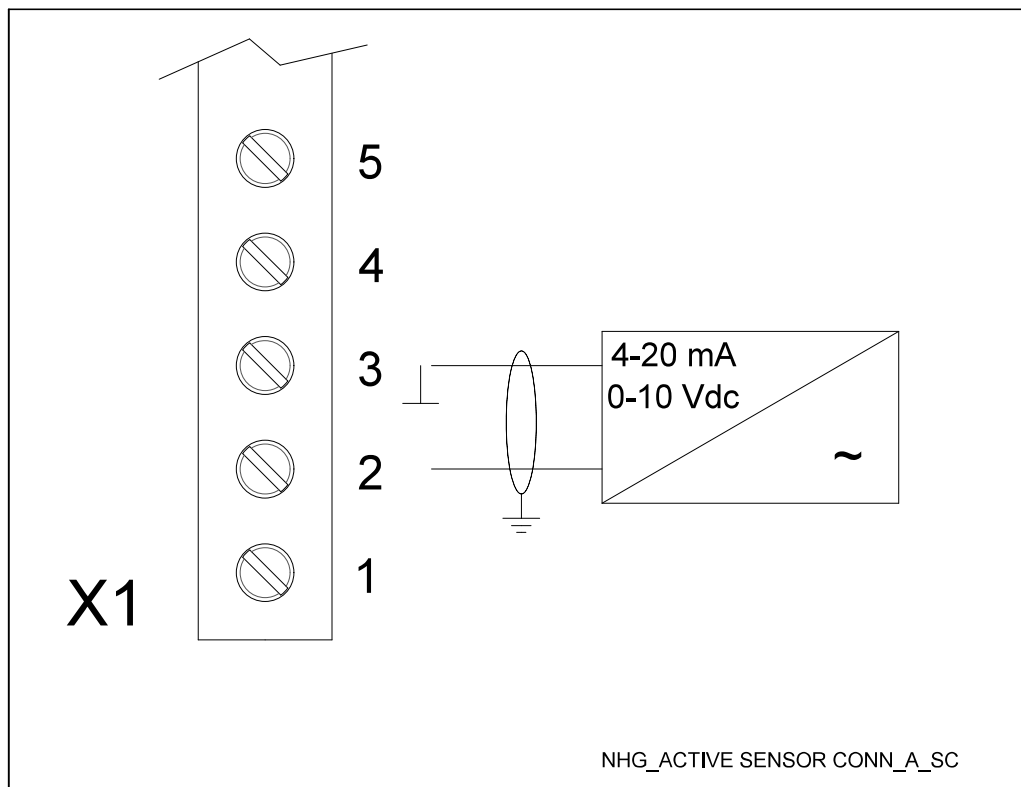
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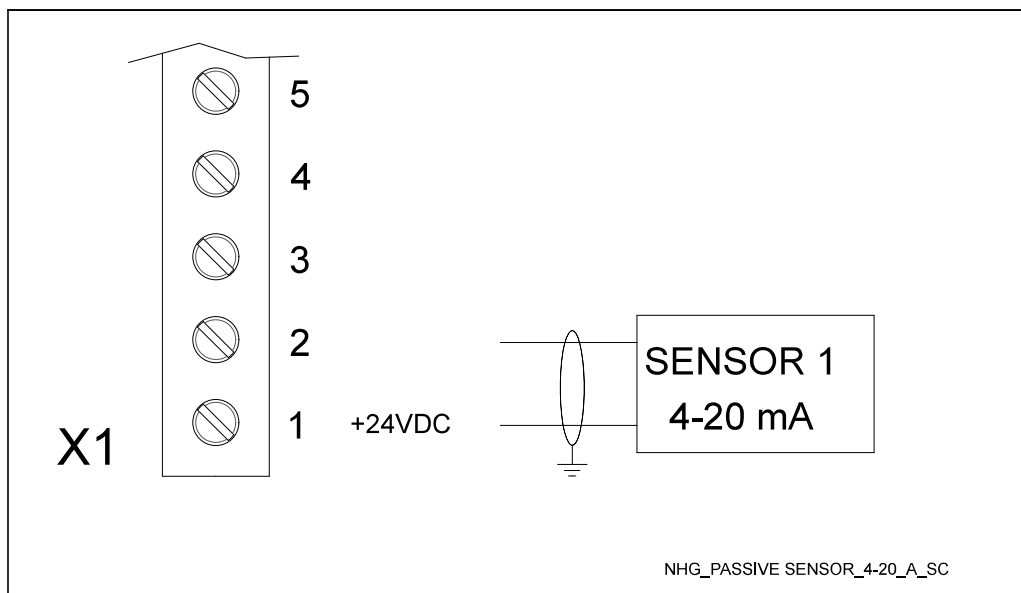
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