CR-TEC Engineering

Automated Valve Solutions

AXMART® v3

Installation and Operation Manual

Index

1. Download and insta

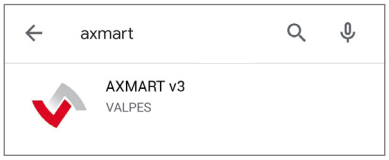
The **AXMART®** is compatible with GS6, GPS, GFS, GP7, GP8 and GBH actuators versions. This software is free and available on Google Play for Android version (v5.0 or higher) and on Apple store for the Apple version.

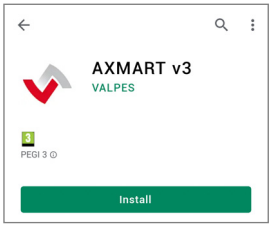
Software name : **AXMART (v3)**

1.1 Android version

Installation :

OR





Exécution :

Icon of **AXMART:**

Access requested by AXMART :

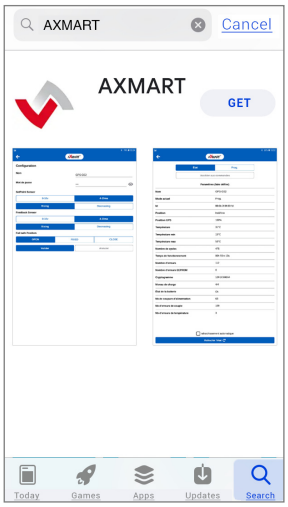
- Access to position
- Access to gallery/photos

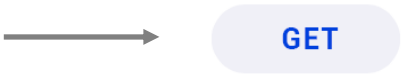
The device GPS must be activated

1.2 Apple version

Installation :

OR





Execution :

Icon of **AXMART:**

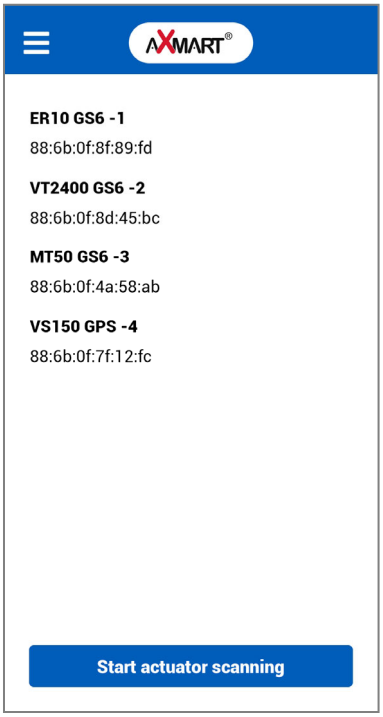
- Before launching **AXMART** , the device clock must be correct.
- During the switch between winter and summer time, a connection to the actuators is imperative for clocks synchronisation.

2. General description

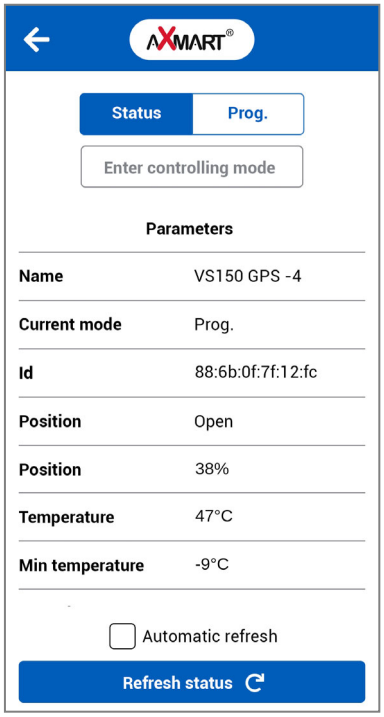
Because of the screen size, the display isn't the same according the device (tablet or smartphone). Les functionalities are the same.

