

CR-TEC Engineering

Automated Valve Solutions



AXMART[®] v3

Installation and Operation Manual



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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**:



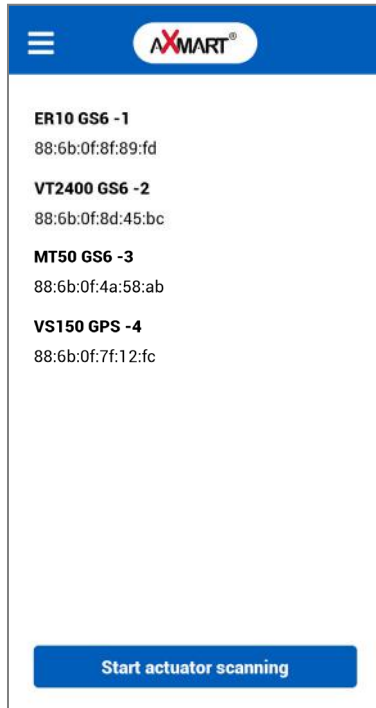
- Before launching **AXMART** , the device clock must be correct.
- During the switch between winter and summer time, a connection to the actuators is imperative for clocks synchronisation.

2. General description

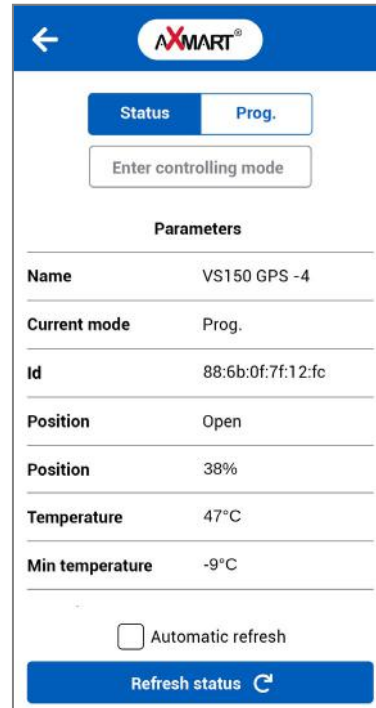
Because of the screen size, the display isn't the same according the device (tablet or smartphone). Les functionalities are the same.

