

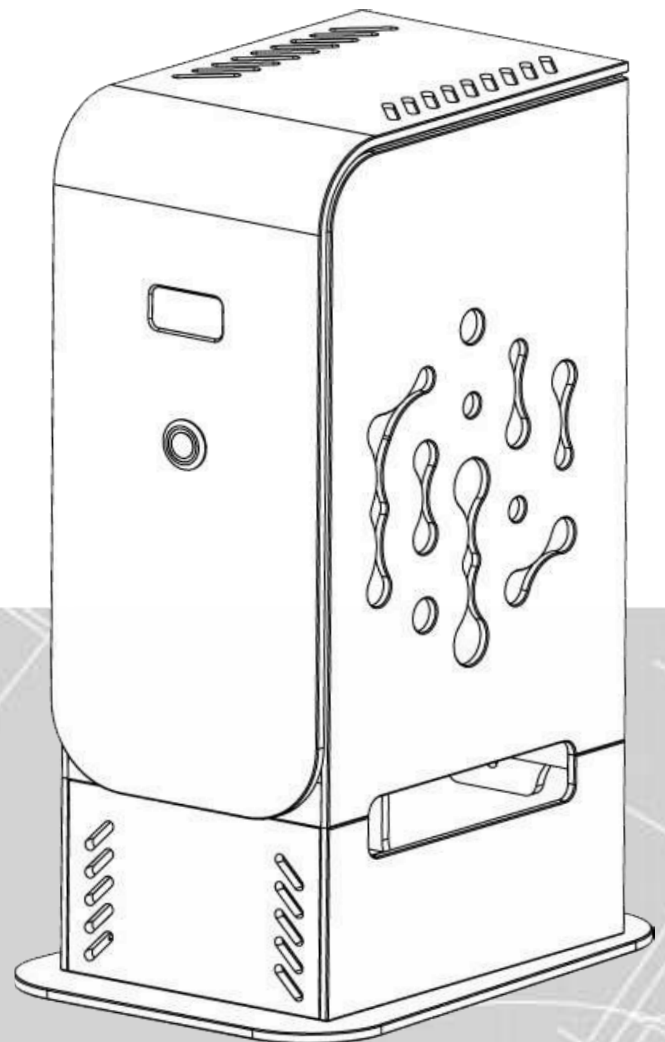
Process supervision and traceability smart controller. DPM[®]Pilot



EN

English translation of
original document

DOC.60514



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REMARKS ABOUT THE MANUAL

Symbols



Information

This warning statement indicates important information (for example: damage to property), but no hazard.



Information

Information to view in your customer area on the www.doga.fr web site.



Caution

This warning statement indicates a low risk that may lead to minor or moderate injuries if not avoided.



Wear personal protection equipment.

This symbol indicates the need to wear protective gloves.



Warning

This warning statement indicates a moderate risk that may lead to severe or fatal injuries if not avoided.

1 INFORMATION

1.1 IMPORTANT

The tool supplied with this manual may have been modified to meet specific needs.

If this is the case, when ordering replacement or spare parts, please indicate the tool item code featured on the delivery document or contact DOGA on **+33 1 30 66 41 41** indicating the approximate delivery date. You will then be sure to get the required tool and/or part.

1.2 PRODUCT REFERENCE

Model	Code
DPM®Pilot Standard (EU)	P200011
DPM®Pilot Standard (US)	P200021
DPM®Pilot Standard (UK)	P200031
DPM®Pilot Advanced (EU)	P200012
DPM®Pilot Advanced (US)	P200022
DPM®Pilot Advanced (UK)	P200032
DPM®Pilot Expert (EU)	P200013
DPM®Pilot Expert (US)	P200033
DPM®Pilot Expert (UK)	P200033

Additional equipment and accessories

Model	Code
19-inch industrial HD touch screen	P200045
19-inch industrial HD screen	P200044
HDMI cable - 2 meters	P200043
Wireless AZERTY keyboard with pad	P200042
Digilink module- External 24 V DC power supply	P200014
DPM I/O Module	P200015
DPM Wiring Module	P200006
DPM®Pilot support foot	P200006

1.3 GENERAL DESCRIPTION OF THE EQUIPMENT

The DPM®Pilot process supervision and traceability controller designed and manufactured by DOGA supports you in the development of your manufacturing processes by meeting the requirements of Industry 4.0.

As the conductor of your assembly station, DPM®Pilot manages the tools and accessories, guides the operator and ensures the traceability of the results. Able to manage the diversity of your operations, DPM®Pilot also allows you to increase operator versatility and reduce training times.

Security: integrated and autonomous system

DPM®Pilot controls workstation equipment autonomously through local connections.

- No risk of production downtime due to network or server issues.
- Process management information is integrated and always available.

Versatility: compatibility with tightening tools available on the market

- DPM®Pilot has been designed to communicate with a variety of brands.
 - DOGA
 - STANLEY©
 - Tohnichi
 - Open Protocol Tools

Ergonomics: easy and intuitive use

Thanks to DPM®Pilot's user-friendly interface, configuring your assembly sequences does not require a computer or automation skills.

DPM®Pilot takes care of the entire process, guides operators, decreases their training time and increases their versatility.

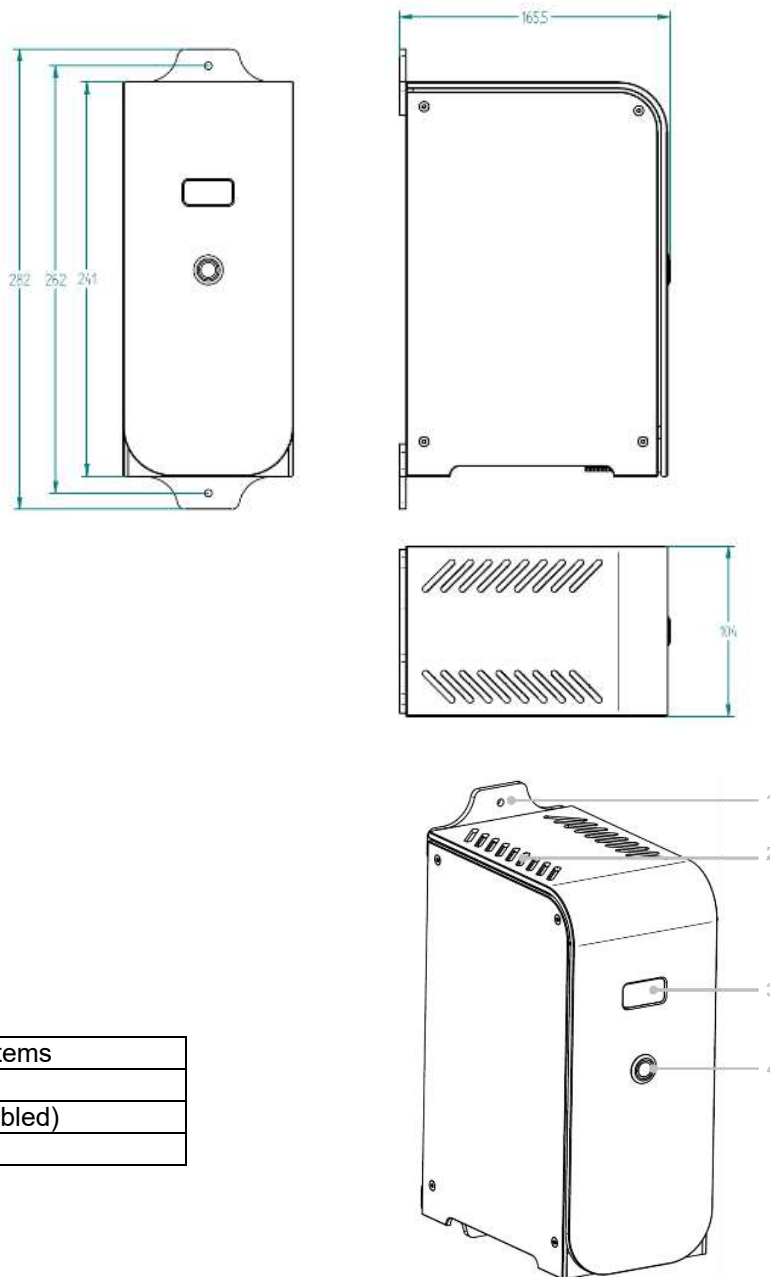
Traceability: protected data

- DPM®Pilot saves the results locally or remotely.
- Recording of all process data.
- Creation of production reports.

1.4 PACKING LIST

DPM®Pilot Standard	DPM®Pilot Advanced	DPM®Pilot Expert
1 controller 1 power cable 1 support foot 1 4 port USB hub 2 rear mounting systems	1 controller 1 power cable 1 Digilink Module 1 Digilink external power supply 1 support foot 1 4 port USB hub 2 rear mounting systems	1 controller 1 power cable 1 Digilink Module 1 Digilink external power supply 1 support foot 1 4 port USB hub 2 rear mounting systems

1.5 TECHNICALS SPECIFICATIONS



1	Rear mounting systems
2	Air vents
3	OLED display (disabled)
4	On / off button

Electrical characteristics	
Supply voltage	110 - 230 V
Frequency	50 - 60 Hz
Consumption	60 W max
Physical characteristics	
Width	104 mm
Depth	165.5 mm
Height	241 mm
Ground with power supply	1.5 kg
Operating temperature	15 - 40°C
Humidity	15 - 85% HR
Sound level	32 dB (A)
Connexions	
Display	1 x display port
USB	2 x USB 3.0 type A, 1 x USB 3.0 type C
Ethernet	2 x WAN Gbit / 100 Mbit / 10 Mbit
Ethernet PoE	4 x LAN Gbit, IEEE802.3af, 15W par port
Digital inputs	4 x dry contact, 24V max
Digital outputs	4 x dry contact, 24V max
Software	
Operating system	Distribution Yocto on kernel Linux 5.2
Software	DPM®Pilot
Class and protection class	
Material Class	Class II: Isolated Mass
IP rating	IP 4X: equipment protected against the intrusion of solids larger than 1 mm
Capacity and connectivity	
Screwdriving tools	Until 20
I/O extension	Until 2
Analog Module	Until 2
Memory capacity	SD card 128 G
Number of sequences (3.5 to 5 Mo)	36 000
Output file (150Ko)	840 000

2 STARTING UP

2.1 UNPACKING

Remove the DPM®Pilot Process Supervision and Traceability Controller from its packaging.



Information

Before use, check over the entire package and look for any signs of damage.
Do not use the appliance if you notice that it is damaged.



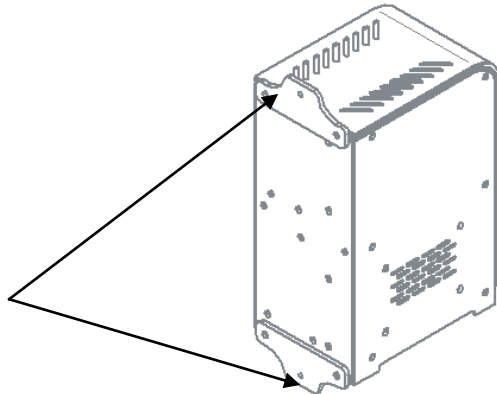
Warning

Danger of suffocation!
Be careful not to leave empty packaging lying around.

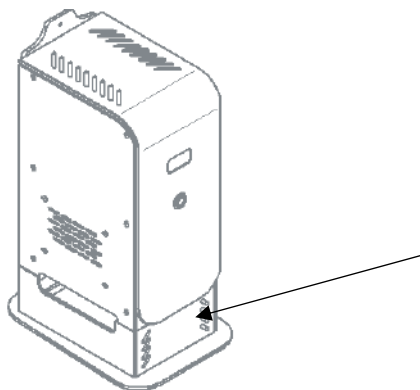
2.2 INSTALLATION

The DPM®Pilot process supervision and traceability controller can be installed on the workstation by 2 ways:

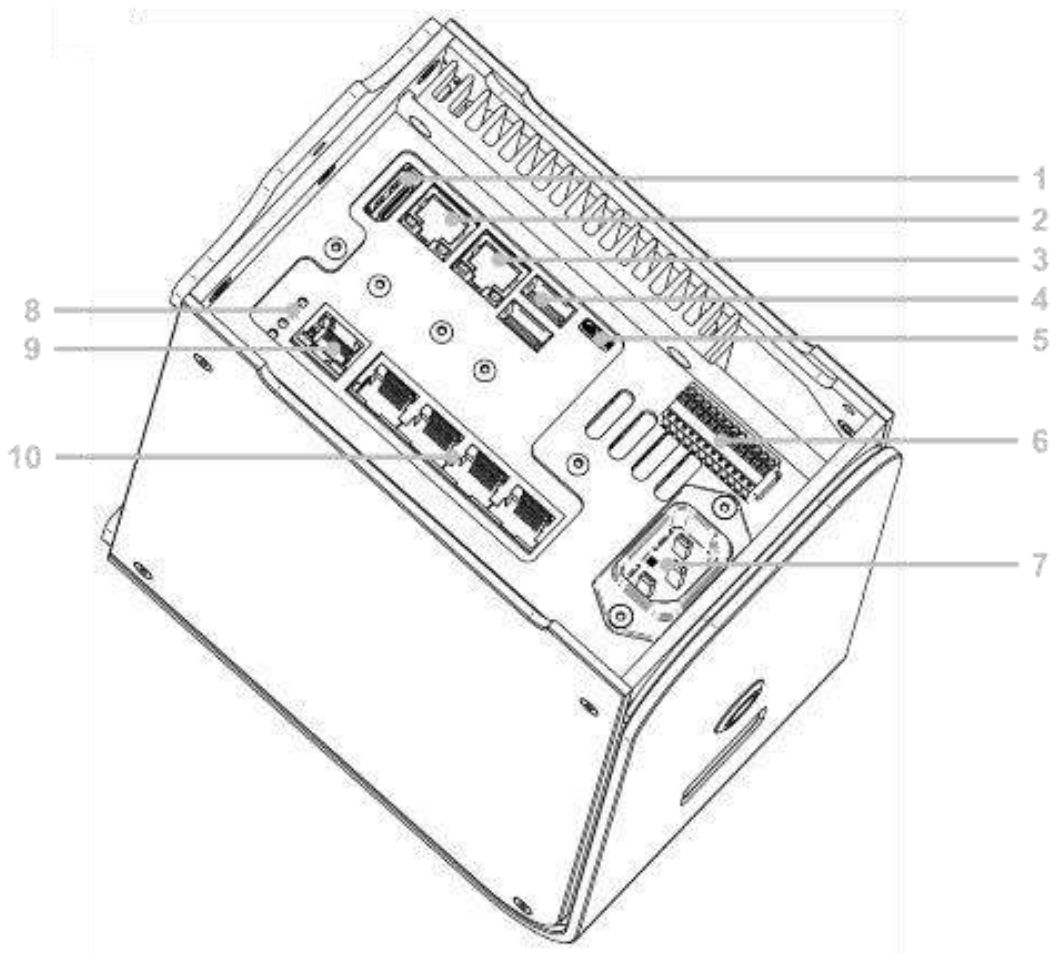
- 1- Fixed on a stud thanks to the 2 fixing tabs provided.



- 2- Placed on a shelf or worktop using the support foot.



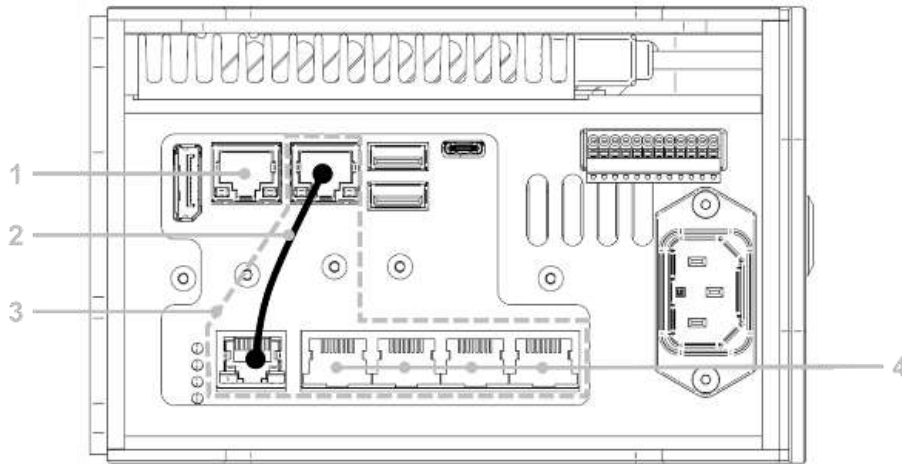
2.3 4 X ETHERNET PORTS WITH POE POWER



1	Display Port Connector
2	Ethernet WAN connector (to file server)
3	Ethernet LAN connector (for tools)
4	2 x USB 3.0 type A
5	1 x USB 3.0 type C
6	Digital I/O connector (disabled)
7	220V Power Connector (C13 Cord)
8	PoE power indication
9	Link port with PoE switch
10	4 x Ethernet ports with PoE power

The DPM®Pilot process supervision and traceability controller is equipped with 2 separate Ethernet networks:

- A network for tools called "LAN".
 - Connection of tightening tools
 - Connecting the Digilink module for the positioning arms
 - BS5C Modbus Bit Box Connection
 - Connection of digital input/output add-on module
- A network for "WAN" data
 - Linking DPM®Pilot to the corporate network

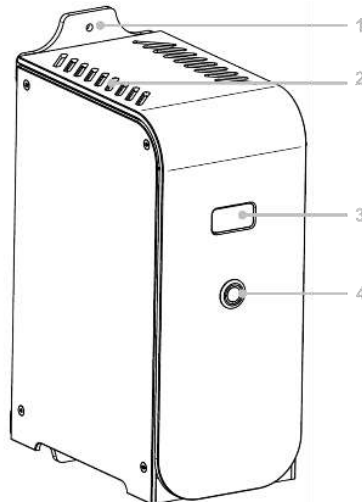


The WAN connects to the indicated port 1.
 The LAN is available on all ports indicated in 4.
 A short Ethernet cable called a "patch" must be installed as indicated in 2.
 The ports indicated in 4 are available for connecting tools (tightening controller, Digilink module and BS 5C Modbus bit box).

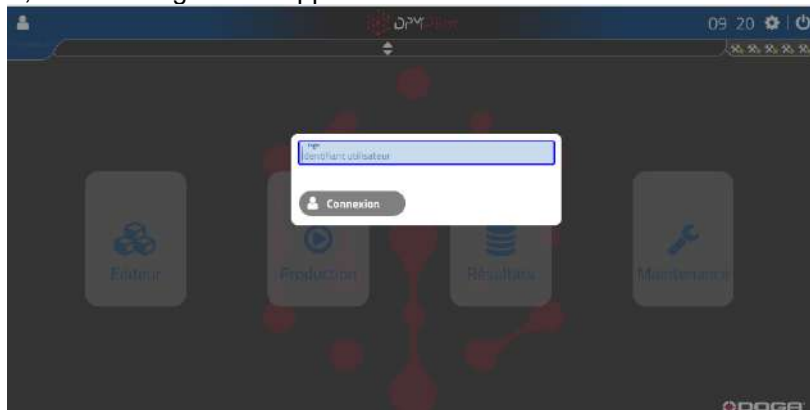
If using the stand, place the USB hub inside and secure it using the double-sided adhesive present.

2.4 COMMISSIONING

Press the commissioning button on the front panel (rep. 4).



Once the boot is complete, the following screen appears.



To access the various menus, it is necessary to enter a user ID.

The entry can be done in different ways:

- Keyboard input (a USB keyboard must be plugged into DPM®Pilot).
- Captured using a configured and compatible barcode scanner.
- Entered via an NFC badge reader (a compatible badge reader must be plugged into DPM®Pilot).



On the 1st provisioning and before registering other users, the " **DpmPilot** " login gives access to administrator privileges.



Warning

We recommend that you create a new user with administrator privileges via the general "user management" setting and keep the identification code safe.

3 CONFIGURATION SETTINGS



Information

Access to this menu from the main screen is accessible only to users with configuration privilege. This privilege should be reserved for users designated as administrators.

The DPM®Pilot process supervision and traceability controller must be configured to meet your application.

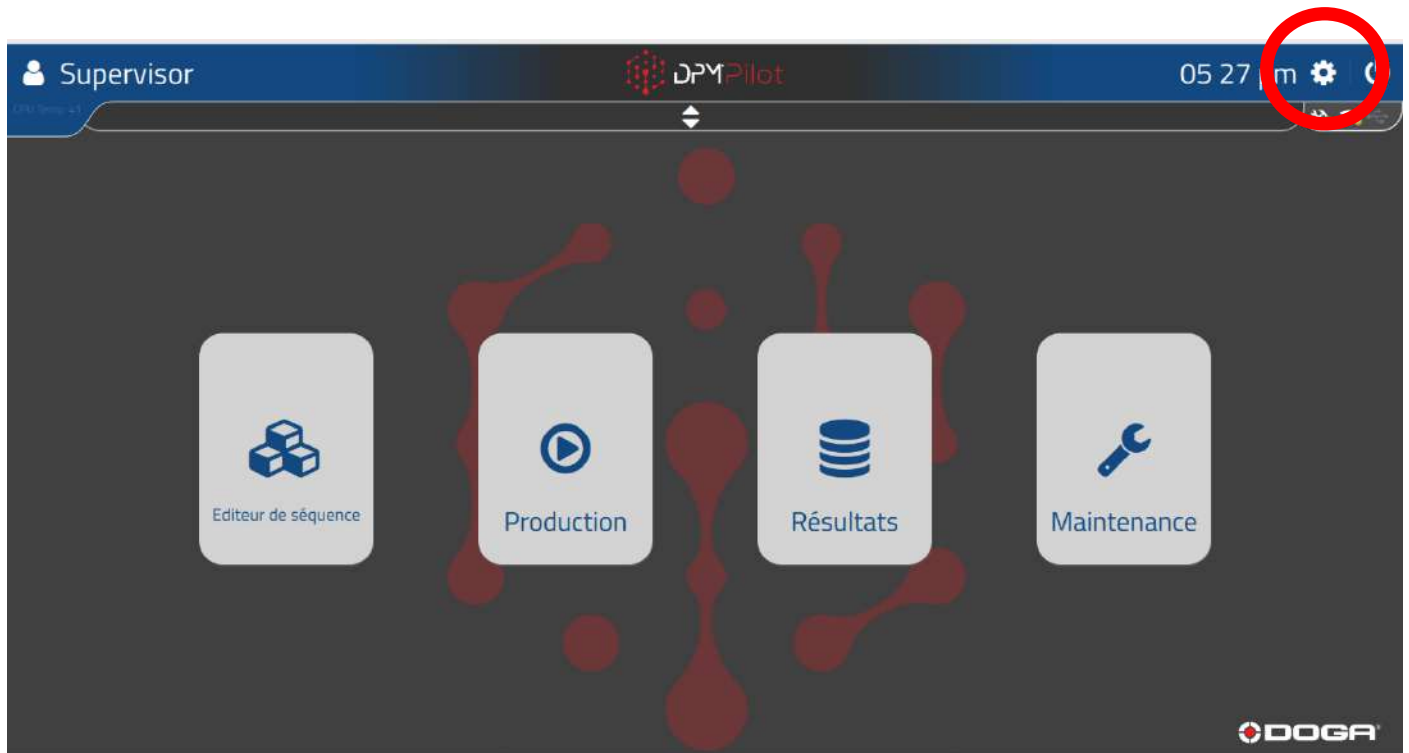
The configuration concerns:

- Tightening tools and accessories (IP connection address, designation, communication protocol, etc.)
- Users and their authorisation
- Location on your network where the results should be saved (available only on the Expert version)

This setting is only a one-time setting and should only be changed when you add or remove tools or users, or change regional preferences (date, time, language, etc.).

3.1 CONFIGURATION SETUP

The general settings can be accessed from the main screen. You must be logged in with Administrator privileges.













By clicking on the pictogram



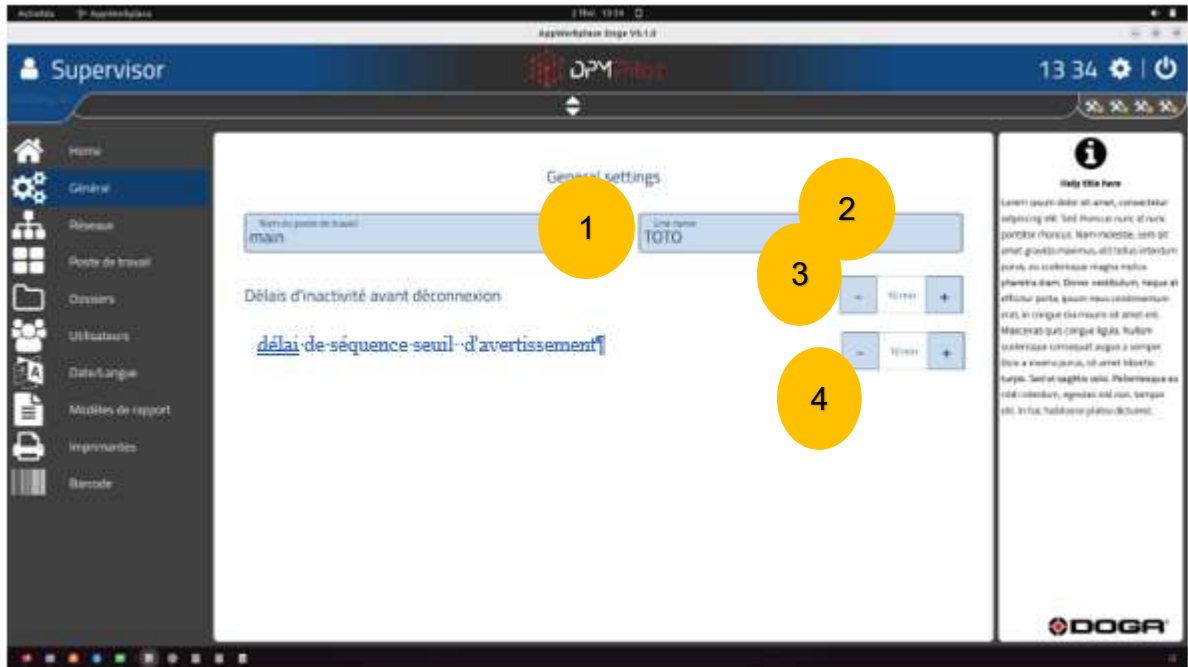
The following screen appears:



N°	Designation
1	Contextual help
2	Menu bar to access the different configuration pages
	 Home Return to the home screen and save
	 Général Access to general settings
	 Réseaux Access network configuration settings
	 Poste de travail Access to workstation configuration and declaration of connected tools and accessories
	 Dossiers Access to Storage Directory Configuration
	 Utilisateurs Access to user configuration (access reserved for Administrator privilege)
	 Date/Langue Access to Setting Location and Language Preferences
	 Modèles de rapport Access to the report template and their customization
	 Imprimantes Access to printer settings (login)
	 Barcode Access to control mask settings (use a barcode to start a sequence)

3.1.1 General setup form

This screen is used to set the name of the extension, the name of the assembly line, and the amount of time the user is idle before logging out.



N°	Designation
1	Workstation or station name
2	Name of the workshop or assembly line
3	Duration after which user identification will be requested if no activity has taken place
4	Alert threshold for the sequence execution time indicator expressed in % Beyond this threshold, the execution time changes to orange. Once the time is over, it turns red. The execution time of the sequence is set in the sequence

3.1.2 Network settings screen.

This menu is used to set up:

- The IP address of the local area network (LAN) that will host the accessories and tools connected to DPM®Pilot (screwdriver, Digilink, DPM I/O Module, BS-5C bit box).
- The IP address of the WAN network to which DPM®Pilot will be linked to access shared directories or external data as well as network printers used for printing PV results.

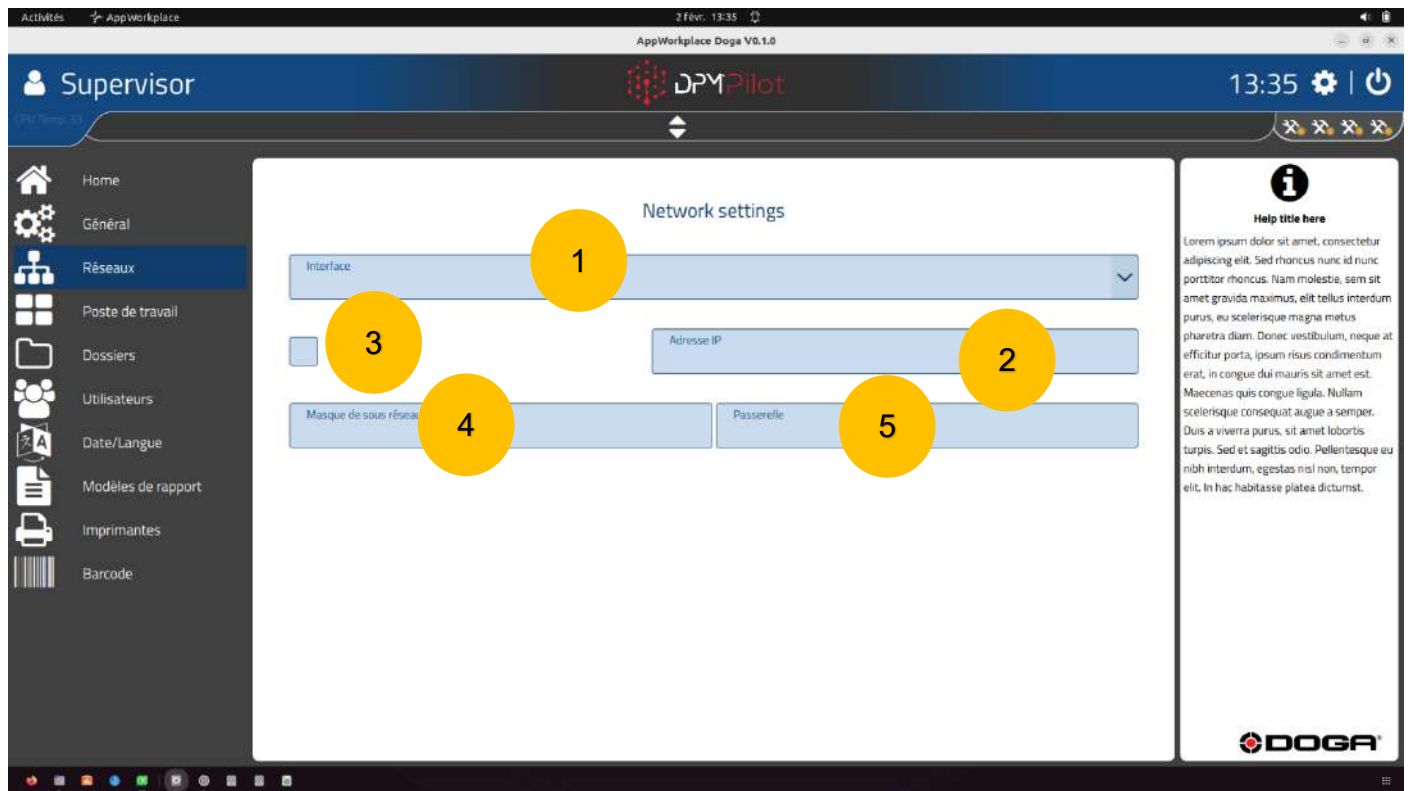


Information

The connection to the WAN network is not necessary if DPM®Pilot is intended for a 100% local application.



The following screen appears:



No.	Designation
1	Network to be configured (external network WAN or LAN)
2	IP address on the network
3	Automatic Addressing (DHCP) Mode ONLY for WAN
4	Subnet mask
5	Gateway

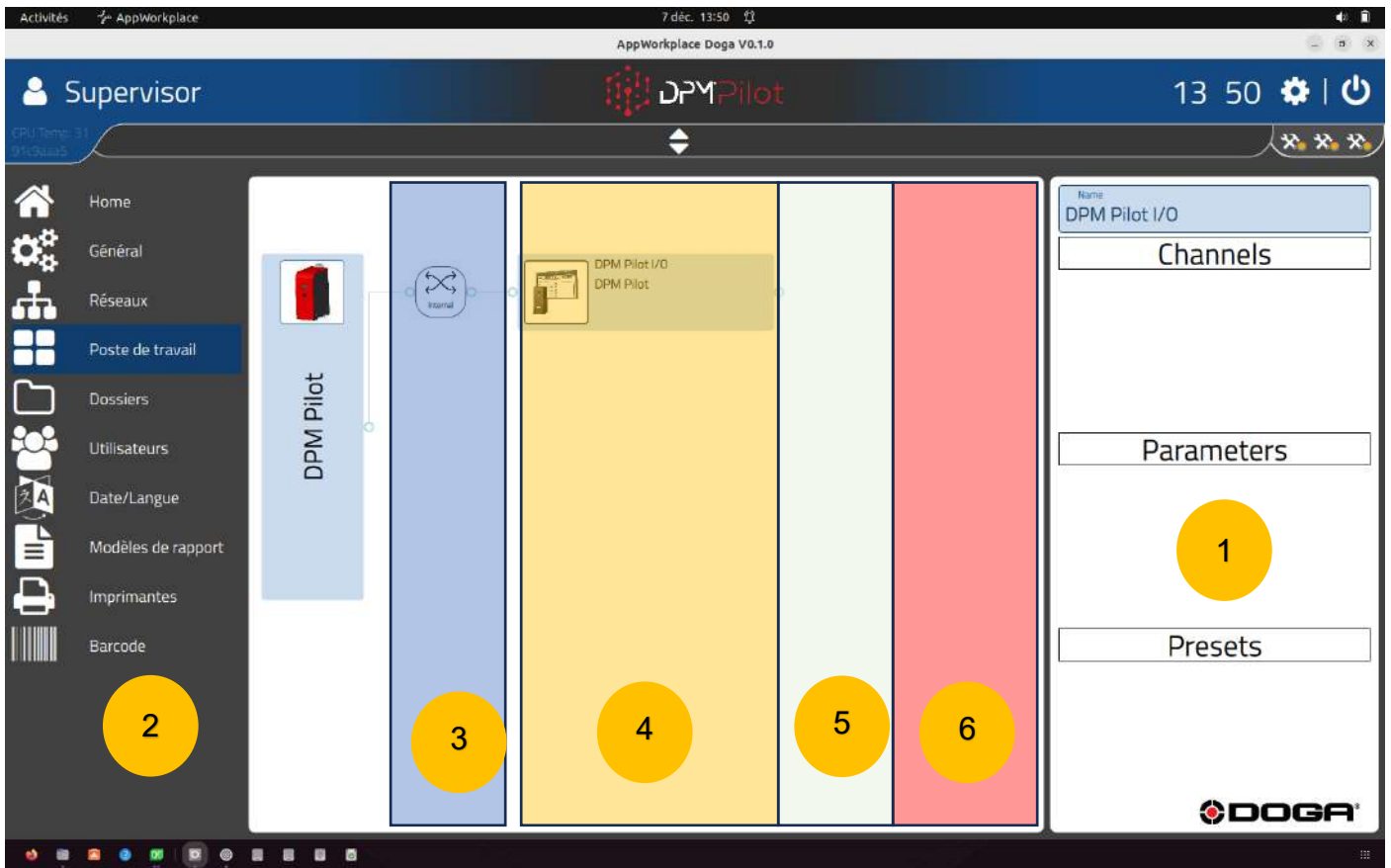
3.1.3 "Workstation" configuration screen

This menu is used to set up the configuration of tools related to DPM®Pilot (screwdrivers, Digilink, DPM I/O Module, BS-5C bit box).

This is the physical configuration of the workstation. The declared tools and settings in this menu will appear when editing sequences.

Click the  Poste de travail

The following screen appears:



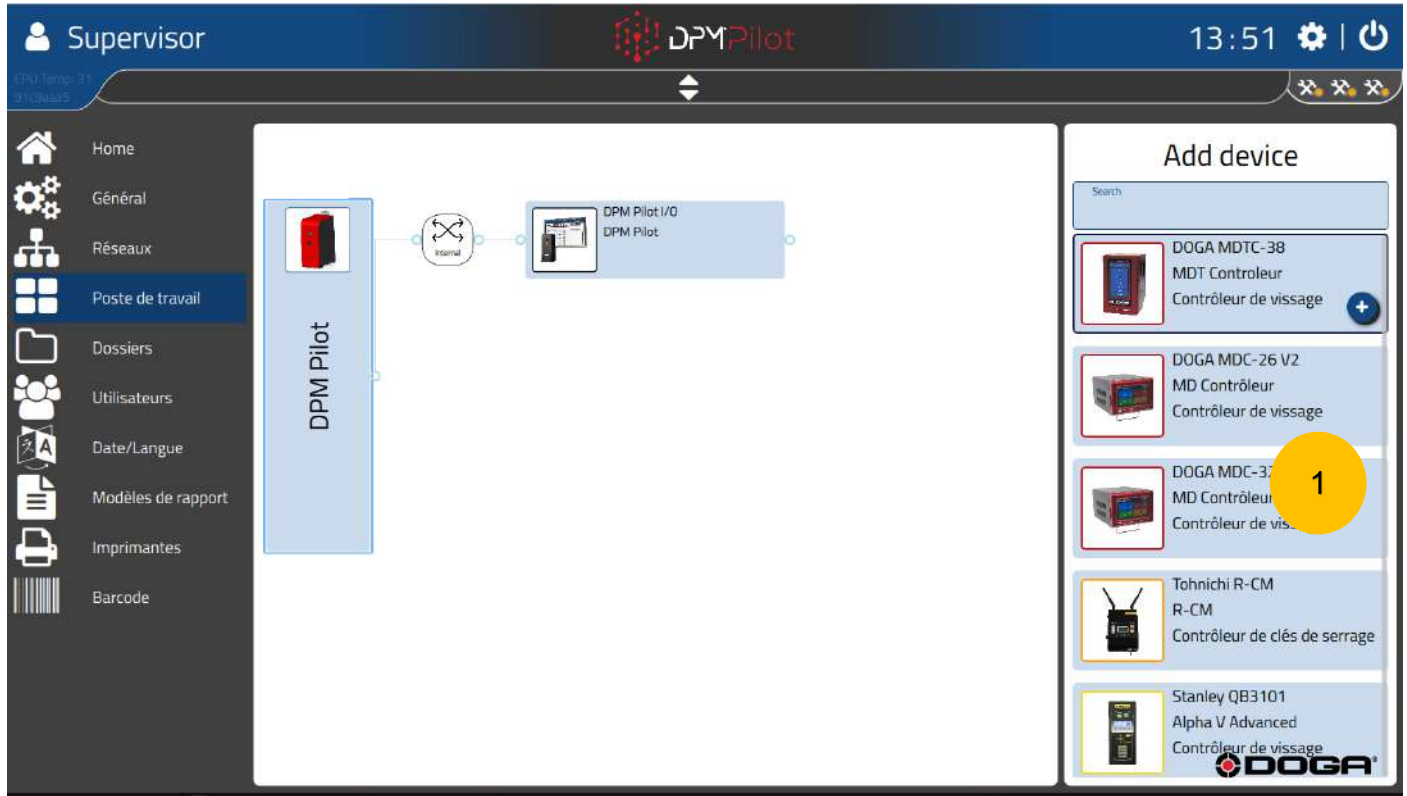
No.	Designation
1	Area of parameterization (the parameters are specific for each device)
2	Menu bar to access the different configuration pages
3	Display area of the connection mode between DPM and the tool or accessory. The connection mode is set automatically. Only the IP address and port settings can be changed
4	Display area of real or virtual controller devices
5	Display area of the connections of the tools to the device In these connections we set the physical links made (depending on the tool)
6	Tool display area (screwdriver, arm bit box, etc.)

To add the equipment that will be physically connected to DPM®Pilot, you must:

- Click on DPM®Pilot on the left side of the



The following screen appears:



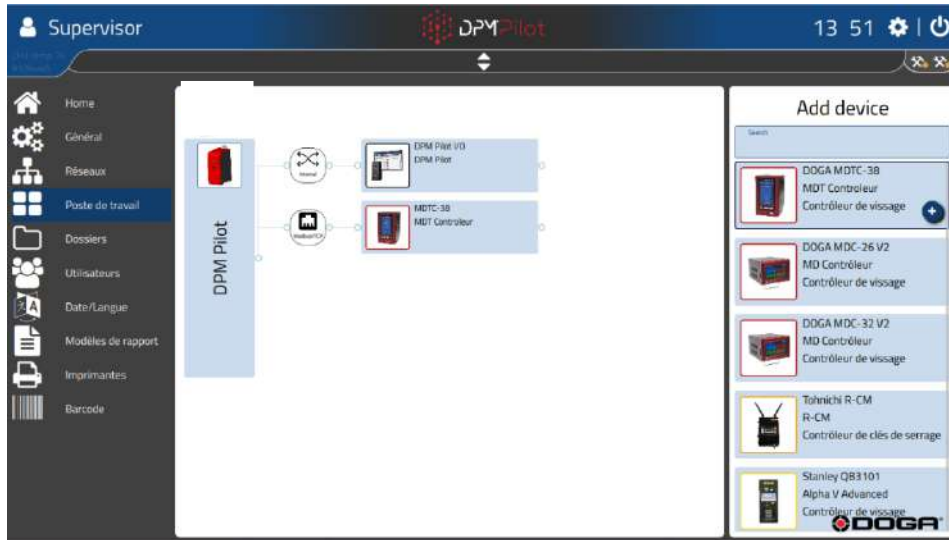
No.	Designation
1	Selection area of the tool or accessory to be connected

- Select the equipment you want to add:



- An icon appears.

- Click the icon to add the selected equipment.



The connection and communication mode between the device and DPM@Pilot is automatically selected and appears between DPM@Pilot and the device.

- To configure IP addresses or connection settings, select the connection icon and fill in the settings.

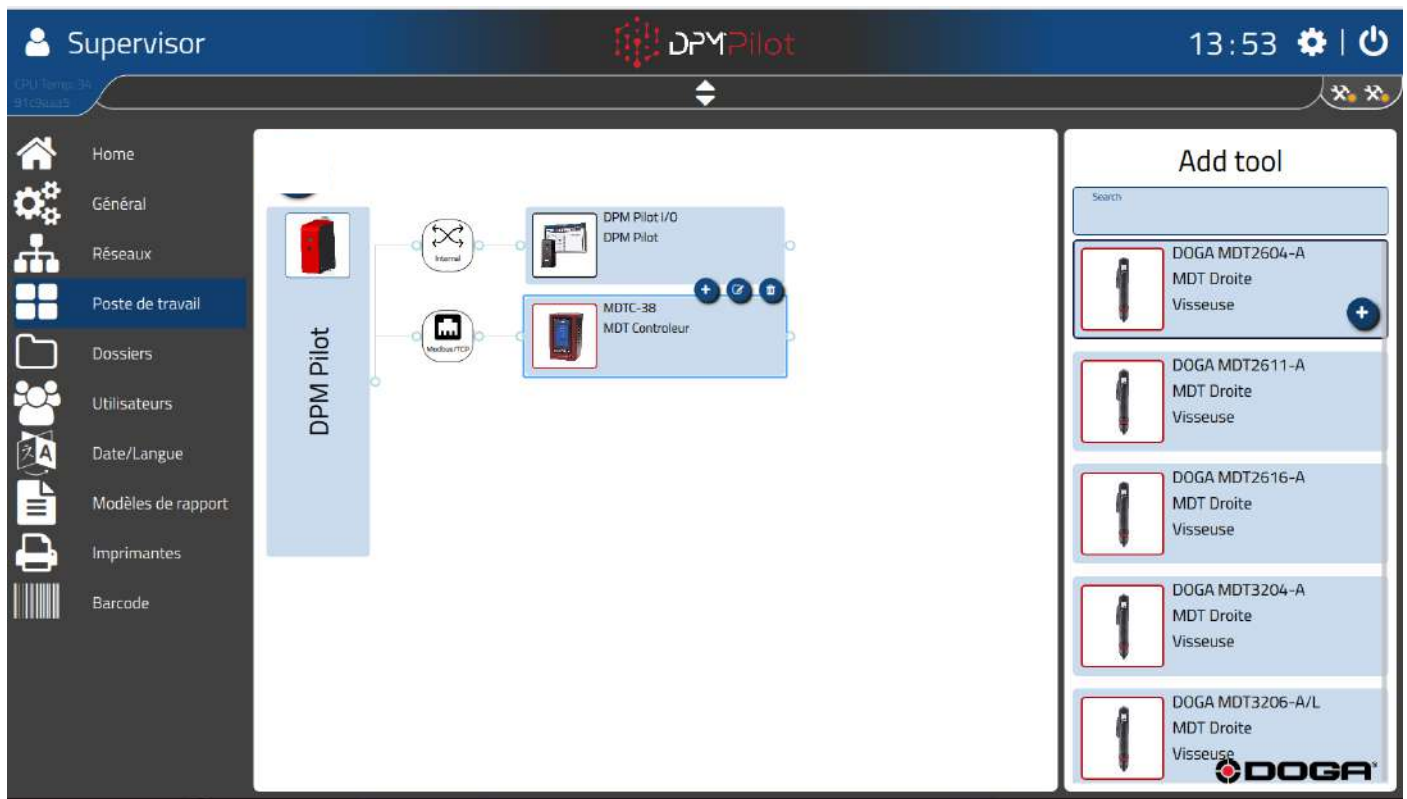
Most equipment or tools are used with one or more elements dedicated to them (e.g. screwdrivers, etc.)