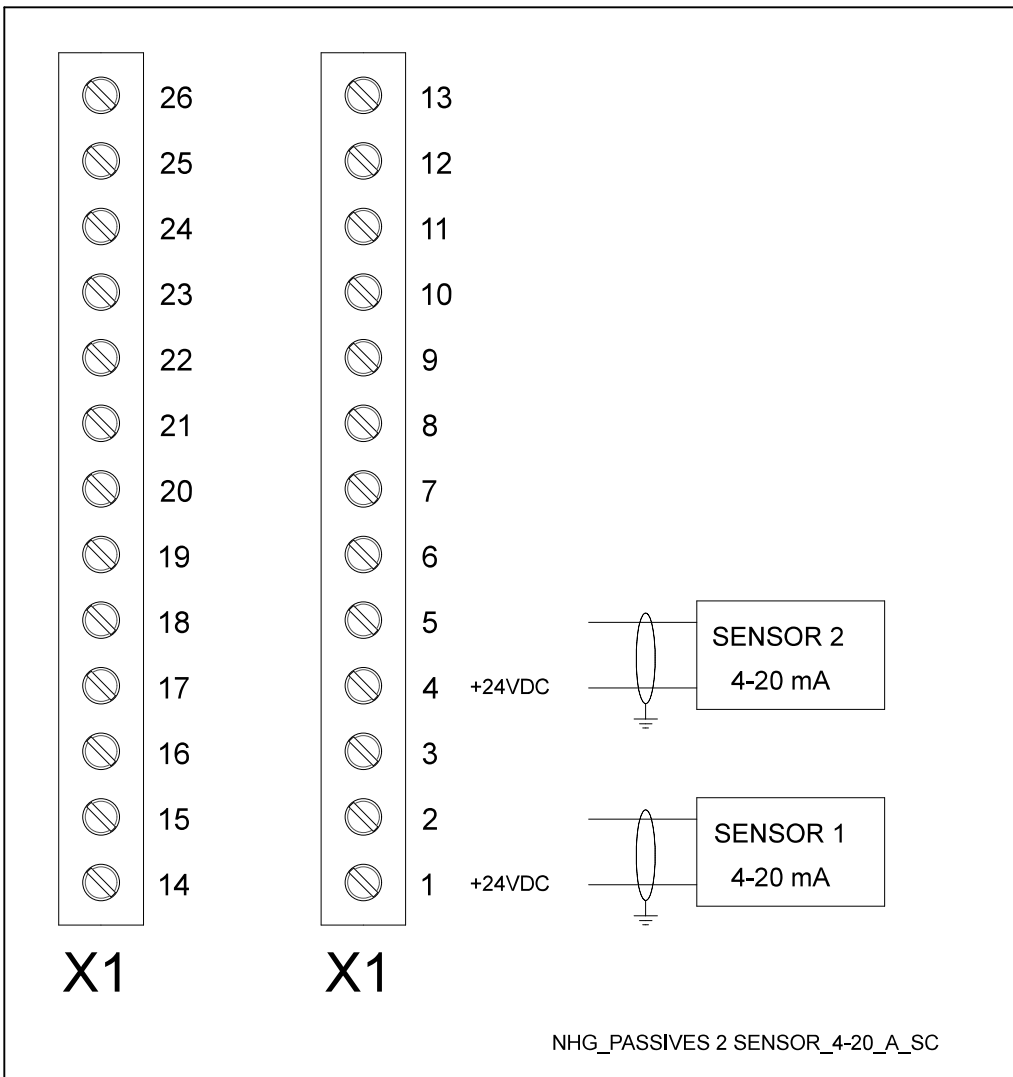
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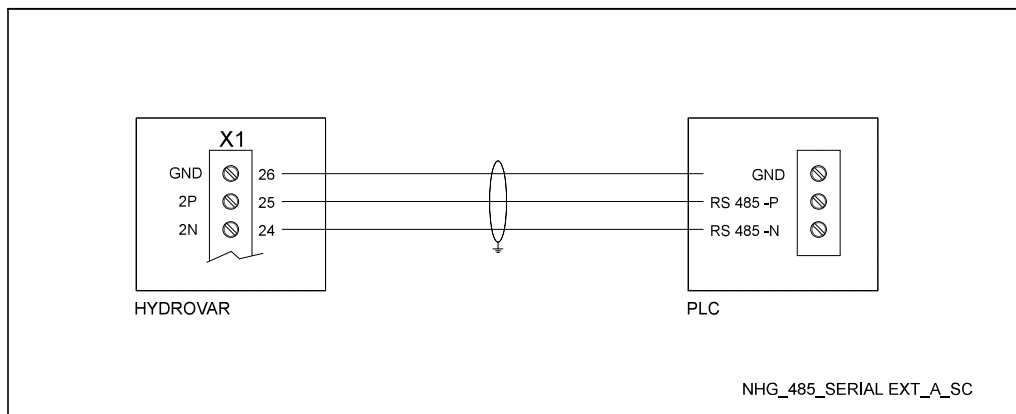
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