2.1 Smartphone display

Connection to an actuator



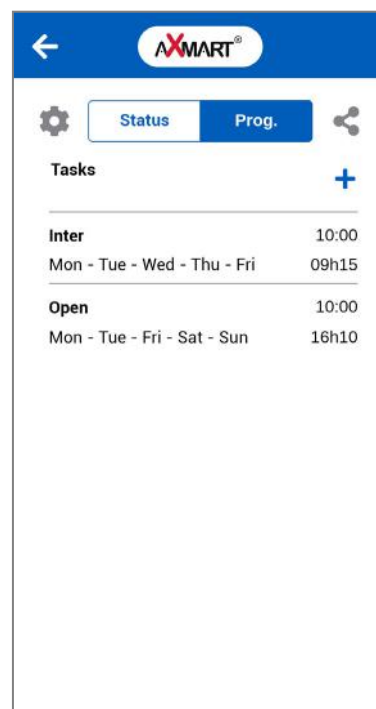
Actuator status



Operating and control mode selection

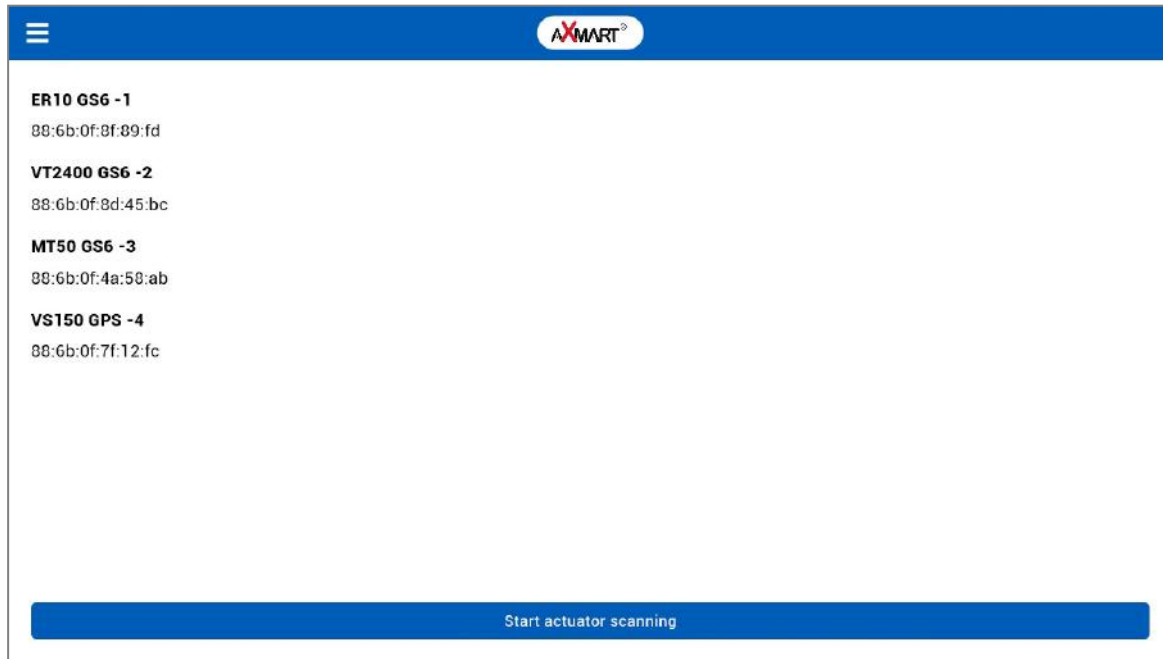


Weekly scheduling



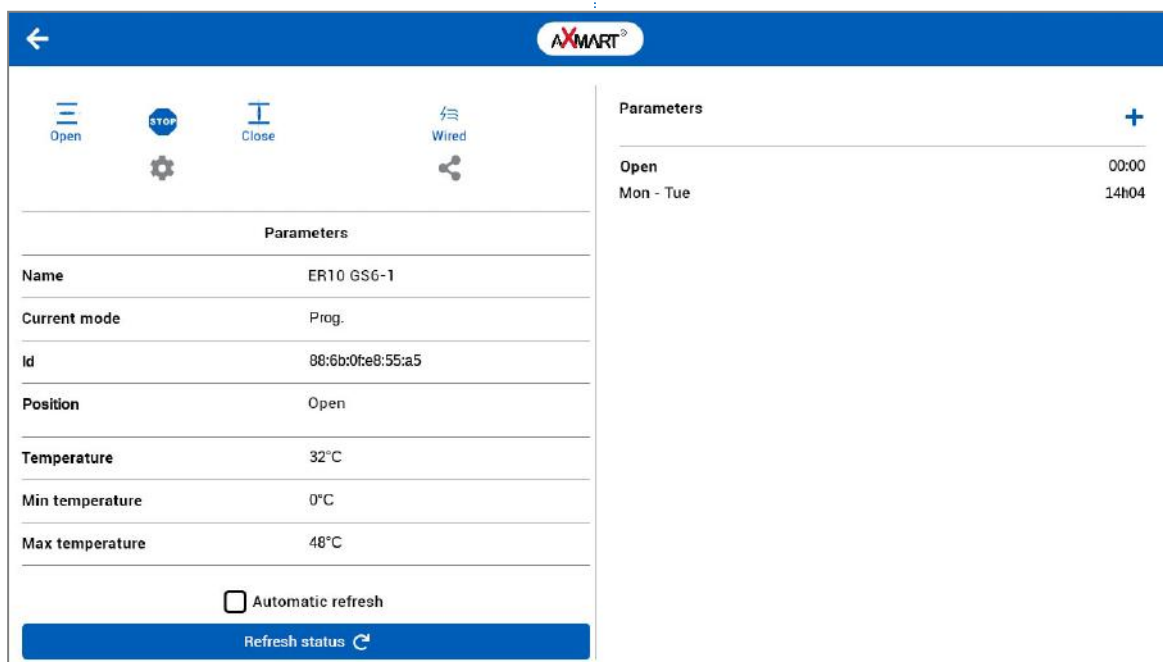
2.2 Tablet display

Connection to an actuator

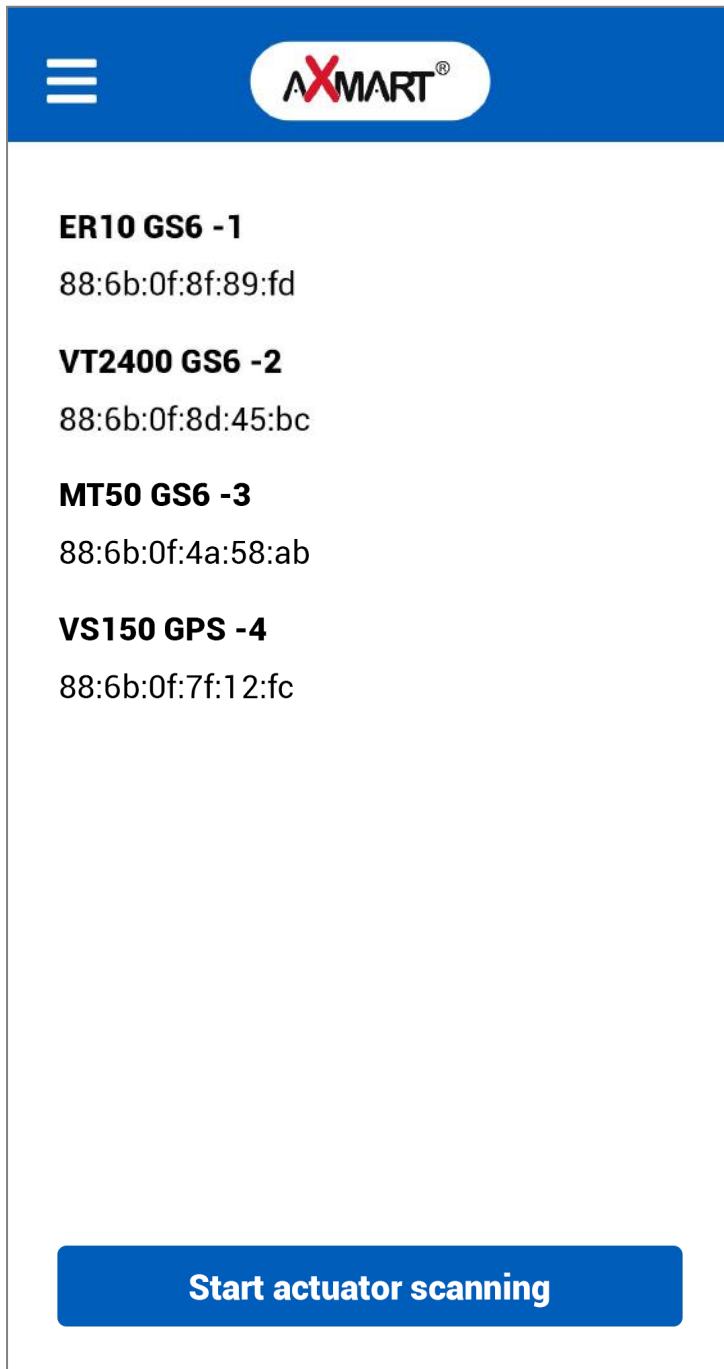


Operating and control mode selection

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.

The screenshot shows the AXMART Status screen. At the top, there is a blue header with a back arrow and the AXMART logo. Below the header, there are two tabs: 'Status' (selected) and 'Prog.'. A 'Prog.' button is also visible. Below the tabs is a button labeled 'Enter controlling mode'. A sharing icon (three connected dots) is located to the right of the tabs, with an arrow pointing to it from the text 'Sharing actuator status (see chapter 5.5)'. The main content area is titled 'Parameters' and contains a table of actuator data. At the bottom, there is a checkbox for 'Automatic refresh' and a blue 'Refresh status' button with a circular arrow icon.