To add one or more items:

- Select Equipment



- The icons appear and the list of compatible items appears in the right banner of the screen.





The icon is used to add an item.



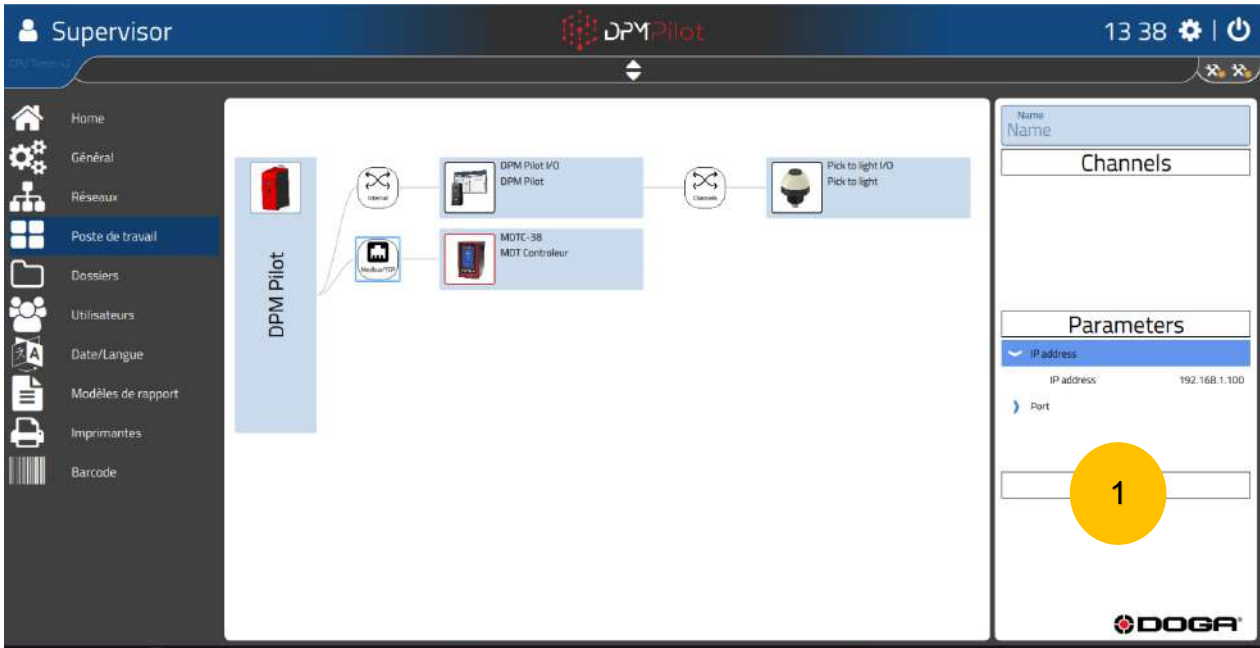
The icon allows you to rename the equipment to give it a specific name.



The icon allows you to remove the equipment from the hardware tree.



To add an item related to the item, select the item you want from the right banner and then click on the icon and place it on the item.



No.	Designation
1	Setting area (settings are specific for each device)



Information

The number of connectable elements must be limited to the capabilities of the equipment.



Information

The configured tree structure must be an exact reflection of the tools that are physically connected on the workstation.



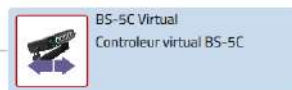
Information

The tool(s) will be identified by name when editing the sequences. If the name of the tool is changed in the configuration, you will need to update the sequences that use this tool.

For cordless tools, communication with DPM®Pilot is via a wifi router. This wifi router is to be placed in the configuration connected to DPM®Pilot in the area of connected equipment. The IP address set in the screwdriver must be indicated in the "IP address" setting of the Wi-Fi router.



For the BS-5C bit box connected via Modbus with DPM®Pilot, a "BS-5C virtual" device connected to DPM®Pilot must be added to the configuration. The IP address set in the BS-5C Tip Box must be specified in the "IP address" parameter of the "BS-5C Virtual".



3.1.4 “Folder” configuration screen



Information

Items and locations are set by default in DPM@Pilot's internal memory. Changing the configuration is necessary if you want to change the location of the items (e.g., on your network or on an external medium (USB stick, external drive, etc.).

This menu is used to set the location of the folders containing the sequences, reports, results databases, images used when editing the sequences, when they are not stored in DPM@Pilot's internal memory.




The following screen appears:

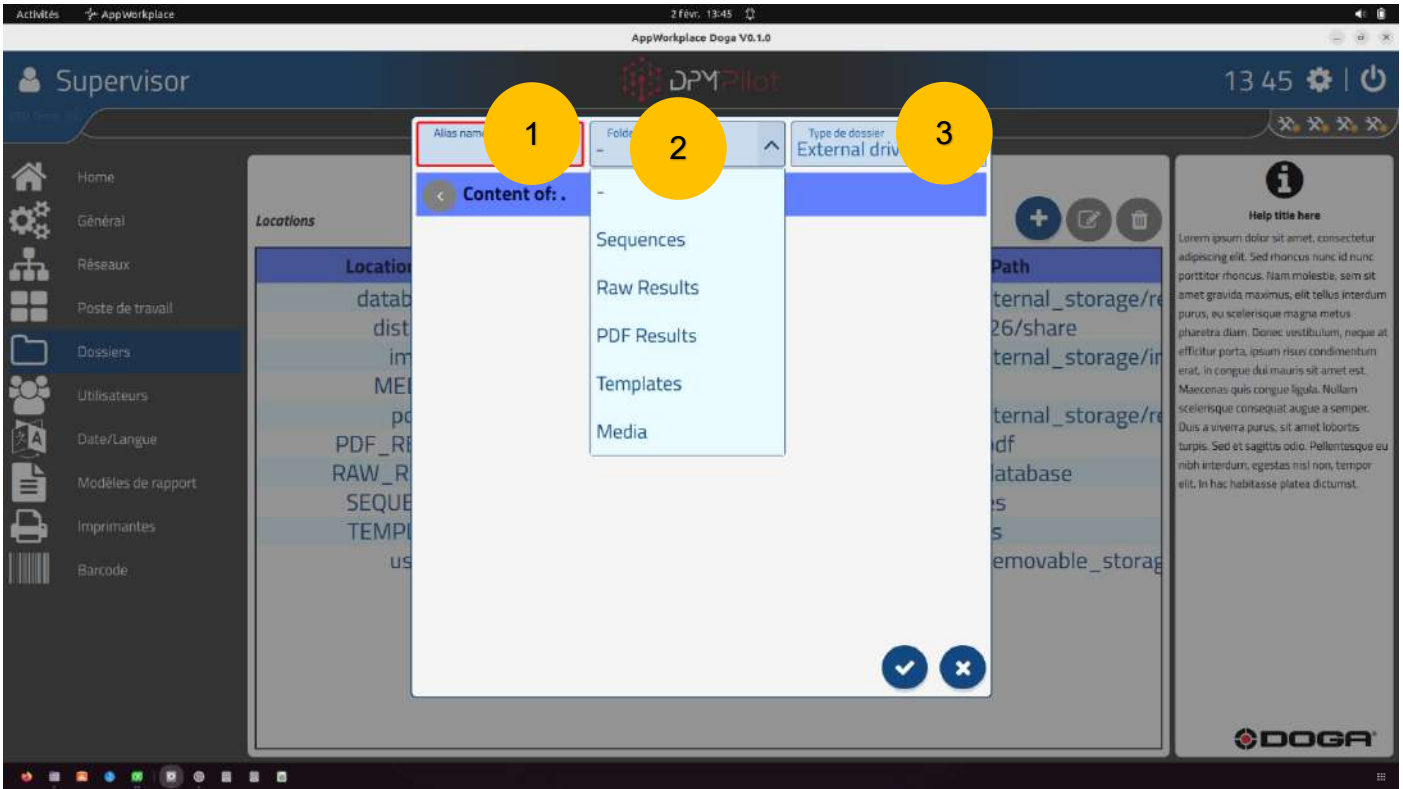


No.	Designation
1	Visualizing the location of elements


3.1.4.1 Example of setup

- Start by defining the locations (directories) in which the items will be saved by clicking on the icon .
-

The following screen appears:



No.	Designation
1	Location Name
2	Content to be recorded (sequence, results, PV template, media)
3	Location (external drive, or network slot)

- Name the alias (name of your folder)
- Select content.
- Select Location
- Tap the icon  to validate.

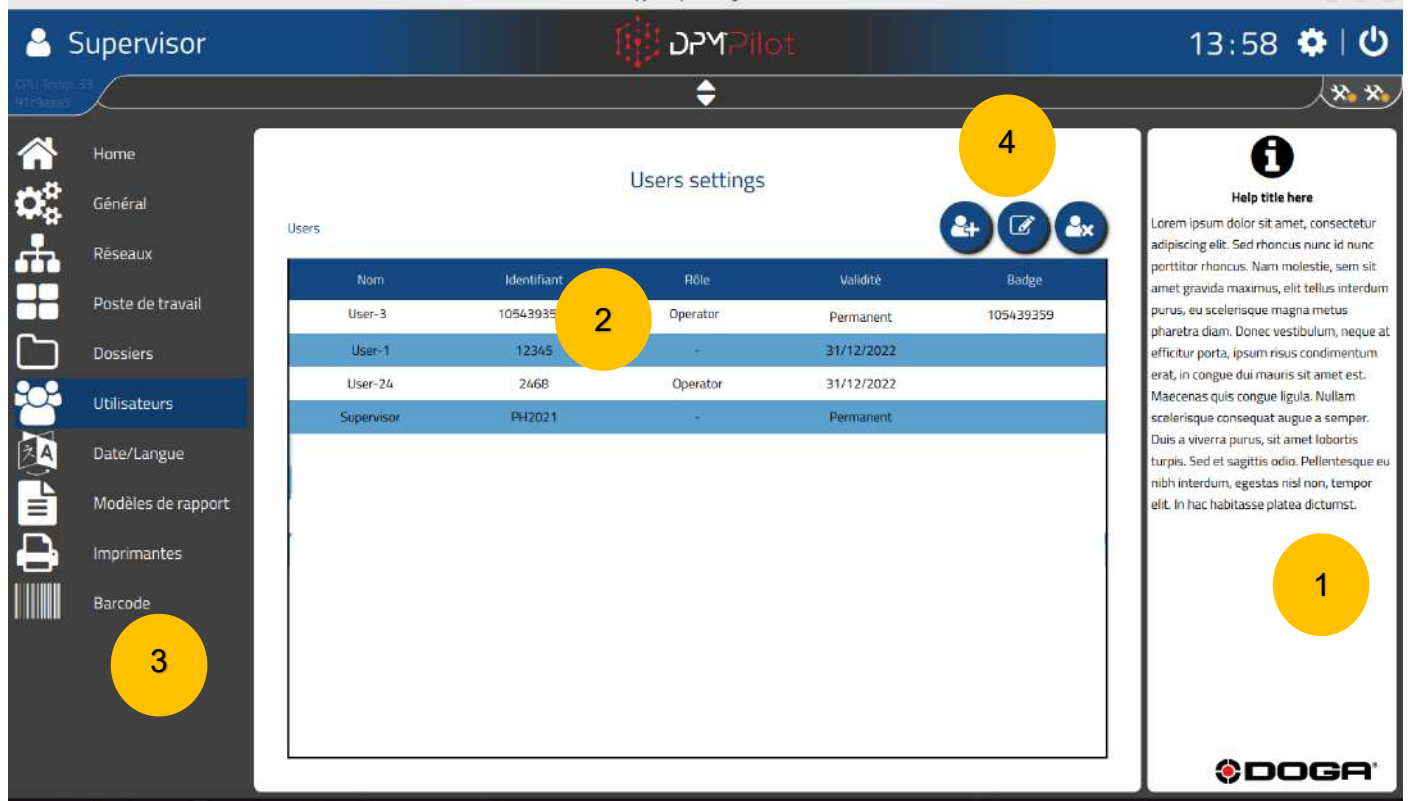
3.1.5 "Users" configuration screen

This menu is used to set up the authorized users by assigning them a role and saving their credentials.



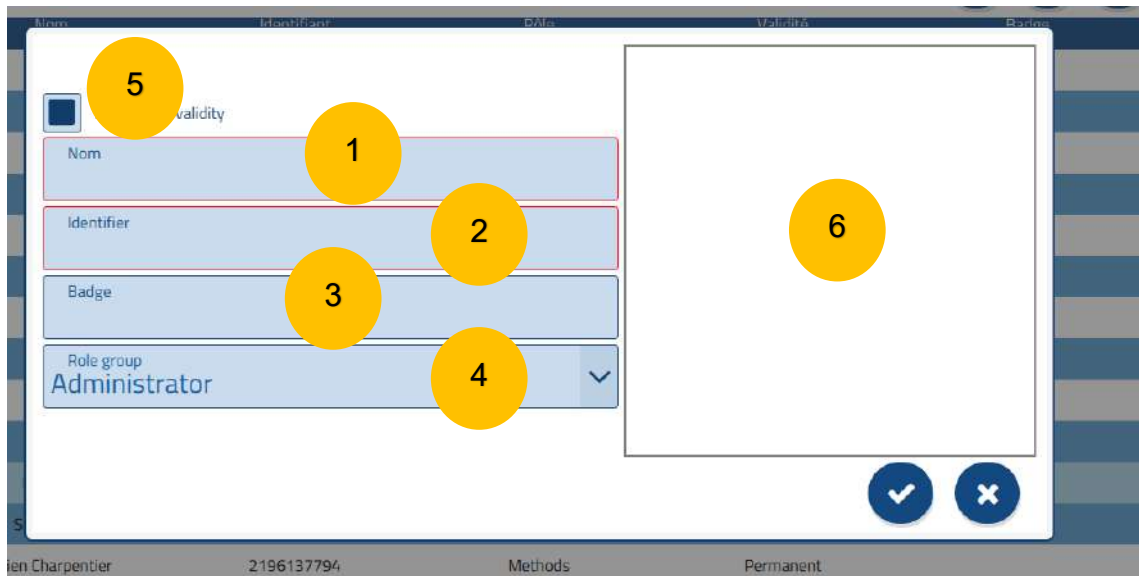
Click the

The following screen appears:



No.	Designation
1	Contextual help
2	List of Declared Users
3	Menu bar to access the different configuration pages
4	Icons for adding/editing/removing a user

Adding a user



No.	Designation
1	Name given to the user
2	Login password
3	Content of the badge for the use of a compatible RFID badge reader
4	User Privilege Assigned Administrator Methods Controller Expert Operator Operator Maintenance
5	Validity
6	Not use

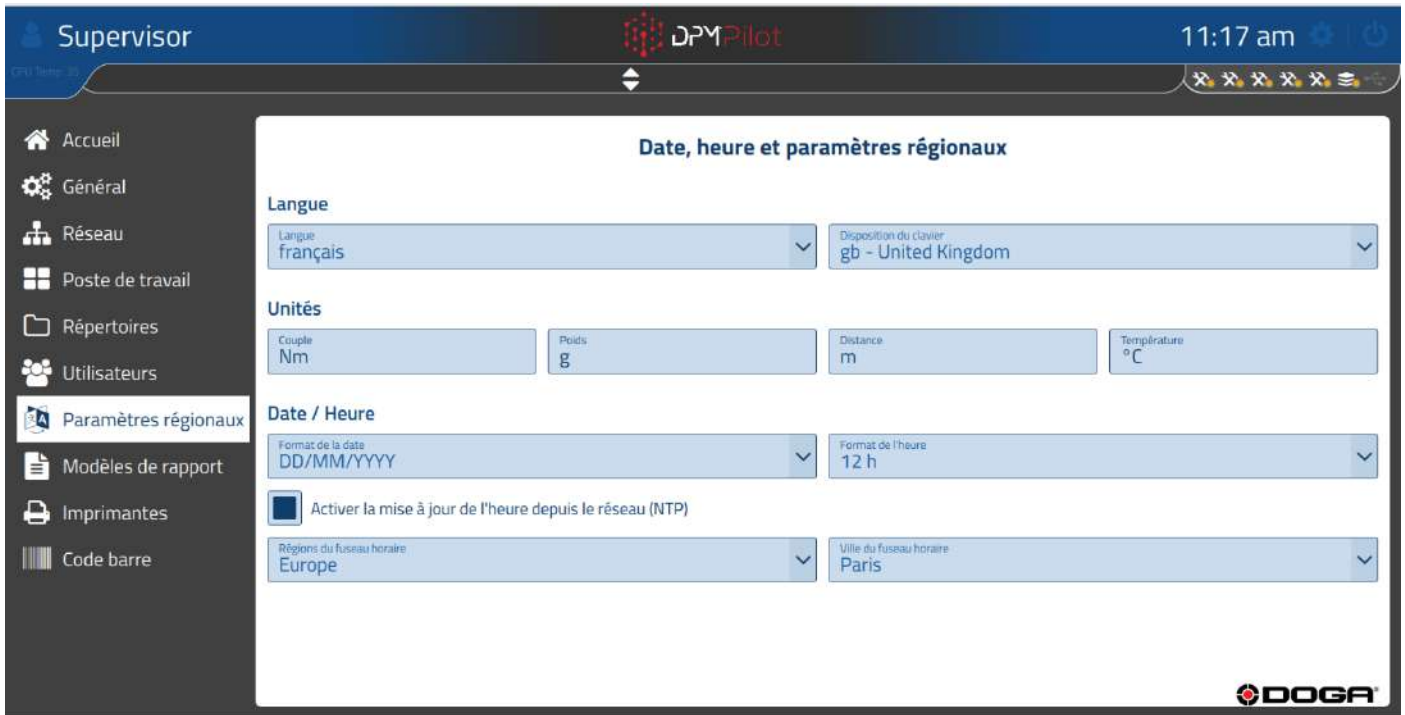
Inaccessible or prohibited

Accessible Function	Administrator	Methods	Controller	Expert Operator	Operator	Maintenance
Running a sequence	✓	✓	✓	✓	✓	✗
Access to the result menu	✓	✓	✓	✓	✗	✓
Access to the maintenance menu	✓	✓	✗	✗	✗	✓
Access the Sequence Edit menu	✓	✓	✗	✗	✗	✗
Access to the workstation configuration menu	✓	✓	✗	✗	✗	✗
User Management	✓	✗	✗	✗	✗	✗
General Settings Configuration	✓	✗	✗	✗	✗	✗
Access skip commands or cancel sequence at runtime	✓	✓	✗	✓	✗	✗
Unfinished sequence resumption	✓	✓	✗	✓	✗	✗
Part Repair Mode	✓	✓	✗	✓	✗	✗
Tool control and acceptance threshold settings	✓	✓	✓	✗	✗	✓
Access to the exit button	✓	✓	✓	✓	✗	✓
Access to all functions	✓	✗	✗	✗	✗	✗

Accessible or permitted	✓
Inaccessible or prohibited	✗

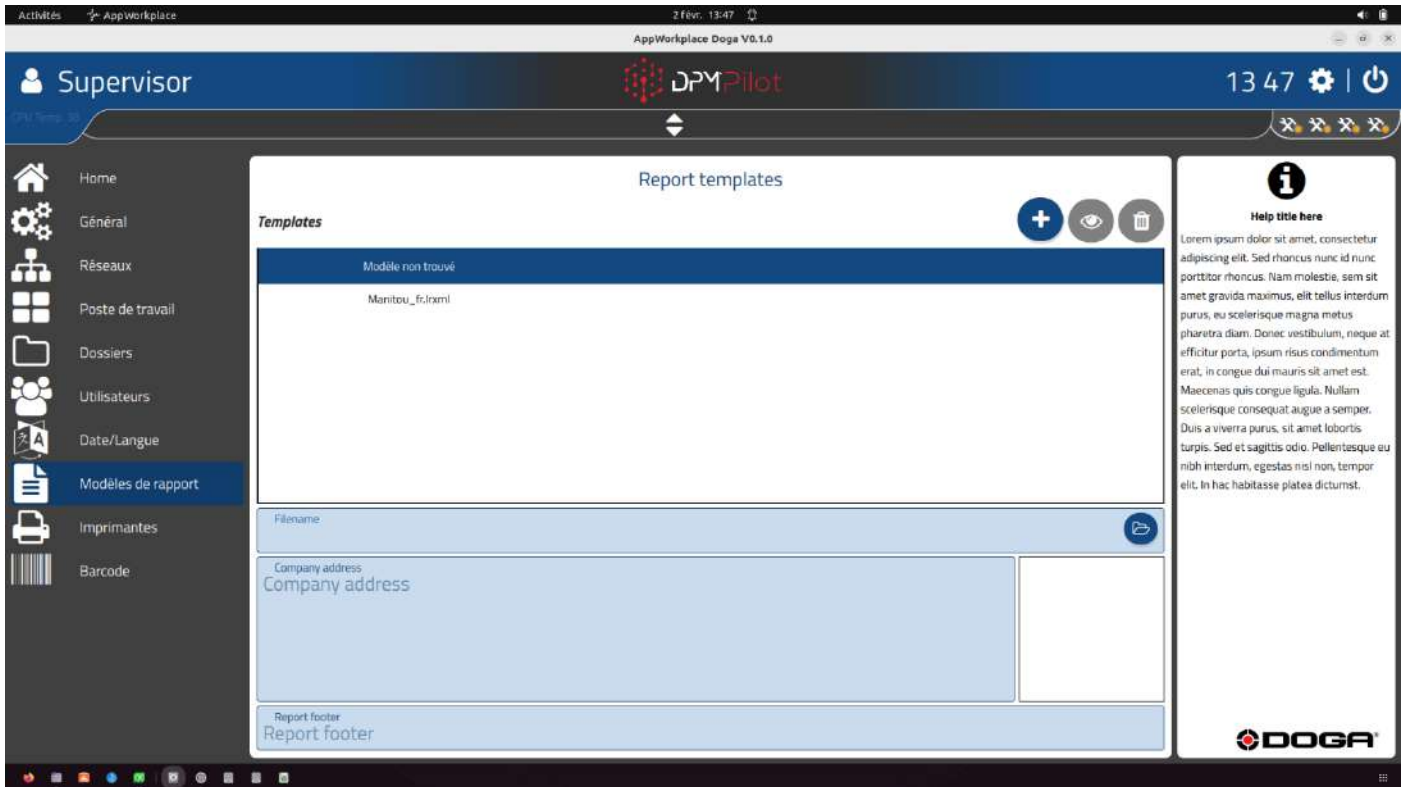
3.1.6 "Regional settings" screen

This menu is used to set the language of use, date and time, and geographical preferences.



3.1.7 "Report Template" Screen

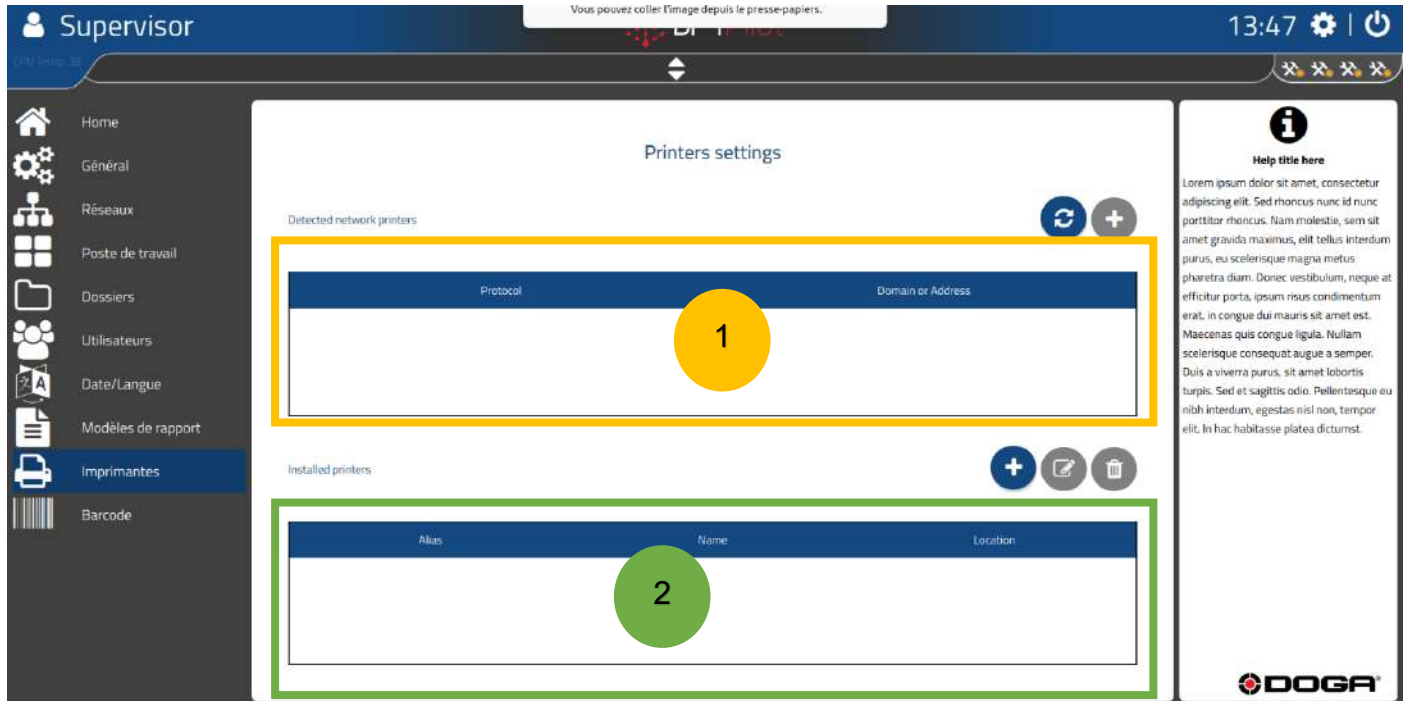
This menu is used to add or remove report templates and to set up the report's customizable fields (address, logo).



The choice of the model to be used is made at the level of the sequence configuration.

3.1.8 "Printers" screen

This menu is used to select the printer to be used in the step and to print the paper version of the results report.





To choose a printer




Information

Printers must be physically connected and running.

In field 1:

- Click the 
 - The list of connected printers appears.
- Click on the icon  to add the desired printer(s) from the usable printers.

To set the size of the label used in the printer

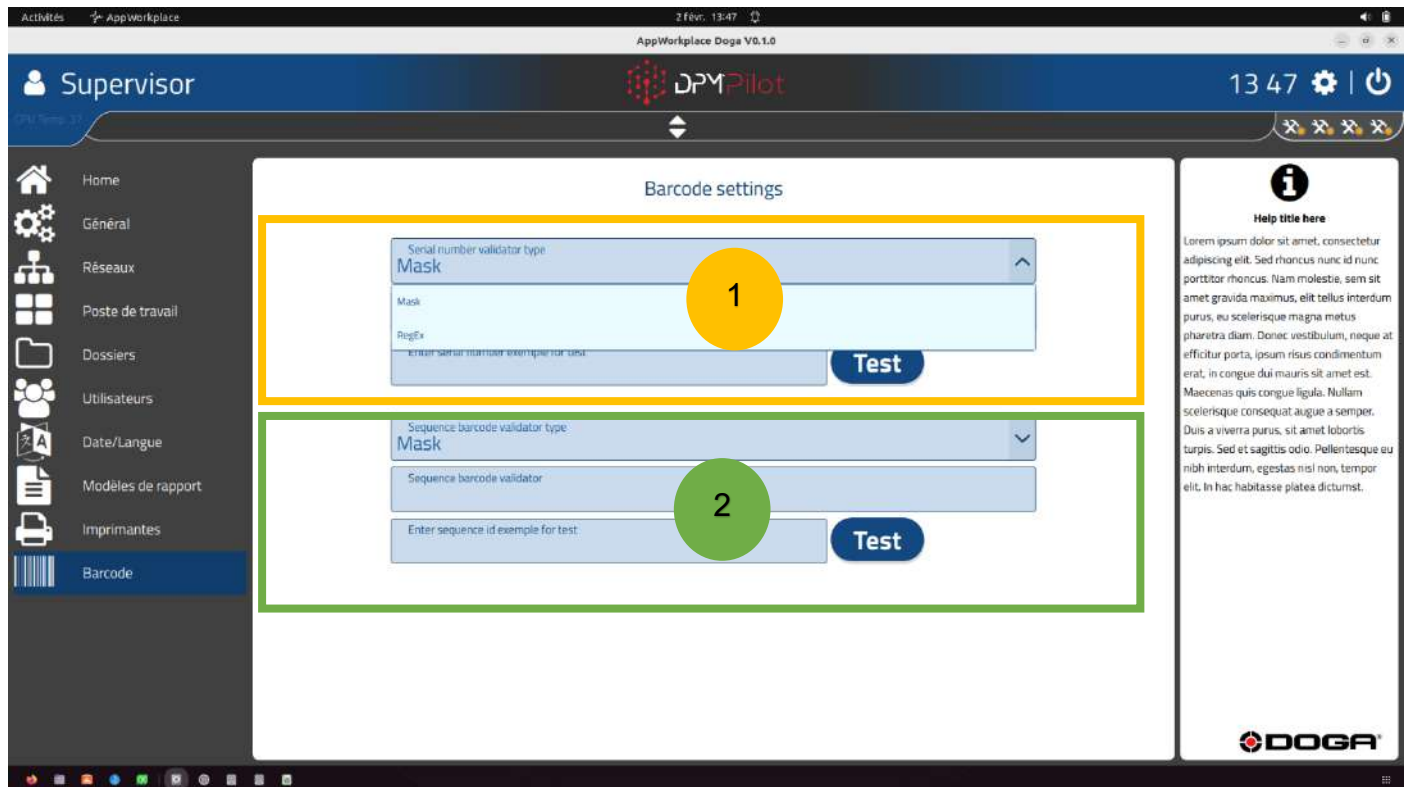
- Select the printer in field 2.
- Click the 
 - The printer's dimension and resolution settings appear.

To declare and set up an unseen network printer.

- Click the icon  in field 2.
- Set the name, network address, and print port.

3.1.9 "Barcode" screen

This menu allows you to set up the control or filter masks on the sequence and/or serial number call barcodes.



The **mask** filter is specified as follows:

- The entry must contain either several letters and/or numbers.
 - A: Character (lowercase or uppercase)
 - 0: digit
 - ? : letter character (lowercase or uppercase) or number or special 1 time
 - *: letter character (lowercase or uppercase) or number or special N times.
 - Example:
 - To validate that the entry is strictly composed of **3 letters**, you must fill in the field under string characters: **AAA**
 - To validate that the entry is strictly composed of **3 digits**, you must enter in the field under string: **000**
 - To validate that the entry is strictly composed of **3 letters and 3 digits**, you must enter in the field under string of characters: **AAA000**
 - To validate that the entry is composed of **3 characters, letters, numbers, special characters strictly**, you must enter in the field under string of characters: **???**

The **RegEx** filter uses a regular expression and allows you to describe any type of string in a flexible way. Its use requires mastery of the syntax of regular expressions.



Information

In computer science, a regular expression or regular expression¹ or normal expression or pattern is a string of characters that describes, according to a specific syntax, a set of possible strings. Regular expressions are also called regexes.

A regular expression is a sequence of typographic characters (more simply called a "pattern") describing a set of strings of characters. For example, the set of words "ex-équo, ex-equo, ex-aequo and ex-æquo" can be condensed into a single reason "ex-(a?e|æ|é)quo". The basic mechanisms for forming such expressions are based on special characters of substitution, grouping, and quantization.

Field 1: this field is used to set up a validator on the serial number, in order to prevent the entry of a number that does not correspond to a real serial number.

When a validator is entered, the serial number entered when a sequence is launched must meet the validator's specifications. DPM Pilot's use of the default serial number is not possible if it does not meet the defined validators.

Field 2: This field is used to set up a validator on the identifier used to launch a sequence.

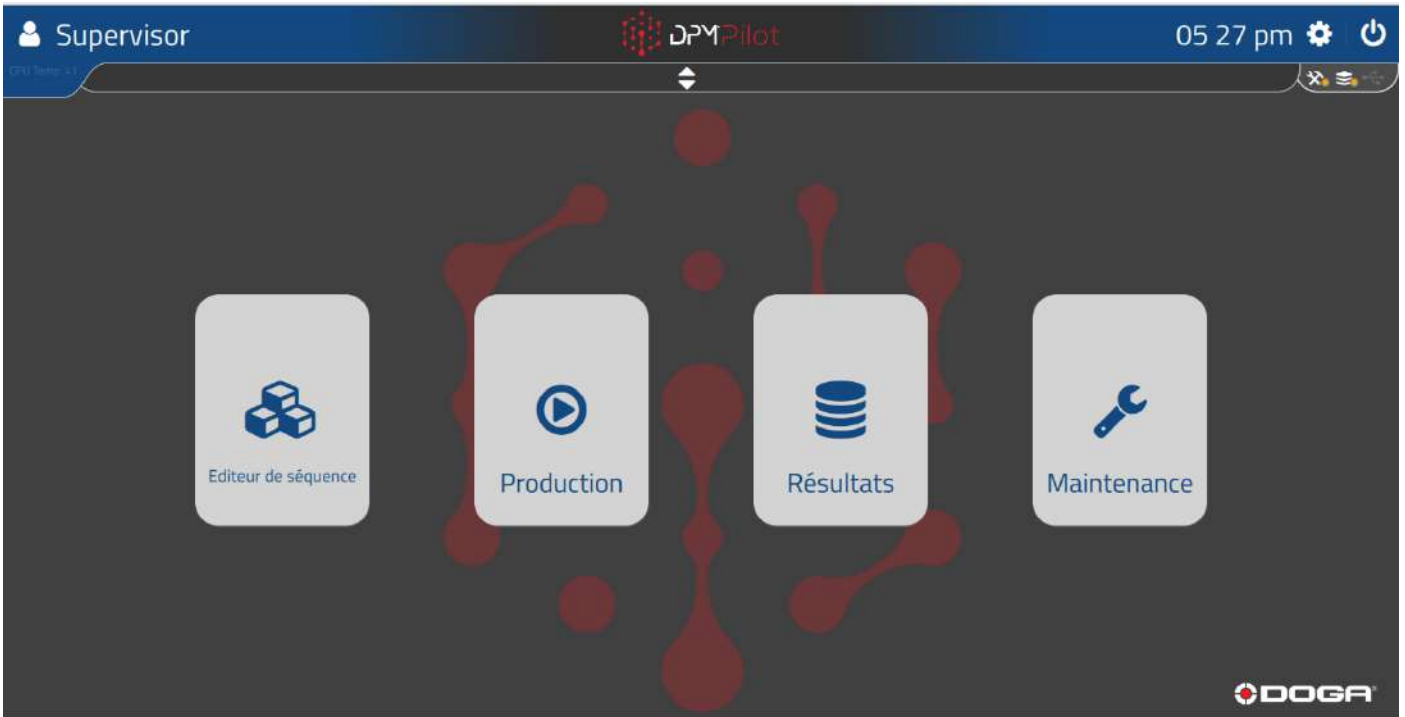
If the barcode used contains other characters in addition to the sequence ID, it is also possible to truncate unnecessary characters when the sequence is started.

4 SEQUENCE EDITING



Information

Access to this menu from the main screen is available only to users with the privilege of editing a sequence.



Main screen view

To access the Sequence Editor:

- Select the "Sequence Editor" tile

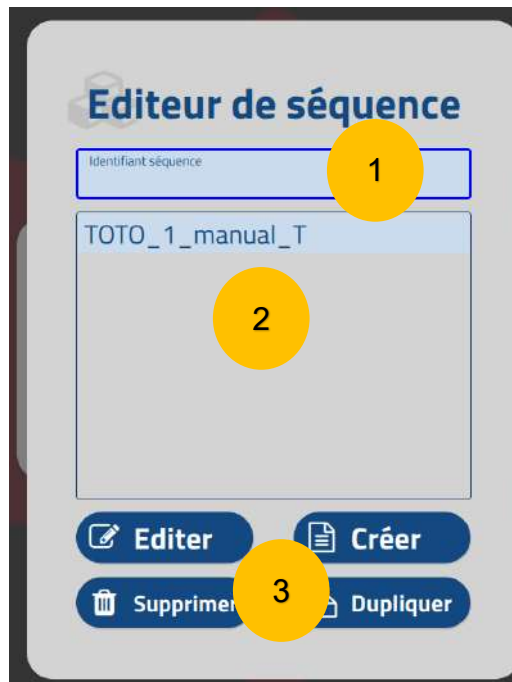


Or use the %JOB_MANAGER barcode.

To return to the main screen:

- Tap outside the editor window or use the %MAIN_SCREEN barcode

The editor screen appears.



No.	Designation
1	Sequence identification
2	List of existing sequences
3	Possible actions <ul style="list-style-type: none"> • Edit→ edit an existing sequence. • Create→ create sequence. • Delete→ delete existing sequence. • Duplicate→ duplicate a sequence

4.1 MANAGING THE INDICES AND STATUSES OF A SEQUENCE.

The sequences are identified as follows:

WWWWWW_X_YYYYYYY_Z

WWWWWW → is the sequence identifier entered when the sequence was created.

X → Revision Index (incremented automatically with each backup).

YYYYYYYY → is the Job Name that was entered when the sequence was created.

Z → is the status of the sequence.

- T: in test
- V: Valid
- D: inactive

An operator user will only have access to valid sequences in the operation menu (sequence execution).

Sequences with the status "Test" will only be accessible to a "Methods" or "Administrator" user.

4.2 CREATING A SEQUENCE



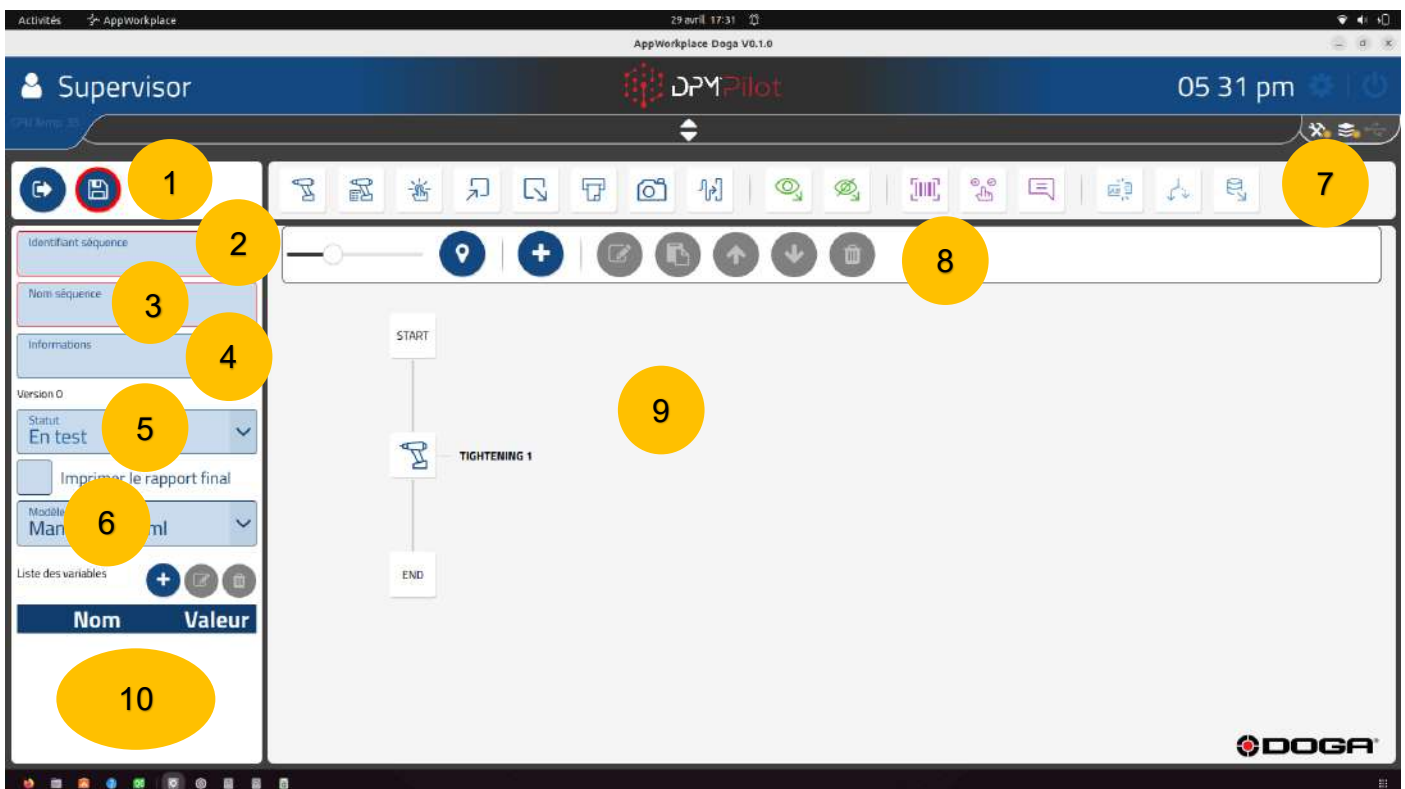
Information

Sequence editing is only available to users with editing privileges.