2.1 Smartphone display

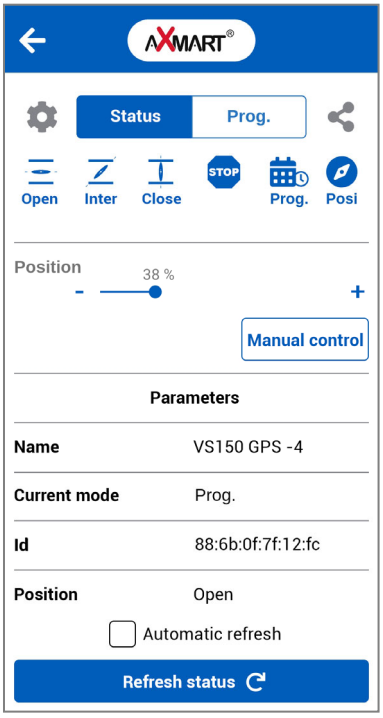
Connection to an actuator



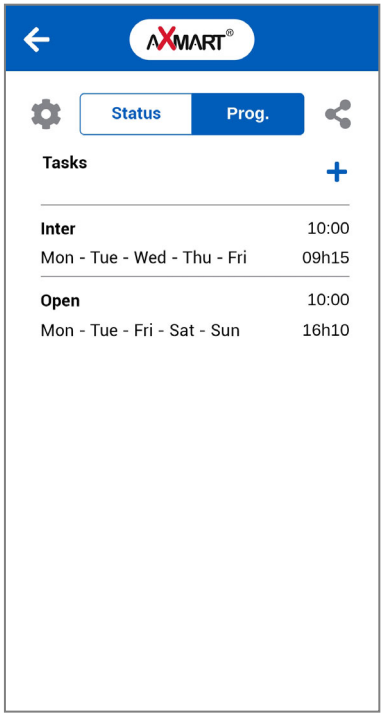
Actuator status



Operating and control mode selection

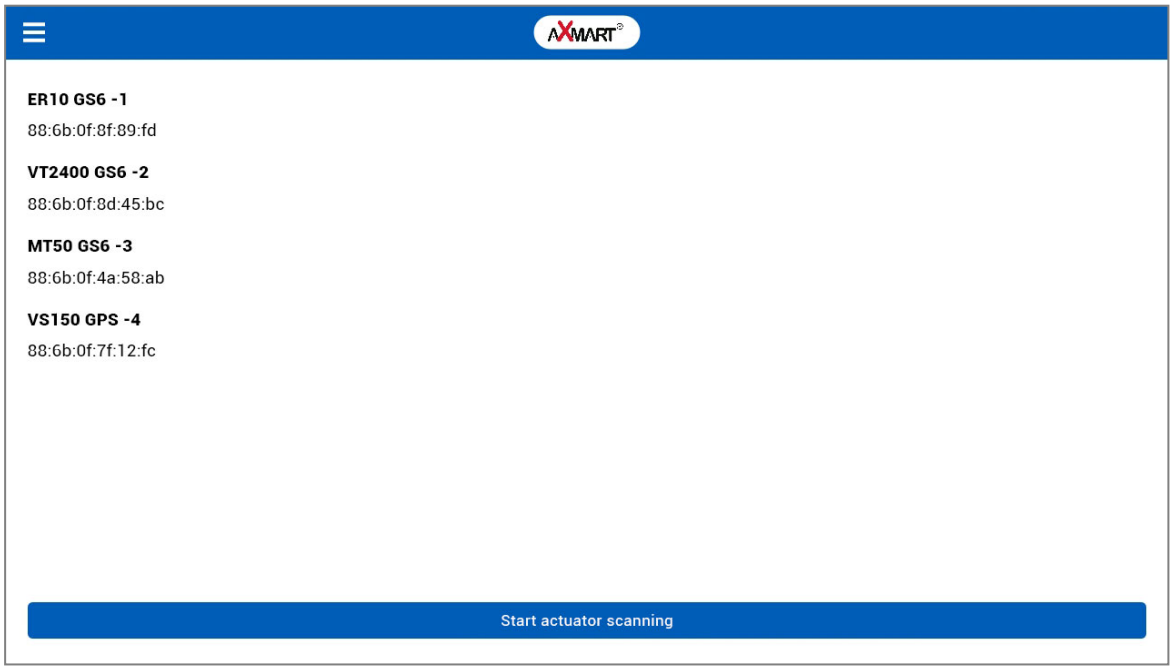


Weekly scheduling



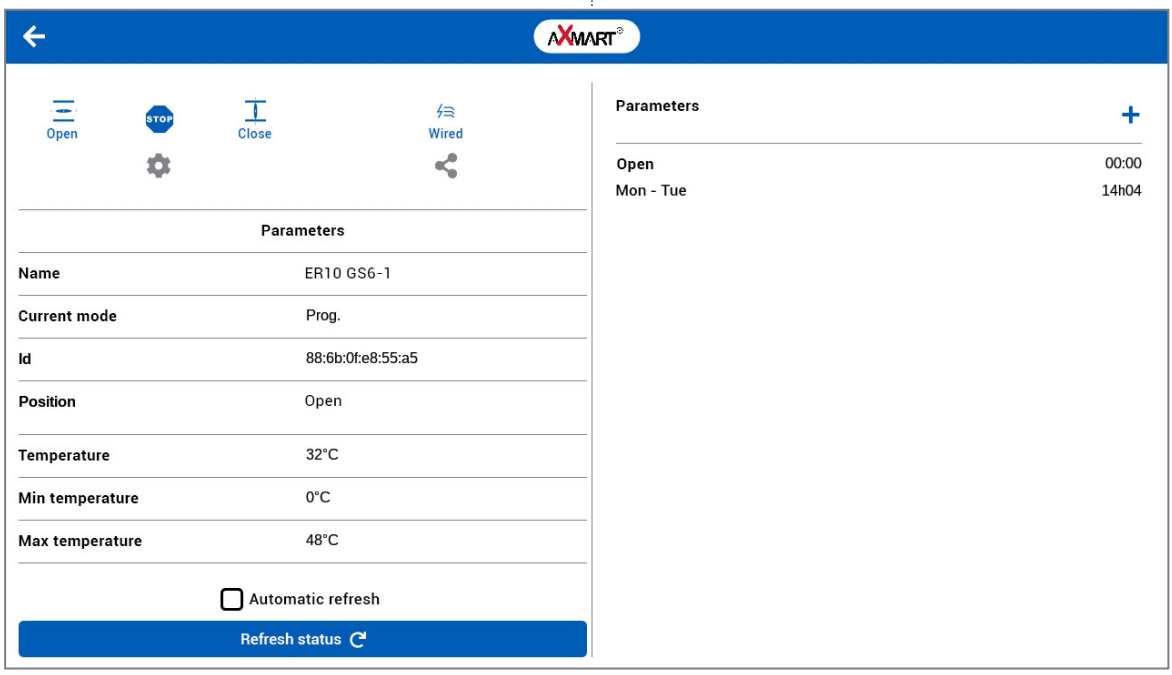