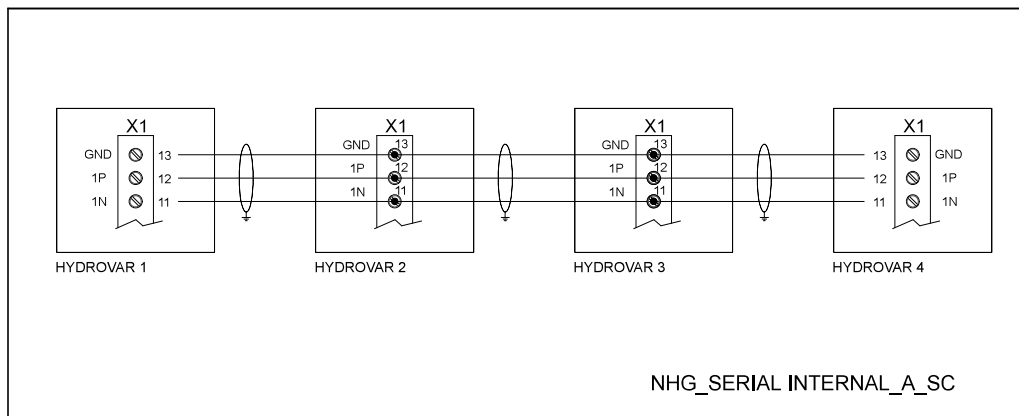
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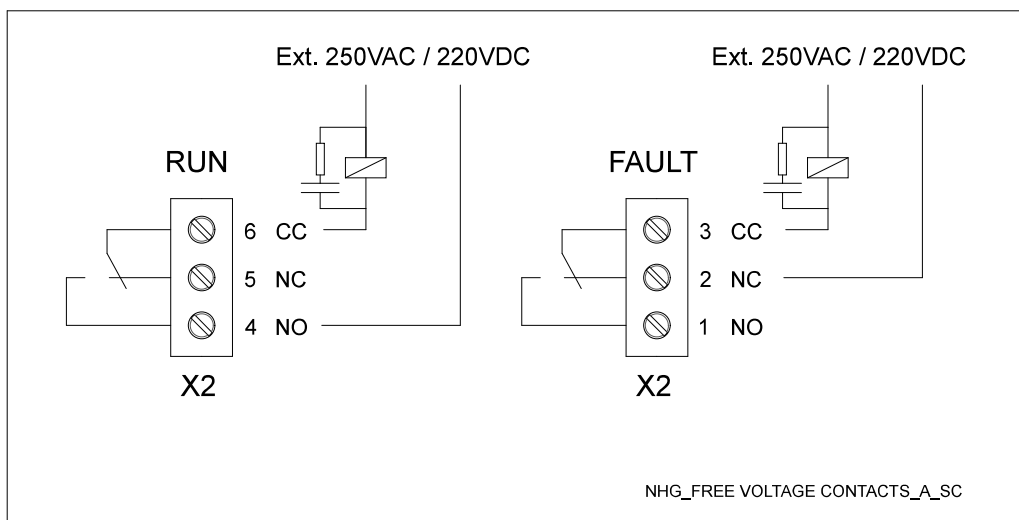
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6.