Click on the "Create" button

The editor screen appears:



No.	Designation
1	Command saves or exit
2	Required Job ID
3	Required Job Name field
4	Information field Optional Allows you to add comments to document the function of the sequence and its specificities
5	Selecting the Sequence Status <ul style="list-style-type: none"> • T: in test • V: valid • D : inactive
6	Selection of the PV template that will be used for the PDF printing of the report at the end of the sequence
7	Banner with possible steps
8	Banner with the editing tools for the sequence
9	The sequence construction window.
10	List of variables that are used in the sequence in user input, button, extract, and referral steps

4.2.1 External data recovery step



Icon	Steps
	Tightening step
	Screwing step parameterized from external data
	Pick to Light step (control of the component socket) this function can be used provided that you have equipped with Pick to Light sensors and that you have done the configuration in the general settings menu
	Stage of checking the status of digital inputs <ul style="list-style-type: none"> Combinatorics possible
	Stage of activating digital outputs <ul style="list-style-type: none"> Combinatorics possible
	Recording a value from an analog input
	Stage of taking a photo for incorporation into the report of results (visual evidence)
	Printing a label step during the sequence
	Start step of polling one or more TOR entries
	End of Polling Step of One or More TOR Entries
	Operator information entry step <ul style="list-style-type: none"> Numeric or alphanumeric value input with or without control
	Selection step by virtual button on the screen <ul style="list-style-type: none"> Combined with a step, the turnout allows the sequence to be oriented towards another branch or a step according to the operator's choice (the possible choices are predefined when editing the step).
	Message Step <ul style="list-style-type: none"> Allows you to inform or specify an action. Acknowledgment can be automatic after a period of time or by pressing the validation icon
	The step of extracting the value contained in a variable. <ul style="list-style-type: none"> Example: retrieving part of the content of a barcode previously entered in an operator input step
	Referral stage <ul style="list-style-type: none"> Combined with an input step, a button step, an extraction step allows the sequence to be oriented towards another branch or a step depending on the test performed on the variable that contains the value to be processed
	External Data Recovery Step <ul style="list-style-type: none"> For example, to retrieve the screwdriving job number to be used

4.2.2 Deletes the selected step



Icon	Function
	Zoom slider
	Adding a branch
	Centring the sequence in the window
	Editing the Previously Selected Step
	Copy of the previously selected Step (the new Step is placed just below the Copied Step)
	Move the Selected Step to the top of the branch of the sequence
	Move the Selected Step to the Bottom of the Sequence Branch
	Delete Selected Step

4.2.3 Adding a step

- Select the icon for the step you want to add with your mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).

4.2.4 Editing an existing stage

Select the step you want to edit:

- Select the step (an outline appears).
- Select the Editing Tool
- Modify the desired parameter(s) in the same way as you would for creating a step.

4.2.5 Deleting an existing step

Select the step you want to edit:

- Select the step (an outline appears).
- Select the Editing Tool




Information

Please note that the deletion is permanent.


4.2.6 Adding an action in the step

For the steps concerned, actions must be configured.

- To do this, click on 



4.2.7 Editing an existing action in the step

- Select the action (it appears in a blue frame).
- Select the Editing Tool .
- Change the setting(s) you want.

4.2.8 Deleting an existing action

- Select the action (it appears in a blue frame)
- Tap the icon .

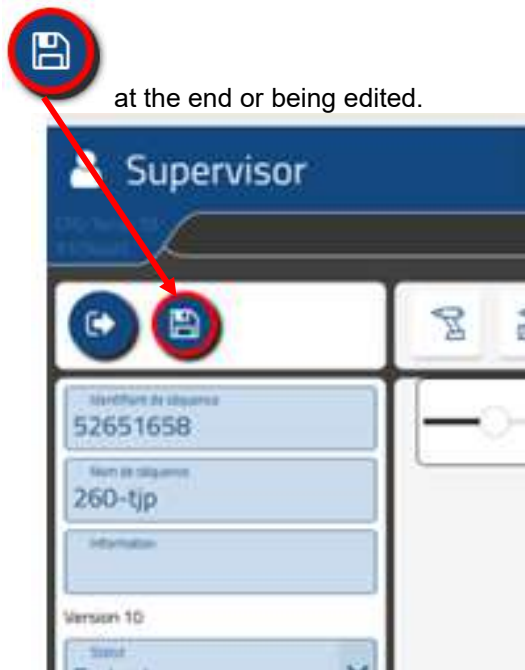


Information

Please note that the deletion is permanent.

4.2.9 Recording a Sequence

To record a sequence, tap the icon  at the end or being edited.



The message "Saved Project" appears.



Information

With each record, the sequence revision index increments.



Information

The sequence file is a pack containing the steps, media, and positioning points.
The generation of the complete file containing all the information is done when the edit menu is exited.

4.2.10 Multimedia

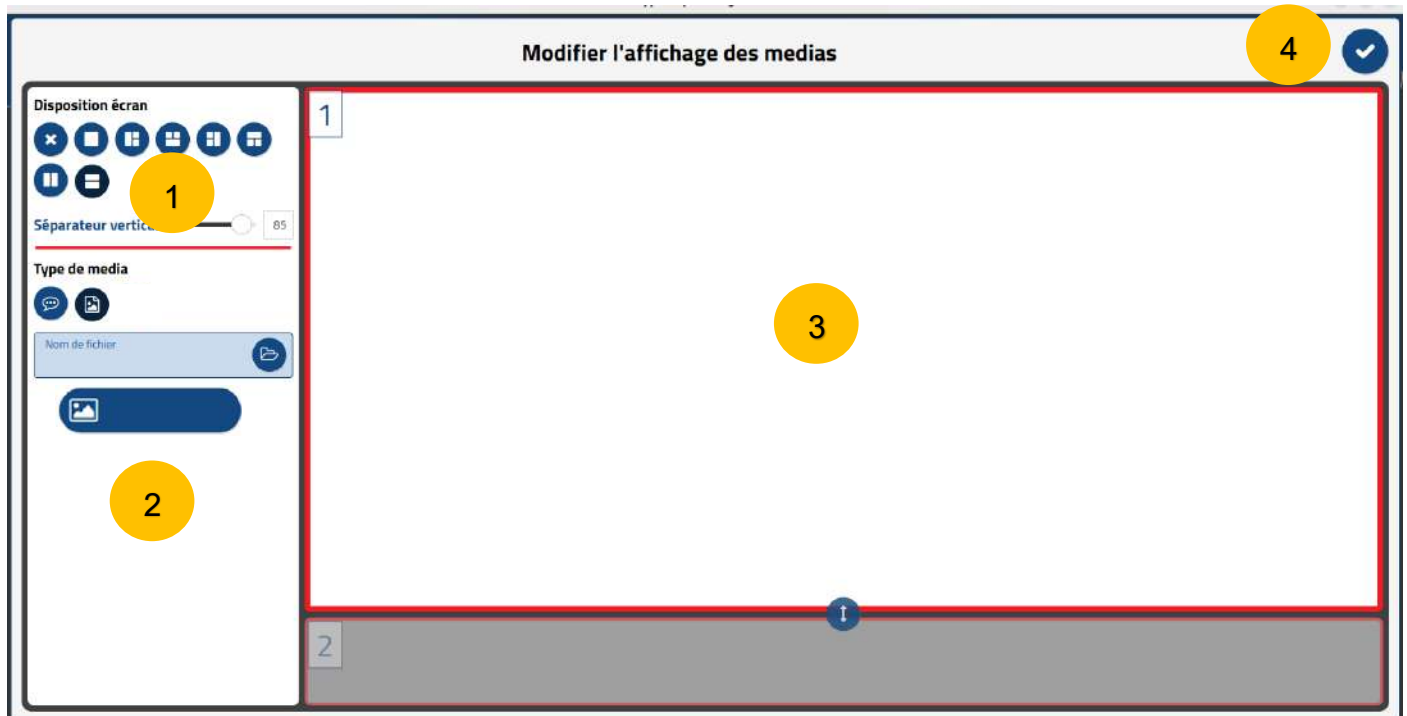
With DPM®Pilot, it is possible to use a different presentation of media and instructions in each step. The operating mode for configuring the displayed media is identical regardless of the step.

4.2.10.1 Setting up the media display in a step

Tap the "Add Media" button.



The following screen appears:



No.	Designation
1	Layout choice area
2	Media type selection area (text/visual instruction (image or PDF import
3	Dynamic display viewing area
4	Validation and Backup Icon





Information

For the screwing steps, the visual media set up in window 1 will be the support for the screwing point identification chips.

4.2.11 The Tightening step.

4.2.11.1 Setting up a stage

To place a screwing step in the sequence:

- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the editing tool .
- The settings screen below appears:



No.	Designation	Condition
1	Command saves or exit	
2	Viewing the sequence being edited	
3	Step ID field	REQUIRED FIELD
4	Step name field	REQUIRED FIELD
5	Media settings and layout field (see multimedia section)	
6	Sequential or non-sequential sequence of actions.	
7	The field that identifies the screwdriving tool to be used. The list of available tools appears. The declaration and configuration of the tools is done from the MANDATORY FIELD configuration menu	REQUIRED FIELD
8	Field designating the device used for position control the list of available tools appears. The declaration and configuration of the tools is done from the configuration menu; If there is no position control required, do not fill in anything	
9	Field designating the socket box or bit used the list of available tools appears. The declaration and configuration of the tools is done from the configuration menu; If there is no bit or socket selection check required, leave blank	
10	Action settings area contained in the step	


4.2.11.2 Creation procedure

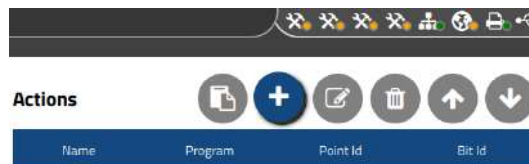
- **Field 3** Specify the stage ID.
The default ID can be maintained.
If you wish, you can indicate another one.



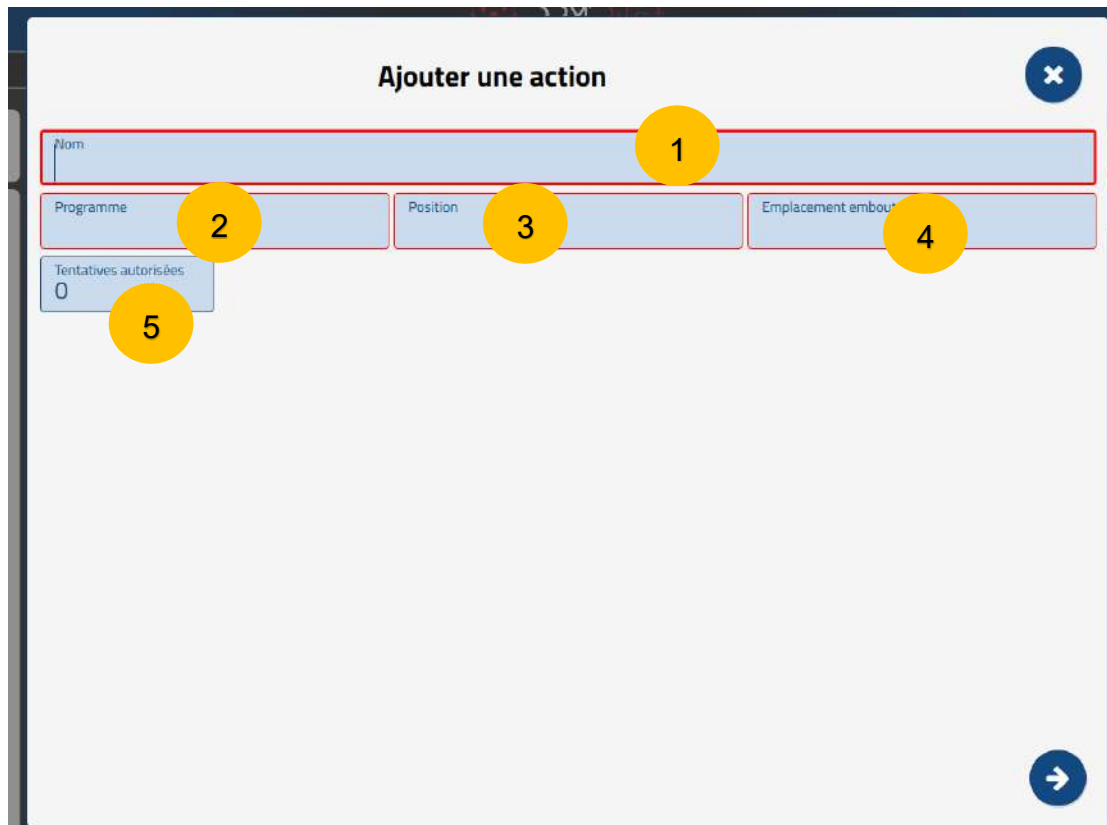
Information

Each step must have its own identifier.
There cannot be multiple steps with the same identifier.

- **Field 4** Specify the name of the stage.
The field must be filled in, it will be displayed below the identifier in the synoptics.
A self-explanatory name makes it easy to know what the step does.
- **Field 5** Refer to the media settings in the "Multimedia" chapter.
- **Field 6** To be unchecked for a NON-sequential sequence of actions.
The operator will have the choice to make them in the order he wishes.
However, if a positioning tool is used, the tightening tool will only be activated if it is in an authorized position.
- **Field 7** Specify the tightening tool to use from one of the tools in the list.
- **Field 8** If you want to check the screwing positions, specify a tool.
If no tools are selected, the screwing will be done without a position check.
- **Field 9** If you want to make tightening conditional on the use of a bit, specify a tool.
If no tools are selected, the screwing will be done without control of the use of the bit.
- **Field 10.** Add the actions. To do this, click 




➤ The following screen appears:



No.	Designation	Condition
1	Action Name	REQUIRED FIELD
2	Screwdriving program to be used	REQUIRED FIELD
3	Screwing position to be checked. This field appears if a position control tool has been selected for the step. Each point should have a unique position	
4	Screwdriver Bit to Use This field appears if a bit check tool has been selected for the step	
5	No. of resumption possible. If a number is specified, a field to indicate the rework screwing program to be used appears on the right	

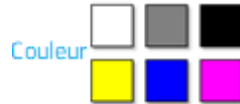
4.2.11.2.1 How to set up an action

- **Field 1** Specify the ID of the action. This information will appear when the sequence is executed in the actions window and on the results report.
- **Field 2** Specify the tightening program to be used **REQUIRED FIELD**.
 - **The parameters of the tightening program are to be specified in the controller or tightening box and not in DPM®Pilot.**
 - **For Tohnichi FDD and FDD-AD wrenches, torque and angle validation parameters are defined in the tool configuration.**
- **Field 3** Specify the tightening position to be checked. **REQUIRED FIELD** if the position control is enabled.
- **Field 4** Screwdriver bit to be used. **REQUIRED FIELD** if tip control is enabled.
- **Field 5** Specify the number of rework possible in case of improper screwing. The number of possible retakes will appear in the execution screen. At the end of the number, if the screwing report is bad, the stock will be declared NOK. If a rework number is specified, a field appears to indicate which tightening program to use. This makes it possible, for example, to have different angular limits if the rework changes the assembly characteristics, or an angular counting threshold that is different from the initial program.

- To continue with the settings and go to the next page, tap the arrow at the bottom right .

If an image media has been specified, it appears on the screen. It is possible to place on the image the chip for the identification of the screwing point to be made in the action. To do this:

- Select the color of the chip from those offered (click on the color).




- Place the chip in the required location (click on the image)
- Adjust the size of the chip with the



- To place the chip more precisely:
 - Select it (double-click on the bullet).
 - Move:
 - Or with the mouse while holding down the right button.
 - Or with the arrows on the keyboard.



Sample image

- To finish the configuration and access the next page, click on at  the top right.

If a position control tool has been specified in field 9 of the step screen, the next screen allows you to enter position values on the 4 available analog channels.



No.	Designation
1	Point value transmitted by the selected Digilink box
2	If this checkbox is checked, the allowed position tolerance can be specified by moving the arm The recorded area corresponds to a square of side length corresponding to the distance between the learned point and the position of the arm when learning tolerance. If you want to specify a per-channel tolerance, clear this check box
3	Tolerance around the point per analog channel

Procedure

- Physically place the tightening tool mounted on the torque reaction and positioning arm on the tightening position.
- Click "Save Location" to save.

If you selected box 2, record the position and tolerance as follows:

- Physically place the tightening tool mounted on the torque reaction and positioning arm on the tightening position.
- Click "Save Location" to save.
- Physically move the tightening tool mounted on the torque reaction and positioning arm to the maximum allowable position.

Arrêter l'enregistrement de la tolérance

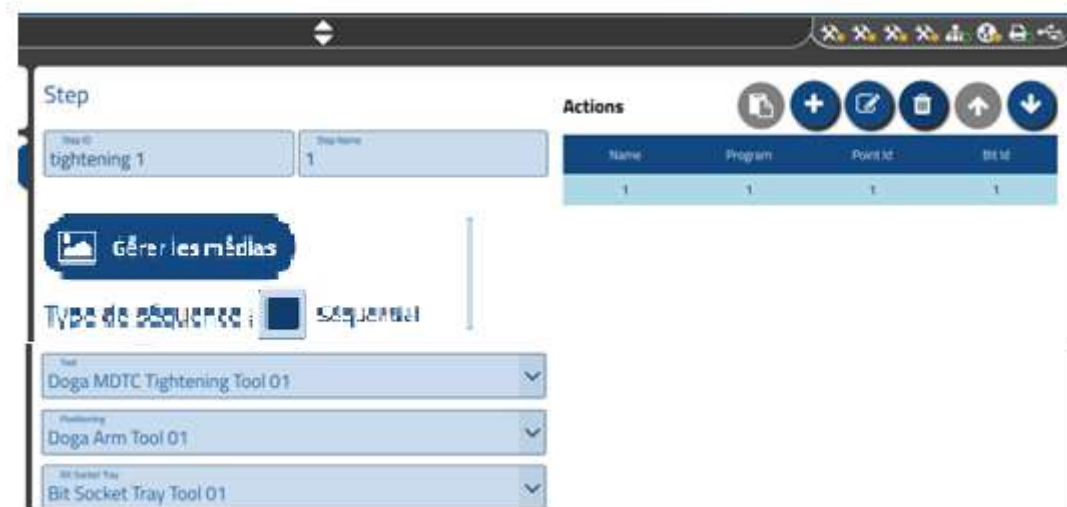
- Click "Stop Tolerance Recording" to save.
- The saved tolerance will be a rectangle around the point.
- Click the button ✓ to save.



Information

Each position control point must have a unique number. Remember to specify a different number for each screwing point.

4.2.11.3 Example of setting up a stage



The identifier for this step is: tightening 1
 Name: 1
 The screwdriver used is: Doga MDTC Tightening Tool 01
 The position control device used is: Doga Arm tool 01
 The socket/bit box used is: Bit Socket tray Toll 01

- An action is set up:
- Its name is: 1
 - The tightening program used is the number : 1
 - The expected position to authorize screwing is the number: 1
 - The bit/socket to be used is the number: 1

4.2.12 Pick to light step (component socket control)

This step is used to specify which component should be used to continue assembly.

It is possible to specify a number of components to be taken.

The pick-to-light step requires a device to be connected to DPM®Pilot.

Each device must be physically implanted on the workstation in front of the component locations.

There must be one device per component to manage.

The hardware currently compatible with the feature is:



- EZ-LIGHT® Touch Gen 2 K50 Specialty Pick-to-Light Turk Banner (see data sheet in appendix)



- Each sensor must be connected to the digital inputs/outputs:
 - From DPM®Pilot.
 - Or, if present, the Digilink interface box (optional equipment on the Standard version and standard on the Advanced and Expert versions of DPM®Pilot).
 - Or if present, the DPM®I/O Module (Input/Output Expansion Module) - optional equipment.
- The operation of this detector light is as follows:
 - When its input is activated, the lamp lights up solid green to indicate which pick to light is active.

4.2.12.1 Setting up a step

To place a pick-to-light step in a sequence:

- Select the icon with the mouse or on the touchscreen .
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the Editing Tool .

- The settings screen below appears:



No.	Designation
1	Warning
2	Viewing the sequence being edited
3	Step ID field
4	Step name field REQUIRED FIELD
5	Media settings and layout field (see multimedia section)
6	Field designating the pick to light tool used for the step
7	Field designating the pick to light location used
8	Field designating the part number or part designation that will appear on the execution screen
9	Field specifying the minimum activation time of the sensor integrated in the LED to validate the component's socket
10	Field specifying the number of takes to complete to validate the step

4.2.12.2 Creation procedure

- **Field 3** Specify the stage ID.
The default ID can be maintained.
If you wish, you can indicate another one.



Information

Each step must have its own identifier.
There cannot be multiple steps with the same identifier.

- **Field 4** Specify the name of the stage.
The field must be filled in and will be displayed below the identifier in the synoptics.
A self-explanatory name makes it easy to know what the step does.
- **Field 5** Fill in the instruction field to tell the operator what to do in this step. E.g.: Take X component ref A.
- **Field 6** Specify the pick to light tool used for the step.
This tool must be set up in the DPM®Pilot configuration menu.
- **Field 7** Specify the sensor to be used from the list shown.
- **Field 8** Specify the part number or designation of the component if you want it to be displayed on the edit screen and on the results report.
- **Field 9** Specify the minimum activation time required to validate the outlet (default is 200 ms).
- **Field 10.** Specify the quantity of components to take.
This will correspond to the number of sensor activations to be recorded.



Information

Under no circumstances does activating the sensor guarantee that the component will be plugged. The pick to light is an aid device and not a control device.

4.2.13 Checking the status of the digital inputs step

This step allows you to check the status of one or more "on/off" inputs of DPM®Pilot, the Digilink module or the DPM®I/O Module input output module.

There are many cases for using this step:

- Testing the status of an input corresponding to information from equipment (button, sensor, PLC, etc.)
- Validation of a manual action to be performed in the sequence without any information about the execution other than validation from the person who performed it. To do this, a push button must be wired to an input.

DPM®Pilot is equipped with 4 inputs and 4 outputs.

The Digilink module has 2 inputs and 2 outputs.

The DPM®I/O Module is equipped with 8 inputs and 8 outputs.

The connection of the inputs and outputs is described in the appendix.



The controlled states are:

- Status ON (input enabled).
- OFF status (inactive input).
- Rising front.
- Forehead descending.

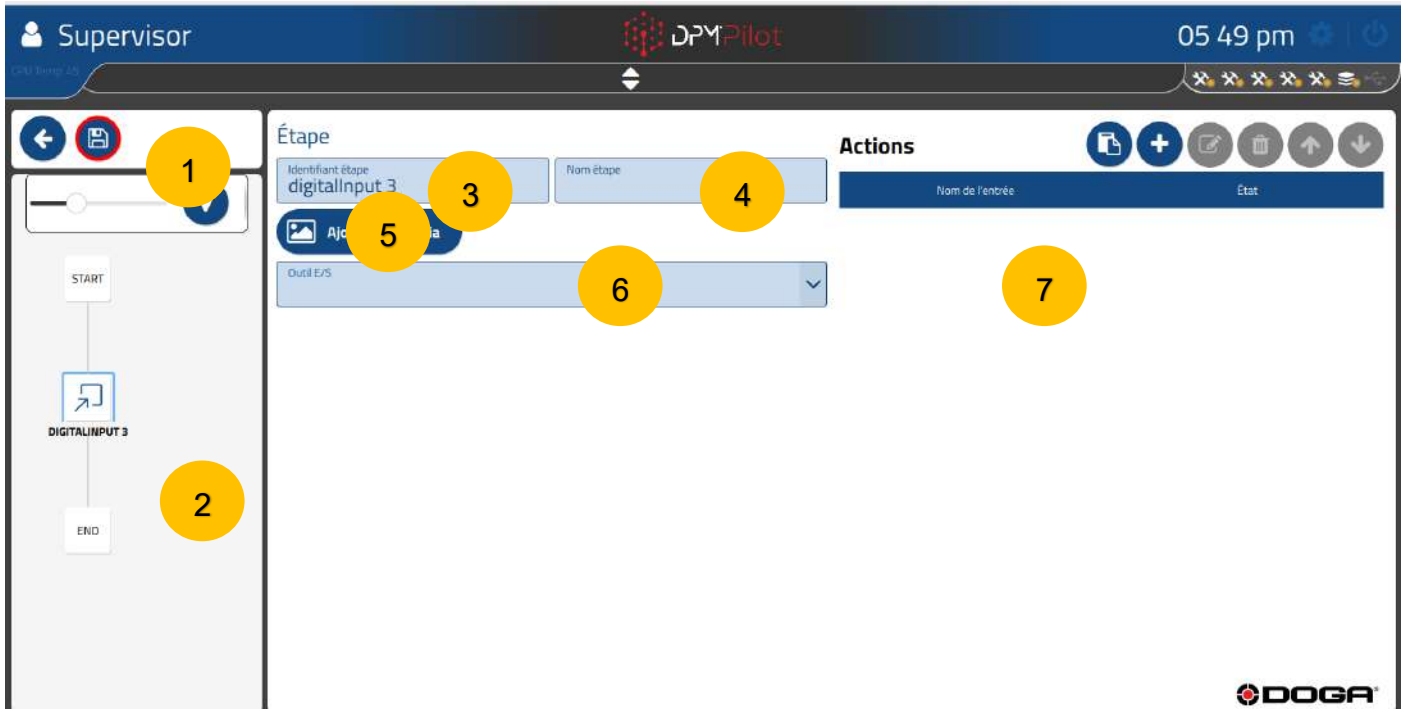
It is possible to make a combinatorics between the inputs. If the combinatorics is validated, then the step is validated.

4.2.13.1 Setting up a stage

To place an input control step in the sequence:

- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the Editing Tool .

- The settings screen below appears:



No.	Designation
1	Command saves or exit
2	Viewing the sequence being edited
3	Step ID field
4	Step name field REQUIRED FIELD
5	Media settings and layout field (see multimedia section)
6	A field that specifies the input-output tool used for the step
7	A field designating the entry(s) to be checked and the expected state to validate the step.

4.2.13.2 Creation procedure

- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish, you can indicate another one.



Information


Each step must have its own identifier.
There cannot be multiple steps with the same identifier.

- **Field 4** Specify the name of the stage. The field must be filled in and it will be displayed below the identifier in the synoptics. A self-explanatory name makes it easy to know what the step does.
- **Field 5** Fill in the instruction field to tell the operator what to do in this step. E.g. Test inputs 1 and 2.
- **Field 6** To be filled in if you want to display an image or PDF when performing the step. If no media is selected, the main window of the operator screen is blank.
- **Field 7** Specify the input-output tool used for the step. This tool must be set up in the DPM®Pilot configuration menu.
- **Field 8** Specify the expected combination (AND/OR).
- **Field 9** Identifies the entries to be tested and their status.




- Click .
 - The following screen appears:



- Choose the entry you want to test from the list provided.
 - Specify the selected state of the desired one
 - Status ON
 - OFF Status
 - Rising Edge (from OFF to ON).
 - Falling edge (going from ON to OFF).
 - Validate the choice by clicking on .
 - Cancel by clicking X.
- Repeat the operation for each of the entries to be tested in the step.

To remove control from an entry:

- Select the action (it appears in a blue frame).
- Click the icon .



Information

Please note that the deletion is permanent.

To edit an action:

- Select the action (it appears in a blue frame)
- Select the Editing Tool .
- Change the desired setting(s)

4.2.14 Digital output activation step

This step enables or deactivates one or more "on/off" outputs of DPM®Pilot, the Digilink module, or the DPM®I/O Module input-output add-on module.

There are many cases of use for this stage. They can include:

- Lighting of a signal lamp or stack light.
- Work authorization sent to an automatism.
- Activation of an actuator (cylinder, relay, etc.).
- Information transmitted to an automatism.

DPM®Pilot is equipped with 4 inputs and 4 outputs.

The Digilink module has 2 inputs and 2 outputs.

The DPM®I/O Module is equipped with 8 inputs and 8 outputs.

The connection of the inputs and outputs is described in the appendix.



The activation states are:

- Status ON (output enabled).
- OFF state (inactive output).
- Impulse activation.
- Alternate activation ON / OFF state.

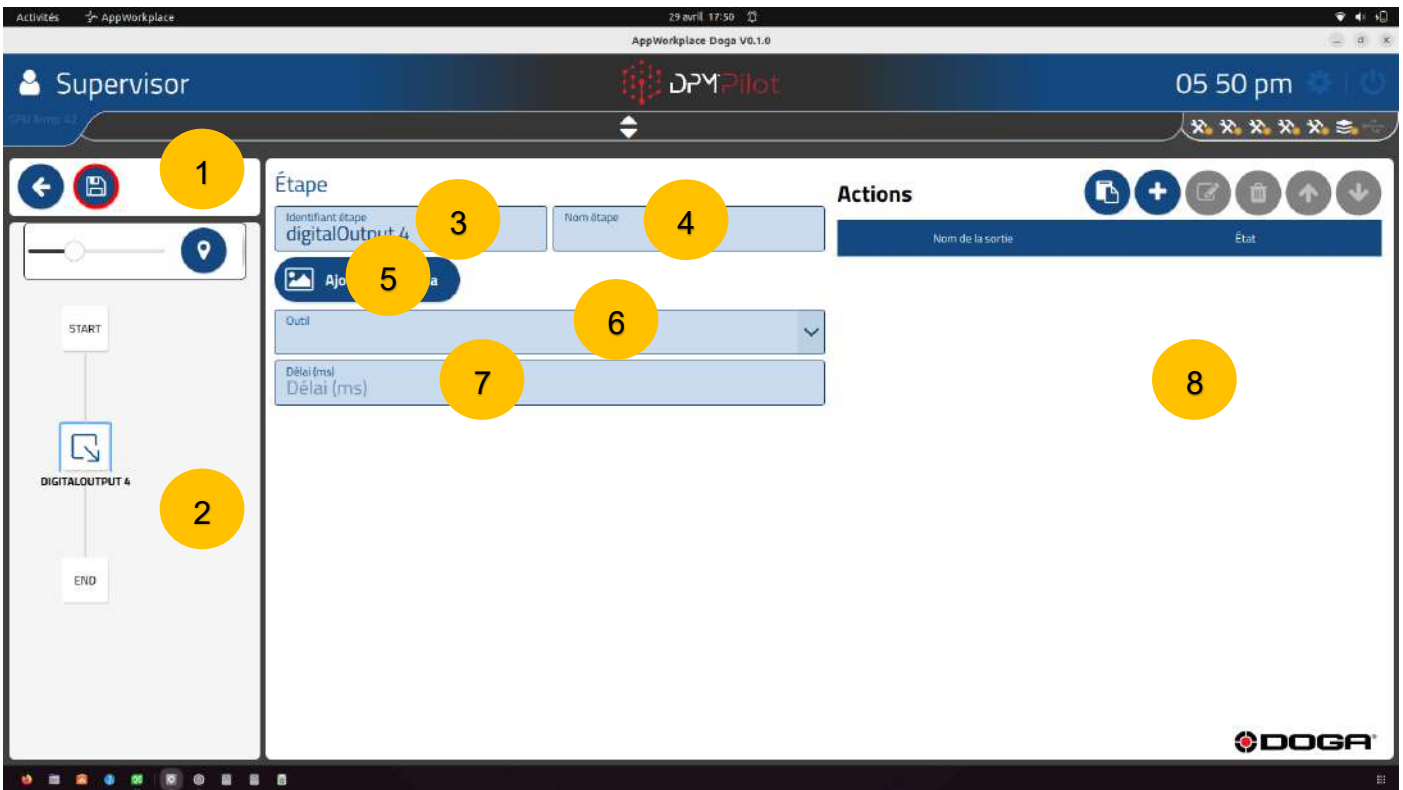
It is possible to activate or deactivate several outputs in the same step. The stage is validated unconditionally.

4.2.14.1 Setting up a step

To place a digital output control step in a sequence:

- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the editing tool  .

- The settings screen below appears:



No.	Designation	Consigne
1	Command saves or exit	
2	Viewing the sequence being edited	
3	Step ID field	REQUIRED FIELD
4	Step name field	REQUIRED FIELD
5	Media settings and layout field (see multimedia section)	
6	A field that specifies the input-output tool used for the step	
7	A field to specify a time during which the step remains active during execution. This time is not related to the time set for impulse activation or flashing	
8	The field designating the outputs to be ordered.	

4.2.14.2 Creation procedure

- **Field 3** Enter the stage ID. The default ID can be maintained. If you wish, you can indicate another one.

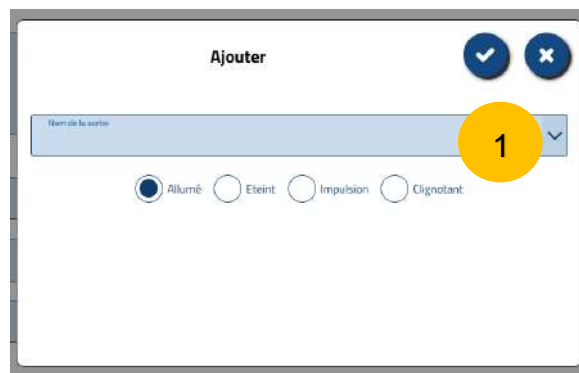



Information

Each step must have its own identifier.
There cannot be multiple steps with the same identifier.


- **Field 4** Specify the name of the stage. The field must be filled in, it is displayed below the identifier in the synoptic. A self-explanatory name makes it easy to know what the step does.
- **Field 5** Specify a statement (allows you to enter the operator statement related to the step. This statement appears on the Execute screen.)
- **Field 6** Specify the input/output tool used for the step.
- **Field 7** If necessary, specify a time during which the step is active (optional parameter).
- **Field 8** Specifies the entries to be tested and their status.

- Tap  .
 - The following screen appears:



- Choose the outing you want to order from the list provided.
- Specify the state by selecting the desired state:
 - Status ON
 - The state remains "ON" until the output is commanded in another mode.
 - Status OFF
 - Impulse operation
 - The output turns on for the specified time and then turns off.
 - Flashing operation.
 - The output turns on and off in flashing mode for the specified amount of time.
- Confirm the choice by clicking on  .
- Cancel by clicking X.
- Repeat the operation for each of the outings to be ordered in the step.

To remove the command from an output:


- Select the action (it appears in a blue frame).
- Tap the icon  .



Information

Please note that the deletion is permanent.

To edit an action:

- Select the action (it appears in a blue frame).
- Select the editing tool .
- Change the setting(s) you want.

4.2.15 Step to record a value from an analog input.

This step allows the recording of an analog value from a sensor or equipment providing an analog signal of 0-10 V, if the value is between the specified high and low limits.

The sensor or equipment must be connected to the Digilink accessory which has 4 analog channels 0-10 V.



There are many cases of use for this stage. They can include:

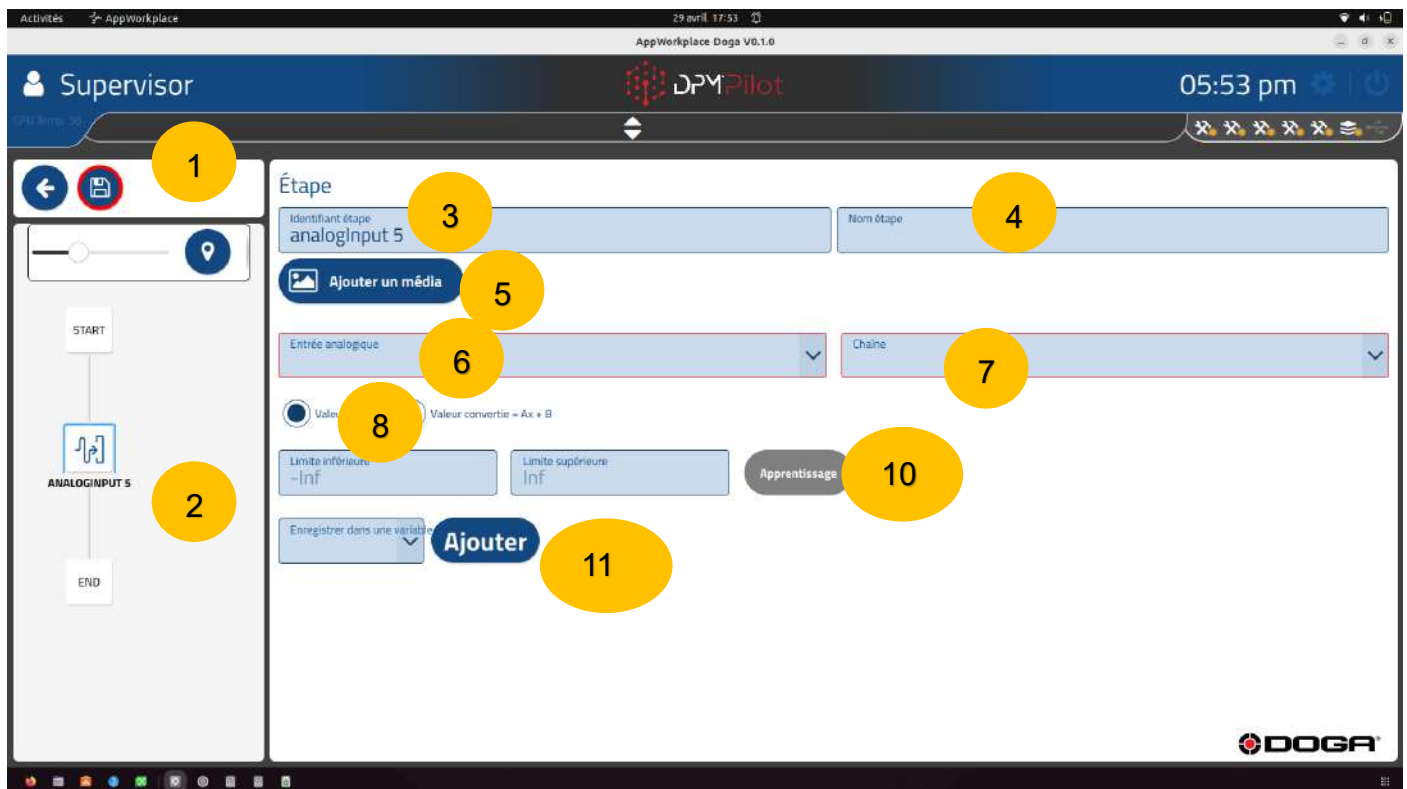
- Recording if it is within the defined upper and lower limits of an analog measurement to continue the sequence (e.g., weight/pressure/effort/dimension).

Since the analog value is stored in a variable, it can be combined with a turnout step to steer the sequence to another branch (see the turnout step) depending on the recorded value. This feature allows you to make a diversified assembly in the same sequence according to the recorded value.

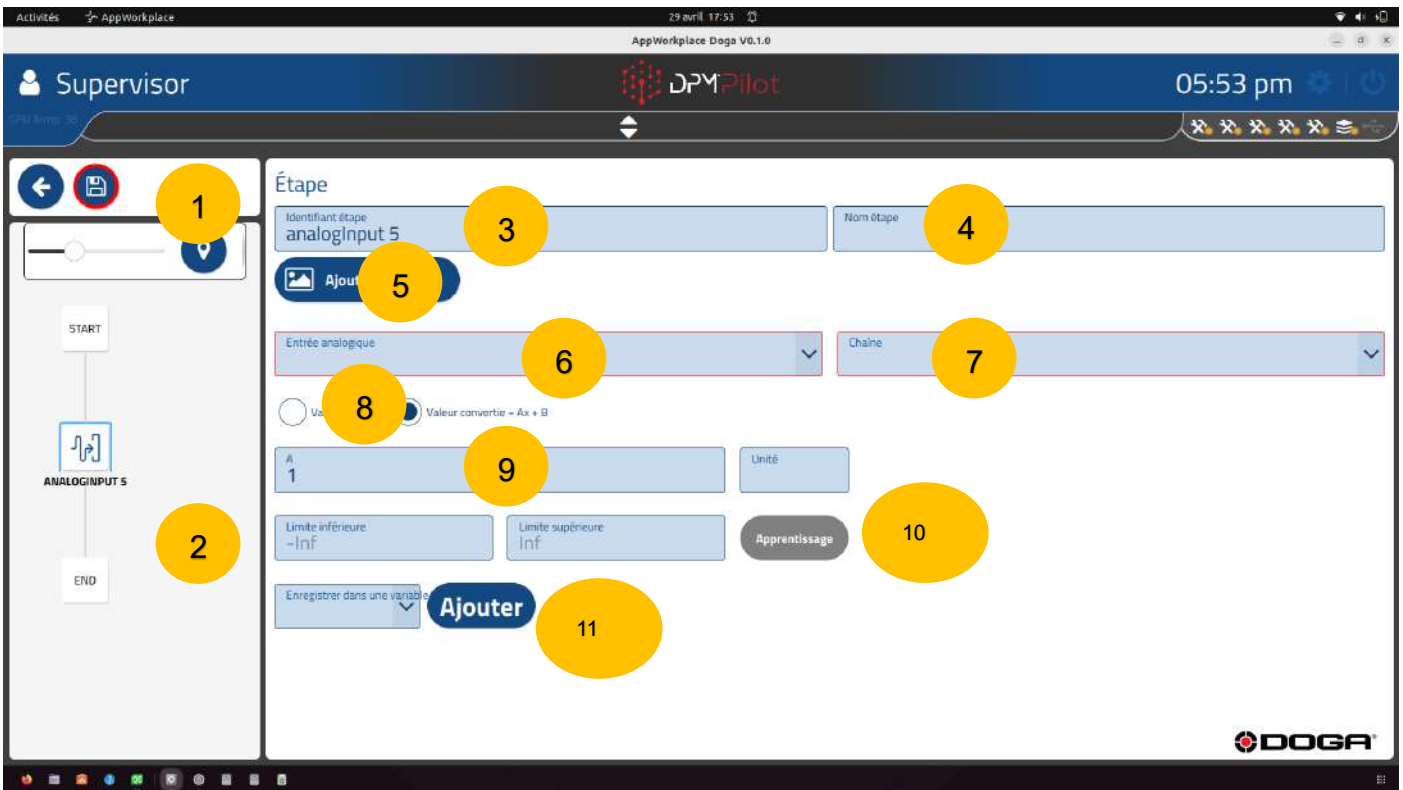
4.2.15.1 Setting up a stage

To place a recording step of a value from an analog input in the sequence:

- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the editing tool .
- When the raw value is selected (the default), the following setup screen appears:



- When the converted value $Ax+b$ is selected, the following setup screen appears. :



No.	Designation	Condition
1	Command saves or exit	
2	Viewing the sequence being edited	
3	Step ID field	REQUIRED FIELD
4	Step name field	REQUIRED FIELD
5	Media settings and layout field (see multimedia section)	
6	The field that specifies the analog input tool used for the step	
7	Field to specify the analog channel to be used	
8	A field that determines whether to record the absolute value (raw value) or to apply a conversion ratio and a unit (converted value $Ax+B$).	
9	A field to specify the values of a and b when the input is being processed	
	A field to specify the upper and lower limits between which the analog value will be stored in $Ax+b$ converted value mode, as well as the A and b parameters and the unit. If the value read on the channel is not within the defined limits, the from step can be committed. Limit values can be saved by learning by clicking the learn button	
11	A field to specify the variable that will contain the recorded analog value	



Information

The sensitivity of a sensor is the ratio of its output value to its input value.

Sensitivity example = 0.167 volt/bar

The offset value is the output value of the sensor for a zero-input value.

Example: original ordinate = 0.1769 volt

To convert the raw value transmitted by Digilink corresponding to the voltage supplied by the sensor interpreted by the analog card, into a decimal value in the corresponding physical quantity (bar / meter / ...), the raw value must be converted using the sensitivity and offset parameters of the sensor. Thus, the value recorded by DPM^{®Pilot} will not be a raw value but the physical quantity (bar/meter).

To do this, a coefficient and an offset are applied to the gross value.

Physical quantity = (sensitivity x gross value) + offset.

4.2.15.2 Creation procedure

- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish, you can indicate another one.



Information

Each step must have its own identifier.

There cannot be multiple steps with the same identifier.