2.2 Tablet display

Connection to an actuator

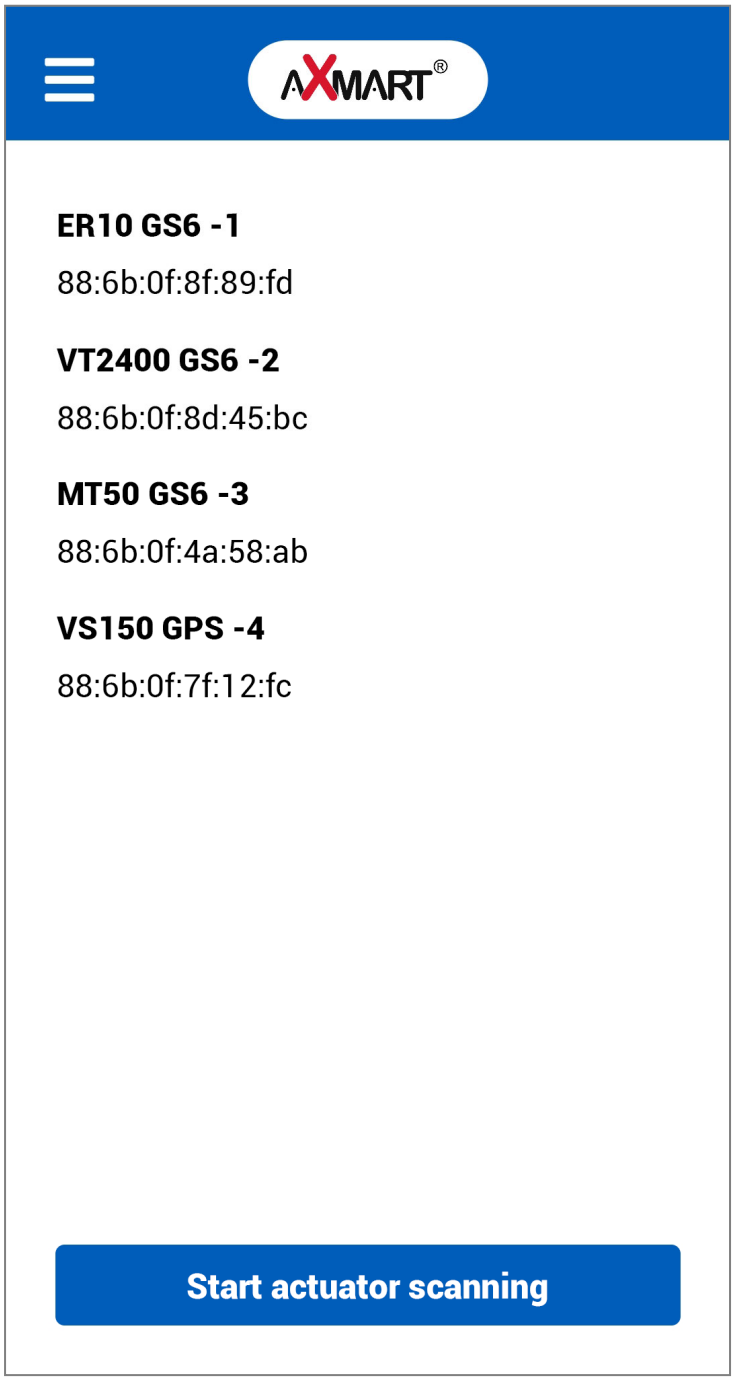


Operating and control mode selection

Weekly scheduling



3. Connection to an actuator



For each actuator, the list shows the name of the actuator and the MAC address (Media Access Control).