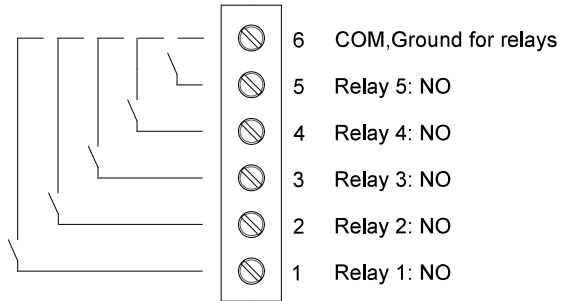
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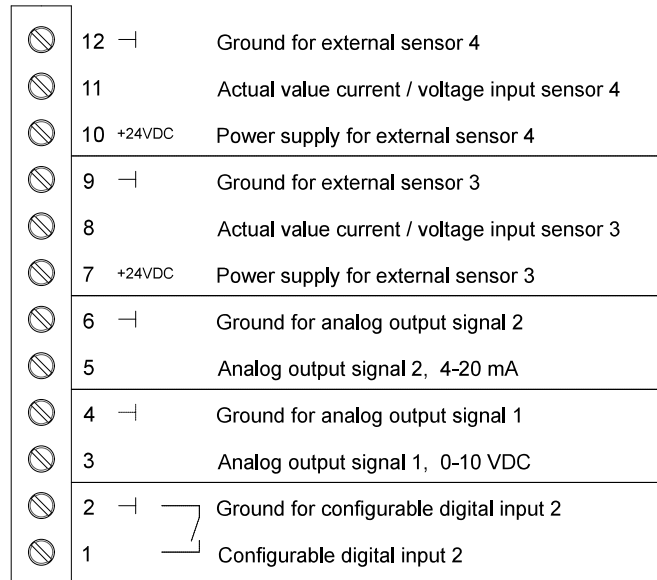