- **Field 4** Specify the name of the stage. The field must be filled in, it is displayed below the identifier in the synoptic. A self-explanatory name makes it easy to know what the step does.
- **Field 5** Media settings and their layout (see paragraph "Multimedia").
- **Field 6** Specify the analog input tool used for the step.
- **Field 7** Specify the analog channel to use.
- **Field 8 9** Specify whether the record is based on the raw value or to be converted.
- **Field 9** Specify the upper and lower bounds between which the analog value must be within for the value to be recorded and the step to be validated.
- **Field 10** Specify the parameters for converting the raw value, the unit, and the upper and lower bounds between which the analog value must be between for the value to be recorded and the step to be validated.
- **Field 11** Specify the variable in which the value will be stored. This variable may be used in one or more forward referral or message steps.



Information

A variable is a kind of labeled box, where information can be stored for later reference or modification.

In computer science, variables are elements that associate a name (the identifier) with a value. The value can be of a different nature: number, text, etc. The variables are physically implanted in the memory of the programmed system (computer, microprocessor board, etc.).

A variable contains a value that can vary during the execution of the program, such as the number of activations of a sensor, etc.

4.2.16 Photo taking step for incorporation into the results report.



This step allows you to take a photo using a compatible external camera during the stitching sequence. This photo is saved and incorporated into the results report and can thus be used as visual evidence.

This step does not allow you to check the conformity of a product with respect to a typical image.

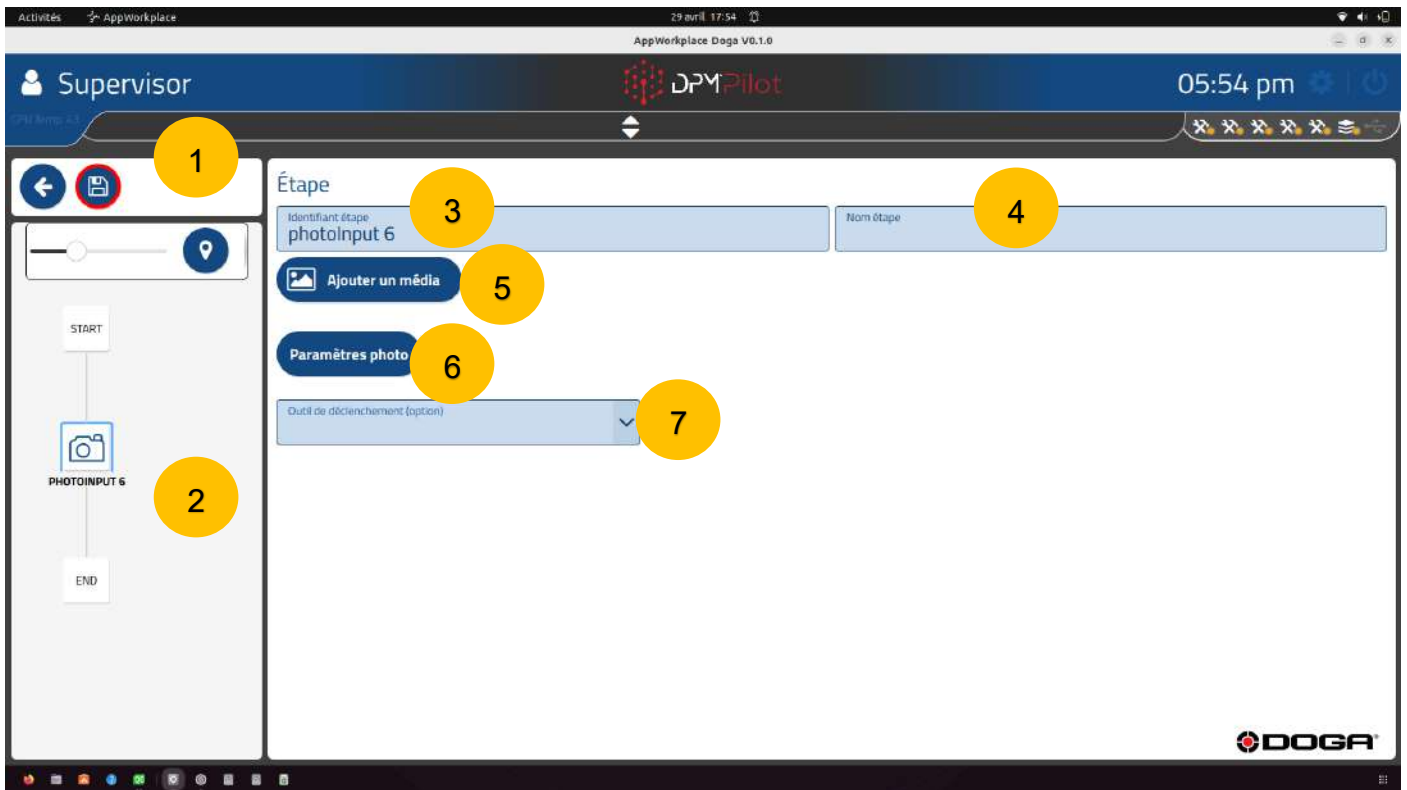
4.2.16.1 Setting up a stage

To place a step to take a photo for embedding in the results report in the sequence:



- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears)
- Select the editing tool  .

The settings screen below appears:



No.	Designation	Condition
1	Command saves or exit	
2	Viewing the sequence being edited	
3	Step ID field	REQUIRED FIELD
4	Step name field	REQUIRED FIELD
5	Media settings and their layout (see multimedia paragraph)	
6	Control to visualize what the camera is pointing at and adjust position and sharpness	
7	Specify the tool and the digital input assigned to the trigger function if the camera requires this command	

4.2.16.2 Creation procedure

- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish, you can indicate another one.

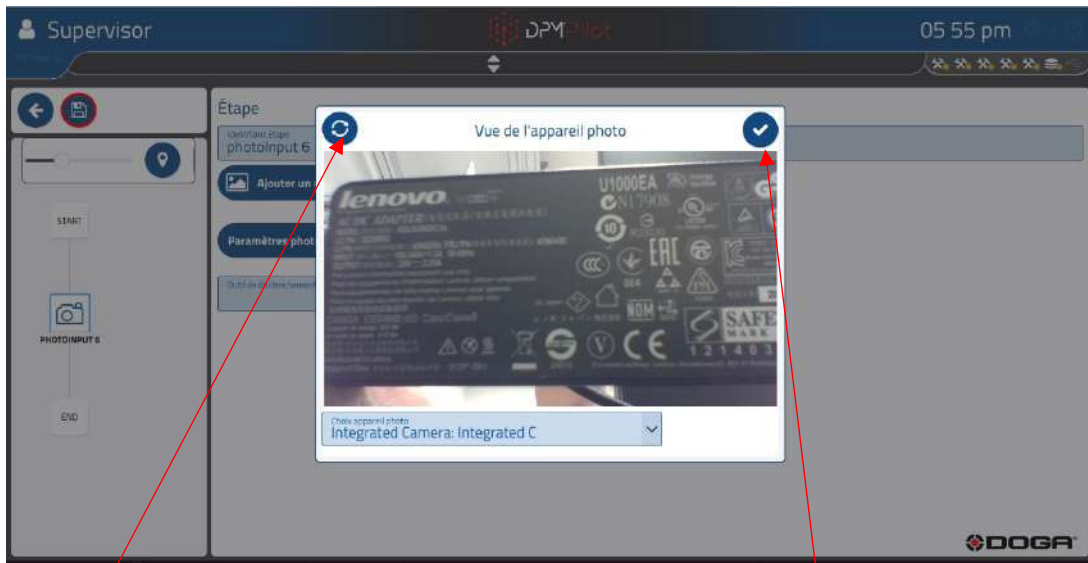


Information

Each step must have its own identifier.
There cannot be multiple steps with the same identifier.

- **Field 4** Specify the name of the stage. The field must be filled in, it is displayed below the identifier in the synoptic. A self-explanatory name makes it easy to know what the step does.
- **Field 5** Setting up media and their layout (see paragraph "Multimedia").
- **Field 6** Click on the "Photo Settings" button.

- The screen below appears:
- You can adjust your camera settings and its position.



Refresh button.

Validate button.

4.2.17 In-sequence label printing step

This step prints a label during the sequence.

There are many cases of use. They can include:

- Printing of a label during the sequence, for example the content of a previously read barcode.
- Printing a label containing information related to the branch of the sequence being executed.



Information

The sequence state cannot be printed because it is specified after the sequence is complete.

To operate, the printer must be powered on and connected to DPM®Pilot. The printer defined in the DPM®Pilot configuration menu will be the one used in the step.

Only a compatible printer can be used.

Usable printers must have a driver developed for CUPS by the printer manufacturer.

The printer is chosen from the general configuration menu of DPM®Pilot.





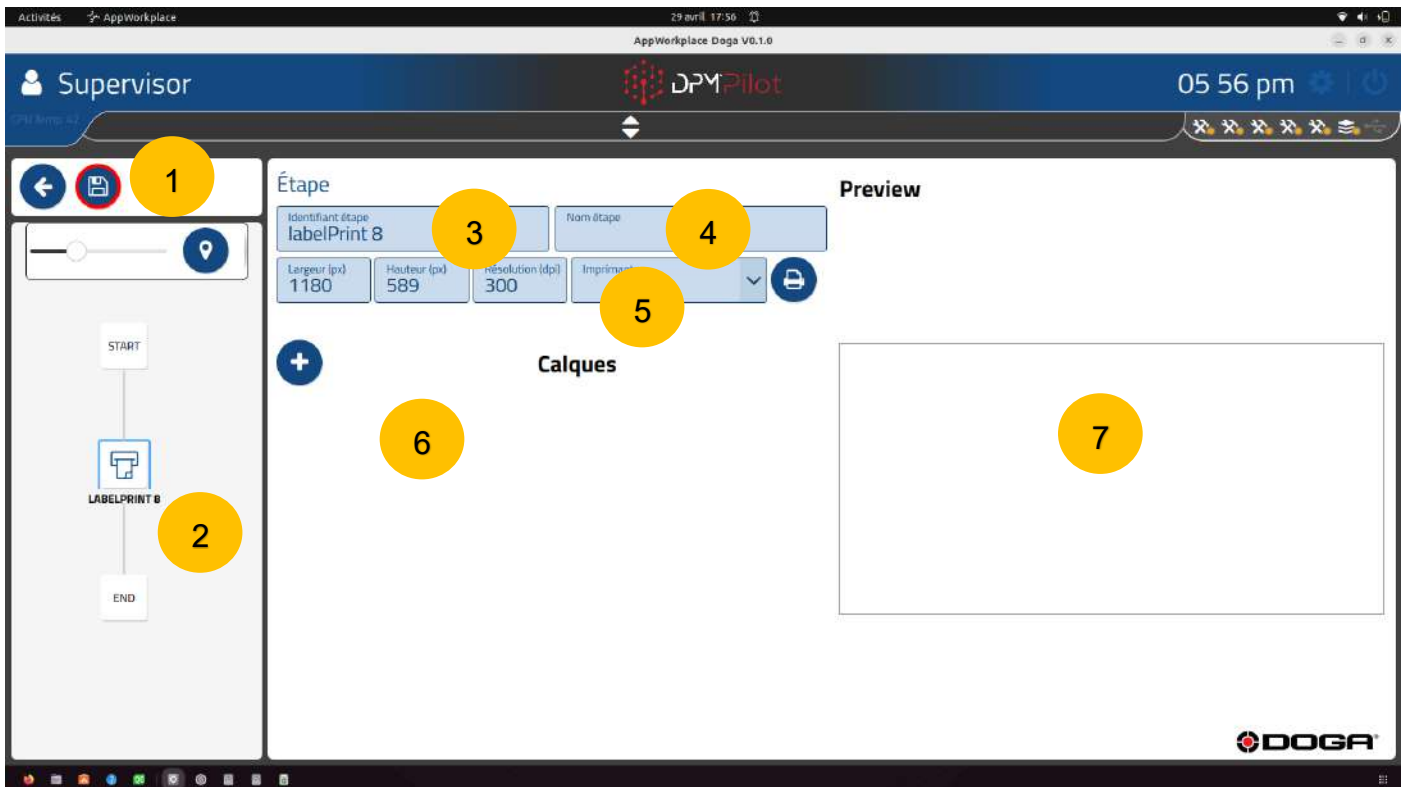
Information

The main printing system under Ubuntu is the Common UNIX Printing System (CUPS). This printing system has become the new standard for printing in most Linux distributions.

4.2.17.1 Setting up a stage

To place a label print step in the sequence:

- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the editing tool .
- The settings screen below appears:



N°	Designation	Condition
1	Command saves or exit	
2	Viewing the sequence being edited	
3	Step ID field	REQUIRED FIELD
4	Step name field	REQUIRED FIELD
5	Pixel label dimension field and printer choice	
6	Label information addition field	
7	Dynamic view of the layout and label content	

4.2.17.2 Creation procedure


- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish, you can indicate another one.

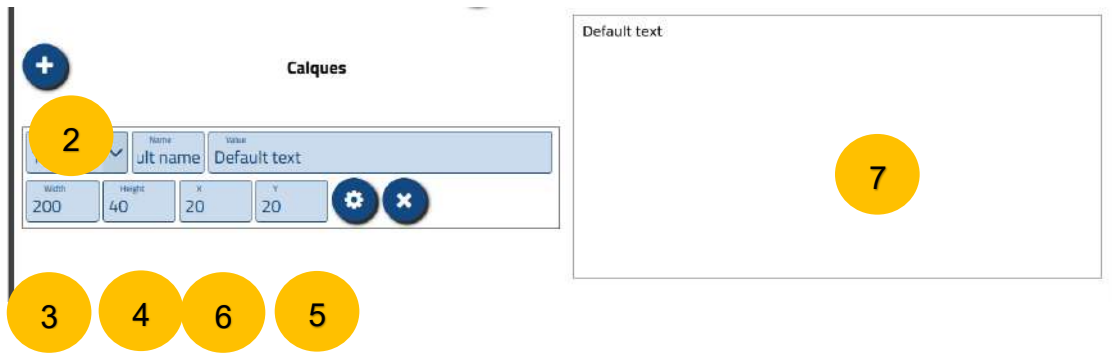


Information

Each step must have its own identifier.
There cannot be multiple steps with the same identifier.

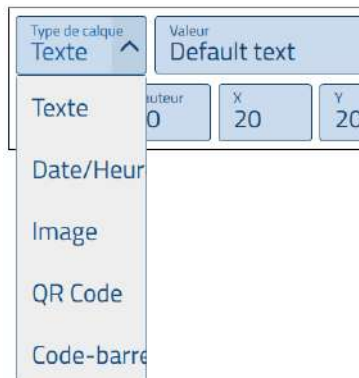
- **Field 4** Specify the name of the stage. The field must be filled in. It is displayed below the identifier in the synoptic. A self-explanatory name makes it easy to know what the step does.


- **Field 5** To add information, press .
 - The following screen appears:



No.	Designation
2	Type of field to print (text / image / barcode / QR code)
3	Field length
4	Field height
5	Start position on X (horizontal axis)
6	Starting position on Y (vertical axis)
7	Dynamic view of the label being edited

- **Field 2** Choose the type of information:

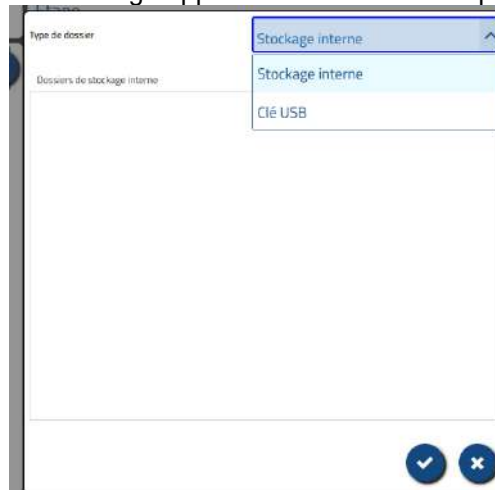


- For a text:
 - Give it a name.
 - Specify the text in the Value box.
 - The text entered appears in the dynamic viewport.
 - Specify the length and height of the field.
 - Specify the starting position.
 - Select the text settings by tapping .
 - The following screen appears:



- Apply your choices by ✓ tapping .

- For an image:
 - Give it a name.
 - Select the image you want to print.
 - The selected image appears in the Smart Viewport.



- Specify the length and height of the field.
- Specify the starting position.

- For a QR code:
 - Specify the text information that will be contained in the QR code.
 - The QR code appears in the dynamic viewing window.
 - Specify the length and height of the field.
 - Specify the starting position.

- For a barcode:
 - Specify the text information that will be contained in the barcode.
 - The barcode appears in the dynamic viewing window.
 - Specify the length and height of the field.
 - Specify the starting position.

To delete a field:

- Select the field.
- Remove the type of information to be printed.



Information

Please note that the deletion is permanent.

To edit an action:

- Select the field and edit the content.



At the end of the edit, it is possible to start a print by pressing the icon .

4.2.18 Start polling step of one or more digital inputs.



This step allows you to monitor the status of one or more on/off inputs in parallel with the execution of the sequence, for example, to check the presence of the part or assembly tooling on the station throughout the assembly.

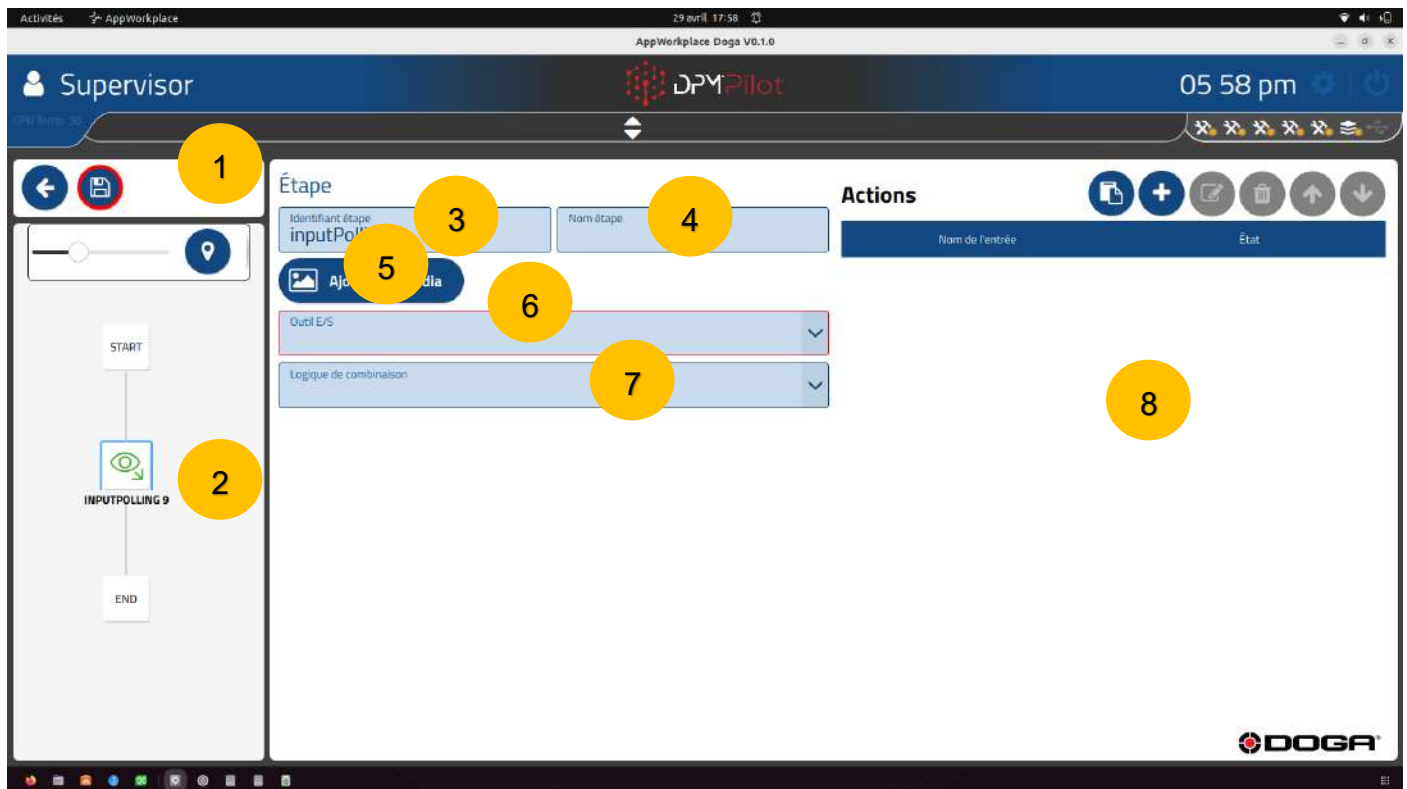
If the input or combination of inputs changes state, the sequence is interrupted, and a message is prompted to exit the sequence.


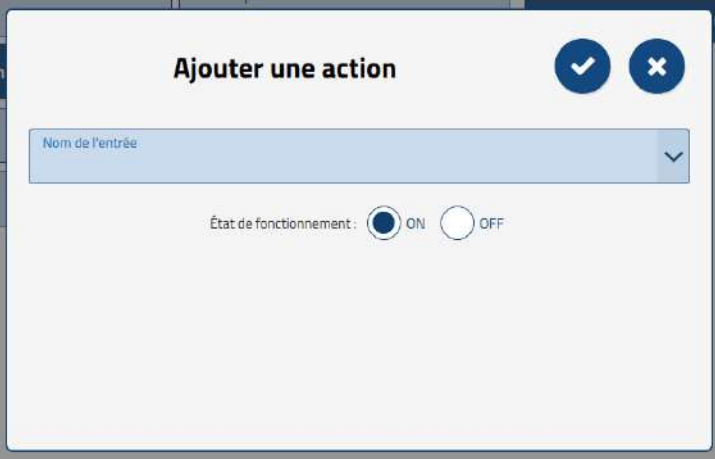
Polling starts with a poll start step and ends with an end step. This means that the scanning can be interrupted and resumed at a later time, for example, to allow the workpiece to be changed or another tool to be used.

4.2.18.1 Setting up a stage

To place a polling start step of one or more TOR entries in the sequence:

- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the Editing Tool .
- The settings screen below appears:



No.	Designation	Condition
1	Command saves or exit	
2	Viewing the sequence being edited	
3	Step ID field	REQUIRED FIELD
4	Step name field	REQUIRED FIELD
5	Media settings and their layout (see multimedia paragraph)	
6	A field to specify which input-output tool to use	
7	8 	
8	A field to specify which entries to scan and their ON or OFF status 	

4.2.18.2 Creation procedure

- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish, you can indicate another one.

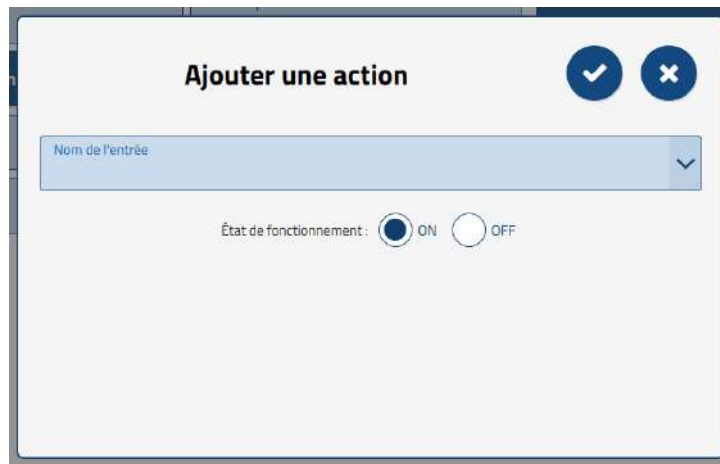


Information

Each step must have its own identifier.
There cannot be multiple steps with the same identifier.

- **Field 4** Specify the name of the stage. The field must be filled in. It is displayed below the identifier in the synoptic. A self-explanatory name makes it easy to know what the step does.
- **Field 5** Setting up media and their layout (see paragraph "Multimedia").
- **Field 6** Select the input tool to use.
- **Field 7** Specify the combinatorial operator to apply to the inputs.
- **Field 8** Specify the entries to be scanned.

- Tap  .
 - The following screen appears:



- Choose the outing you want to order from the list provided.
- Specify the state by selecting the desired state:
 - Status ON
 - Status OFF
- Confirm the choice by pressing ✓.
- Undo by pressing X.
- Repeat the operation for each of the outings to be ordered in the step.

To delete an output command:


- Select the action (it appears in a blue frame).
- Tap the icon .



Information

Please note that the deletion is permanent.

To edit an action:



- Select the action (it appears in a blue frame).
- Select the editing tool .
 - Change the setting(s) you want.

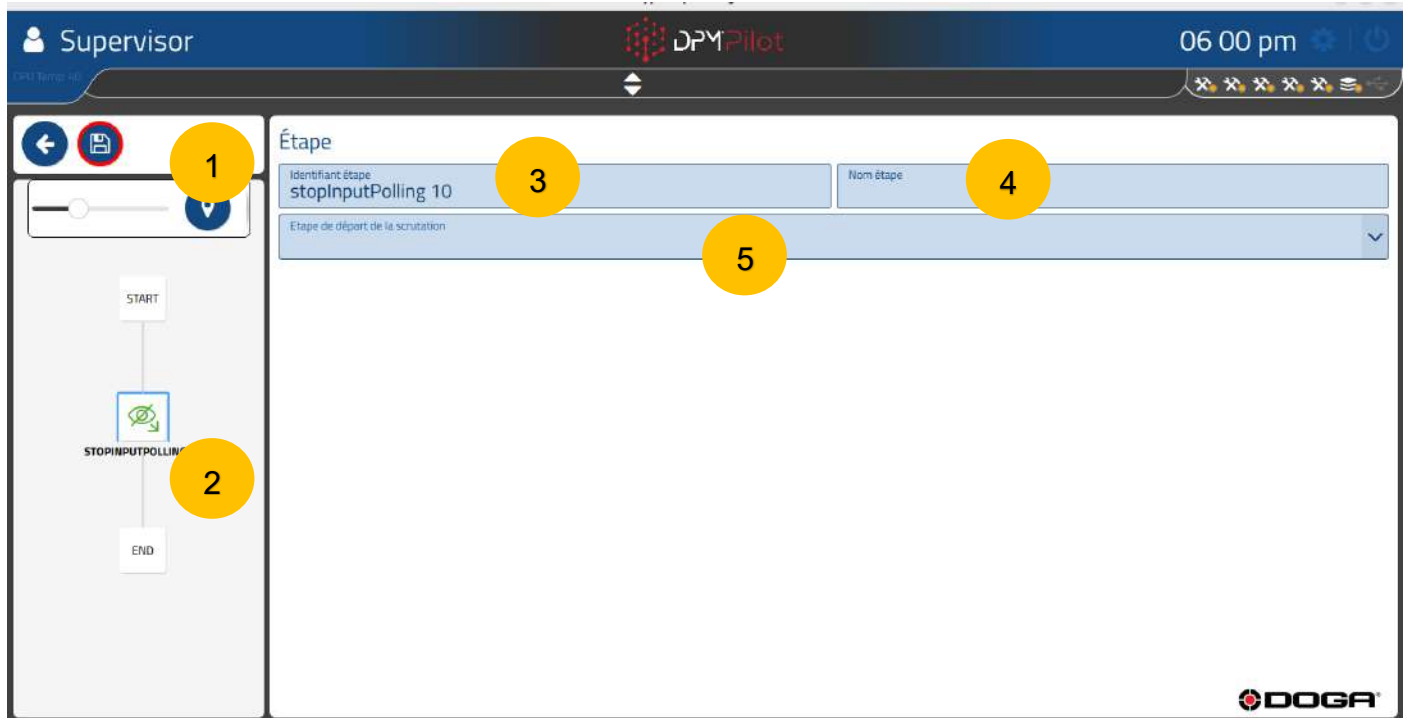
4.2.19 End of polling step for one or more digital input

This step is used to end a scan that was initially started.

4.2.19.1 Setting up a stage

To place an end-polling step of one or more TOR entries in the sequence:

- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the editing tool .
- The settings screen below appears:



No.	Designation	Condition
1	Command saves or exit	
2	Viewing the sequence being edited	
3	Step ID field	REQUIRED FIELD
4	Step name field	REQUIRED FIELD
5	A field that specifies the polling start step	

4.2.19.2 Creation procedure

- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish, you can indicate another one.



Information

Each step must have its own identifier.
There cannot be multiple steps with the same identifier.

- **Field 4** Specify the name of the stage. The field must be filled in. It is displayed below the identifier in the synoptic. A self-explanatory name makes it easy to know what the step does.
- **Field 5** Choose the start polling step from the list.
 - The polling takes place between the selected start step and the end step created.

4.2.20 Operator information entry step

This step allows the operator to enter information with a consistency check if the function is activated.

The purpose of this step is to record the input of a numeric or alphanumeric value that can be used in the rest of the sequence.



There are many cases of use, for example:

- Record a value (physical quantity) obtained by using a measuring device not connected to DPM®Pilot, and if necessary, orient the sequence according to the value.
- Record the contents of a barcode to orient the assembly sequence based on product diversity.
- Record information that needs to be recorded in the results report.
- Register a user ID other than the one used to open the application according to user privileges.

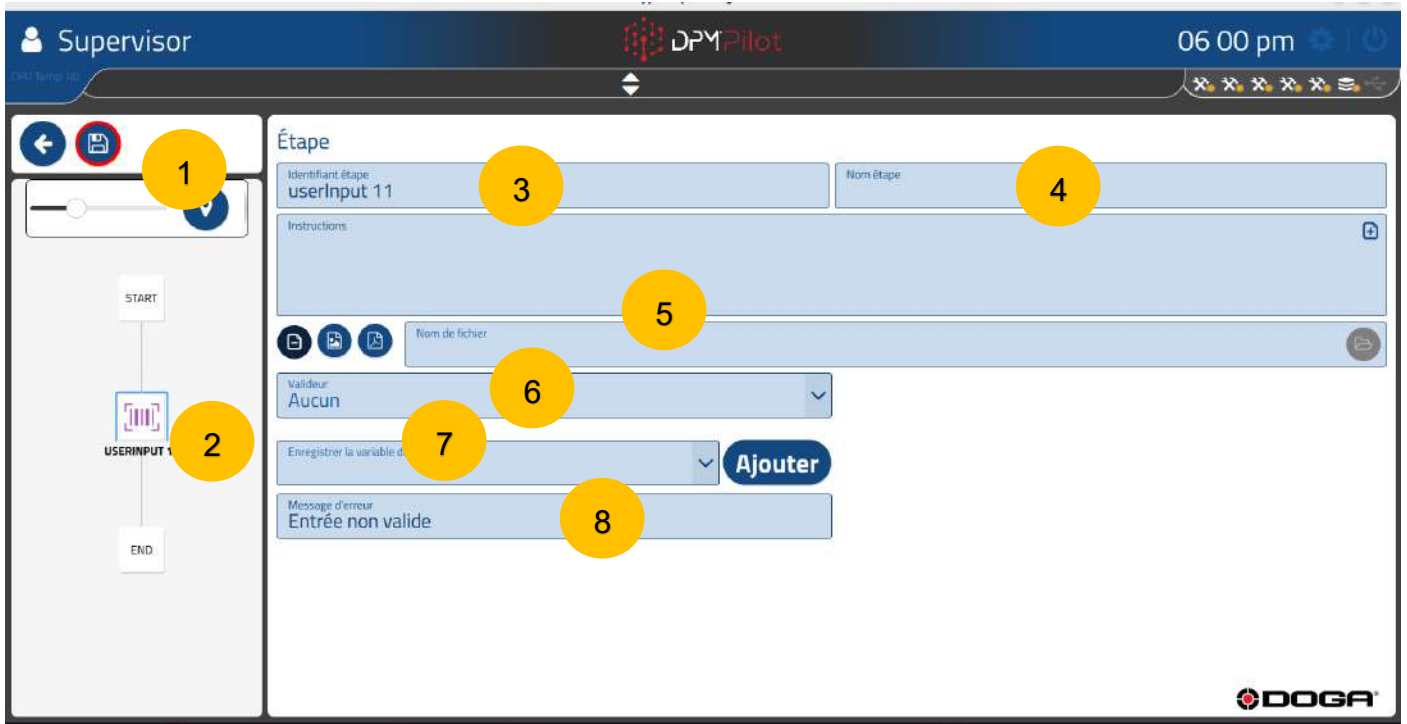
The orientation of the assembly sequence from this information must be done by adding a downstream switching step to the sequence.

4.2.20.1 Setting up a step

To place a user information step in the sequence:

- Select the icon  with the mouse or on the touch screen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the editing tool .
- The settings screen below appears:

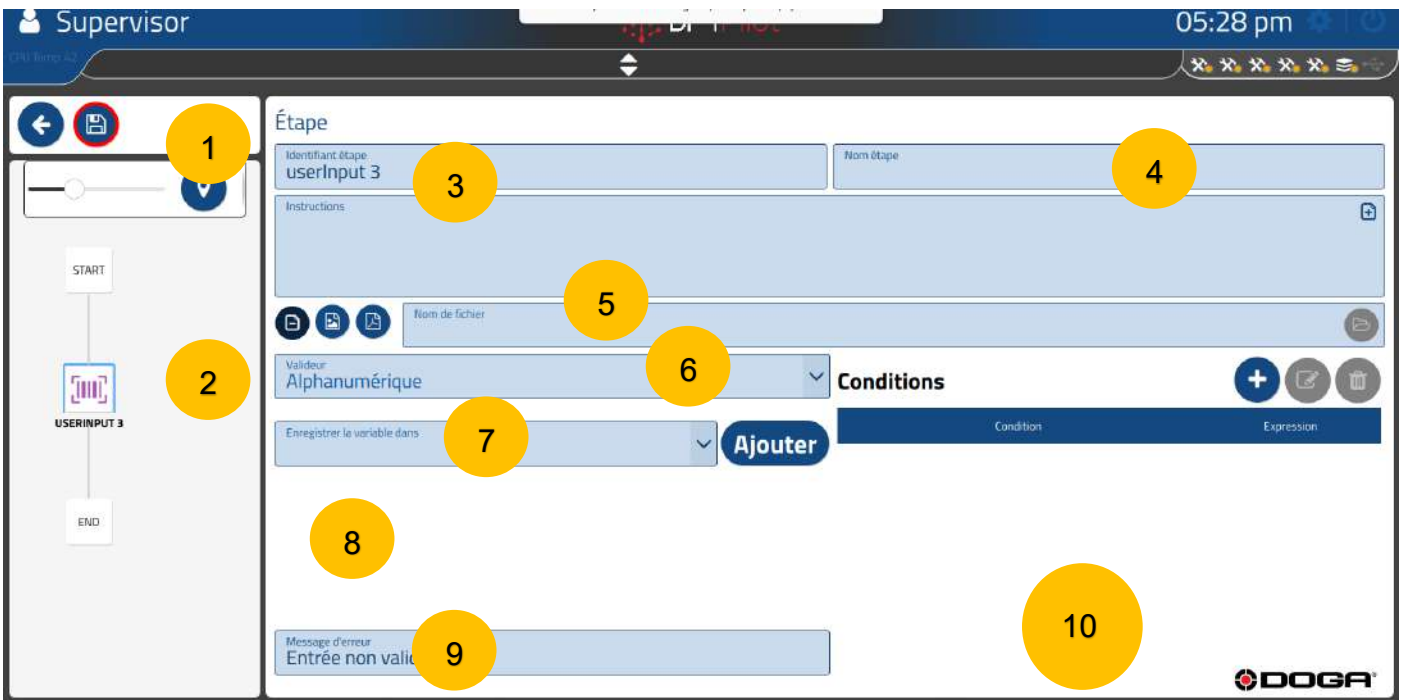
Screen if there is no validator.



Display with digital validator.



Display with alphanumeric validator.



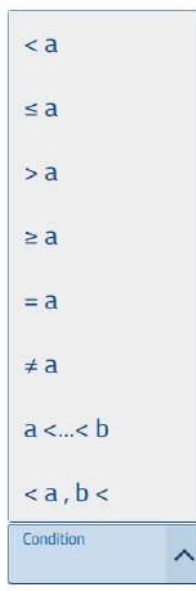
No.	Designation	Condition
1	Setting area (settings are specific for each device)	
2	Menu bar to access the different configuration pages	
3	The display area of the connection mode between DPM and the tool or accessory. The connection mode is set automatically. Only the IP address and port settings can be changed	REQUIRED FIELD
4	Display area of real or virtual controller devices	REQUIRED FIELD
5	Display area of the connections of the tools to the device in these connections we set the physical links made (depending on the tool)	
6	Tool display area (screwdriver, torque reaction arm, bit socket tray, etc.)	
7	A field designating the variable that will contain the entered value and that will be used in the processing of the information entered in the sequence	
9	Specific field that will appear depending on the validator chosen. <ul style="list-style-type: none"> If the alphanumeric validator is selected in field 6. This field will be used to specify the message if the validation is not correct. If the Numeric Validator is selected in field 6. This field will be used to specify the condition for validating the entry and the value(s) that will be used to validate the entry 	
10	A field specific to the alphanumeric validator that will appear if the alphanumeric validator is selected in field 6. This field will be used to specify which condition will be controlled on what will be entered by the user	

4.2.20.2 Creation procedure

- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish, you can indicate another one.
- **Field 4** Specify the name of the stage. The field must be filled in. It is displayed below the identifier in the synoptic. A self-explanatory name makes it easy to know what the step does.
- **Field 5** Fill in the instruction field to tell the operator what to do in this step.
 - Example:
 - Scan the version barcode.
 - Enter the length of the part.
- **Field 6** Choose the consistency check you want to apply to the value or the barcode you entered.



- **No** → consistency check, the value or the scanned code is recorded in the variable defined in field 7.
- **Numerical** → Consistency checks with validator adapted to the processing of a numerical value (number).



- **Field 7** To be filled in to specify the variable that will be used to remember the content of the user input regardless of its form (numeric or alphanumeric input, barcode).



Information

A variable is a kind of labeled box, where information can be stored for later reference or modification. In computer science, variables are elements that associate a name (the identifier) with a value. The value can be of a different nature: number, text, etc. The variables are physically implanted in the memory of the programmed system (computer, microprocessor board, etc.). A variable contains a value that can vary during the execution of the program, such as the number of activations of a sensor, etc.

In this field, you will need to:

- Either select an existing variable (previously created) or create a new variable by pressing the "Add" key and specify the name you want to give to the variable. The name must be self-explanatory enough to allow you to understand unequivocally what the variable will contain as a type of information, e.g: Measurement Ig, Diversity1 ...
- **Field 8** In this field you specify the type of validator.
 - Types of validators available:
 - **Lower:** The entry must be strictly less than the value specified in the number field next to the validator.
 - **Less than or equal** to the entry must be less than or equal to the value specified in the number field next to the validator.
 - **Greater:** The entry must be strictly greater than the value indicated in the number field next to the validator.
 - **Greater than or equal:** The entry must be greater than or equal to the value specified in the number field next to the validator.
 - **Equals:** The entry must be equal to the value in the number field next to the validator.
 - **Different from:** The entry must be different from the value specified in the number field next to the validator.
 - **Between:** the entry must be outside the 2 values indicated in the number fields next to the validator.
 - **Outside:** the entry must be between the 2 values indicated in the number fields next to the validator.
 - Then specify the numerical value(s) that will be used to validate the entry according to the validator chosen.

4.2.20.3 Example of setup for saving a numeric value

The goal is to record a numerical value corresponding to the size of a room. This size must be between a minimum and a maximum for the entry to be validated. We will expect a value between 100 and 200.

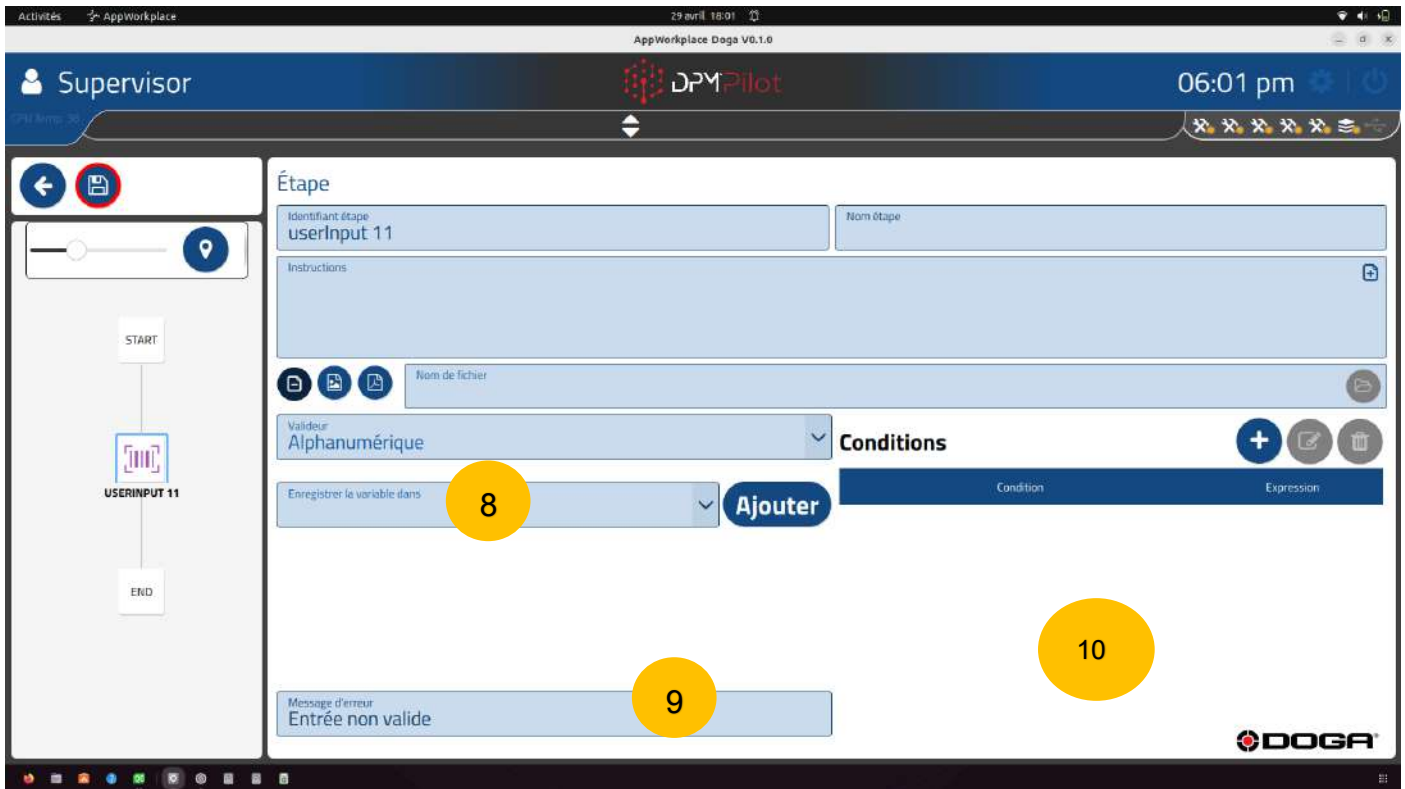
- **Field 3** Indicate the stage ID: enter "Lg measurement".
- **Field 4** Indicate the name of the step: enter "Lg measurement".
- **Field 5** Fill in the instruction field to tell the operator what to do in this step. "Measure the length of the workpiece with the ruler and type it on the keyboard."

- **Field 6** Choose the consistency check you want to apply to the value or the barcode entered: we choose **Numeric**.
- **Field 7** To be filled in to specify the variable that will be used to store the content of the user input regardless of its form (numeric or alphanumeric input, barcode): we create the variable named **Length**.
- **Field 9** In this field you specify the type of validator: we use the validator **Between** and we give the limits of **100** and **200**.
 If the value entered is between these 2 values, the entry is validated.
 If the value is not within range, the message "Error" appears.