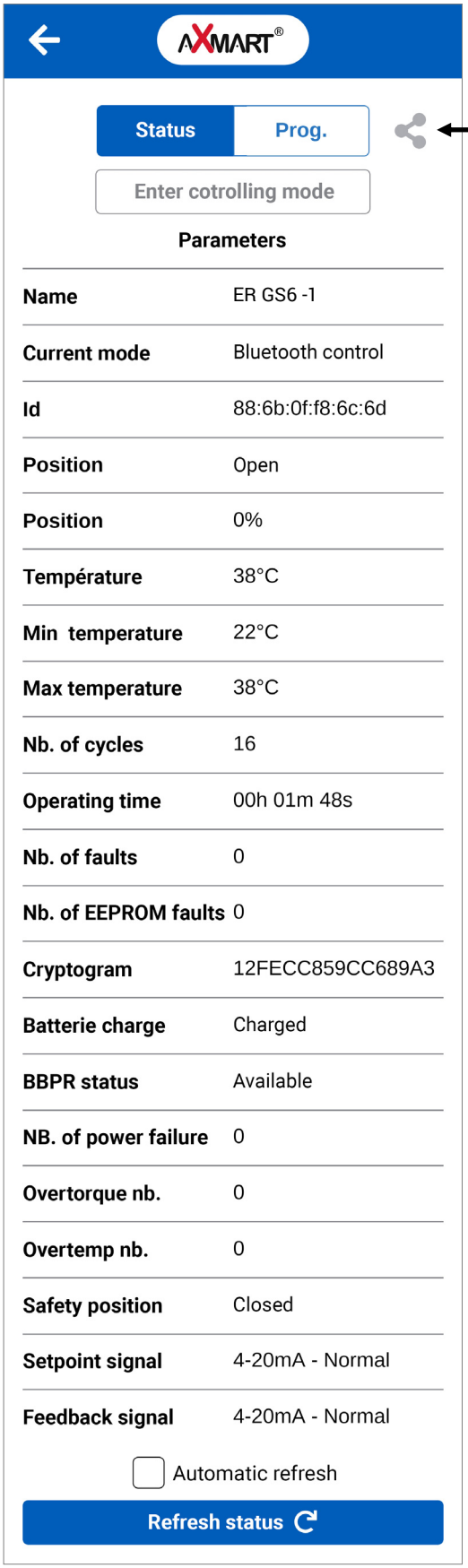
After the connection, the display switches automatically to the status of the actuator (see chap. 4).

It's possible to launch new detections of actuators

One actuator can be connected at only one device at the same time.

4. Stat

The status screen shows all actuator parameters in real time.