8.

## PREMIUM CARD HYDROVAR



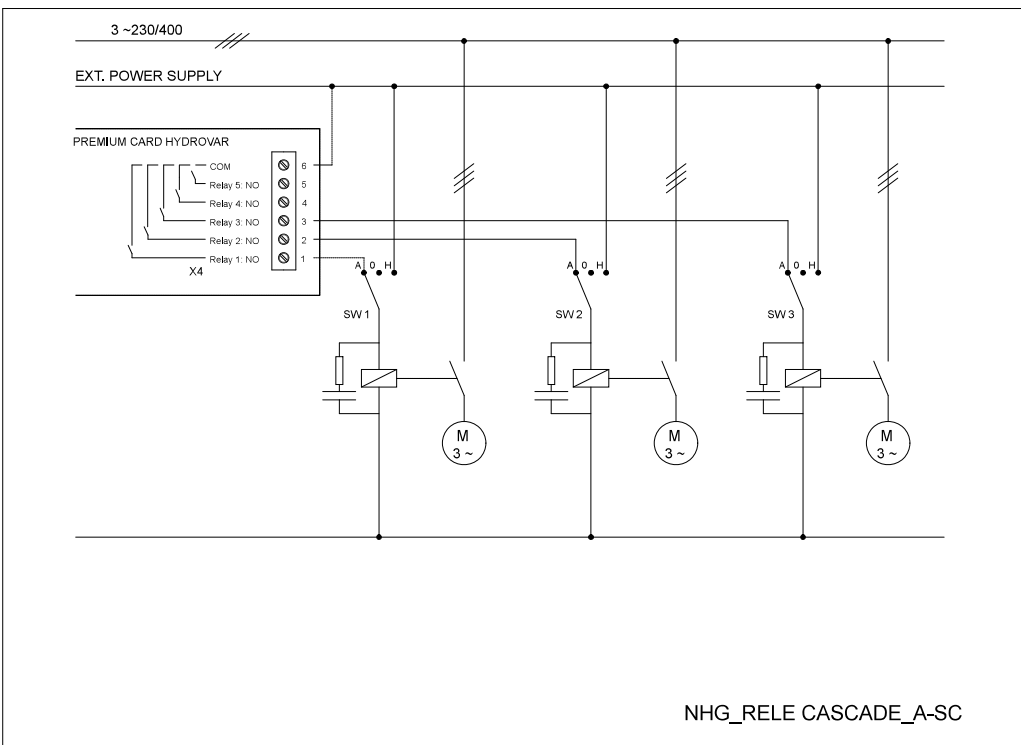
**X4**

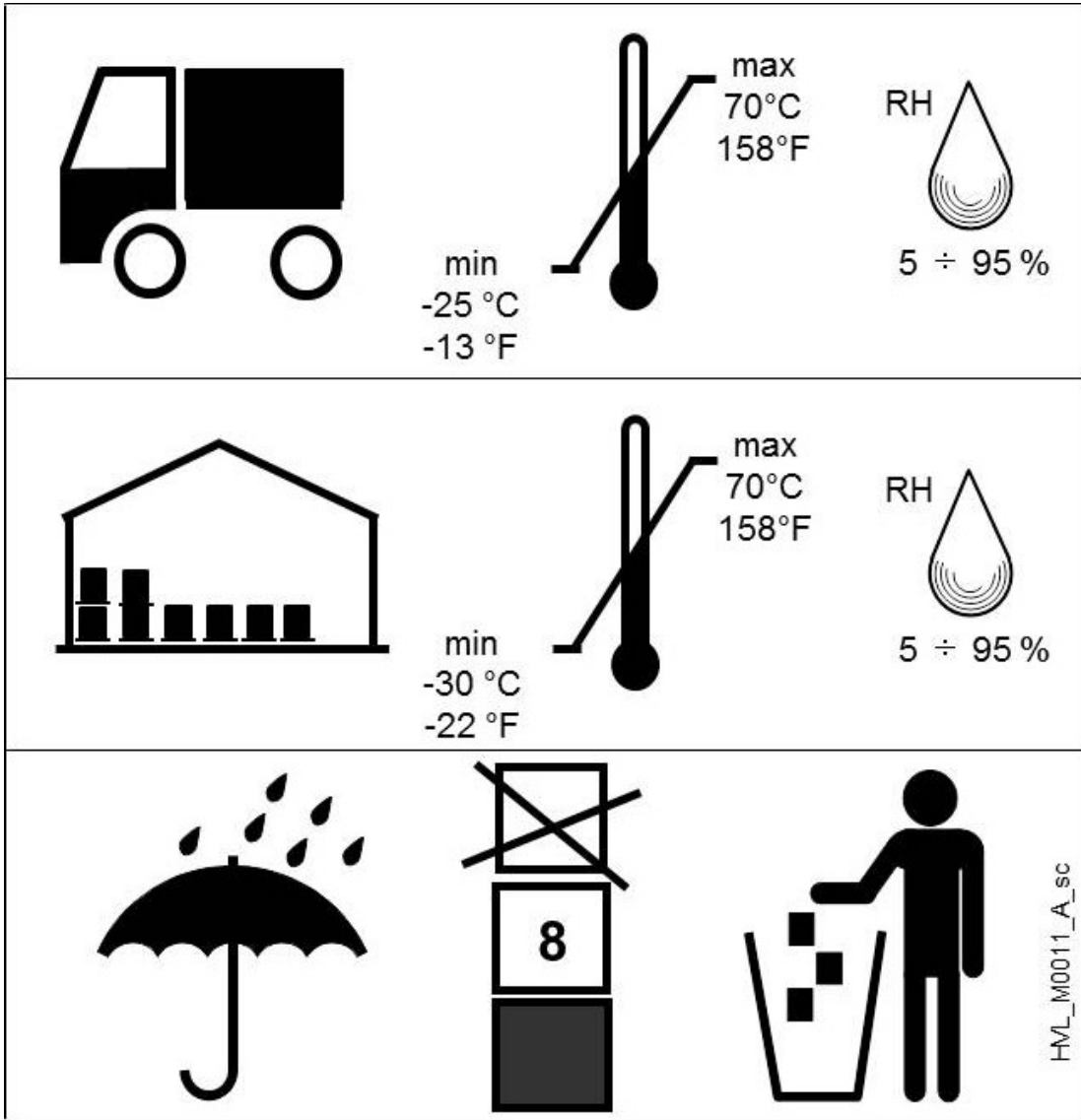


**X3**

NHG\_PREMIUM CARD\_A\_SC

9.





HML\_M0011\_A\_sc

**xylem**  
Let's Solve Water

Xylem Service Italia S.r.l.  
Via Vittorio Lombardi 14  
Montecchio Maggiore VI  
36075  
Italy  
Contact your supplier or local  
sales and service  
representative

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