Example numeric value screen



- **Alphanumeric** Consistency check with validator suitable for processing an alphanumeric value (letters and numbers).



- **Field 8** To be filled in to specify the variable that is used to store the content of the user input in any form (numeric or alphanumeric input, barcode).



Information

A variable is a kind of labelled box, where information can be stored for later reference or modification. In computer science, variables are elements that associate a name (the identifier) with a value. The value can be of a different nature: number, text, etc. The variables are physically implanted in the memory of the programmed system (computer, microprocessor board, etc.). A variable contains a value that can vary during the execution of the program, such as the number of activations of a sensor, etc.

In this field, you must:

- Either select an existing variable (previously created) or create a new variable by pressing the "Add" key and specify the name you want to give to the variable. The name must be self-explanatory enough to allow you to understand unequivocally what the variable will contain as a type of information, e.g.: Measurement lg, Diversity1 ...

- **Field 9** Alphanumeric Validator-Specific Field This field is used to specify the message if the validation is not correct.
- **Field 10** The field specific to the alphanumeric validator that appears if the alphanumeric validator is selected in field 7. This field is used to specify which condition(s) are checked on what is entered by the user.



- Types of validators available (to be specified in field 10):
 - **Starts with:** The entry must start with the value in the number field next to the validator.
 - **Ended By:** The entry should end with the value specified in the number field next to the validator.
 - **Equals:** The entry must be the same as the value specified in the number field next to the validator.
 - **Contains:** The entry must contain, regardless of its position, the value specified in the number field next to the validator.
 - **Mask:** The entry must contain either a number of letters and/or numbers:
 - A: uppercase or lowercase character
 - 0: digit
 - ? : letter character (lowercase or uppercase) or number or special 1 time
 - *: letter character (lowercase or uppercase) or number or special N times.
 - Example:
 - To validate that the entry is strictly composed of **3 letters**, you must fill in the field under string characters: **AAA**
 - To validate that the entry is strictly composed of **3 digits**, you must enter in the field under string: **000**
 - To validate that the entry is strictly composed of **3 letters and 3 digits**, you must enter in the field under string of characters: **AAA000**
 - To validate that the entry is composed of **3 characters, letters, numbers, special characters strictly**, you must enter in the field under string of characters: **???**

- To validate that the entry is composed of **N letters, numbers, special characters without number control**, you must enter in the substring field: *
- **RegEx:** The entry must match the regular expression described in the substring field. This validator allows any type of string to be described flexibly. Its use requires mastery of the syntax of regular expressions.



Information

In computer science, a regular expression or regular expression¹ or normal expression or pattern is a string of characters that describes, according to a specific syntax, a set of possible strings. Regular expressions are also called regexes.

A regular expression is a sequence of typographic characters (more simply called a "pattern") describing a set of strings of characters. For example, the set of words "ex-équo, ex-equo, ex-aequo and ex-æquo" can be condensed into a single reason "ex-(a?e|æ|é)quo". The basic mechanisms for forming such expressions are based on special characters of substitution, grouping, and quantization.

4.2.20.4 Example of a setup for saving an alphanumeric value

The goal is to record an alphanumeric value (composed of characters, numbers and/or letters) corresponding to the mounting option to be performed.

This value must contain 12345 and abcde for the entry to be validated.

- **Field 3** Indicate the stage ID: enter " **option 1**".
- **Field 4** Indicate the name of the step: enter "**choice option**".
- **Field 5** Fill in the instruction field to tell the operator what to do in this step.
"**Scan the option code of the chosen room**".
- **Field 6** To be filled in if you want to display an image, PDF, or video when performing the step. If no media is selected, the main window of the operator screen is blank.
- **Field 7** Choose the consistency check you want to apply to the value or the barcode entered: we choose **Alphanumeric**.
- **Field 8** To be filled in to specify the variable that is used to store the content of the user input regardless of its form (numeric or alphanumeric input, barcode): we create the variable named **option**.
- **Field 9** In this field you specify the logical operator applied to the validators specified in field 10: the logical operator **And** is used.



- **Field 10** In this field we use the "contains" validator with 2 actions:
 - **Action 1** contains **abcde**
 - **Action 2** contains **12345**

Ajouter / Editer condition

Type de validation
Contient
Expression
abcde

Test de la condition :

Chaîne de caractère à tester

Test

Ajouter / Editer condition

Type de validation
Contient
Expression
12345

Test de la condition :

Chaîne de caractère à tester

Test

Supervisor
06 04 pm

START

USER/PUT 2

END

Étape

Identifiant étape
option1
Nom étape
choix option

Instructions
Scanner le code de l'option pièce choisi

Nom de l'étape

Valeur
Alphanumérique

Conditions

Condition	Expression
contient	abcde
contient	12345

Enregistrer la donnée dans
option

Message d'erreur
Entrée non valide

4.2.21 Selection step by virtual button on the screen

This step allows a window to be displayed on the screen containing choices in the form of a "button".



There are many cases of use, they can be, among others:

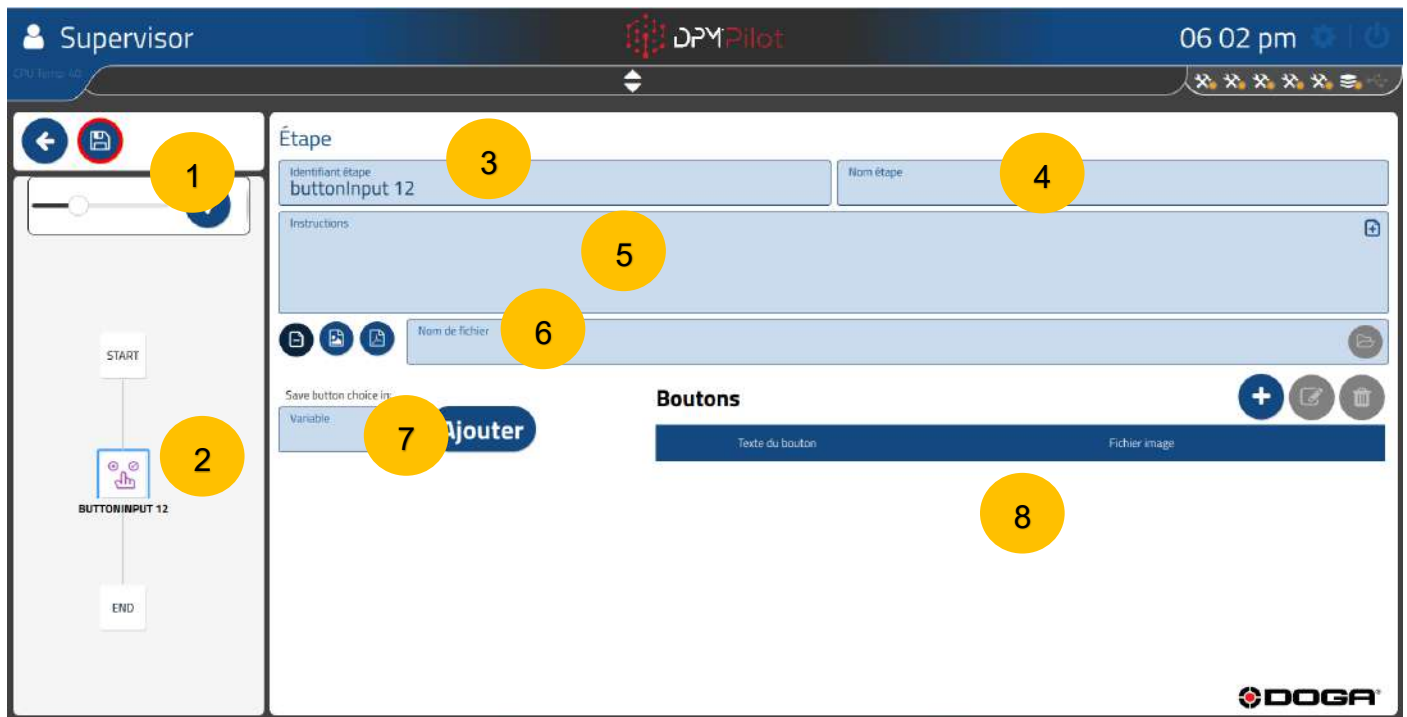
- Choice among those proposed to orient the sequence.
- Validation of an operation with multiple possible responses.

The orientation of the assembly sequence from this information must be done by adding a downstream switching step to the sequence.

4.2.21.1 Setting up a stage

To place a button step in the sequence:


- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the Editing Tool .
- The settings screen below appears:



No.	Designation	Condition
1	Command save or exit	
2	Viewing the sequence being edited	
3	Step ID field	REQUIRED FIELD
4	Step name field	REQUIRED FIELD
5	Statement field (allows you to enter the operator statement related to the step. This statement will appear on the execution screen. It is possible to display in the statement the value contained in a variable (choice of the variable by the + icon at the top right of the field window)	
6	Fields to attach media (image / PDF) we select the type of media and the location where the model is located (internal memory or USB stick)	
7	A field designating the variable that will contain the entered value and that will be used in the processing of the information entered in the sequence.	
8	The field in which the buttons and their contents are specified.	


4.2.21.2 Creation procedure

- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish, you can indicate another one.
- **Field 4** Specify the name of the stage. The field must be filled in. It is displayed below the identifier in the synoptic. A self-explanatory name makes it easy to know what the step does.
- **Field 5** Fill in the instruction field to tell the operator what to do in this step.
 - Example:
 - Would you like to start over?
 - Select the option you want.
- **Field 6** To be filled in if you want to display an image, PDF, or video when performing the step. If no media is selected, the main window of the operator screen is blank.
- **Field 7** To be filled in to specify the variable that will be used to remember the content of the user input regardless of its form (numeric or alphanumeric input, barcode).

	<p>Information</p> <p>A variable is a kind of labelled box, where information can be stored for later reference or modification.</p> <p>In computer science, variables are elements that associate a name (the identifier) with a value. The value can be of a different nature: number, text, etc. The variables are physically implanted in the memory of the programmed system (computer, microprocessor board, etc.).</p> <p>A variable contains a value that can vary during the execution of the program, such as the number of activations of a sensor, etc.</p>
---	--

In this field, you must:

- Either select an existing variable (previously created) or create a new variable by pressing the "Add" key and specify the name you want to give to the variable. The name must be self-explanatory enough to allow you to unequivocally understand the type of information that the variable will contain, such as, e.g., lg measurement, Diversity1, etc.
- **Field 8** To be filled in to specify the number of buttons, the text or the information they will contain
 - The text or content of the button selected by the user when the sequence is executed is saved in the variable specified in field 7.

	<p>Information</p> <p>The number of buttons must be limited to 6.</p>
---	--


4.2.21.3 Example of setting up a button step

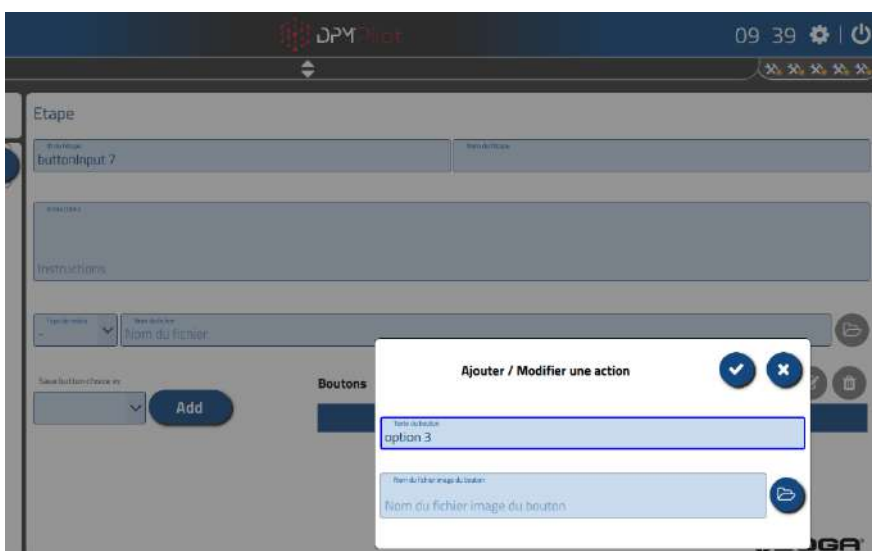
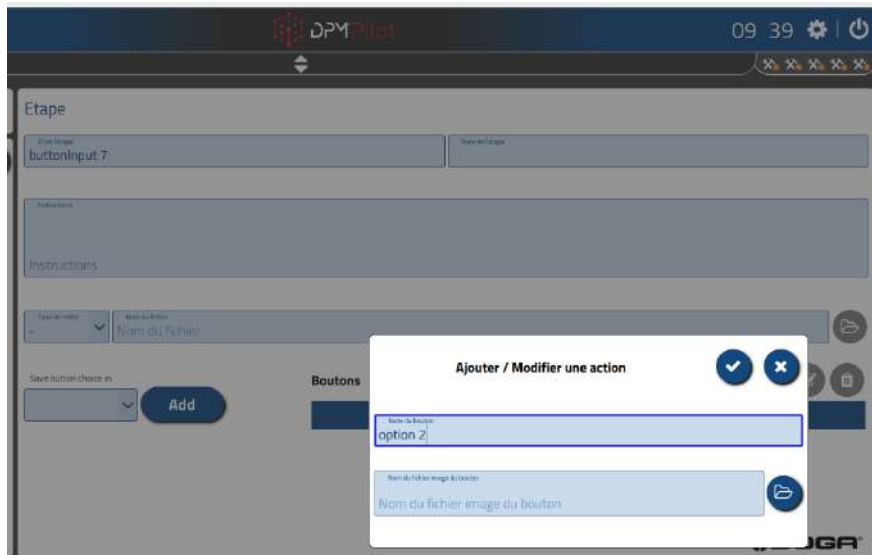
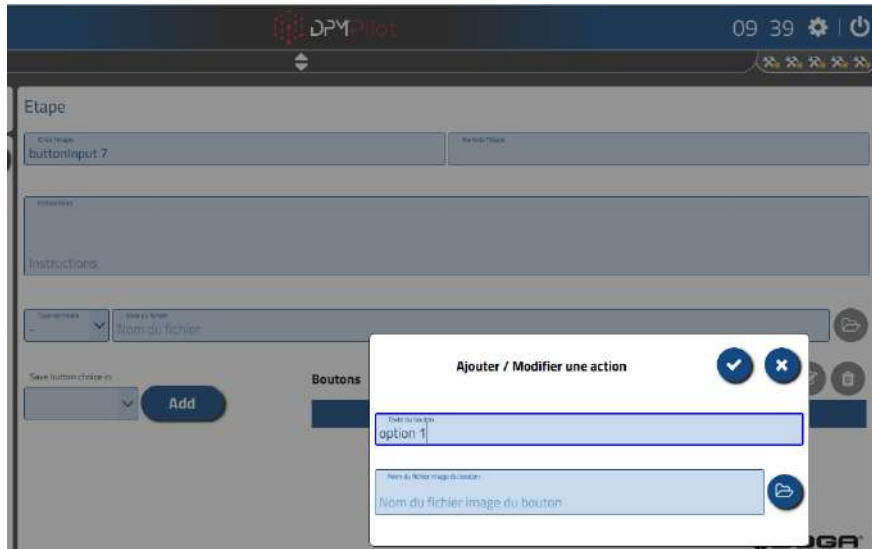
The goal is to save the user's choice among those offered in the button window.

We're going to create a button step that will contain 3 choices to answer the question "Choose from the 3 possible option choices".

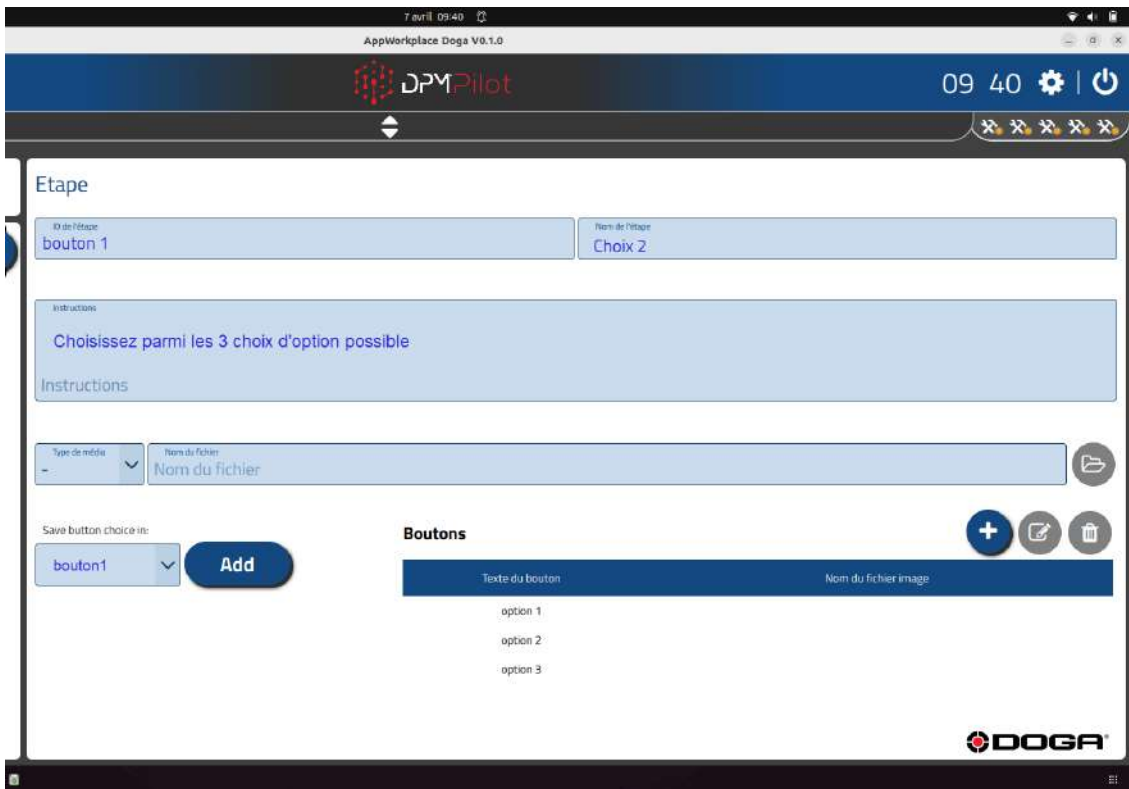
The operator sees the following window when this step is executed:



- **Field 3** The step ID is named as [button 1](#).
- **Field 4** The step is called [choice 2](#).
- **Field 5** The instruction filled in is: [Choose from the 3 possible option choices](#).
- **Field 6** No media is specified.
- **Field 7** We use the `button1` variable that we added beforehand.
- **Field 8** Create 3 buttons by pressing the icon .
 - Button 1 → option 1
 - Button 2 → option 2
 - Button 3 → option 3



Step screen after setup.



4.2.22 Message Step



This step allows you to display a window containing information or instructions in text with or without an image accompanied by a validation button. The validation button can be activated at the end of a time. The message step can be deleted without validation after a configurable time.

There is no choice possible in a message step, its purpose is to provide information or to request an action that only requires validation.

The validation button can be activated from the touch screen or by selection via a mouse connected to DPM®Pilot.

4.2.22.1 Setting up a stage

To place a message step in the sequence:

- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the Editing Tool .
- The settings screen below appears:



No.	Designation	Condition
1	Command saves or exit	
2	Viewing the sequence being edited	
3	Step ID field	REQUIRED FIELD
4	Step name field	REQUIRED FIELD
5	Statement field (allows you to enter the operator statement related to the step). This statement will appear on the execution screen. It is possible to display in the statement the value contained in a variable (choice of the variable by the + icon at the top right of the field window)	
6	Fields to attach media (image / PDF) we select the type of media and the location where the model is located (internal memory or USB stick)	
7	The field for setting the amount of time before the button is active.	
8	The time setup field before the step is automatically validated.	

4.2.22.2 Creation procedure

- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish, you can indicate another one.
- **Field 4** Specify the name of the stage. The field must be filled in It is displayed below the identifier in the synoptics. A self-explanatory name makes it easy to know what the step does.
- **Field 5** Fill in the instruction field to tell the operator what to do in this step.
 - Example:
 - Check the color and validate.
 - Start of the editing sequence.
 - It is possible to use a variable previously defined in the sequence in this field to display its contents. To include the content of the variable in the text, you must write the name of the variable in a double quotation mark or select it from the list of variables already defined by pressing the + icon located at the top right of the instructions field window.
 - Example: The measured length is {{measured length}}
 - If the variable contains 12345
 - The on-screen display at runtime will be: Measured length is 12345
- **Field 6** To be filled in if you want to display an image, PDF, or video when performing the step. If no media is selected, the main window of the operator screen is blank.
- **Field 7** To be filled in if you want the validation button to be active (in blue) after a time (expressed in seconds).
- **Field 8** To be filled in if you want the message step to be validated automatically after a time (expressed in seconds).



4.2.23 Variable value extraction step

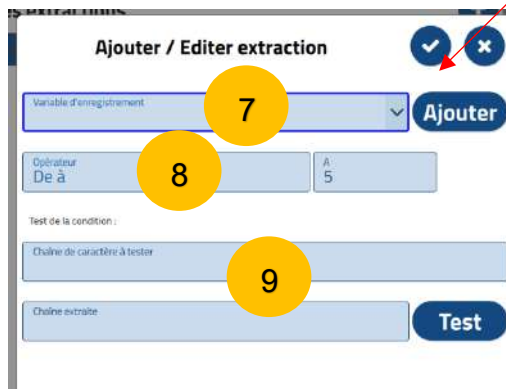
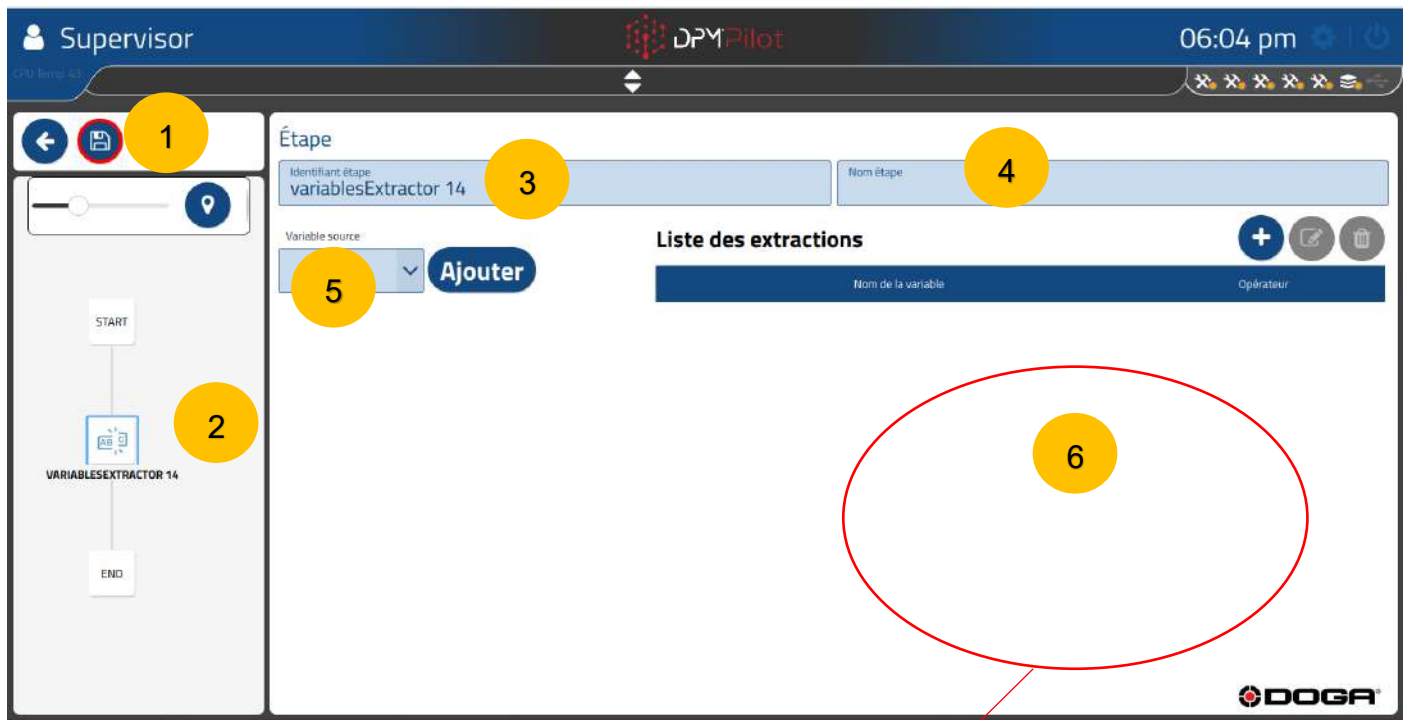
This step extracts numeric or alphanumeric characters from the contents of a variable for later use in the sequence or for printing.

The major use case of an extraction step is to retrieve from the content of a barcode, the part reference without considering the rest of the characters that are not significant or that systematically change such as a serial number that would be combined with the part number.

To orient the assembly sequence, the extraction step must be followed by a downstream switching step.

To place an extraction step in the sequence:

- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the Editing Tool .
- The settings screen below appears:



No.	Designation	Condition
1	Command saves or exit	
2	Viewing the sequence being edited	
3	Step ID field	REQUIRED FIELD
4	Step name field	REQUIRED FIELD
5	A field designating the variable that contains the source value from which the character(s) that will be used in the sequence must be extracted.	
6	Fields to specify the extracted elements	
7	A field to specify the variable that will contain the extracted value	
8	Field to specify the characters to extract (from to)	
9	Field to test the extractor to validate that the selection of extracted characters matches	

4.2.23.1 Creation procedure

- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish, you can indicate another one.
- **Field 4** Specify the name of the stage. The field must be filled in. It is displayed below the identifier in the synoptic. A self-explanatory name makes it easy to know what the step does.
- **Field 5** Specify the name of the source variable from which the content specified in field 6 will be extracted.
- **Field 6** To be filled in to specify the extracted items.
- **Field 7** To be filled in to specify the variable that will be used to store the extracted content.



Information

A variable is a kind of labelled box, where information can be stored for later reference or modification. In computer science, variables are elements that associate a name (the identifier) with a value. The value can be of a different nature: number, text, etc. The variables are physically implanted in the memory of the programmed system (computer, microprocessor board, etc.). A variable contains a value that can vary during the execution of the program, such as the number of activations of a sensor, etc.

In this field, you will need to:

- Either select an existing variable (previously created) or create a new variable by pressing the "Add" key and specify the name you want to give to the variable. The name must be self-explanatory enough to allow you to unequivocally understand the type of information that the variable will contain, such as, e.g., lg measurement, Diversity1, etc.
- **Field 8** To be filled in to specify the characters to be extracted (from - to).
 - You specify the interval to retrieve by specifying the 1st and last ones.
 - 3 character.

Caracter 1	Character 2	Character 3	Character 4	Character 5	Character 6	Character 7
A	B	C	D	1	2	3

Multiple combinations can be extracted from the same source content in a single step. Each extraction is saved in a specific variable.

4.2.23.2 Example of setting up an extraction step

The goal is to record in 2 variables the extraction of the component reference and its serial number, both of which are contained in a single barcode previously recorded through a user input step.

Depending on the component number, the assembly is different and the serial number will be printed.

The content of the barcode has been saved in the `barcodepump` variable it is as follows:

123456SN99999

The reference is `123456`

The serial number is `99999`

The extraction of the reference will be placed in the `refpump` variable


The extraction of the serial number will be placed in the `SNpump` variable

A diverter step will need to be placed downstream of the extraction step to direct the sequence according to the reference.

A print step will need to be placed downstream of the pull step to print.

- **Field 3** Indicate the identifier: `Extractionpump`
- **Field 4** Indicate the name of the step: `Extraction Pump Reference`
- **Field 5** Specify the name of the source variable: `barcodepump`



- **Field 6** We will create 2 extractions by pressing on the icon .

1st extraction, we want to recover the first 6 characters corresponding to the reference:

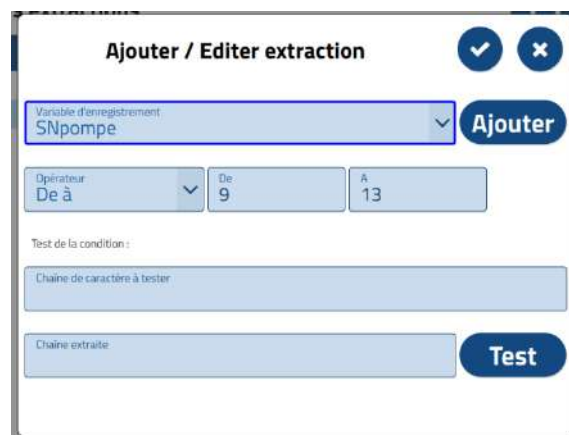
Car 1	Car 2	Car 3	Car 4	Car 5	Car 6	Car 7	Car 8	Car 9	Car 10	Car 11	Car 12	Car13
1	2	3	4	5	6	S	N	9	9	9	9	9

- **Field 7** We indicate the destination variable of the 1st **pump extraction** and the characters to be extracted from **1 to 6**



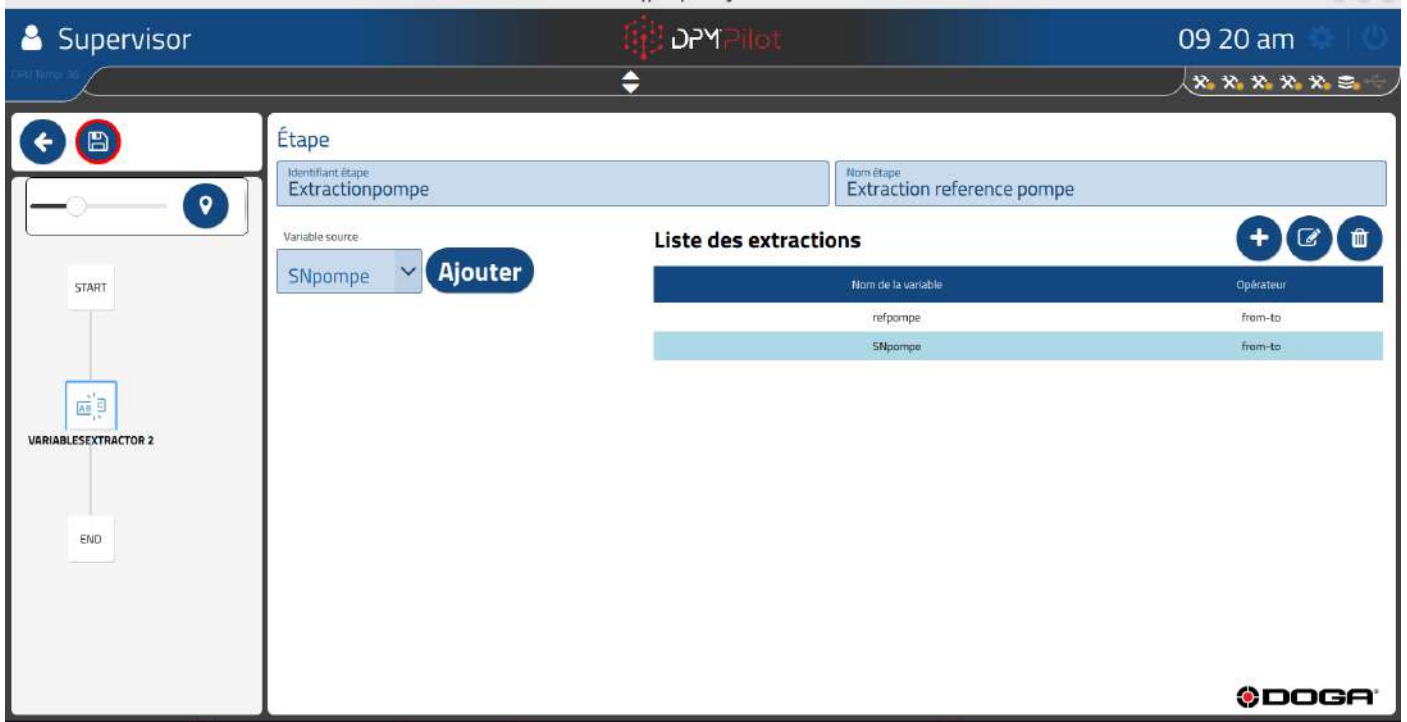
2nd extraction, we want to recover the last 5 characters corresponding to the reference:

Car 1	Car 2	Car 3	Car 4	Car 5	Car 6	Car 7	Car 8	Car 9	Car 10	Car 11	Car 12	Car13
1	2	3	4	5	6	S	N	9	9	9	9	9



- **Field 7** We indicate the destination variable of the 2nd extraction **SNpompe** and the characters to be extracted from **9 to 13**

Extraction example screen



4.2.24 Switch step.

This step makes it possible to orient the sequence according to information previously recorded in a variable during a step placed upstream in the synoptic diagram of the sequence.

The switch step must be preceded by an operator input step, a button step or an extraction step in which the variable tested in the switch will have been filled in.

The switch step can direct the sequence to several destinations. This destination can be in the main branch towards a downstream stage of the switch or in a sub-branch.



A default destination is specified, to avoid deadlocks in the event of an error in the setting of the upstream steps.

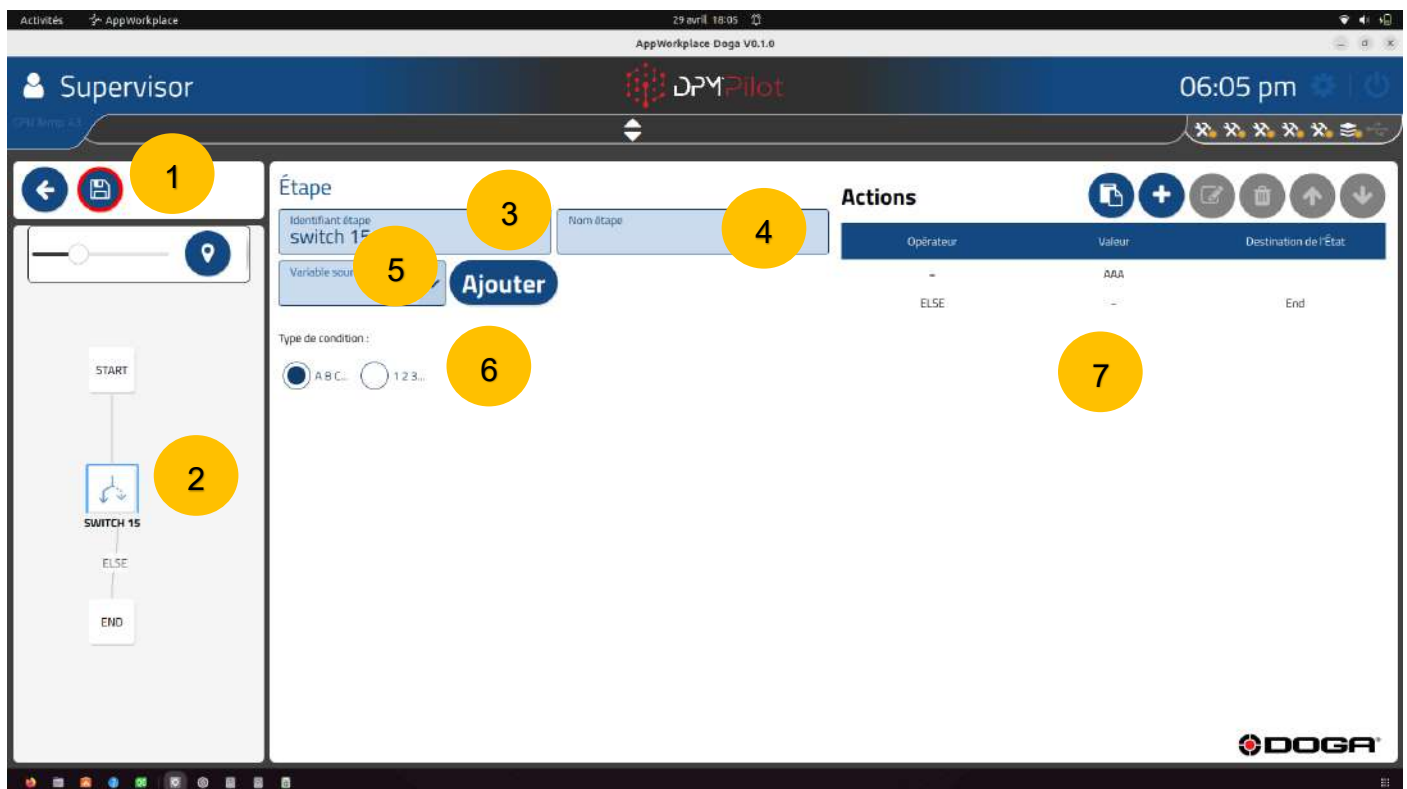


ATTENTION

ATTENTION! THE DESTINATION MUST NOT BE AN UPSTREAM STEP THAT HAS ALREADY BEEN MADE.

To place a switch step in the sequence:

- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the editing tool .
- The settings screen below appears:



No.	Designation	Condition
1	Command saves or exit	
2	Viewing the sequence being edited	
3	Step ID field	REQUIRED FIELD
4	Step name field	REQUIRED FIELD
5	A field that designates the variable that contains the value analysed in the switch to direct the sequence	
6	Fields to specify the type of condition to apply to the variable content (numeric or alphanumeric) <ul style="list-style-type: none"> The action parameters will depend on the choice 	
7	<ul style="list-style-type: none"> Field to specify the destinations of the switch based on the test on the variable content 	

4.2.24.1 Creation procedure

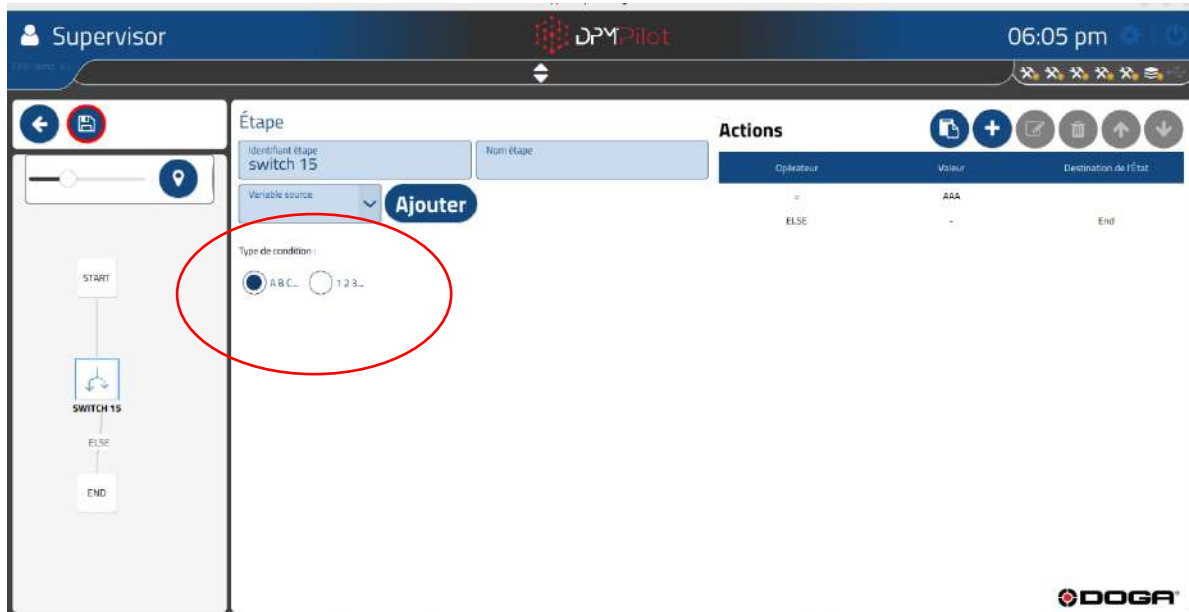



Information


To facilitate the configuration of the switch steps, it is recommended to have an easily understandable identification of all the steps in the sequence by having explicitly named the role of each step.

Case 1: The switch directs the sequence in the main branch.

- Before setting up the switching stage, it is necessary that the downstream stages, in particular the destination stages, are placed.
- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish, you can indicate another one.
- **Field 4** Specify the name of the stage. The field must be filled in. It is displayed below the identifier in the synoptic. A self-explanatory name makes it easy to know what the step does.
- **Field 5** Specify the name of the variable whose content is to be analysed.
- **Field 6** Specify the conditions to apply to the content of the variable (numeric or alphanumeric).

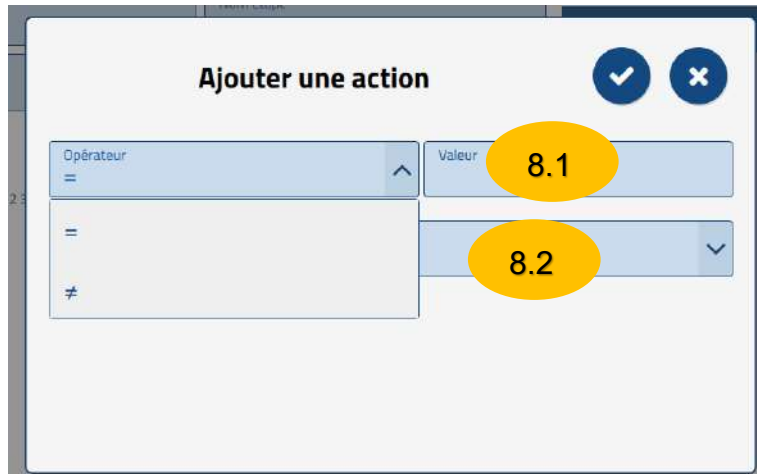


- ABC → alphanumeric condition
 - Operator = or ≠
 - 123 → Numerical condition
 - Operator = ≠ > < ≤ ≥ <...<
- **Field 8** Create the actions performed by the switch.
- Create the conditions by tapping the icon .

 **Information**
 2 default destinations are already present.
 The destination designated ELSE is a default destination not to be deleted, it allows in case of unexpected content in the tested variable to direct the sequence to the end step. This destination can be changed.
 The 2nd destination must be modified and will serve as the 1st destination for the switch.

If the **alphanumeric** condition was chosen in field 6:

- The screen below appears:



- Select the carrier you want to apply.
- Enter the target value in field 8.1 "Value".
- Select the destination that will be reached if the test is OK in field 8.2.