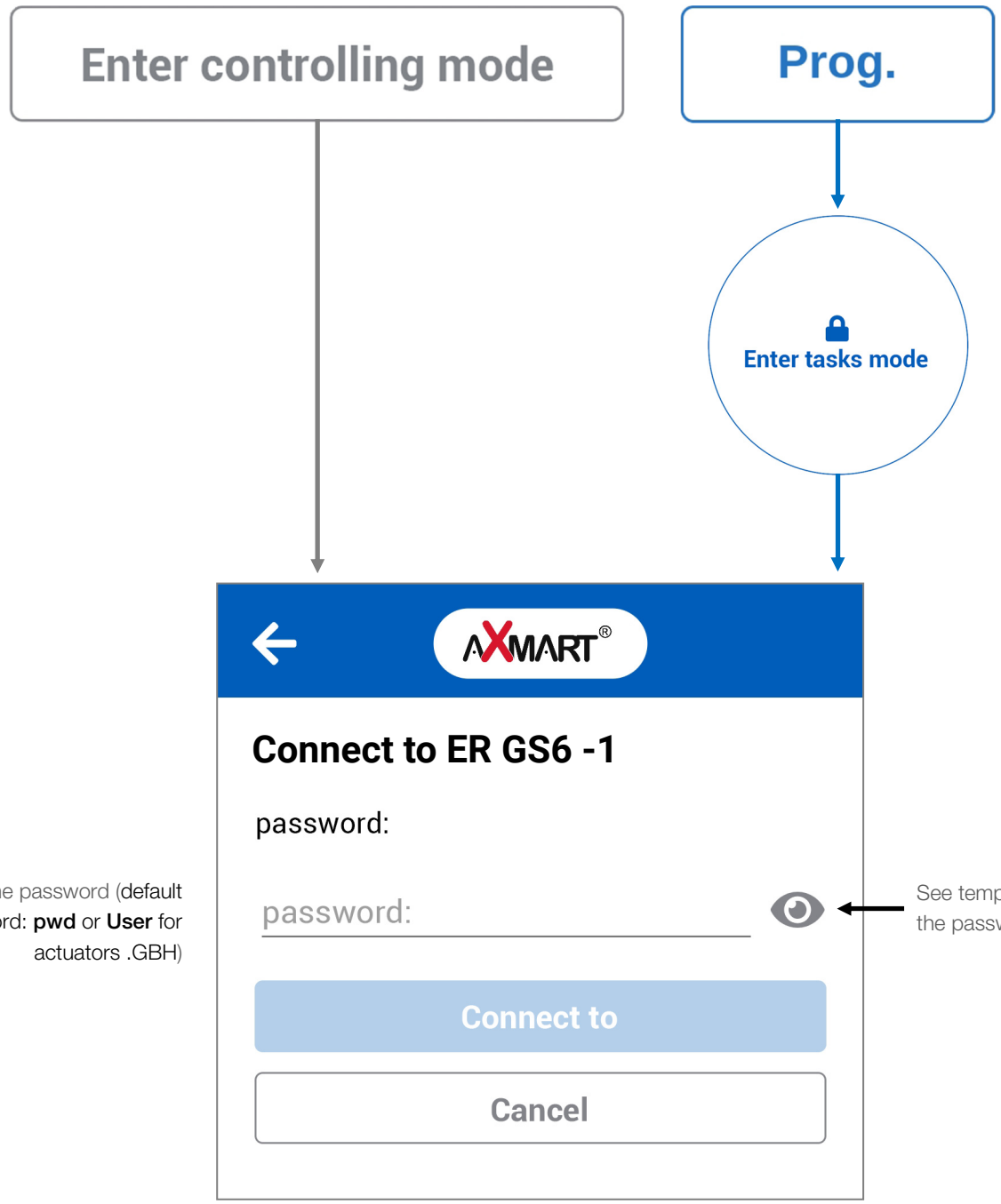
Sharing actuator status (see chapter 5.5)

Actuator name	
Current selected control mode (Bluetooth®, prog, posi and wired)	
Actuator MAC address	
Current position (open, closed, intermediate)	
Current position (percentage of opening)	
Current temperature inside actuator enclosure	
Minimum temperature	
Maximum temperature	
Number of operating periods before and after a rest period (since the first start of the actuator)	
Total functioning time	
Number of errors (temperature, overtorque)	
Internal number of errors (microcuts during writing memory).	
Password encryption. Needed for password recovery process.	
Battery charge status	
BBPR availability (battery connected, safety temperature not reached and charge level > 70 %)	
Number of power cuts and starts of BBPR unit	
Number of overtorques	
Number of excessive temperature	
Backup position, reached in case of power failure	
Type of setpoint analogic signal (4-20 mA or 0-10 V)	
Type of feedback analogic signal (4-20 mA or 0-10 V)	

5. Functionalities

5.1 Control activation

The functionalities described from this section allow the actuator control. Therefore, the actuator password is required (default password: pwd or User for actuators .GBH).



Enter the password (default password: **pwd** or **User** for actuators .GBH)

See temporarily the password

At the first connection, the following message appears :

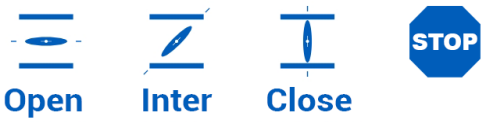
Restricted functionalities: password change.

It is then mandatory to customise the security settings by changing the password (Chapter 6.2).

5.2 Functioning modes

Mode « Bluetooth® control » :

This mode is activated using these functions:



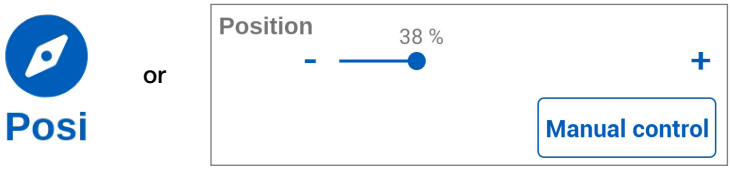
Actuator status

Parameters	
Current mode	Bluetooth Control

This mode allows a local control (on-off) of the actuator.