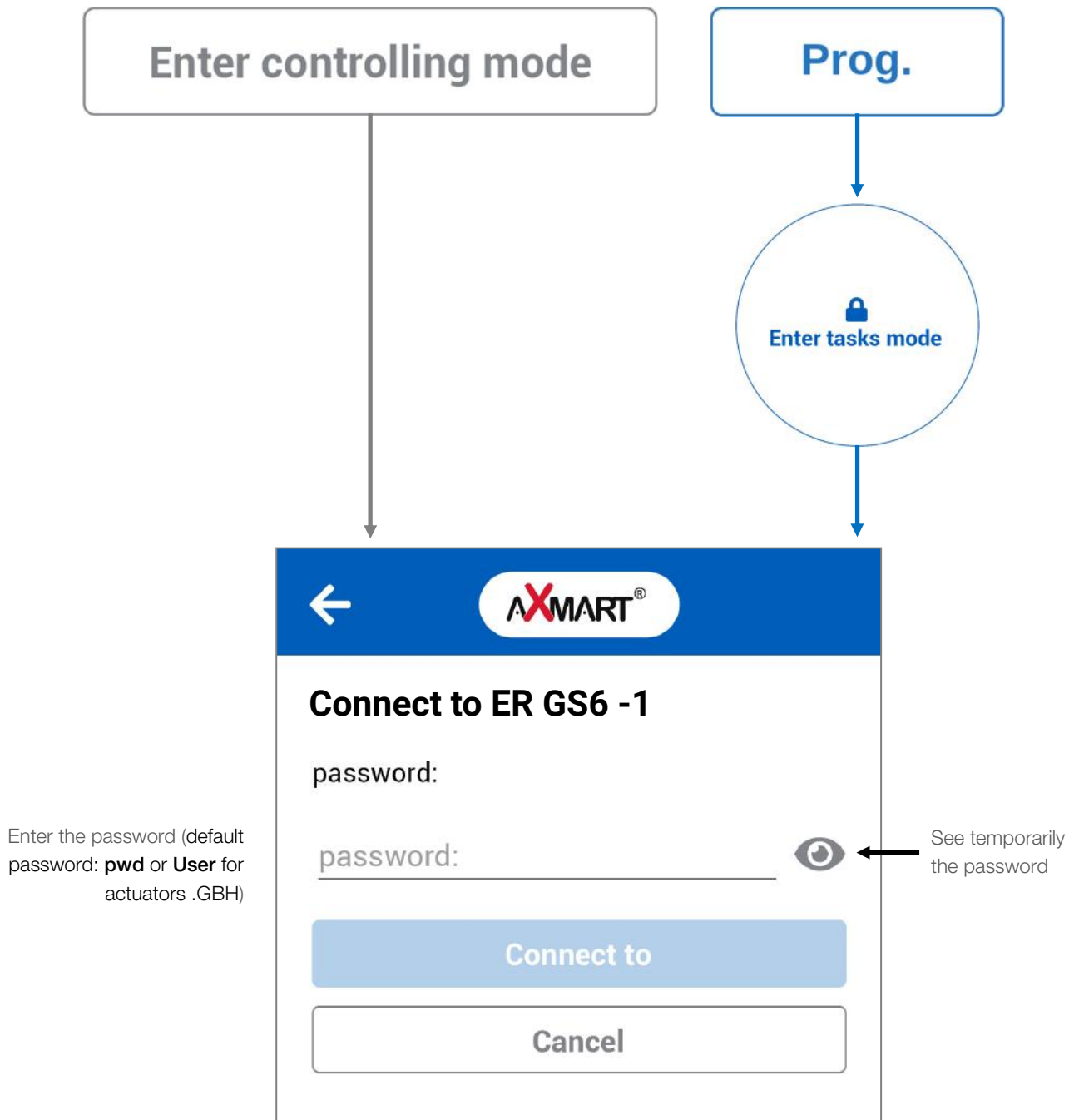
Parameters	
Name	ER GS6 -1
Current mode	Bluetooth control
Id	88:6b:0f:f8:6c:6d
Position	Open
Position	0%
Température	38°C
Min temperature	22°C
Max temperature	38°C
Nb. of cycles	16
Operating time	00h 01m 48s
Nb. of faults	0
Nb. of EEPROM faults	0
Cryptogram	12FECC859CC689A3
Batterie charge	Charged
BBPR status	Available
NB. of power failure	0
Overtorque nb.	0
Overtemp nb.	0
Safety position	Closed
Setpoint signal	4-20mA - Normal
Feedback signal	4-20mA - Normal