If the **numerical** condition was chosen in field 6:

- The screen below appears:

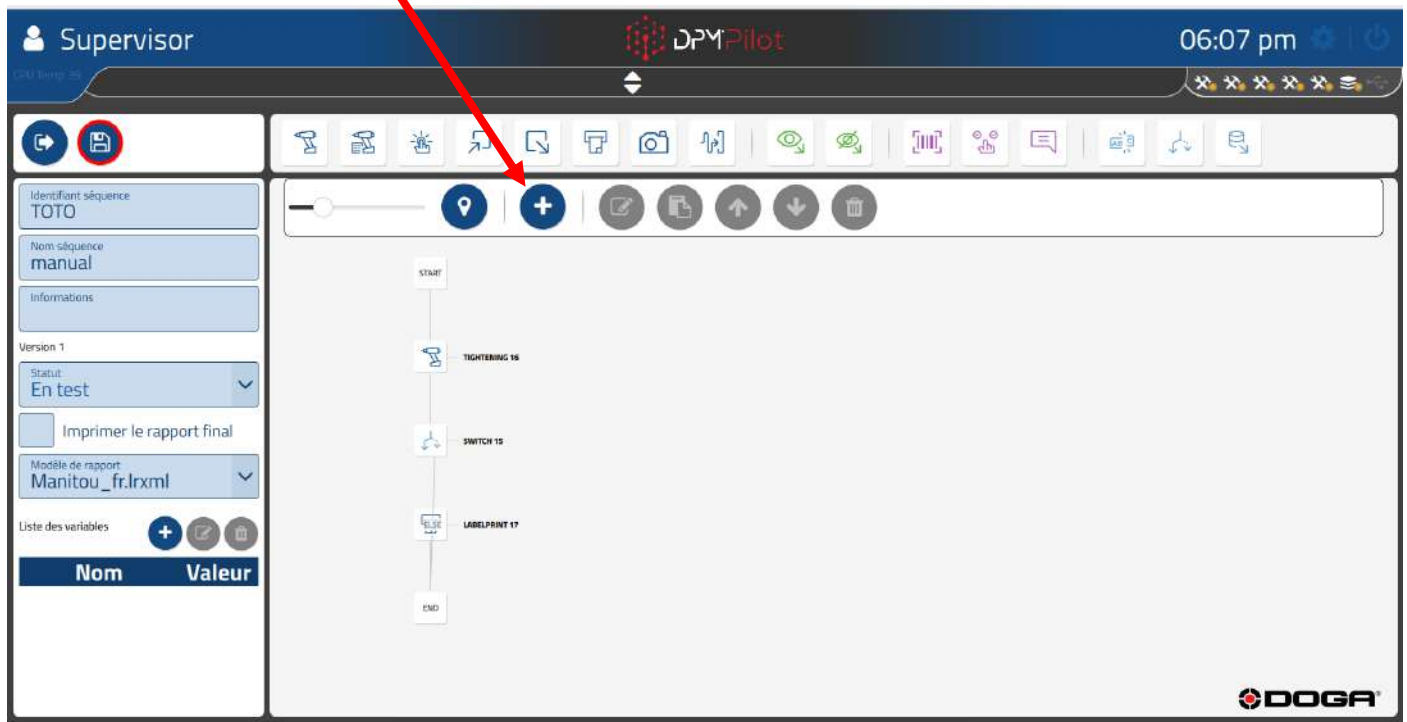


- Select the carrier you want to apply.
- Enter the target value in field 8.1 "Value".
- Select the destination that will be reached if the test is OK in field 8.2.

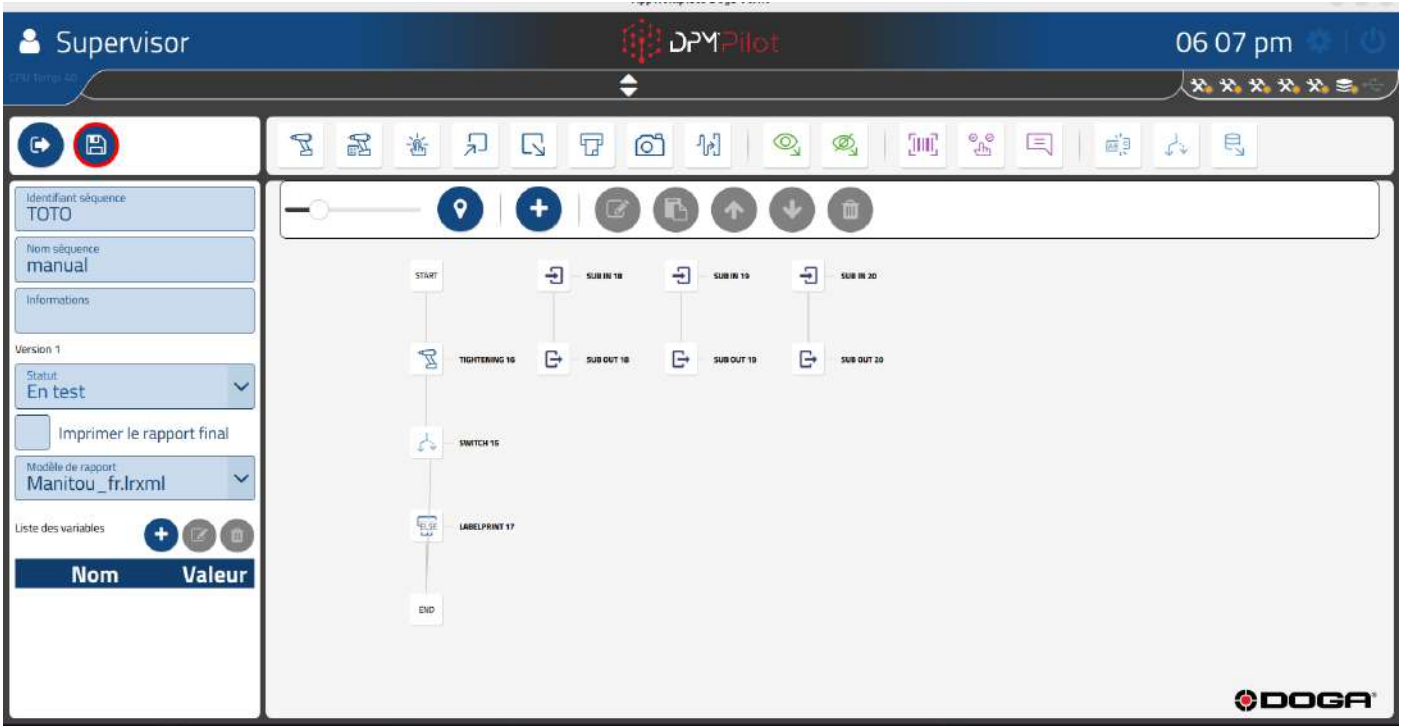
Case 2: The switch directs the sequence in one or more sub-branches.

- Beforehand, it is necessary to create the sub-branches containing the steps towards which the switch will direct the sequence.
- To create a subbranch:

- Tap the icon  on the screen showing the sequence diagram.



Below is the screen after the creation of 3 sub-branches:



- Then set up the branches to include the necessary steps.

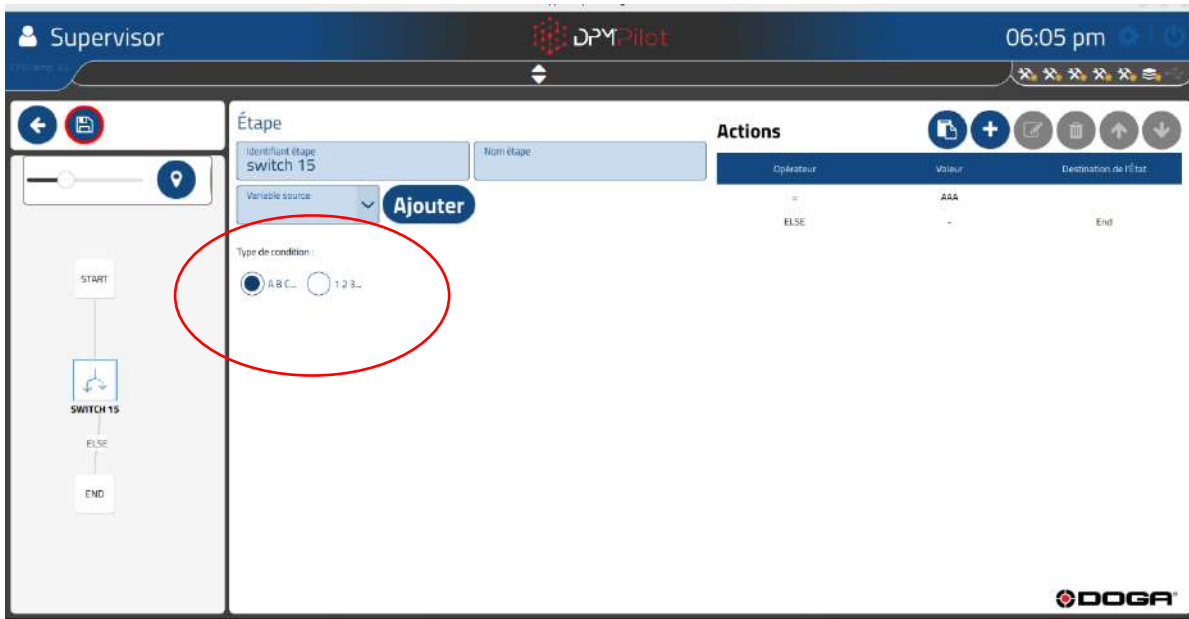



Information

A subbranch represents a sequence of steps that will only be executed if a switch in the main branch directs the sequence towards them.

These are not sequences that will run in parallel.

- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish, you can indicate another one.
- **Field 4** Specify the name of the stage. The field must be filled in. It is displayed below the identifier in the synoptic. A self-explanatory name makes it easy to know what the step does.
- **Field 5** Specify the name of the variable whose content will be analysed.
- Specify the conditions to apply to the content of the variable (numeric or alphanumeric).



- ABC → alphanumeric condition
 - Operator = or ≠
 - 123 → Numerical condition
 - Operator = ≠ > < ≤ ≥ <...<
- **Field 8** Create the actions performed by the switch.
- Create the conditions by tapping the icon .

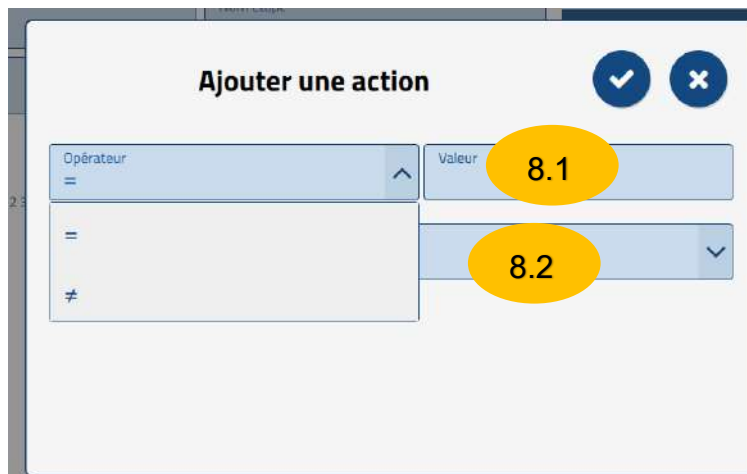


Information

2 default destinations are already present. The destination designated ELSE is a default destination not to be deleted, it allows, in case of unexpected content in the tested variable, to direct the sequence to the end step. This destination can be changed. The 2nd destination must be modified and will serve as the 1st destination for the switch.

If the **alphanumeric** condition was chosen in field 6:

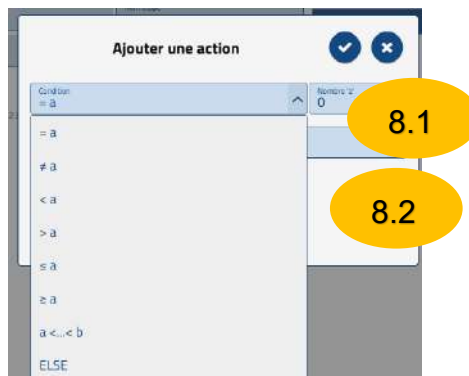
- The screen below appears:



- Select the carrier you want to apply.
- Enter the target value in field 8.1 "Value".
- Select the destination that will be reached if the test is OK in field 8.2.

If the **numerical** condition was chosen in field 6:

- The screen below appears:



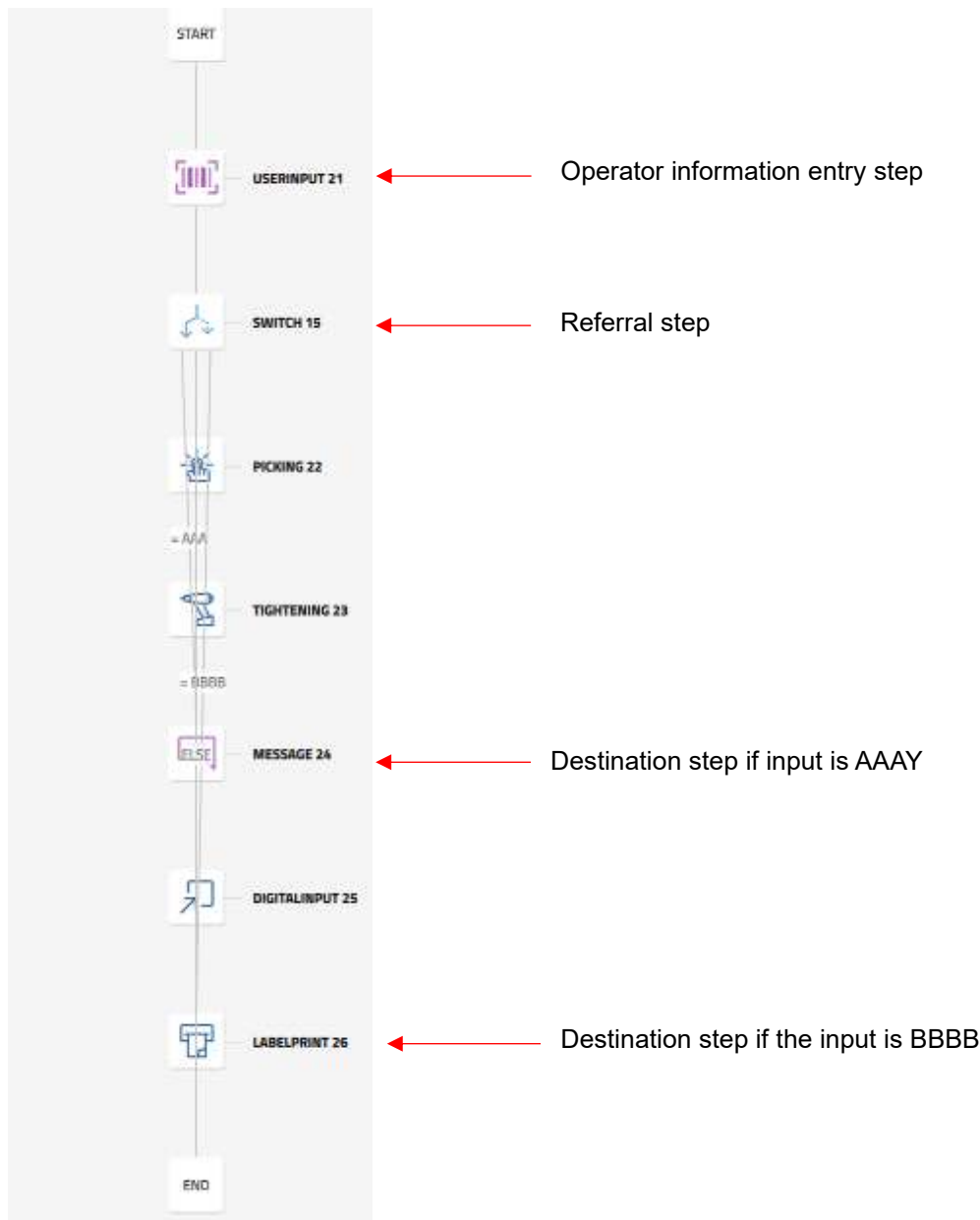
- Select the carrier you want to apply.
- Enter the target value in field 8.1 "Value".
- Select the destination that will be reached if the test is OK in field 8.2.

4.2.24.2 Example of setting up a turnout step directing the sequence in the main branch

We will create a switch in the main branch that will direct the sequence to downstream steps based on the input made by the user in an operator information entry step placed upstream of the switch.

- The content of the choice will be placed in the variable **CB**
- The CB variable will be evaluated to determine the orientation of the sequence.
- If CB contains **AAAA** then the turnout will direct the sequence to the downstream Step [Message 24](#)
- If CB contains **BBBB** then the turnout will direct the sequence to the downstream step [Labelprint 26](#)

The sequence is as follows:





You select the switching step to set it up (by pressing the icon).

We select the default destination in field 7 (we will choose END).

2 referral destinations are added in field 8:

- Choice of operator = for both
- If the variable • If CB contains AAAA, the switch will direct the sequence to the downstream step Message 4

Ajouter une action [✓] [✕]

Opérateur = Valeur AAAA

Etape de destination message 24

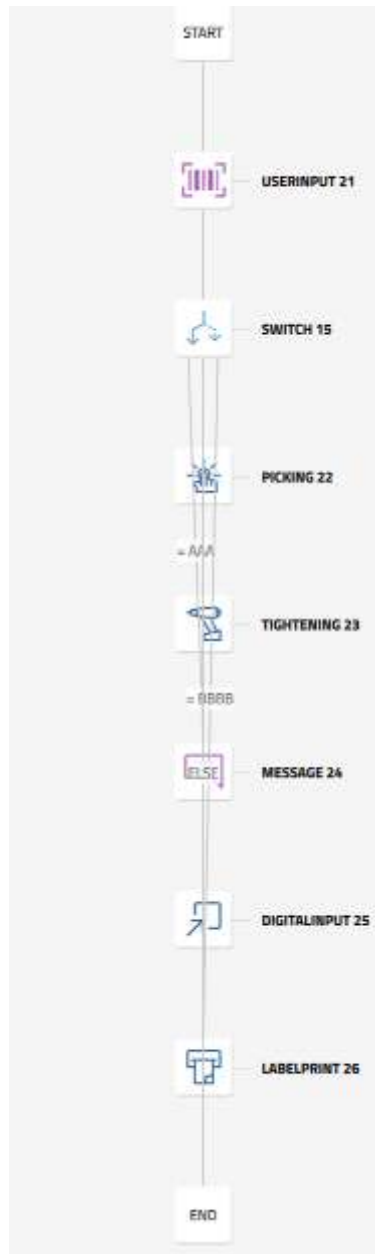
- If the CB variable contains BBBB, the turnout will direct the sequence to the downstream Labelprint 26 step

Ajouter une action [✓] [✕]

Opérateur = Valeur BBBB

Etape de destination labelPrint 26

Once the configuration was made, the synoptic diagram evolved as follows:



- Arrows connect the switch to the destinations.

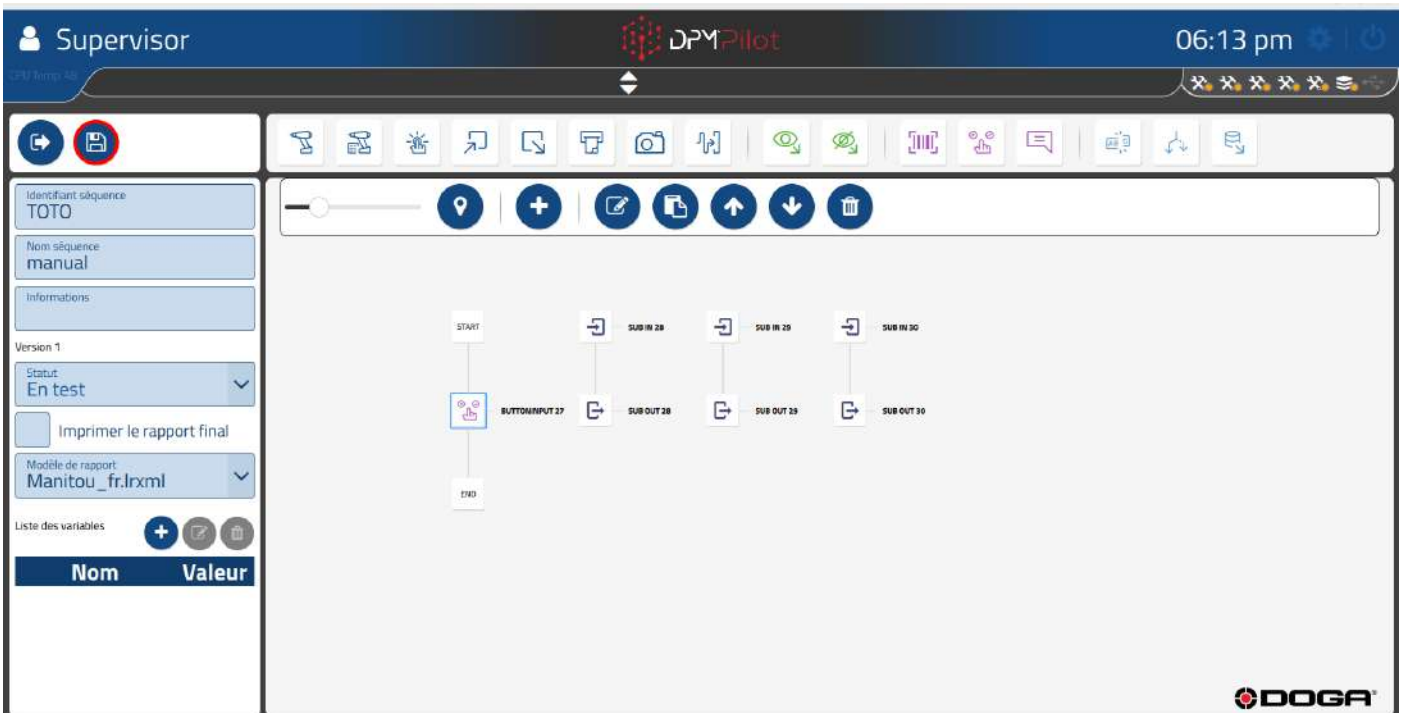
4.2.24.3 Example of setting up a turnout step directing the sequence in sub-branches

We'll create a turnout in the main branch that will direct the sequence to one of the sub-branches based on the choice made by the user in a button step placed upstream of the turnout.

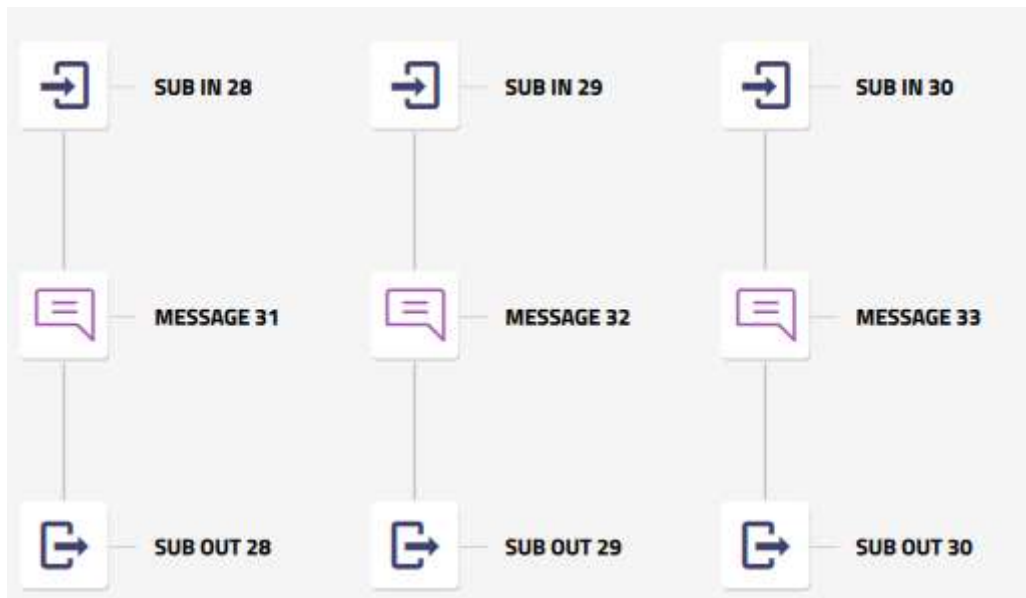
The button step will contain 3 choices:

- Choice 1
- Choice 2
- Choice 3
- The content of the choice will be placed in the variable `button`.
- The `button variable` will be evaluated to determine the orientation of the sequence.
- Choice 1 will direct the sequence to the Sub in 28 subbranch.
- Choice 2 will direct the sequence to the Sub in 29 subbranch.
- Choice 3 will direct the sequence to the Sub in 30 subbranch.
- At the end of the execution of the subbranch, the return is made to the END step of the main branch.

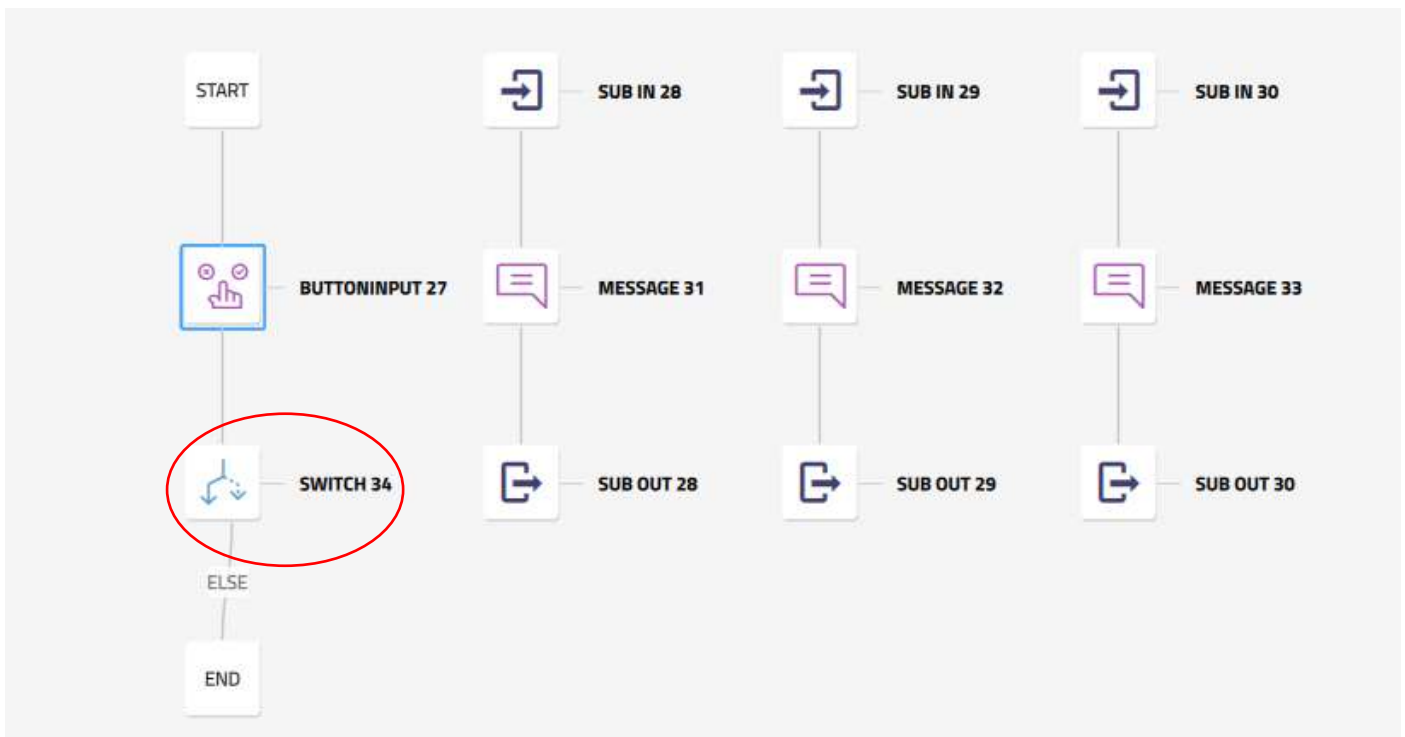
We start by creating the 3 sub-branches:




Then we set the content of the 3 sub-branches. For the example, we incorporate a message step.



Once the sub-branch settings have been completed, the switching step is placed in the main branch.



You select the switching step to set it up (by pressing the icon ).

3 referral destinations are added in field 8:

- If the button variable contains "choice 1", the switch will direct the sequence to the Sub in 28 subbranch.

Editer l'action

Opérateur =

Valeur choix 1

Etape de destination Sub in 28

- If the button variable contains "choice 2", the switch will direct the sequence to the Sub in 29 subbranch.

Ajouter une action

Opérateur =

Valeur choix 2

Etape de destination Sub in 29

- If the button variable contains "choice 3", the switch will direct the sequence to the Sub in 30 subbranch.

Ajouter une action

✓
✕

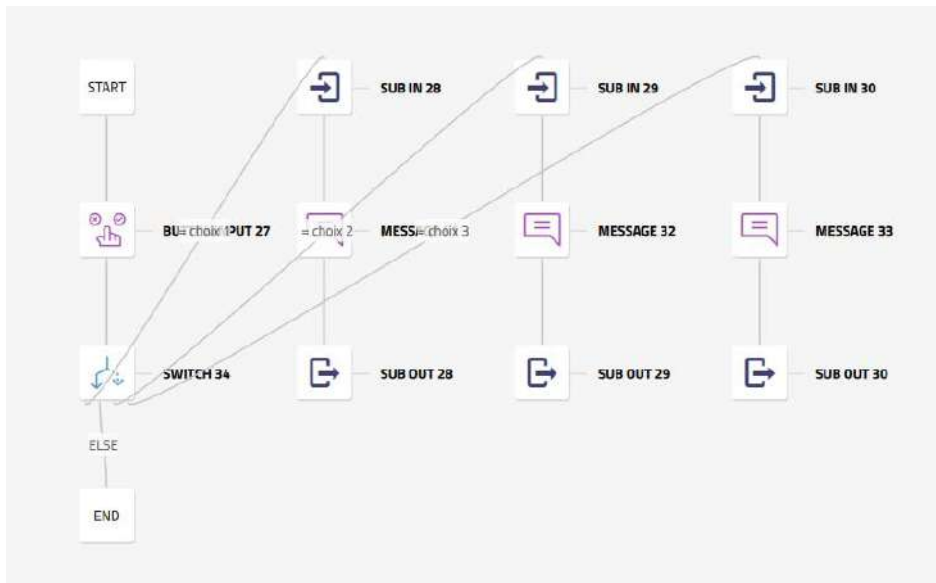
Opérateur
=

Valeur
choix 3

Etape de destination
Sub in 30


Once the configuration was made, the synoptic evolved as follows:

- Arrows connect the switch to the destinations.



It remains to direct the return of each sub-branch to the END stage of the main branch.

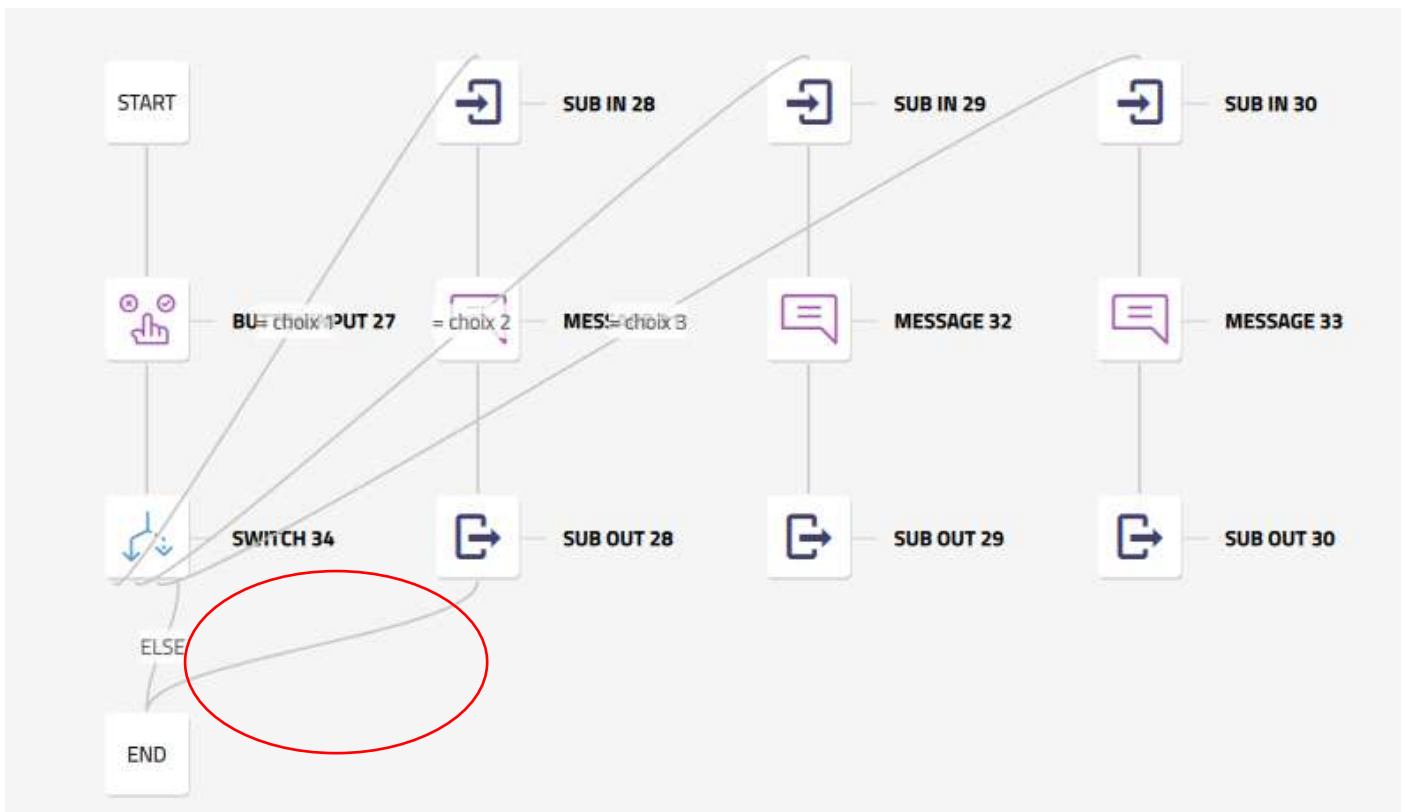
To do this:


- Select the Sub out 28 step, and then select the edit icon .
- Select the END destination.

Étape	
Identifiant étape Sub out 28	Nom étape
Étape de destination End	

Once the configuration was made, the synoptic evolved as follows:

- An arrow connects the subbranch end step to the END destination.

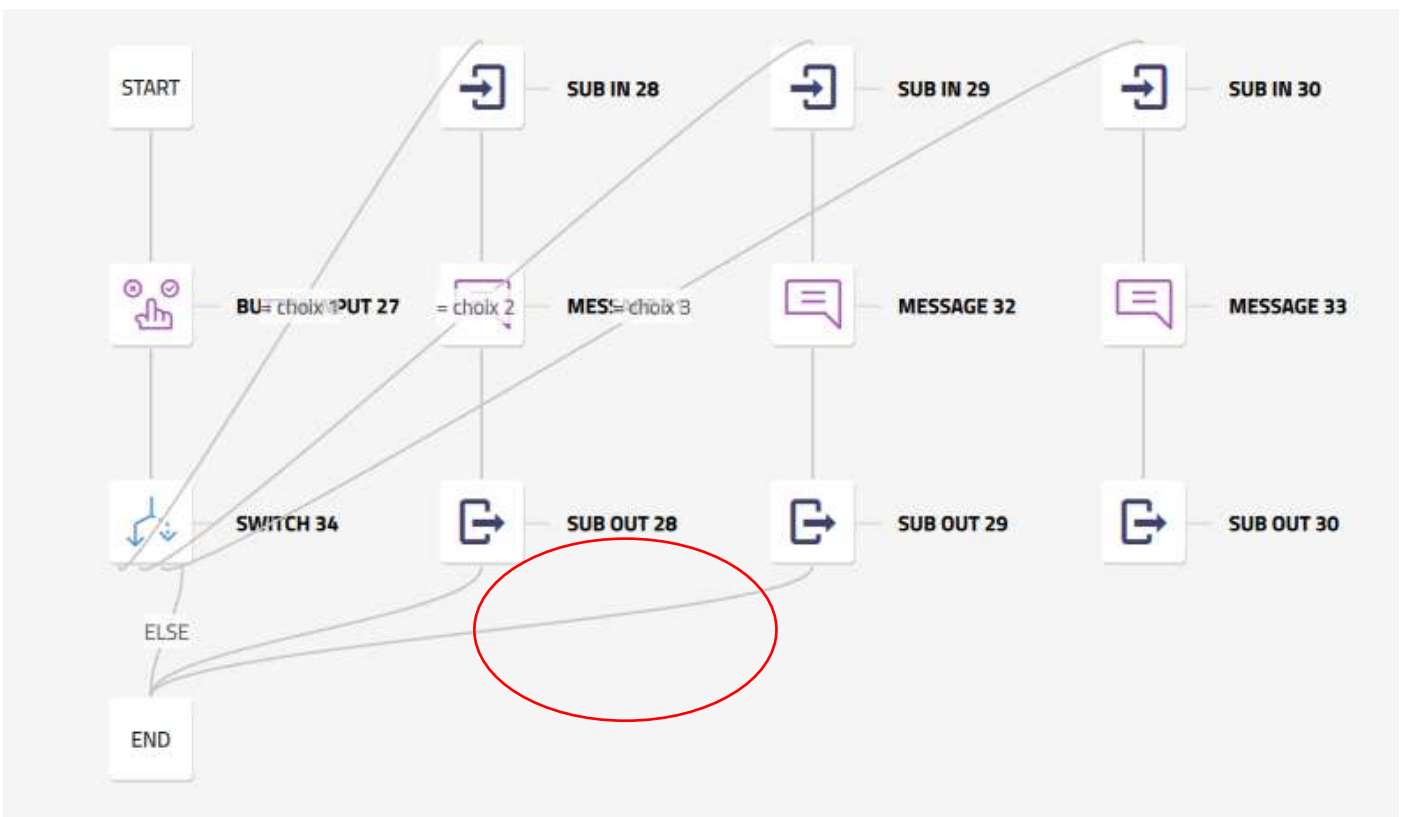



- Select the Sub out 29 step, and then select the edit icon .
- Select the END destination.

Étape	
Identifiant étape Sub out 29	Nom étape
Étape de destination End	

Once the configuration was made, the synoptic diagram evolved as follows:

- An arrow connects the end step of the subbranches to the END destination.

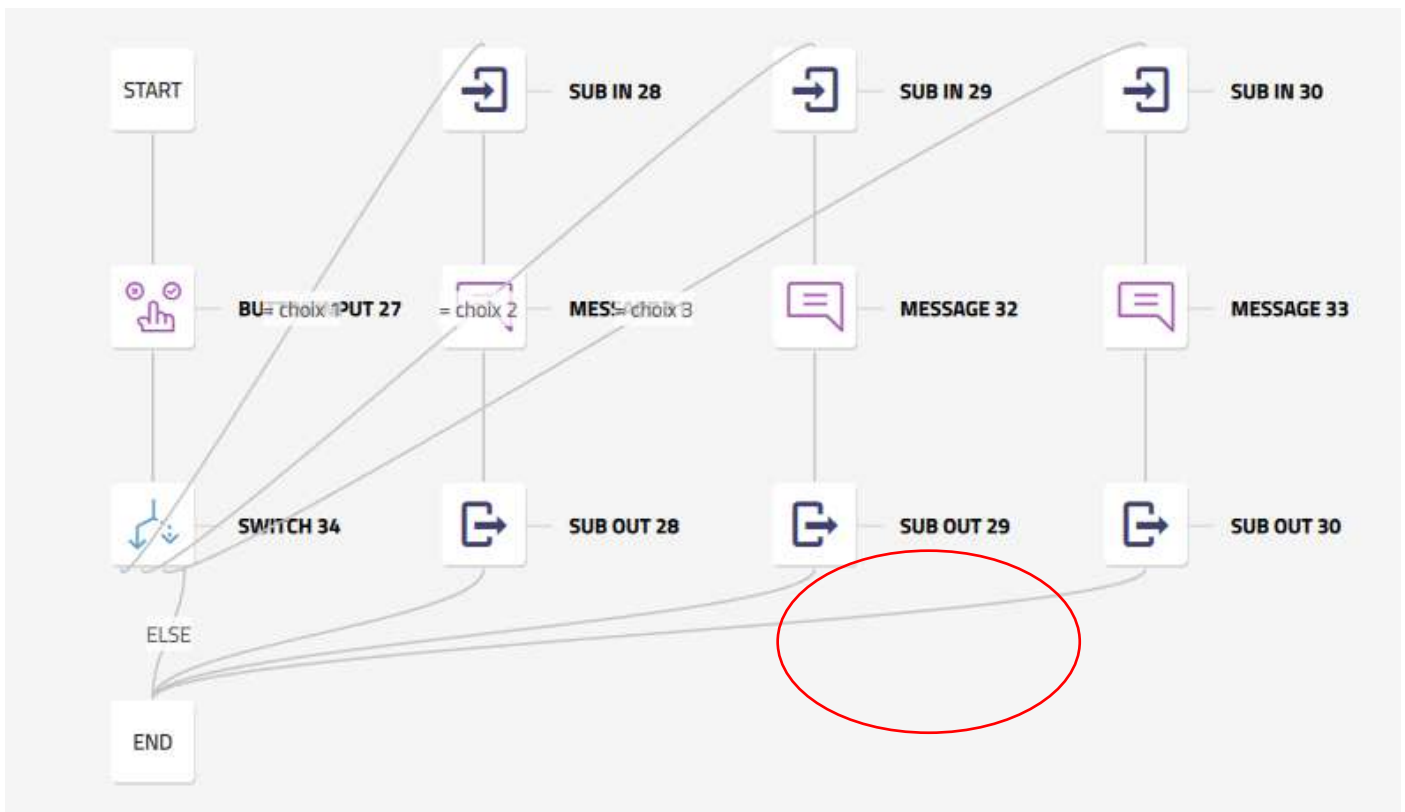


- Select the Sub out 30 step, and then select the Edit icon .
- Select the END destination.

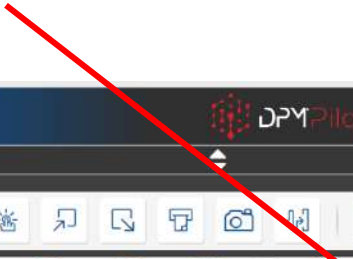
Étape	
Identifiant étape Sub out 30	Nom étape
Étape de destination End	

Once the configuration was made, the synoptic diagram evolved as follows:

- An arrow connects the end step of the subbranches to the END destination.