Mode « Positioning » :

This mode is activated using these functions:



Actuator status

Parameters	
Current mode	POSI

This mode allows a local control of the actuator with percentage of opening.
This mode also gives priority to electric wiring on terminals 15/16 (setpoint) and 13/14 (feedback)

Mode « Wired control » :

This mode is activated using this function:

Actuator status

Parameters	
Current mode	Wired control

This mode gives priority to electric wiring on power supply terminals (1, 2, 3 and 4).

Mode « Weekly scheduling » :

This mode is activated using this function:

Actuator status

Parameters	
Current mode	Prog.

This mode gives priority to stored tasks of the scheduler.

Each functioning mode activation deactivates the other ones. Before exiting AXMART, It's mandatory selecting the mode corresponding to the desired use of the actuator.

5.3 Local control

AXMART allows to locally manipulate the actuator.

Basic control :

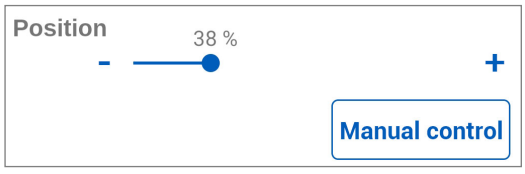
Drives the actuator until open position (90°) or final position (180°) in case of 3-position-actuator.

Drives the actuator until intermediate position (in case of 3-position-actuator).

Drives the actuator until closed position (0°)

Actuator stops

Control with percentage of opening (positioning) :

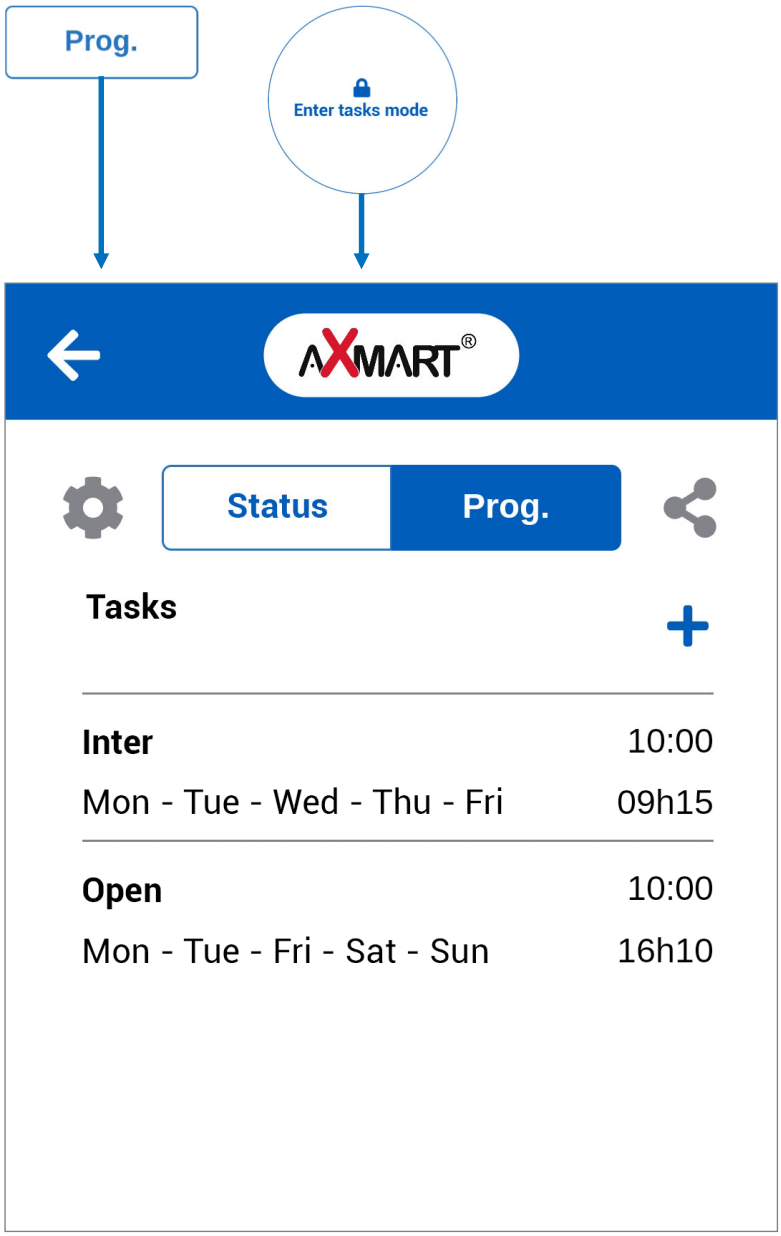


Using « Manual control » drives the actuator to the selected percentage of opening.

Each functioning mode activation deactivates the other ones. Before exiting AXMART, It's mandatory selecting the mode corresponding to the desired use of the actuator.