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).



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).

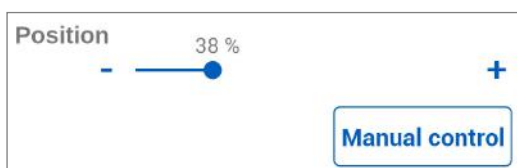


Drives the actuator until closed position (0°)



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).

The diagram illustrates the process of entering tasks mode. A 'Prog.' button and an 'Enter tasks mode' button (with a lock icon) point to the 'Prog.' tab in the AXMART app. The app screen shows a list of tasks with their schedules.

Task Name	Schedule
Inter	10:00
Mon - Tue - Wed - Thu - Fri	09h15
Open	10:00
Mon - Tue - Fri - Sat - Sun	16h10

Annotations:

- Add a new task (pointing to the '+' icon)
- List of tasks stored in the actuator. (pointing to the task list)
- It's possible to modify or suppress a task, clicking on it. (pointing to the task list)



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

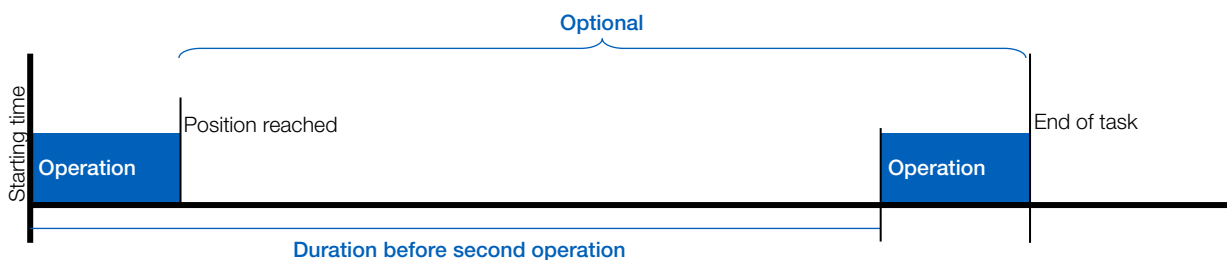
Position the actuator has to reach or position inversion

Optional: Duration hold-position time
i (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:



i 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

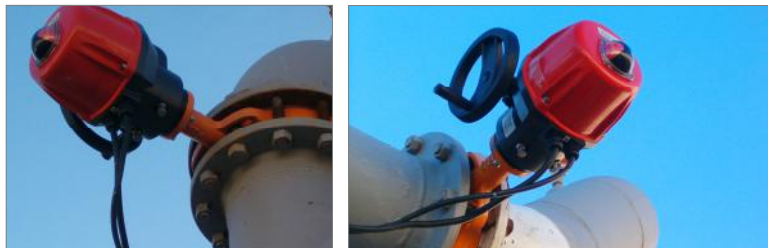
The icon  allows sending a complete report including all actuator parameters and using the communication functions available on the device (Bluetooth®, Wifi direct, cloud, Email...)

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).



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



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.



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 described above
- **Inverted** : Inverted voltage/intensity ranges
10 V = 0° ; 0 V = 90° and 20 mA = 0° ; 4 mA = 90°



Positioning

Setpoint signal

0-10mV	4-20mA
Normal	Inverted

Feedback signal

0-10mV	4-20mA
Normal	Inverted

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...)



FAILSAFE

Safety position

Open	Inactive	Closed
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