For better readability, it is possible to place the sub-branches higher or lower in the sequence graph using the keys



Supervisor DPM Pilot 10 49 am

Identifiant séquence

Nom séquence

Informations

Version 0

Statut: **En test**

Imprimer le rapport final

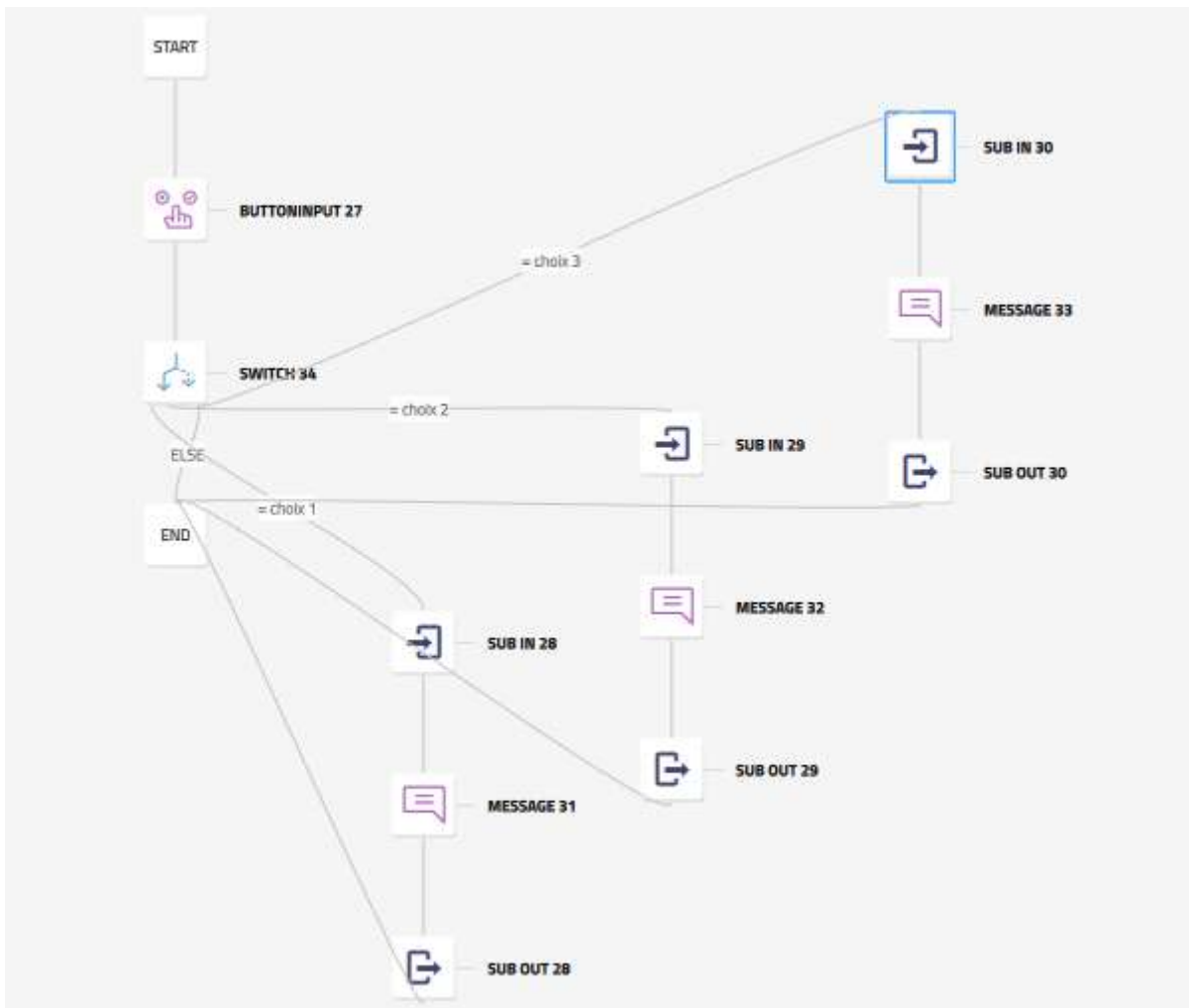
Modèle de rapport: **Manitou_fr.lxml**

Liste des variables

Nom	Valeur
SNpompe	
refpompe	
codebarrepompe	

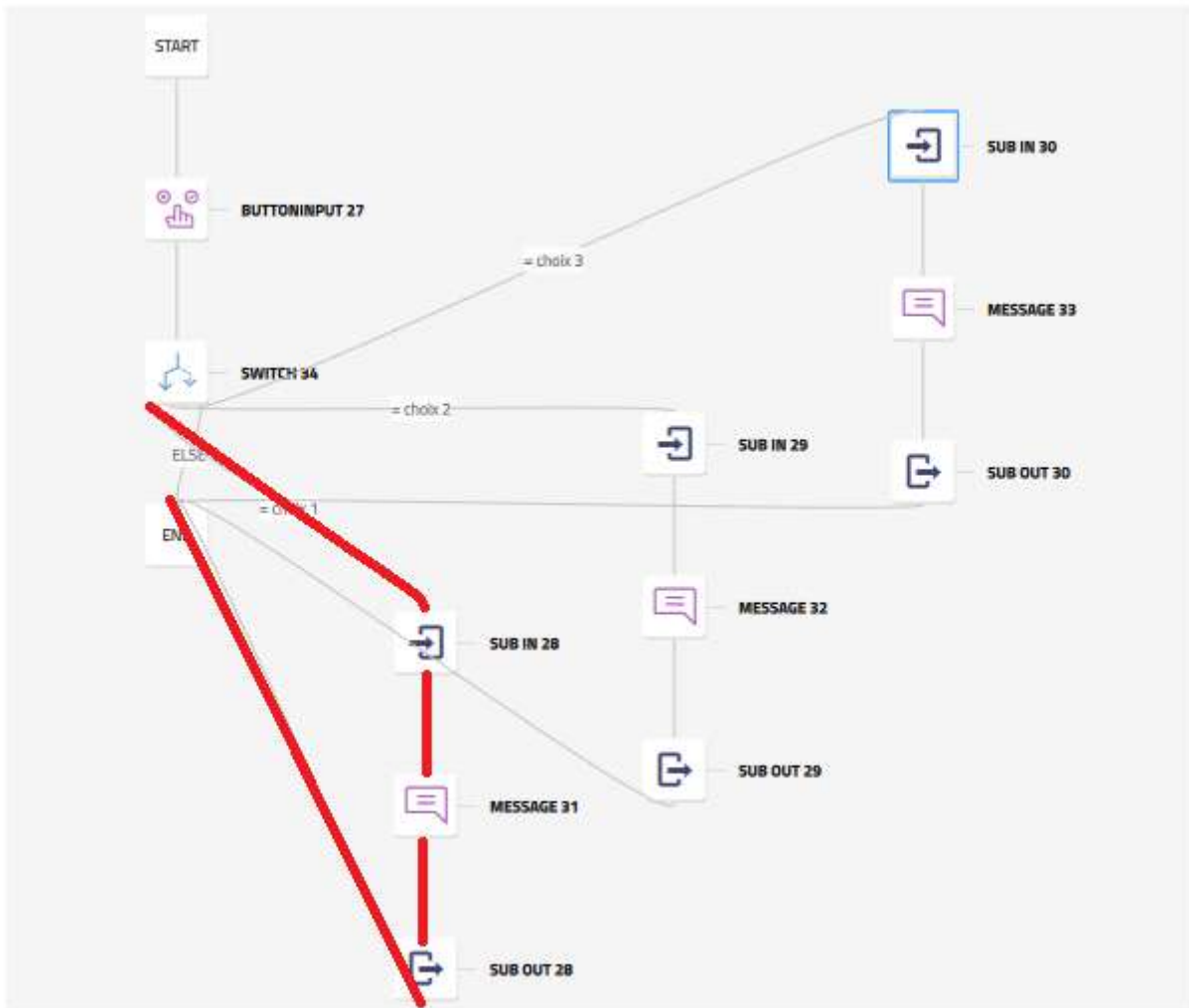
📍
+
📝
📄
⬆️
⬇️
🗑️

DOGA®



When executing the sequence:

- For example, if the user selects "choice 1" in the button step, the sequence will proceed as follows:





The other 2 sub-branches will not be unrolled.

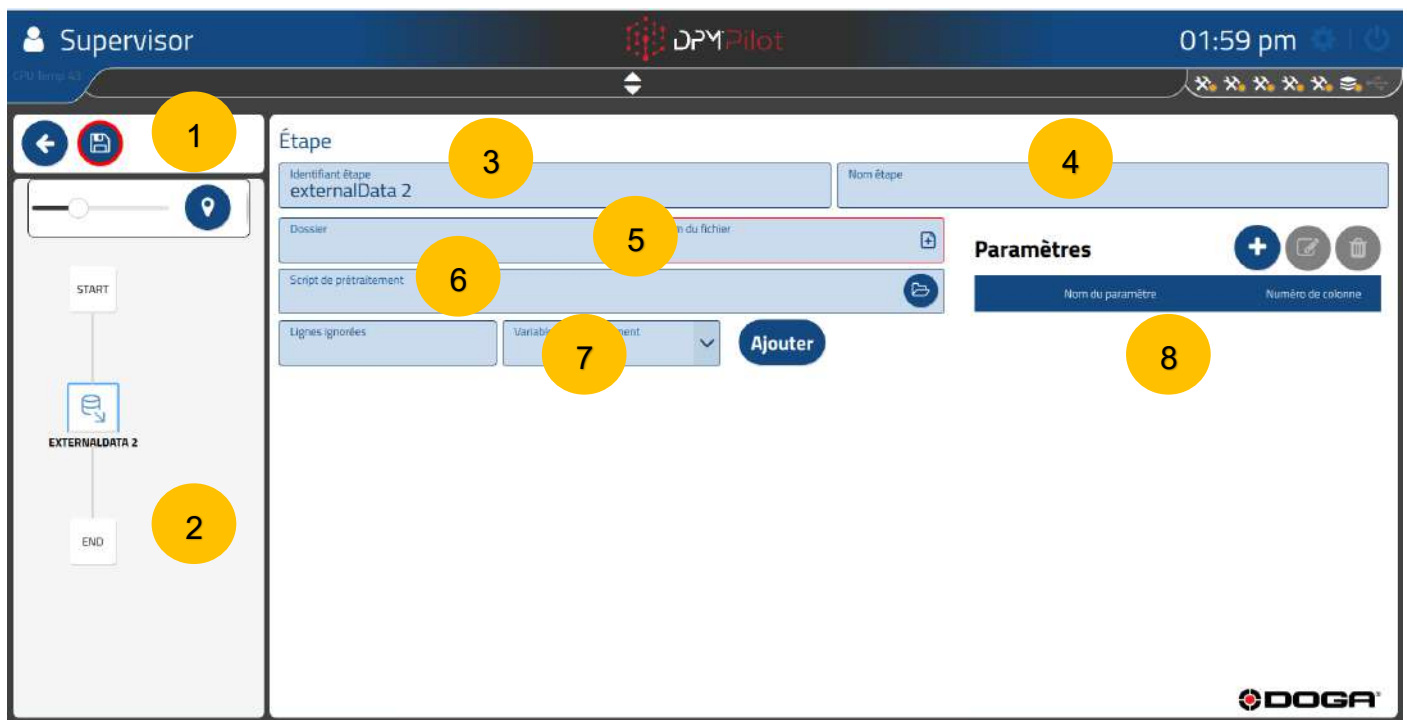
4.2.25 Working with external data step

This step is used to extract data from a file that is used in the parameterization of a screwing step with external data. The extracted data is saved in a variable.

This step must precede the tightening step with external data .

To place a use external data step in the sequence:

- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the editing tool .
- The settings screen below appears:



No.	Designation	Condition
1	Command saves or exit	
2	Viewing the sequence being edited	
3	Step ID field	REQUIRED FIELD
4	Step name field	REQUIRED FIELD
5	The setting field for the location of the file containing the data	
6	A field designating the specific data extraction script (the script must have been completed beforehand)	
7	A field to specify the variable that will contain the extracted data	
8	Field for setting up links between the location of the data and its correspondence with the expected parameters	

4.2.25.1 Creation procedure

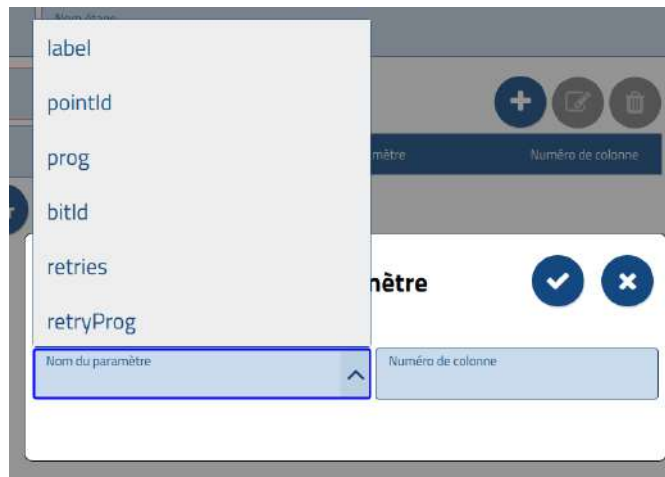
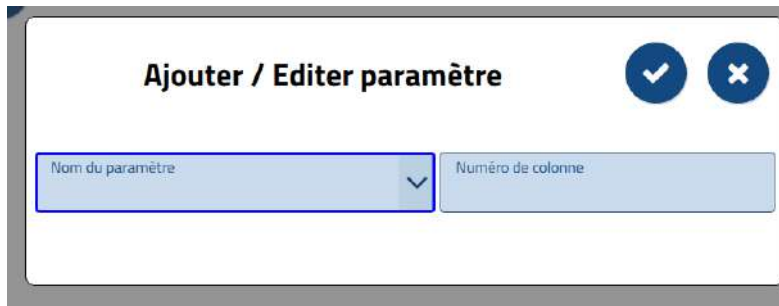
- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish, you can indicate another one.



Information

Each step must have its own identifier.
There cannot be multiple steps with the same identifier.

- **Field 4** Specify the name of the stage. The field must be filled in. It is displayed below the identifier in the synoptic. A self-explanatory name makes it easy to know what the step does.
- **Field 5** Select the location of the file to use.
- **Field 6** Select the script to use to do the extraction.
 - The use of a script is only necessary if the location or data contained in the file is not exactly in the format and location expected.
 - The script must be available on an external memory medium (USB stick).
- **Field 7** Specify the variable to use to store data in DPM@Pilot.
- **Field 8** Specify the mappings between the parameters and column numbers in the source file or the one generated by the script.





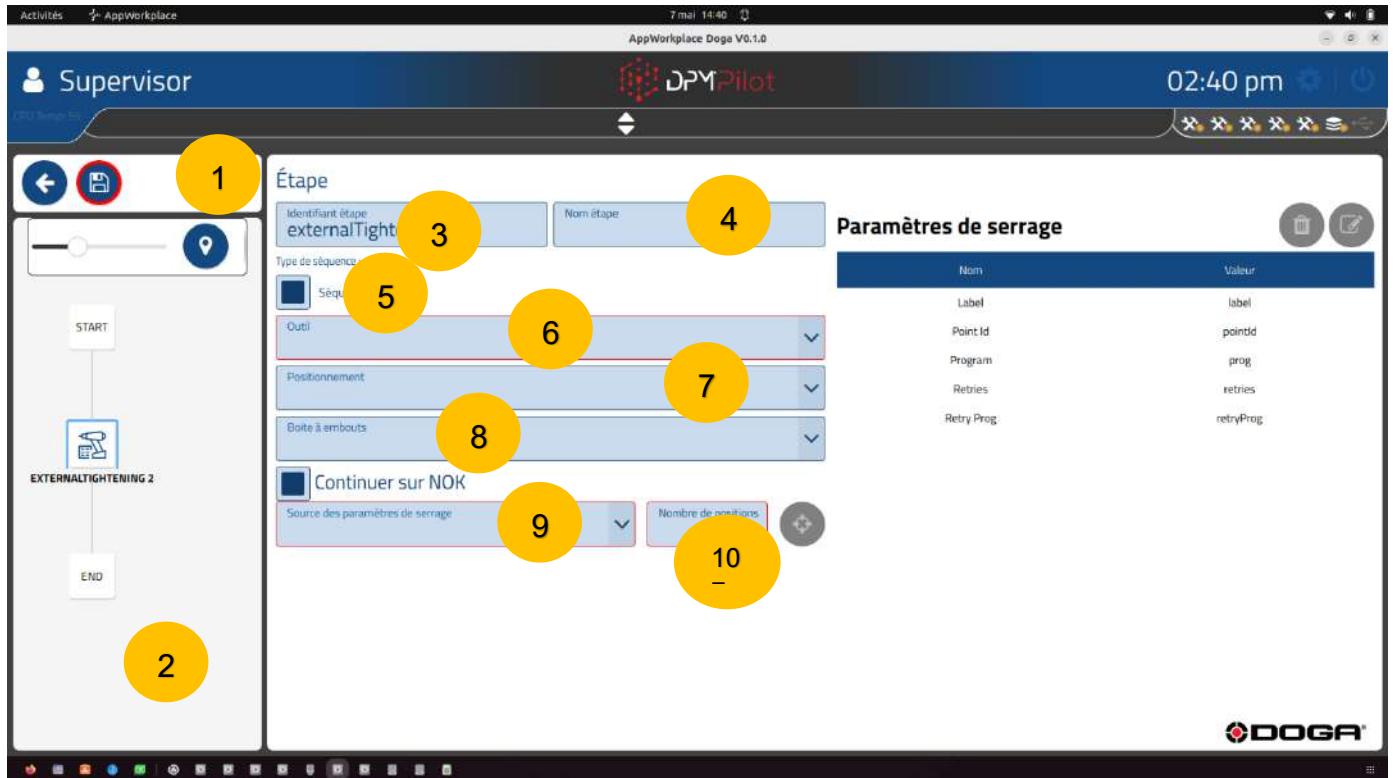
Parameter	Designation
label	Tightening point name
pointid	Point ID
Prog	No. of the tightening program to be used
bitid	Identifier of the bit to be used
retries	Number of tests possible in case of NOK tightening
retryProg	No. of the assembly program to be used for repeat tightening

4.2.26 Tightening step with external data

This step allows you to make assembly using the parameters previously extracted by a step of using external data.

To place an external data work step in the sequence:

- Select the icon  with the mouse or on the touchscreen.
- Place the step in the branch of the sequence where you want it (drag and drop action).
- Select the step (an outline appears).
- Select the editing tool .
- The settings screen below appears:



No.	Designation	Condition
1	Command saves or exit	
2	Viewing the sequence being edited	
3	Step ID field	REQUIRED FIELD
4	Step name field	REQUIRED FIELD
5	A field that indicates whether actions in the step are executed sequentially	
6	The field that identifies the tightening tool to be used. The list of available tools appears. The declaration and configuration of the tools is done from the MANDATORY FIELD configuration menu	REQUIRED FIELD
7	Field designating the device used for position control the list of available tools appears. The declaration and configuration of the tools is done from the configuration menu. If there is no position control required, do not fill in anything	
8	Field designating the socket tray or bit socket tray used the list of available tools appears. The declaration and configuration of the tools is done from the configuration menu. If there is no bit or socket selection check required, leave blank	
9	A field that specifies the variable that contains the parameters (this variable is the one specified in the use external data step as the location to save the data from the source file that contains the data to be used)	
10	Field designating the number of points to be made in the step	

4.2.26.1 Creation procedure

- **Field 3** Specify the stage ID. The default ID can be maintained. If you wish; You can indicate another one.



Information

Each step must have its own identifier.
There cannot be multiple steps with the same identifier.

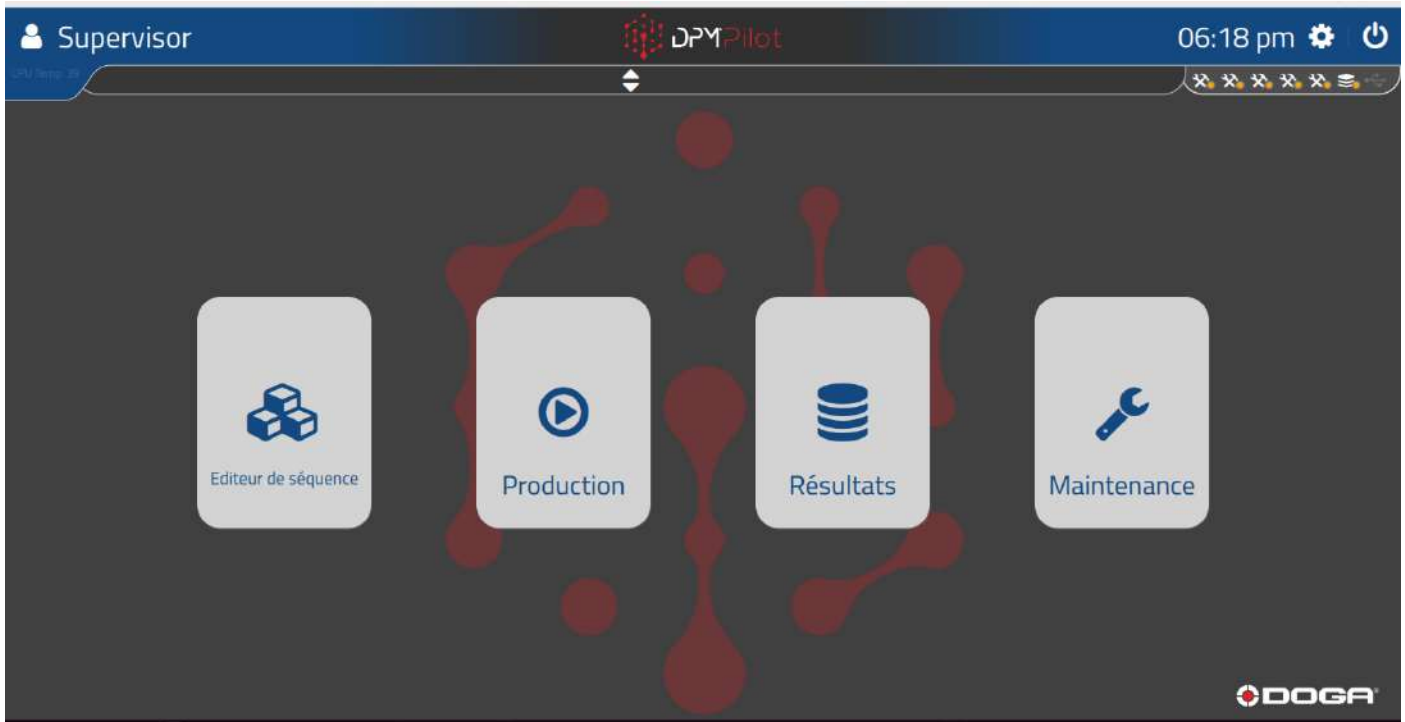
- **Field 4** Specify the name of the stage. The field must be filled in. It is displayed below the identifier in the synoptic. A self-explanatory name makes it easy to know what the step does.
- **Field 5** To be unchecked for a NON-sequential sequence of actions. The operator will have the choice to make them in the order he wishes. However, if a positioning tool is used, the tightening tool will only be activated if it is in an authorized position.
- **Field 6** Specify the tightening tool to use from one of the tools in the list.
- **Field 7** If you want a check of the tightening positions, specify a tool. If no tools are selected, the screwing will be done without a position check.
- **Field 8** If you want to make tightening conditional on the use of a bit, specify a tool. If no tools are selected, the screwing will be done without control of the use of the bit.
- **Field 9**. Select the variable that contains the parameters you want to use.
- **Field 10** Indicate the number of points.

5 PRODUCTION



Information

Access to this menu from the main screen is available only to users with the privilege to execute a sequence.



Main screen view

To access the sequence execution in production, you must select the "Production" tile



or use the barcode %OPERATION

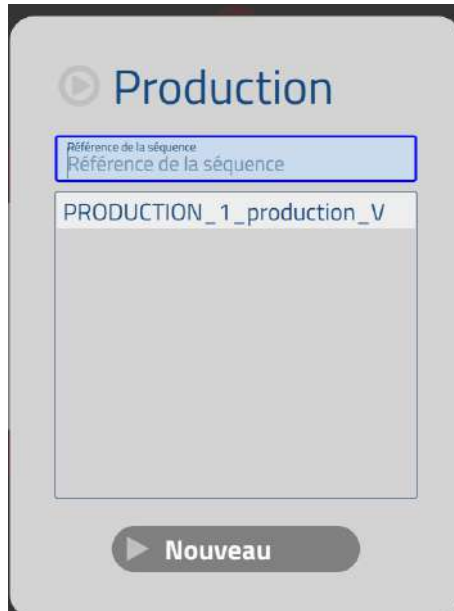
To return to the main screen:

- Tap outside the editor window or use the %MAIN_SCREEN barcode.

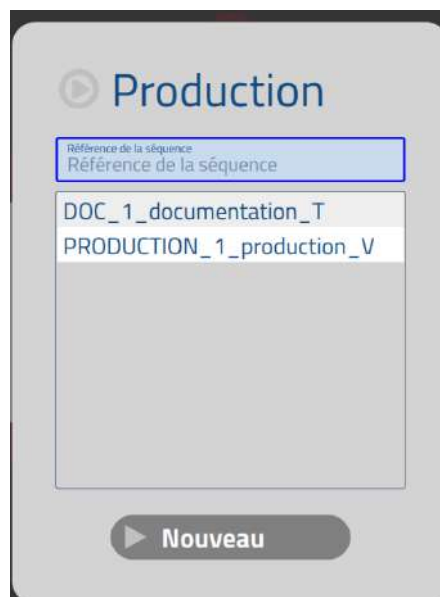
Sequences created in the editor appear.

Depending on the privileges of the identified user, only sequences in active status appear.

A user with the operator privilege will only have access to sequences with an active (V) status.



A Methods or Administrator user will have access to sequences with an active (V) or test (T) status.

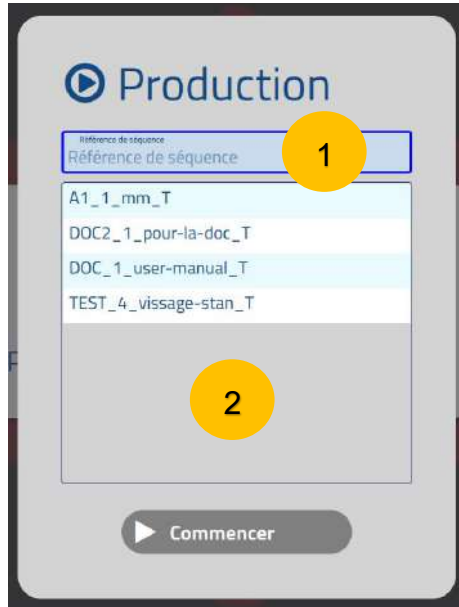


Information

A user with operator privileges will only have access to sequences with a status of "Validated". A sequence with a status of "validated" is recognizable by the presence of the letter V at the end of the display name.

5.1 START A SEQUENCE

5.1.1 Procedure for launching a sequence.



- Enter the name of the sequence in **field 1**.
 - Or by entering the name using a keyboard (the list in **field 2** is reduced as you enter to display only the sequences corresponding to the entry).
 - By reading a barcode containing the identifier of the created sequence in the sequence edit menu.



Information

It is possible to filter certain characters contained in a barcode via the settings available in the configuration menu to take into account only the characters necessary to identify the sequence to be launched.

- By selecting a sequence from the list in **field 2**.

Once the sequence is selected, the following window appears:



N°	Designation
1	Serial Number registration field of the part to be assembled
2	List of parts made with the selected sequence and not finished

5.1.1.1 Assembling a new part

To assemble a new part:

- Enter a serial number on the keypad or by scanning the barcode containing the serial number.
 - If the part does not have a serial number, DPM@Pilot assigns the serial number displayed in Window 1.
 - The serial number assigned by DPM@Pilot begins with SN and is 10 digits long. It will increment automatically.
- Press the "Start" button (via the touchscreen or via the mouse depending on the hardware configuration).
 - It is also possible to start the sequence by scanning the barcode containing the text **%START**.

If the sequence selection needs to be changed, you must return to the previous menu.

To do this, there are two possible choices:

- Click the screen outside the selection window.
- Scan a barcode with the text **%STOP**.

Once the sequence is launched, the production screen appears:



No.	Designation
1	Field containing the name of the current sequence, the serial number and the jump commands (see details below)
2	A field containing the indication of the current stage and the stage counter
3	Field containing actions in the current step
4	Field the status of the tools used in the current step
5	A field containing the media(s) specified when editing for the stage.
6	User ID
7	Connected tool

5.1.1.2 Continue assembling a work-in-progress part.

The assembly of a part may be interrupted. The results are saved, and it is possible to continue the assembly where it left off.

To resume assembly:



- Enter the name of the sequence in **field 1**:
 - Or by entering the name using a keyboard (the list in **field 2** is reduced as you enter to display only the sequences corresponding to the entry).
 - By reading a barcode containing the identifier of the sequence created in the sequence editing menu.



Information

It is possible to filter certain characters contained in a barcode via the settings available in the configuration menu to take into account only the characters necessary to identify the sequence to be launched.

- By selecting a sequence from the list in **field 2**.

Once the sequence is selected, the following window appears:



No.	Designation
1	Serial Number registration field of the part to be assembled
2	List of parts made with the selected sequence and not finished

Select the part you want to complete from the list in field 2, and then select **Continue** to continue the sequence from where it was interrupted.

Select **Reset** to redo the sequence from the beginning. The results previously saved for the serial number will be deleted. The serial number entered is reused.

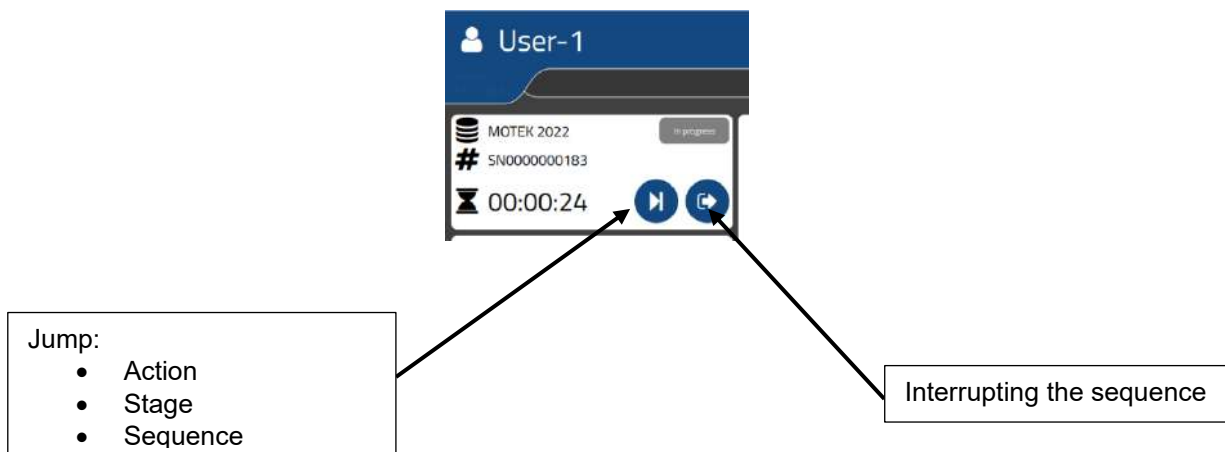
5.1.1.3 Skip an action or step, interrupt a sequence.

It is possible, while running a sequence of:

- Skip current action
- Skip the current step.
- Interrupt a sequence in progress.

Access to these functions is available to authorized users (see User Management).

The jump or interrupt is done via the buttons in the window:



In the event of a jump in action:

- The skipped action is recorded as bad in the results.
- The part has a "non-compliant" status.

In the event of a skipping step:

- The skipped step is recorded as bad in the results.
- The part has a "non-compliant" status.

In the event of a sequence skip

- The sequence is recorded as bad in the results.
- The part has a "non-compliant" status.

The assembly of the part cannot be done, it must go through an external touch-up or via the touch-up menu.

If the sequence is interrupted:

- The sequence is recorded as in progress in the results.
- The part identified by its serial number is in the current parts list.
- The assembly of the part can be restarted (continue or reset).

6 REWORK



Information

Access to this menu from the main screen is accessible only to users with the privilege to edit a part.

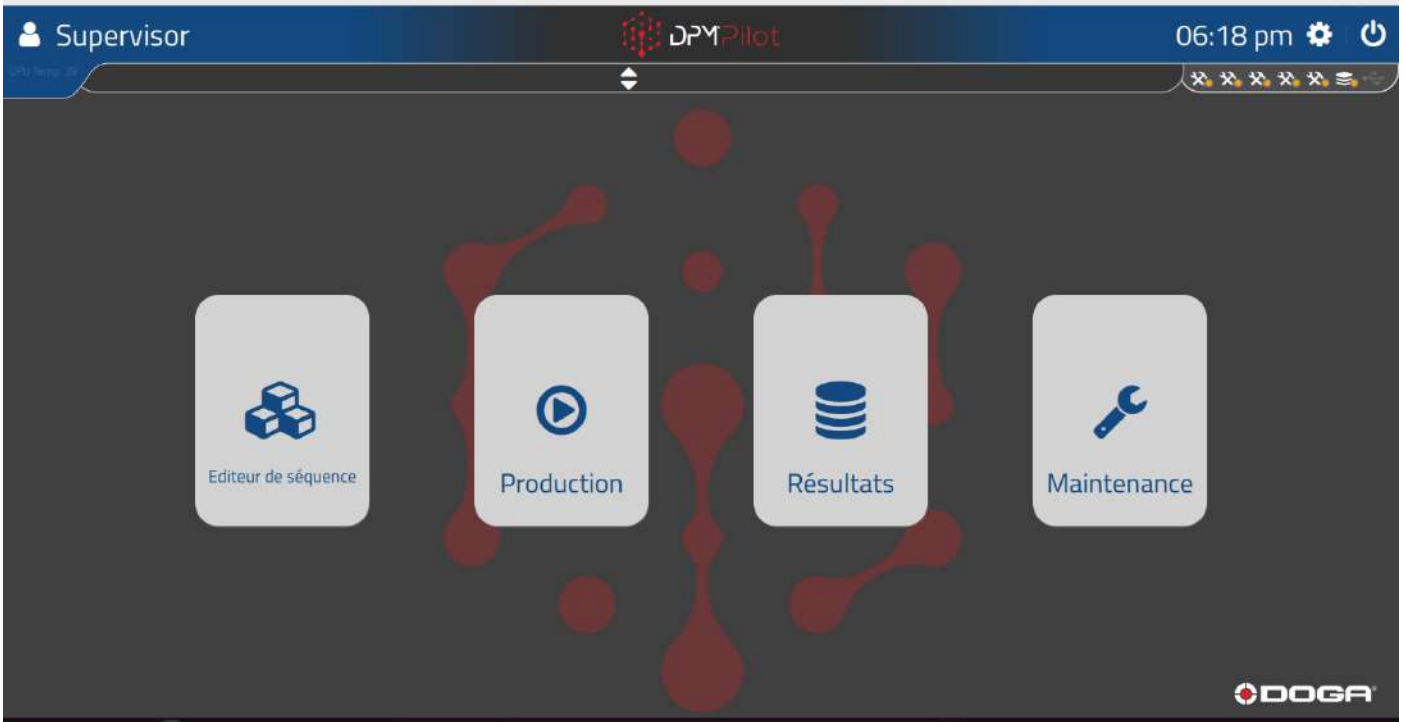
UNDER DEVELOPMENT

7 RESULTS



Information

Access to this menu from the main screen is accessible only to users who have the privilege of viewing the results.



Main screen view

To access the results minutes, you must select the "Results" tile.

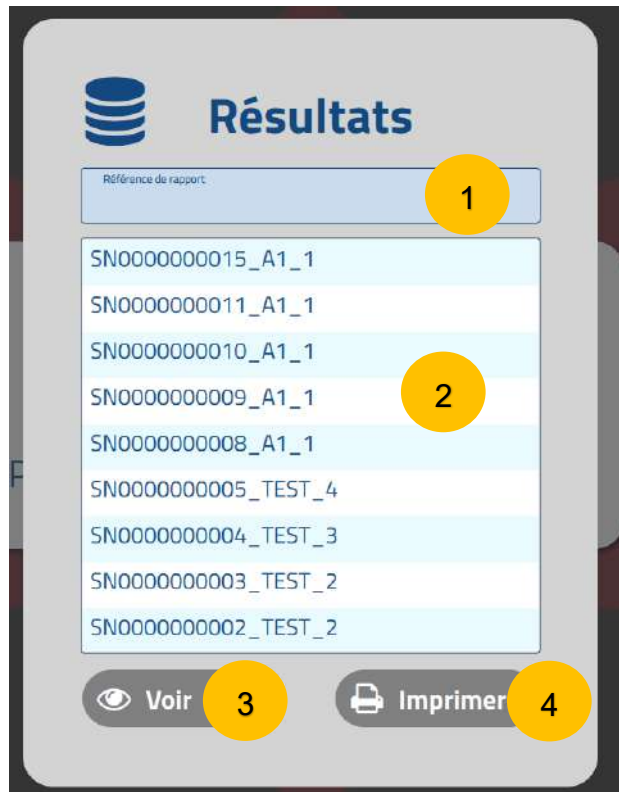


or use the %RESULTS barcode

To return to the main screen:

- Tap outside the edit window or use the %barcode MAIN_SCREEN

The following screen appears:



No.	Designation
1	Field in which the name of the report of the result can be entered
2	List of all registered tickets
3	Control to view the report on the screen
4	Command to print the PV on the printer defined in the general configuration of DPM Pilot

7.1 CONSULTATION OF A REPORT OF RESULTS

- Enter the PV number you want to view in field 1 or select it from drop-down list 2.
- Tap "View."



- The selected ticket appears on the screen.



Results Report

DPM Pilot name: DPM Pilot 01
 Sequence ID: BETATEST
 Serial number: SN0000000052
 Sequence status: PENDING
 Sequence comment:



Steps Execution Details

userInput 1						
	Datetime	Status	Input			User
equals: AAAA	2023.03.17 09:04:07	OK	BBBB			User-24
equals: BBBB	2023.03.17 09:04:07	OK	BBBB			User-24
tightening 1						
Tool: STANLEY Tightening Tool 01						User
	Datetime	Status	Prog.	Torque	Angle	
pt1	2023.03.17 09:04:17	OK	1	1.00	19	User-24
pt2	2023.03.17 09:04:28	OK	1	1.00	33	User-24
switch 3						
	Datetime	Status				User
= BBBB	2023.03.17 09:04:29	OK				User-24
digitalInput 8						
	Datetime	Status				User
In01	2023.03.17 09:04:30	OK				User-24
digitalOutput 1						
	Datetime	Status	State			User
out01	2023.03.17 09:04:31	OK	ON			User-24
message 9						
	Datetime	Status				User
OK	2023.03.17 09:04:34	OK				User-24
userInput 10						
	Datetime	Status	Input			User
nonInput	2023.03.17 09:04:40	OK	EEEE			User-24

7.2 PRINTING OF A REPORT OF RESULTS

UNDER DEVELOPMENT

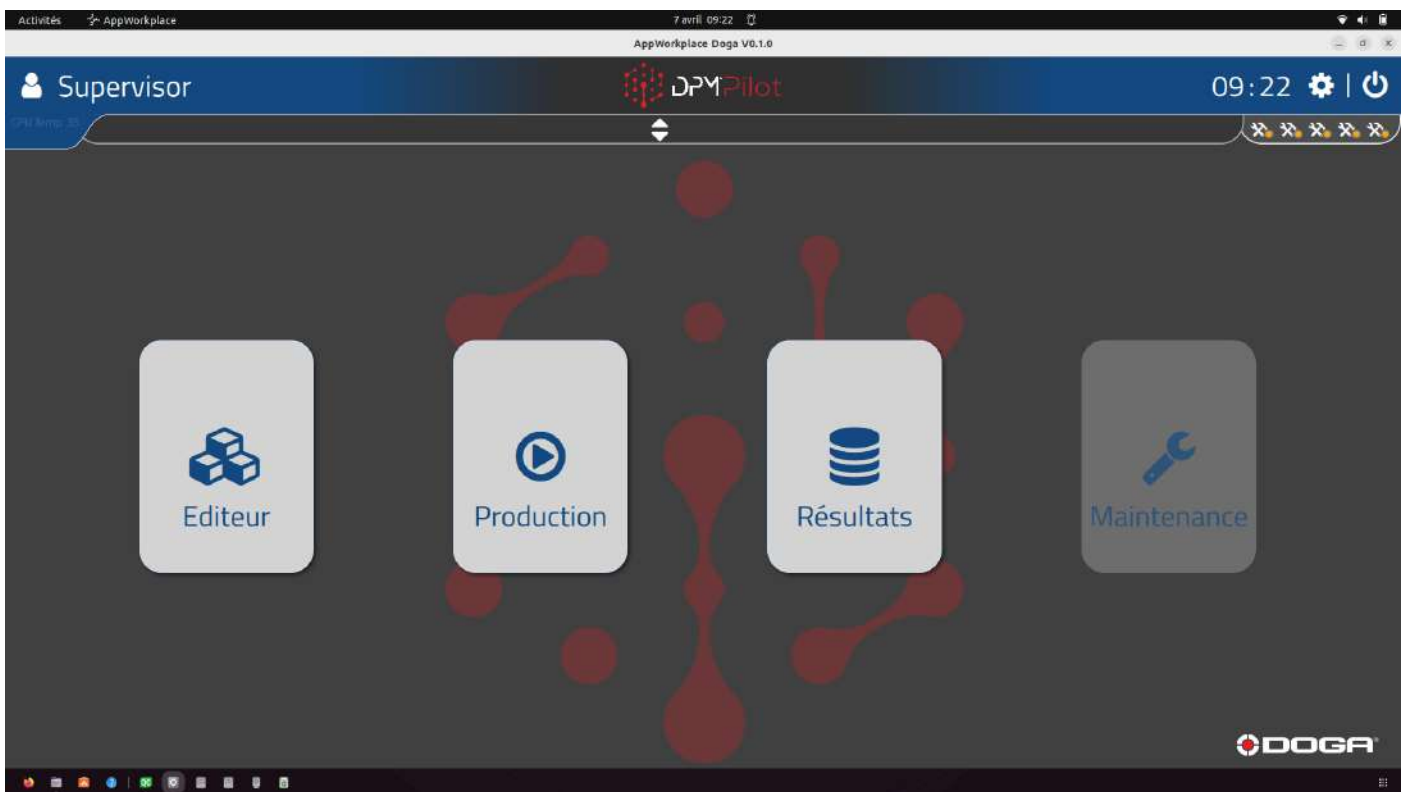
8 MAINTENANCE

8.1 MAINTENANCE MENU



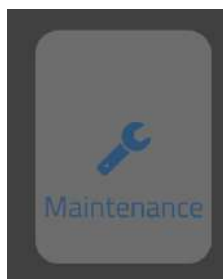
Information

Access to this menu, from the main screen, is available only to users with the privilege to execute sequence.