5.4 Weekly scheduling

With AXMART, it's possible to automate and making standalone the actuators, using a weekly scheduler (capacity of 20 tasks).



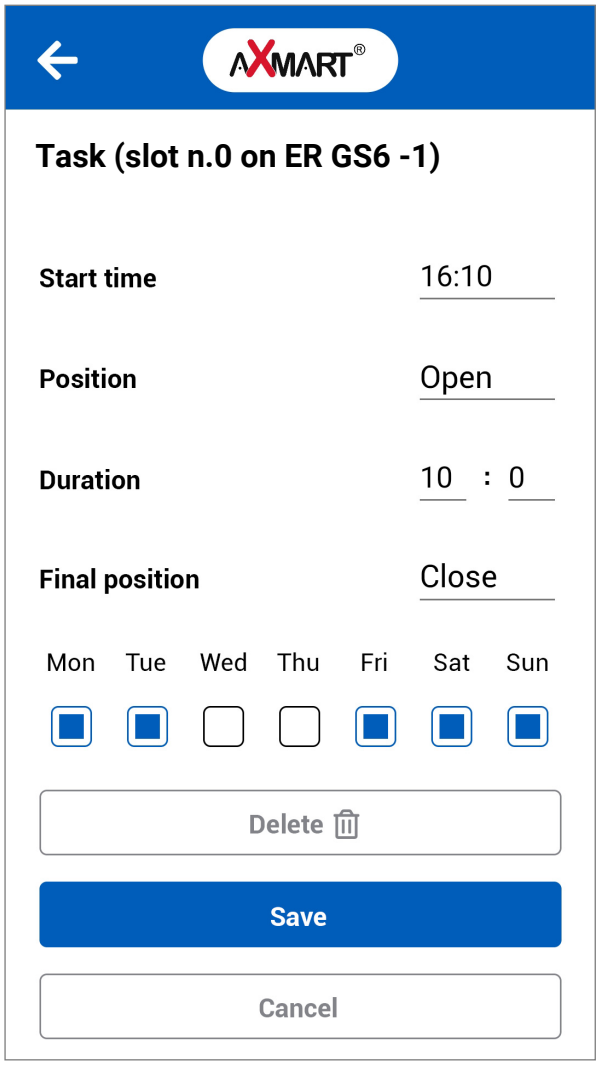
Add a new task

List of tasks stared in the actuator.

It's possible to modify or suppress a task, clicking on it.

Each functioning mode activation deactivates the other ones. Before exiting AXMART, It's mandatory selecting the mode corresponding to the desired use of the actuator.

Task scheduling:



Task starting time

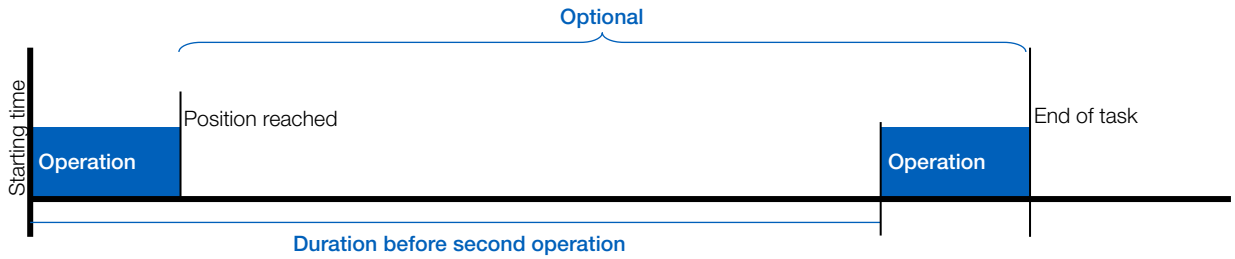
Position the actuator has to reach or position inversion

Optional: Duration hold-position time
(This duration includes the actuator operating time)

Optional: position to reach after the previous duration

Days for task start

Example of two operations with an hold position time:



Each functioning mode activation deactivates the other ones. Before exiting AXMART, It's mandatory selecting the mode corresponding to the desired use of the actuator.

5.5 Sharing and sending status report

The icon allows sending a complete report including all actuator parameters and using the communication functions available on the device (Bluetooth®, Wifi direct, cloud, Email…)

Report content (available in English only):

Actuator VS300 GS6 -1 (88:6b:0f:8f:89:fd)

Generated on : dd/mm/yyyy - hh:mm:ss

State

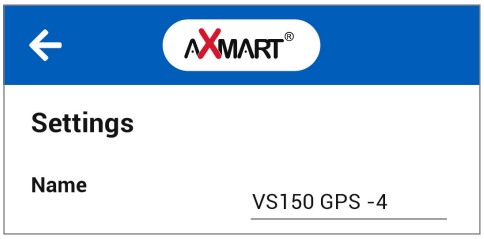
Property	Value
Name	VS150 GPS -4
Address	88:6b:0f:8f:89:fd (NB when generated on iOS, MAC addresses ends by XX:XX:XX)
Status mode	OK
Temperature	45°C
Temperature Min	-9°C
Temperature Max	64°C
Cycle counter	2504
Working time	06h 36m 21s
Fault counter	245
EEPROM error counter	0
Current mode	Prog.
Password	12FEC69B94
Charging level	Charged
Battery status	Available
Nb power fail	242
Nb torque fault	220
Nb temperature fault	25
Actuator position	0%
Start ramp	0
Torque limit	80
Torque delay	1
Gear unlock	0
Temp regulation	10
Temp security	70
BBPR position	Closed
Pilotage wired	0
SetPoint sensor point	4-20mA
SetPoint sensor direction	Rising
Feedback sensor point	4-20mA
Feedback sensor direction	Rising
Type	GS6
Rotation direction	Normal
Tasks	**SlotId** | **Duration** | **Time** | **Command** | **Position** 0 | 10:00 | 16h10 | Ouvrir | Fermeture **Mon** | **Tue** | **Wed** | **Thu** | **Fri** | **Sat** | **Sun** TRUE | TRUE | FALSE | FALSE | TRUE | TRUE | TRUE
User picture	 

6. Actuator setup

Clicking on icon gives access to setup screen.

6.1 Modification of the actuator name

Type in the field « **Name** » the new name of the actuator (12 characters maximum).



→ **Enter**

6.2 Modification of the actuator password

for obvious safety reasons , the password must be modified at the first use of the actuator. Type the new password in the field « **Password**».

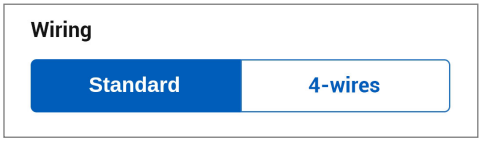
The icon shows the characters.

8 characters maximum
Available characters: a-z, A-Z, 0-9 only

→ **Enter**

6.3 Wiring setup

Concerns the control with the actuator electric wiring.



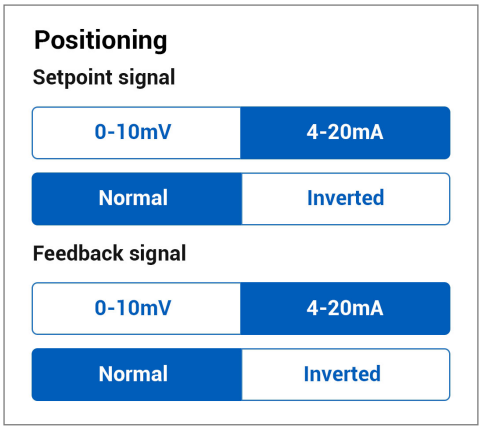
- **4-wires :** specific wiring with all terminals of the power supply terminal block or for pulse control wiring.
- **Standard :** for all other wiring including positioning.

→ **Enter**

6.4 Positioning setup

The setpoint signal (terminals 15/16) is the actuator positioning signal. The feedback signal gives the actuator position (terminals 13/14).

- **0-10 V :** Setpoint or feedback with voltage range
  0 V = 0° ; 10 V = 90°
- **4-20 mA :** Setpoint or feedback with intensity range
  4 mA = 0° ; 20 mA = 90°
- **Normal :** Correspondence signal/position as descripted above
- **Inverted :** Inverted voltage/intensity ranges
  10 V = 0° ; 0 V = 90° and **20 mA = 0° ; 4 mA = 90°**

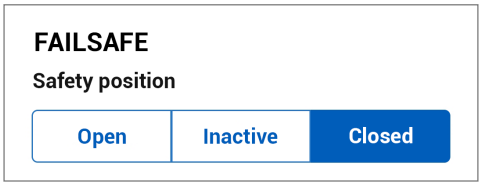


→ Enter

6.5 FAILSAFE safety position setup

The FAILSAFE system insure that the actuator will reach a predetermined safety position in case of power failure.

- **Open :** The valve reaches open position in case of power failure.
- **Closed :** The valve reaches closed position in case of power failure (default).
- **Inactive:** The FAILSAFE unit is disabled (example : maintenance...)



→ Enter

CR-TEC Engineering Inc.

CR-TEC Engineering Inc.
15 Orchard Park Road, Unit 18
Telephone 203-318-9500 • Fax 203-245-2575
info@crtec.com • www.crtec.com