Main screen view

To access the results minutes, select the "Maintenance" tile.



or use the %MAINTENANCE barcode

To return to the main screen:

- Tap outside the editor window or use the %MAIN_SCREEN barcode

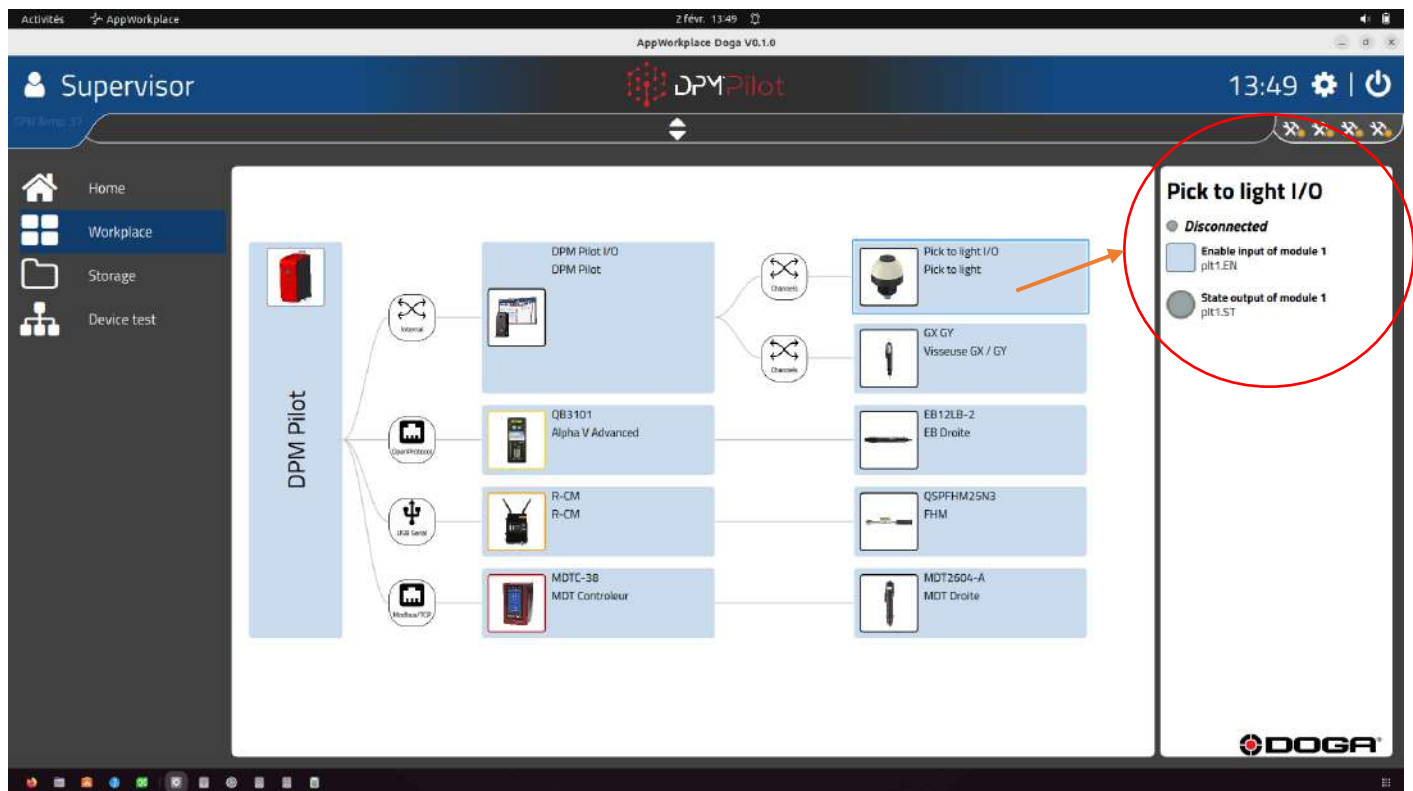
8.1.1 Test the different tools and equipment connected to the workstation menu

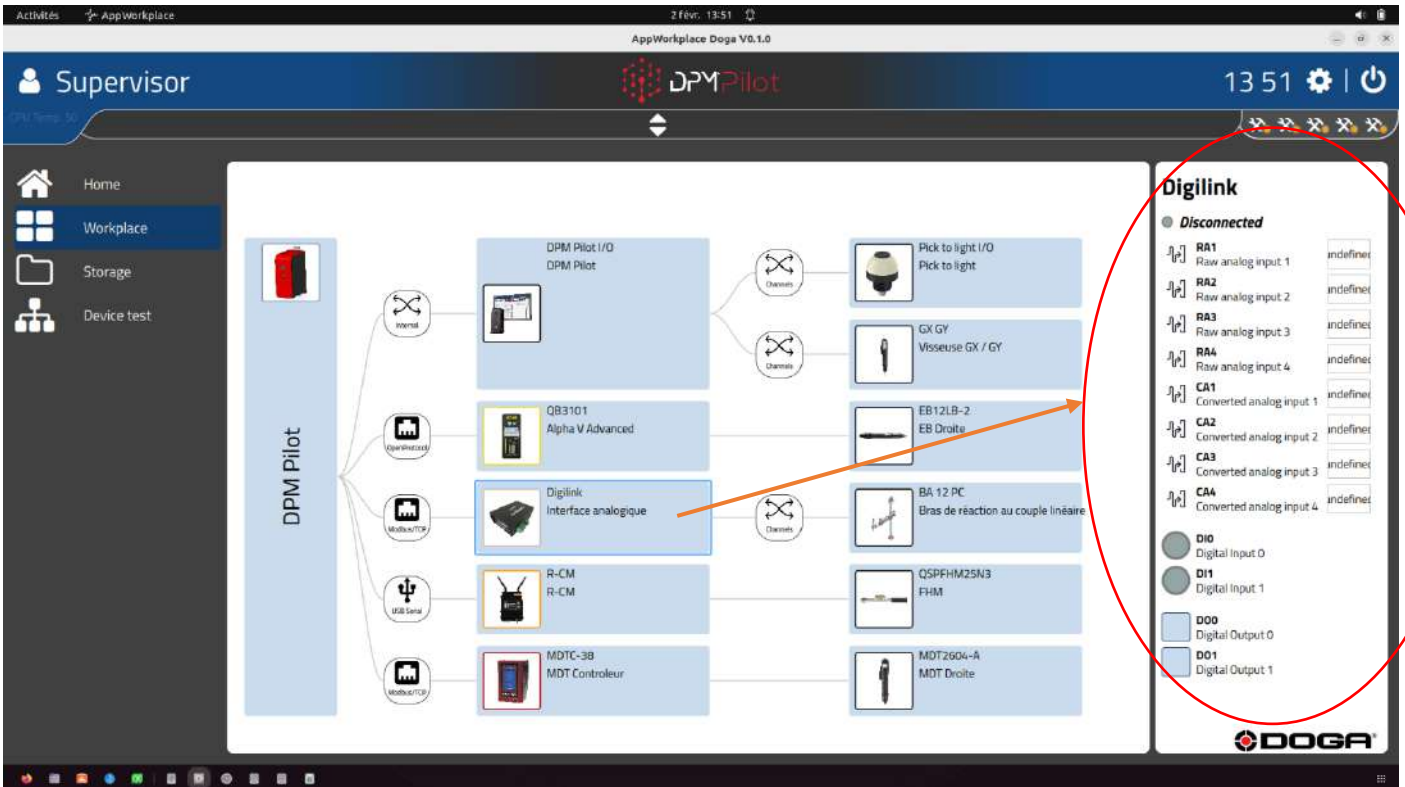
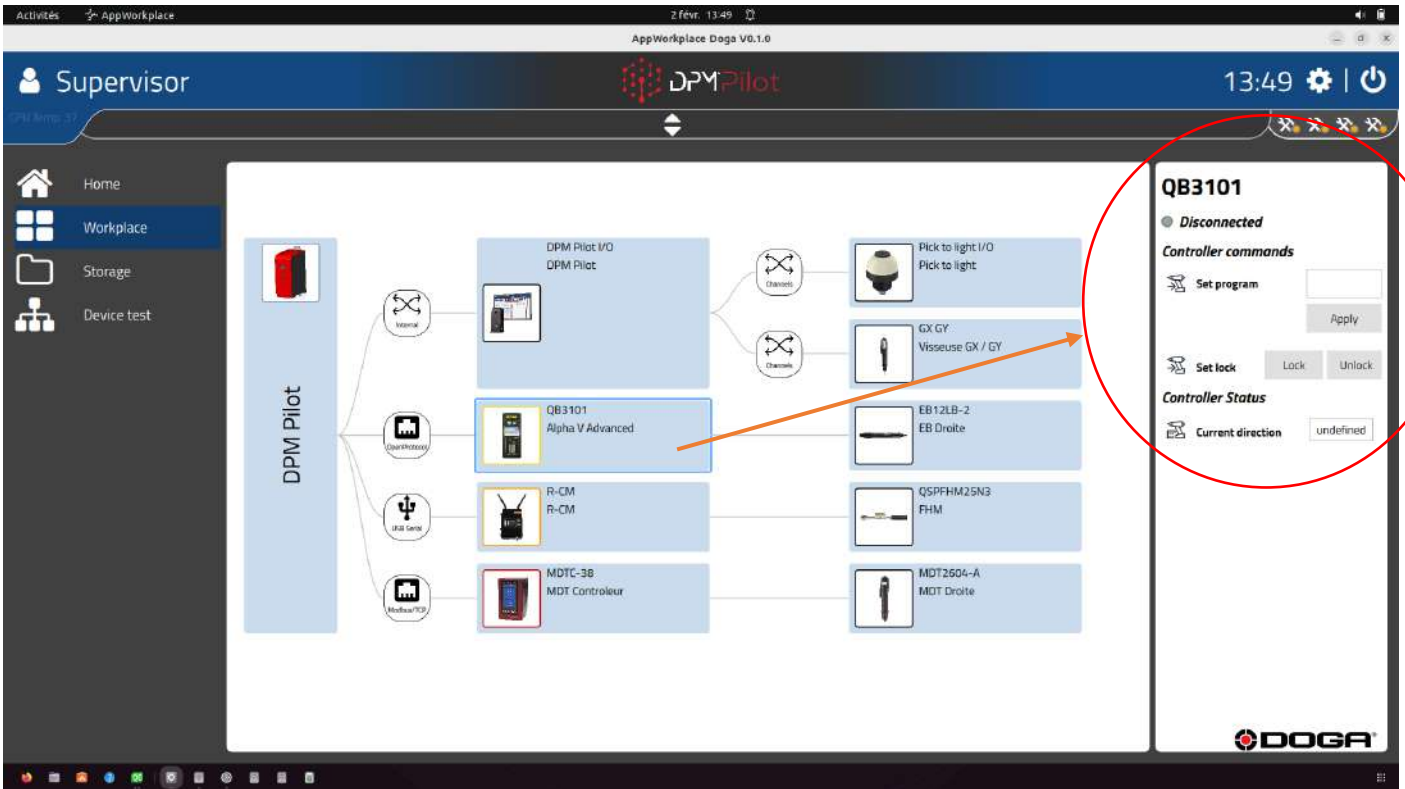
The possible actions and test functions depend on the tool.

To test a connected tool:

- Select the tool in the tree view.
 - Testable functions or available information appear in the window on the right side of the screen.

Examples:

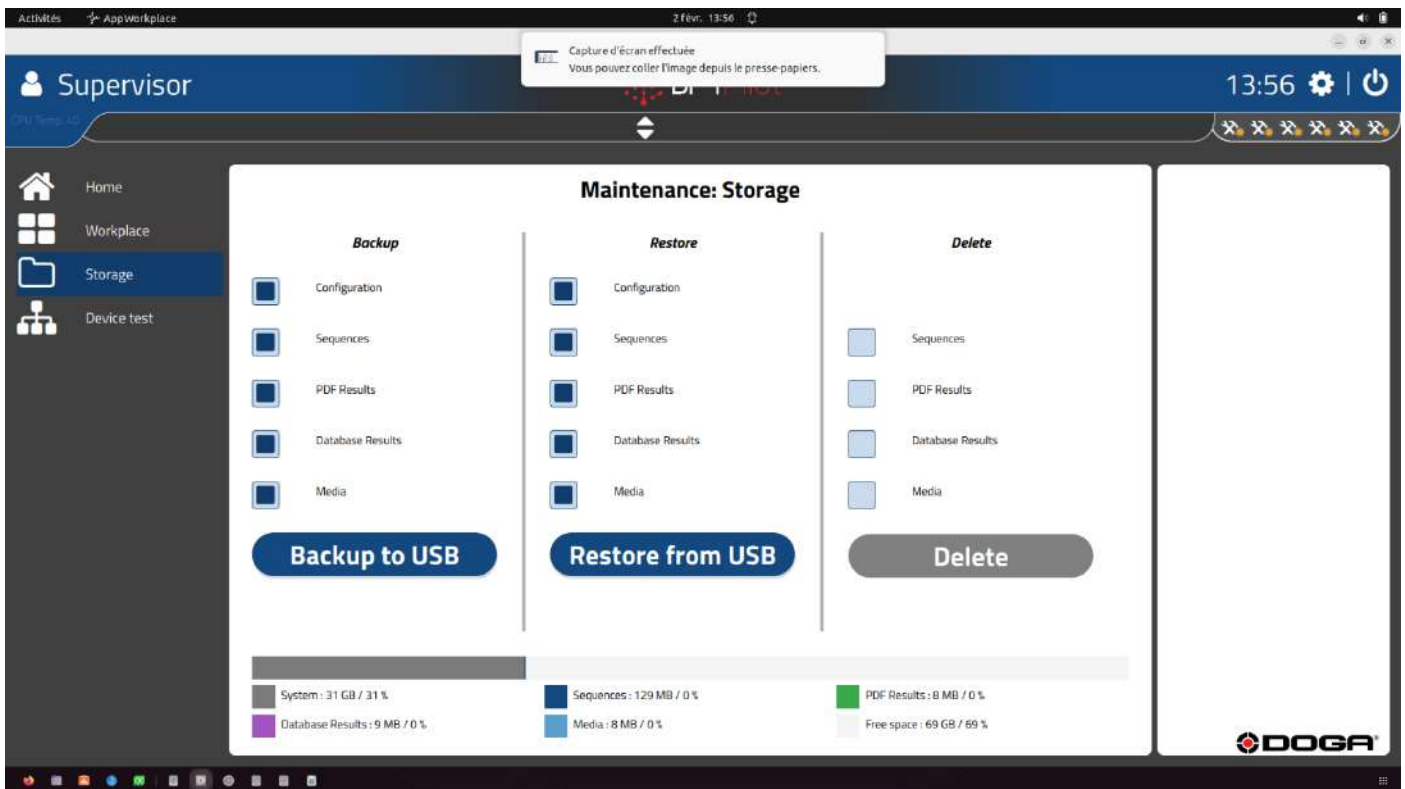




8.1.2 Backup


In this menu it is possible to save and load different files and directories such as:

- Configuration
- Sequences
- Results (PDF)
- Results database
- Media (images and PDFs used to set up visuals in sequences)



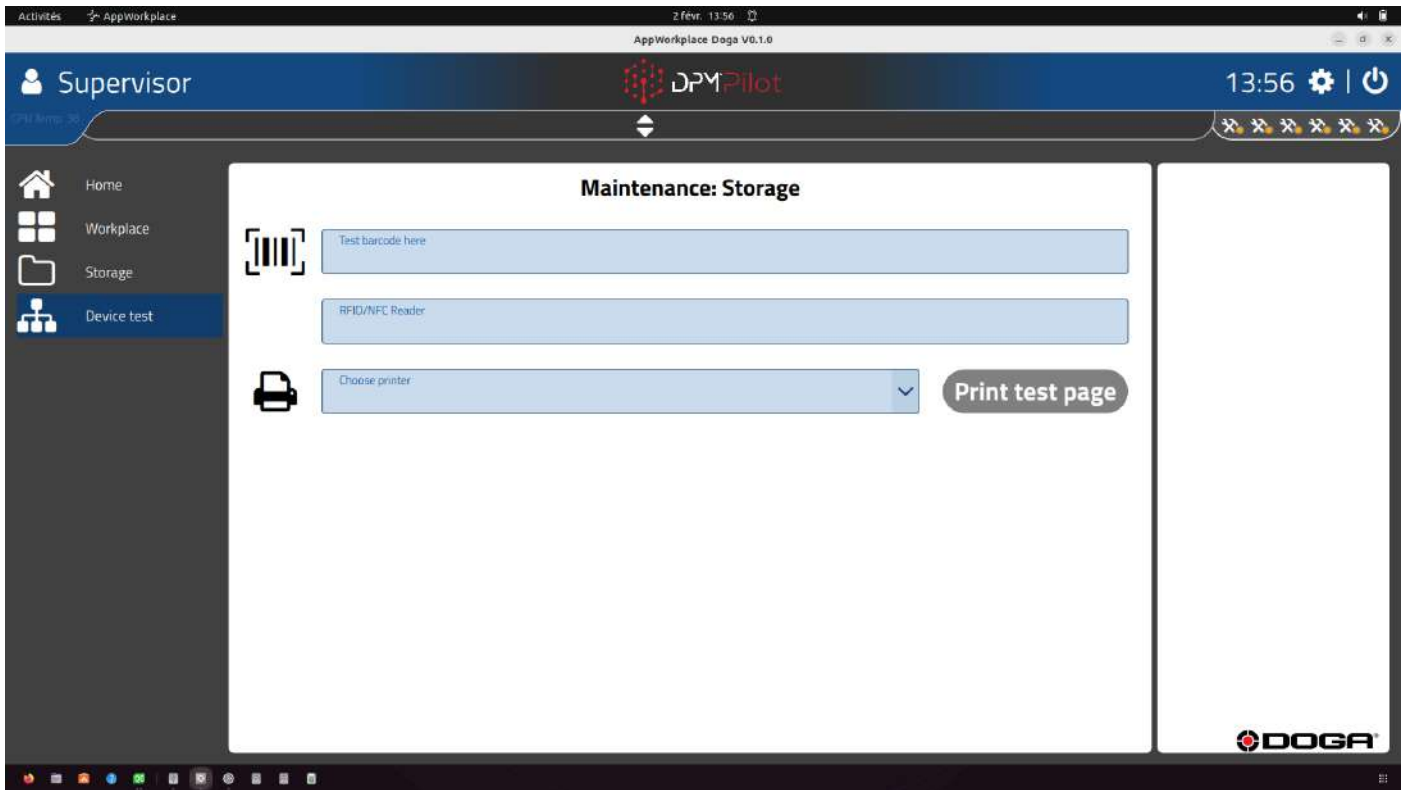
It is also possible to delete items via the Delete menu.

Warning

 **WARNING! ANY DELETION IS FINAL.**

8.1.3 Testing connected peripheral devices.

In this menu, it is possible to test the proper functioning of the input or printing devices.



8.2 BACKUP AND CHARGING VIA USB STICK



Warning

The operations described below must be carried out by a person who is well informed. These operations will be integrated into the maintenance menu.

8.2.1 Saving the configuration file from DPM®Pilot

- Create a **CONFIG** directory on an empty USB drive.
- Plug the key into DPM®Pilot
- Carry out the commissioning:
 - The configuration file is backed up (download the DPM®Pilot configuration in this directory).
 - The application launches.
- Remove the USB flash drive.
- Back up the file to a durable backup source.

8.2.2 Upload the configuration file to DPM®Pilot

- Create a CONFIG_UPLOAD directory on an empty USB drive.
- Load the configuration file to be installed in the CONFIG_UPLOAD directory
- Plug the key into DPM®Pilot.
- Carry out the commissioning:
 - The configuration file is loaded.
 - The application launches.
- Remove the USB flash drive.

8.2.3 Backing up the result files and the results database from DPM®Pilot

- Create a **REPORTS** directory on an empty USB drive.
- Plug the key into DPM®Pilot.
- Carry out the commissioning:
 - The result files are backed up.
 - The application launches.
- Remove the USB flash drive.
- Back up the file to a durable backup source.

8.2.4 Saving footage from DPM®Pilot

- Create a **SEQUENCES** directory on an empty USB drive.
- Plug the key into DPM®Pilot.
- Carry out the commissioning:
 - The sequence files are saved.
 - The application launches.
- Remove the USB drive
- Back up the file to a durable backup source.

8.2.5 Upload the sequence file to DPM®Pilot

- Create a SEQUENCES_UPLOAD directory on an empty USB drive.
- Load the sequence file(s) to be installed in the SEQUENCES_UPLOAD directory
- Plug the key into DPM®Pilot.
- Carry out the commissioning:
 - The configuration file is loaded.
 - The application launches.
- Remove the USB drive

8.2.6 DPM®Pilot App Update

- Create an **UPDATE** directory on an empty USB drive.
- Upload the files. **ipk** for updating DPM®Pilot to be installed in the **UPDATE** directory
- Plug the key into DPM®Pilot.
- Carry out the commissioning:
 - The configuration file is loaded.
 - The application launches.
- Remove the USB flash drive.

8.2.7 Backup of event log files from DPM®Pilot


- Create a **LOGS** directory on an empty USB drive.
- Plug the key into DPM®Pilot.
- Carry out the commissioning:
 - The sequence files are saved.
 - The application launches.
- Remove the USB flash drive.
- Back up the file to a durable backup source.


8.3 MAINTENANCE

Do not use solvents.
Clean with a dry, lint-free cloth.


8.4 TROUBLESHOOTING

As part of the production, the proper functioning of the device has been checked several times. However, if the device should malfunction, refer to the following troubleshooting list.

	<p>Tools and accessories won't connect All troubleshooting tasks requiring the opening of the case are to be carried out by DOGA or a company authorized by DOGA.</p>
---	--

Malfunction	Action to take
Access skip commands or cancel sequence at runtime	<ul style="list-style-type: none"> Check that the power cord is properly plugged in and that the outlet to which the power supply is 220 Vac
The app won't launch	<ul style="list-style-type: none"> Contact DOGA After-Sales Service
Tools and accessories won't connect	<ul style="list-style-type: none"> Check that tools and accessories have power and are in use Relaunch a connection from the headband at the top of the main screen. 
The password does not work or has been forgotten	<ul style="list-style-type: none"> Contact DOGA After-Sales Service
Even after checking, the device does not work perfectly.	<ul style="list-style-type: none"> Contact DOGA After-Sales Service

If you cannot solve an issue after reviewing this manual, please contact DOGA After-Sales Service.

	<p>My customer area on www.doga.fr Go to your customer area on www.doga.fr, click on "Your contacts" and then select your specific After-Sales Service contact depending on the device type.</p>
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8.5 SPARE PARTS

For any spare parts order, contact your DOGA Technical Sales Representative.
Indicate your device reference.

	<p>My client area on www.doga.fr Go to your client area on www.doga.fr, click "Your contacts", then select your specific Technical Sales Representative depending on the device type.</p>
---	---

8.6 PHONE SUPPORT

8.6.1.1 For information about using the device

Please contact your technical sales representative.



My customer area on www.doga.fr

Go to your customer area on www.doga.fr, click on "Your contacts" and then select your specific **Technical Sales Representative** depending on the device type.

8.6.1.2 For any questions about repairs

Please contact your After-Sales Service contact.



My customer area on www.doga.fr

Go to your customer area on www.doga.fr, click on "Your contacts" and then select your dedicated **After-Sales Service contact** depending on the device type.

If our technician can remotely determine the origin of the fault, he will tell you what to do in order for you to repair it by yourself as much as possible.

8.7 AFTER-SALES RETURNS

All equipment must be returned with an after-sales service return form that you must complete and attach to your package.

Repair, maintenance, calibration or adjustments can only be started after the receipt of this form.



Information

Following this procedure allows you to quickly take charge of your request and reduces the troubleshooting cost.

8.7.1.1 Download the after-sales service return form.

You can download the sheet by following one of the following links:

<https://www.doga.fr/sites/doga/files/uploads/documents/00184.pdf>

<https://www.doga.fr/en/our-services/industrial-maintenance>



Information

You can use your own after-sales service return form as long as it contains all the information necessary to take care of your equipment.

8.7.1.2 Send your equipment

The returned package must be postage paid to the following addresses depending your transport mode:

Postal packages	Carrier packages
DOGA - Service SAV 8, avenue Gutenberg - CS 50510 78317 Maurepas Cedex FRANCE	DOGA - Service SAV 11, rue Lavoisier 78310 MAUREPAS FRANCE

8.8 ON-SITE REPAIR

Even though it seems convenient, on-site repair is seldom the best solution for transportable equipment. The conditions in which the technician will work are not as ideal as our workshops and technician travel expenses are costly.

If you require an on-site service, please contact our After-Sales Department.



My customer area on www.doga.fr

Go to your customer area on www.doga.fr, click on "Your contacts" and then select your dedicated **After-Sales Service contact** depending on the device type.

Our services will organize the intervention.

8.9 WARRANTY

DOGA guarantees its products against defect in parts or fabrication for a period of **12 months**.

To benefit from the parts and labour warranty, the following conditions must be respected:

- The equipment must have been used for professional manner and in accordance with normal conditions of use in the limits described in this user manual.
- The device must not have suffered any damage from storage, maintenance, or improper handling.
- The equipment must not have been modified or repaired by unqualified persons.

9 SECURITY

9.1 GENERAL PROVISIONS



This user manual must be carefully stored in a known place and easily accessible to potential users of the product.



Caution

Read and have each operator read this manual carefully before installing, using, or repairing the product.

Make sure that the operator has fully understood the rules of use and the meaning of any symbols affixed to the product.

Most accidents could be avoided by following the instructions in the user manual.

These rules have been drafted with reference to the European Directives and their various amendments, as well as standard rules products.

In each case, respect and comply with national safety standards. Do not remove or damage labels and annotations affixed to the product, especially those required by law.

9.2 CONTRA-INDICATIONS

Do not cover.

Do not submerge.

Do not expose to splashing liquids.




Do not use near a heat source.

11 STANDARD

11.1 MANUFACTURER DETAILS

Manufacturer: DOGA
Address: ZA Pariwest
 8 avenue Gutenberg CS 50510 78317 MAUREPAS CEDEX – France

11.2 MARKINGS

DPM®Pilot process supervision and traceability controller	Equipment Designation
Type	Equipment Reference
Serial number	Unique equipment serial number
 DOGA 8 avenue Gutenberg CS 50510 78317 MAUREPAS CEDEX – FRANCE	Name and address of the equipment manufacturer
Year xxxx	Year of manufacture of the equipment
	Equipment designed and manufactured in accordance with the requirements of European Directives 2014/35/EU, 2014/30/EU and 2011/65/EU
	All safety instructions and instructions must be read and understood.

11.3 TRANSPORT AND STORAGE

Information



Your equipment can be damaged if you transport or store it improperly. Observe the transport and storage information for your equipment.

11.3.1.1 Transport

Use a suitable container to transport the equipment to protect it from damage. Please observe the following guidelines before each transport:

- Turn off the device.
- Unplug the power cord.

11.3.1.2 Storage

Please respect the following guidelines before storing:

- Turn off the device.
- Unplug the power cord.
- Clean the product according to the instructions in the Maintenance chapter.
- Store it in a suitable container to protect it from dust and direct sunlight.
- Store it in a dry place at an ambient temperature below 40°C.

11.4 RECYCLING AND END-OF-LIFE OF WEEE



The pictogram representing a crossed-out garbage can, affixed to an electrical or electronic device, means that it must not be disposed of with household waste.

The collection solutions are as follows:

11.4.1.1 Collection and recycling system

In accordance with the provisions of the Environmental Code on Waste Electrical and Electronic Equipment (WEEE) (art. R543-195 et seq.), DOGA is a member of ECOSYSTEM, an eco-organisation approved by the public authorities under the conditions defined by art. R543-197.

You can thus benefit from the collection and recycling system offered by ECOSYSTEM for WEEE from the professional equipment that DOGA has sold. More information at www.ecosystem.eco.

11.4.1.2 Collection points

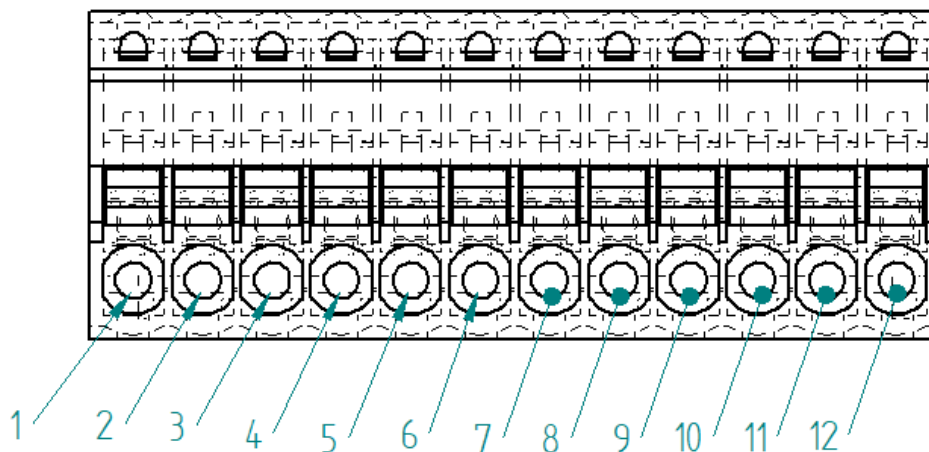
Free collection points for used electrical or electronic devices are available near your business. The authorities of your city or municipality can provide you with the addresses.

12 ANNEXES

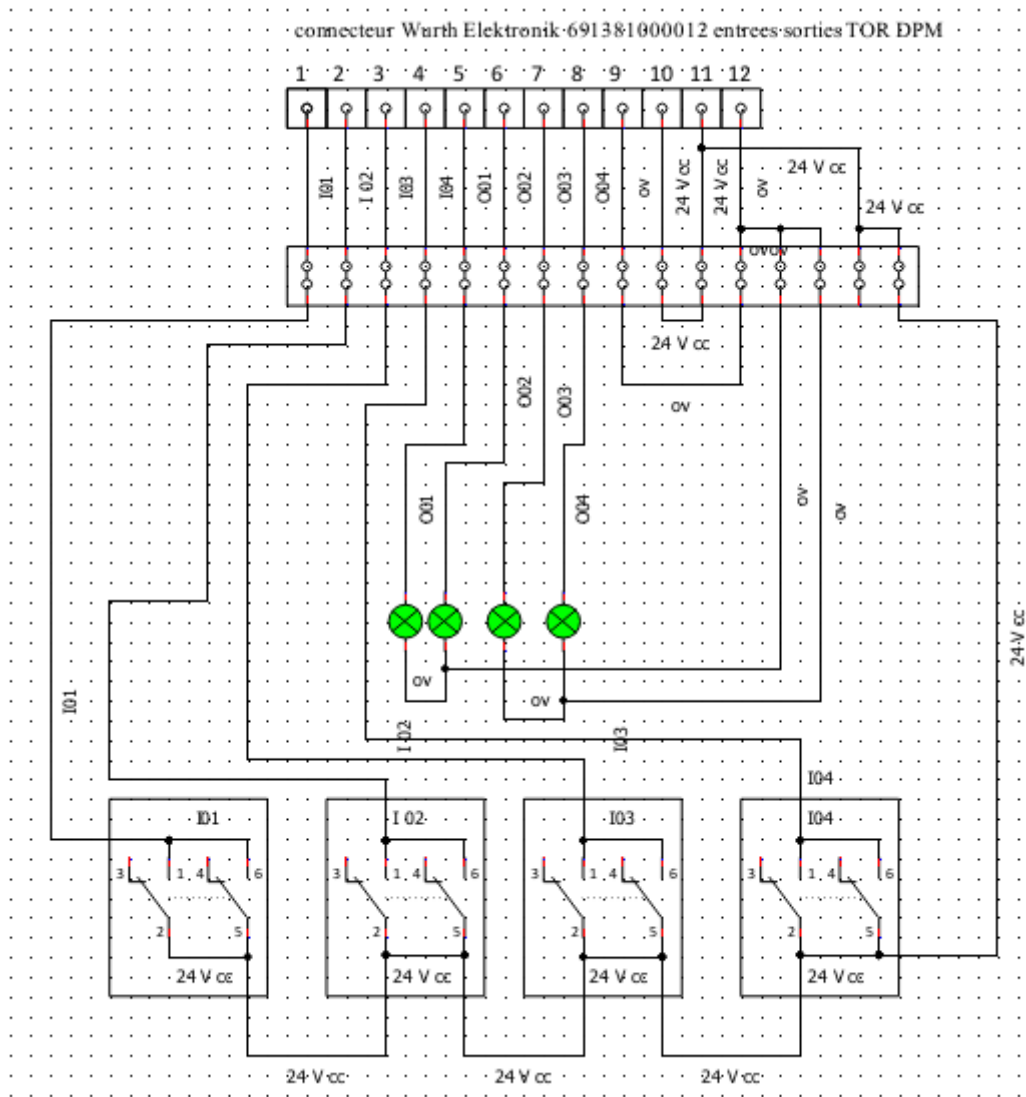
12.1 DESCRIPTION OF THE WURTH ELEKTRONIK CONNECTOR 691381000012 DIGITAL INPUTS AND OUTPUTS



Pin	Designation
1	Input1
2	Input 2
3	Input 3
4	Input 4
5	Exit 1
6	Exit 2
7	Exit 3
8	Exit 4
9	Common for inputs
10	Common for output
11	24 Vdc
12	Mass



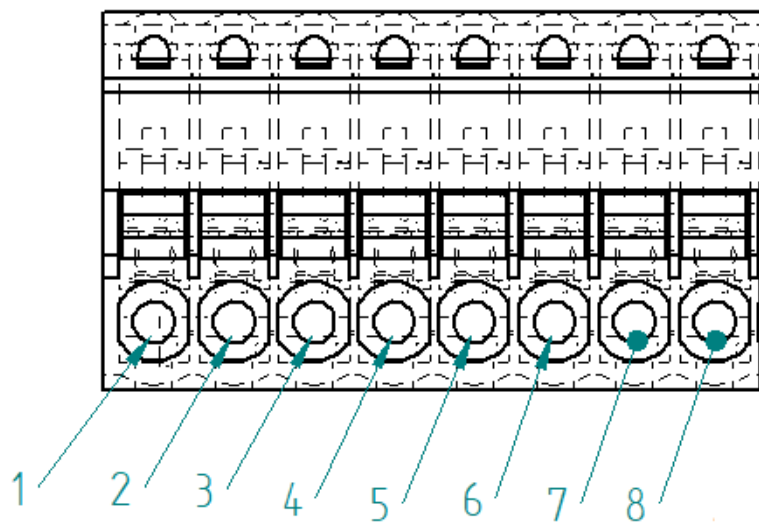
Example of wiring



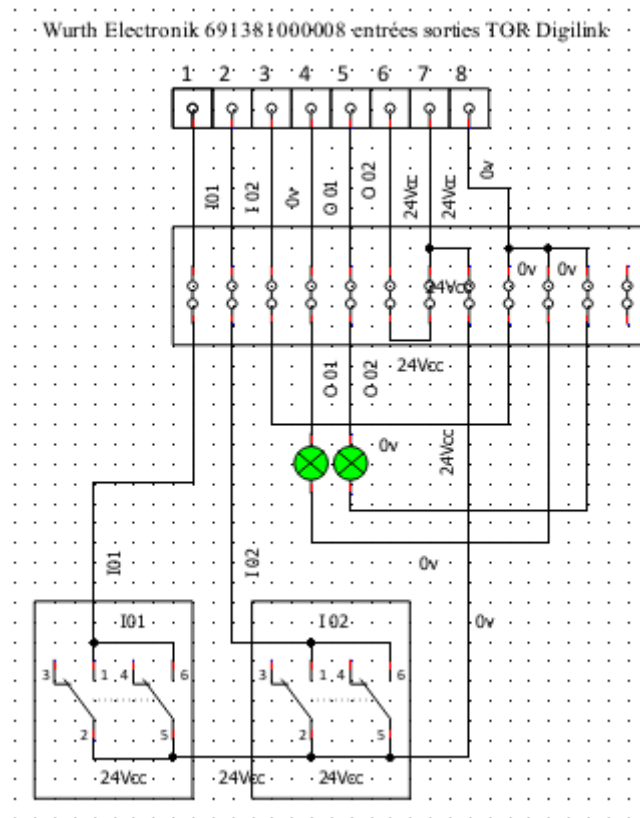
12.2 MASS



Pin	Designation
1	Input 1
2	Input 2
3	Common for inputs
4	Exit 1
5	Exit 2
6	Common for outputs
7	24 Vdc
8	Mass



Example of wiring

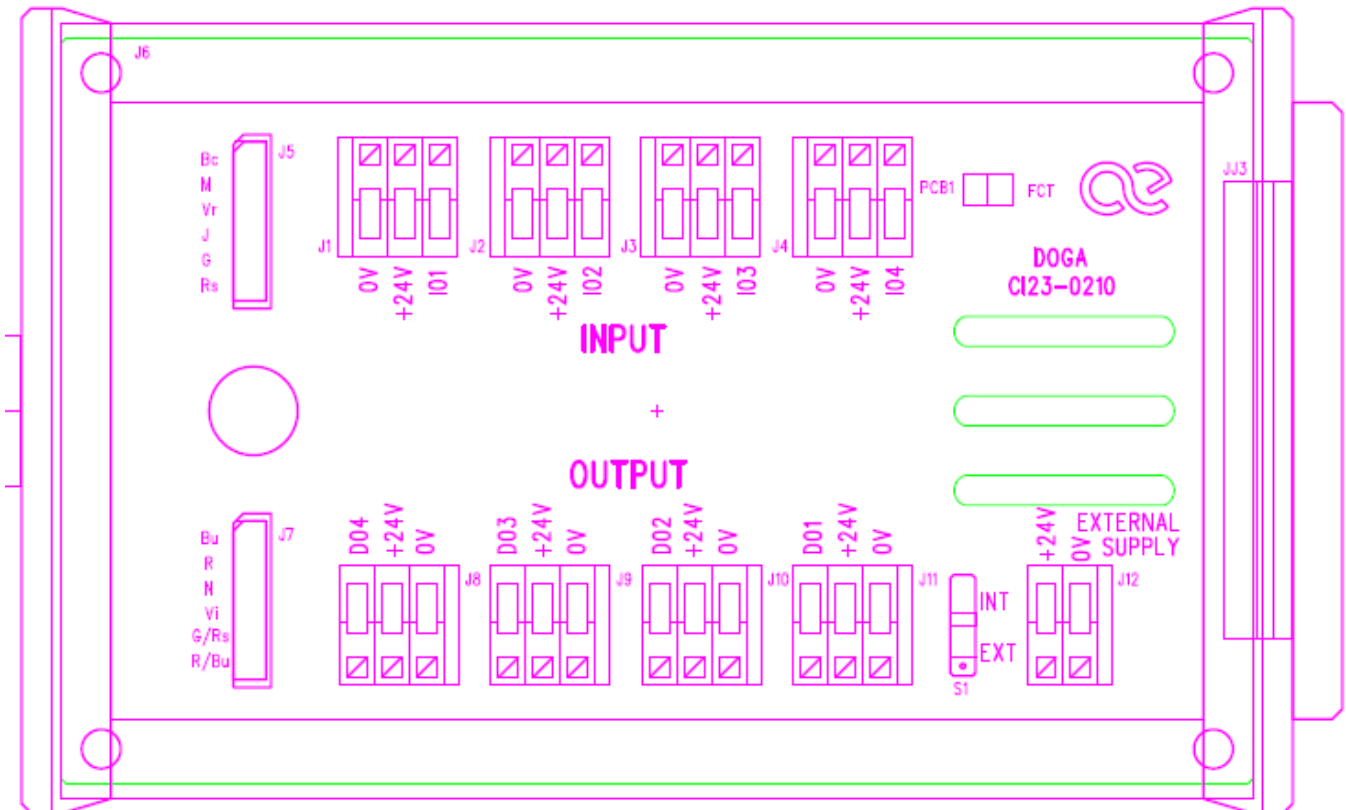


12.3 DESCRIPTION OF DPM® WIRING MODULE

This optional module allows the connection of external elements (sensors, actuators) for each input and output.

The connection is made on terminals located in the module (one per input and one per output with common and 24V voltage distributed). The cables are routed through the cable grommet to be drilled.

It is possible to use an external power supply on the outputs. The switch is switched by positioning the S1 switch in the corresponding position.

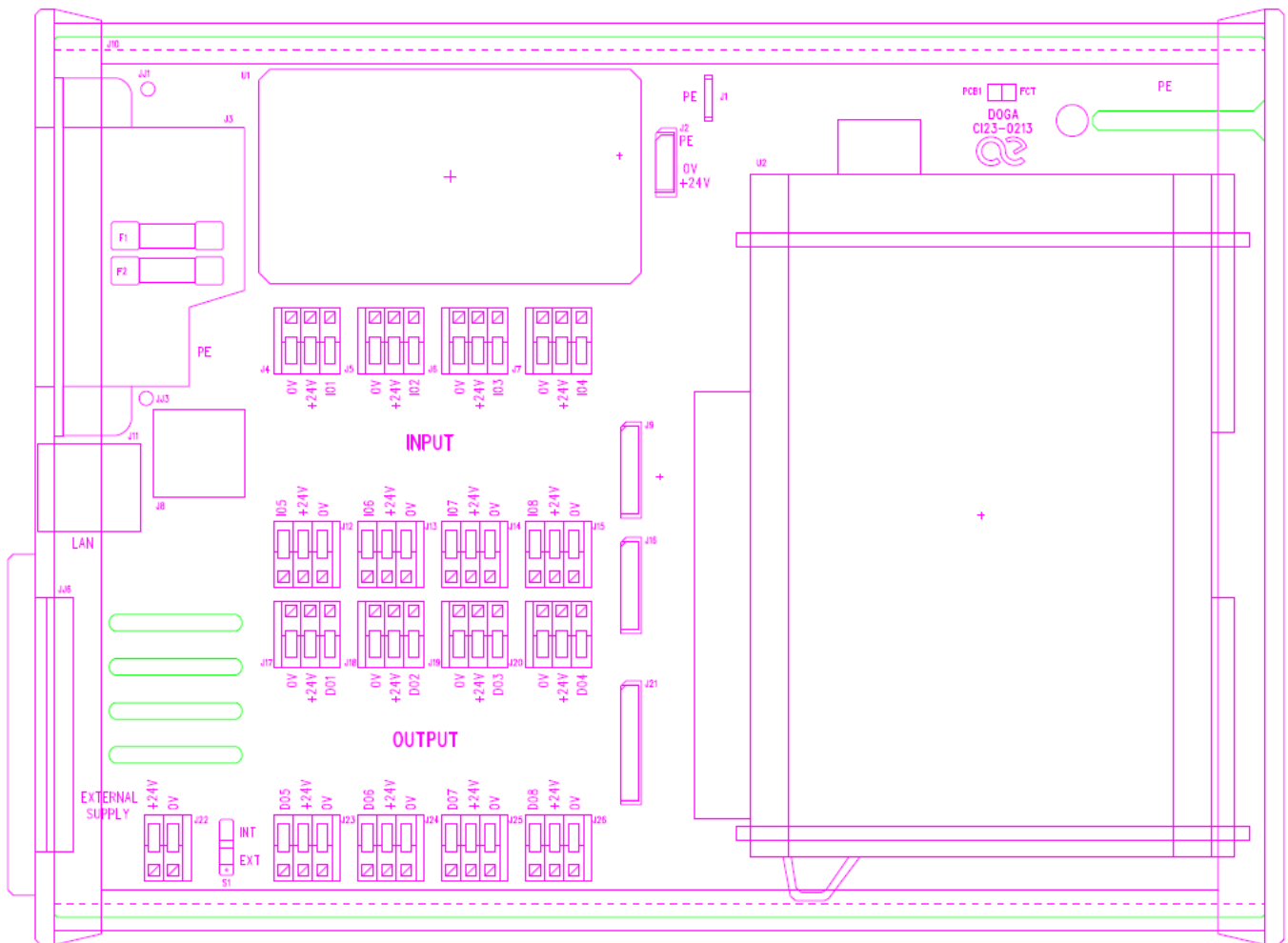


12.4 DESCRIPTION OF THE DPM®I/O MODULE

This optional module provides an expansion of 8 inputs and 8 outputs in addition to DPM®Pilot's 4 inputs and 4 outputs.

The connection is made on terminals located in the module (one per input and one per output with common and 24V voltage distributed). The cables are routed through the cable grommet to be drilled.

It is possible to use an external power supply on the outputs. The switch is switched by positioning the S1 switch in the corresponding position.



12.5 BACK TO THE SEQUENCE SELECTION MENU

Barcode	Function
 <p data-bbox="464 517 783 555">%JOB_MANAGER</p>	Information
 <p data-bbox="475 723 772 761">%MAIN_SCREEN</p>	Back to the main window
 <p data-bbox="491 925 756 963">%OPERATION</p>	Selecting the production menu from the main window
 <p data-bbox="517 1122 718 1160">%RESULTS</p>	Selecting the result menu from the main window
 <p data-bbox="480 1301 770 1339">%MAINTENANCE</p>	Selecting the maintenance menu from the main window
 <p data-bbox="512 1485 727 1523">%VALIDATE</p>	Validation in a message step
 <p data-bbox="544 1675 705 1713">%START</p>	Start the previously selected sequence
 <p data-bbox="560 1854 689 1892">%STOP</p>	Back to the sequence selection menu

12.6 LAUNCH BARCODES AND SELECTION

Compatible barcode readers:

- Zebra DS3608 in USB version
- Zebra LS2208 in USB version

12.6.1.1 Setting the Model LS2208 Barcode Scanner

The drive must be configured in **Simple COM Port Emulation mode** with a USB connection – **CDC Host**

Setting up the barcode scanner is done in 4 steps:

1. Initializing the default settings: scan the code below.



Set Factory Defaults

2. Enter key CR/LF



Enter Key (Carriage Return/Line Feed)

3. Configuration en USB Simple COM Port Emulation



Simple COM Port Emulation

4. Configuration USB-CDC Host



12.6.1.2 Setting the Model DS3608 Barcode Scanner

Setting up the barcode scanner is done in 2 steps:



RETURN TO FACTORY DEFAULTS



USB CDC Host
(Note 1)

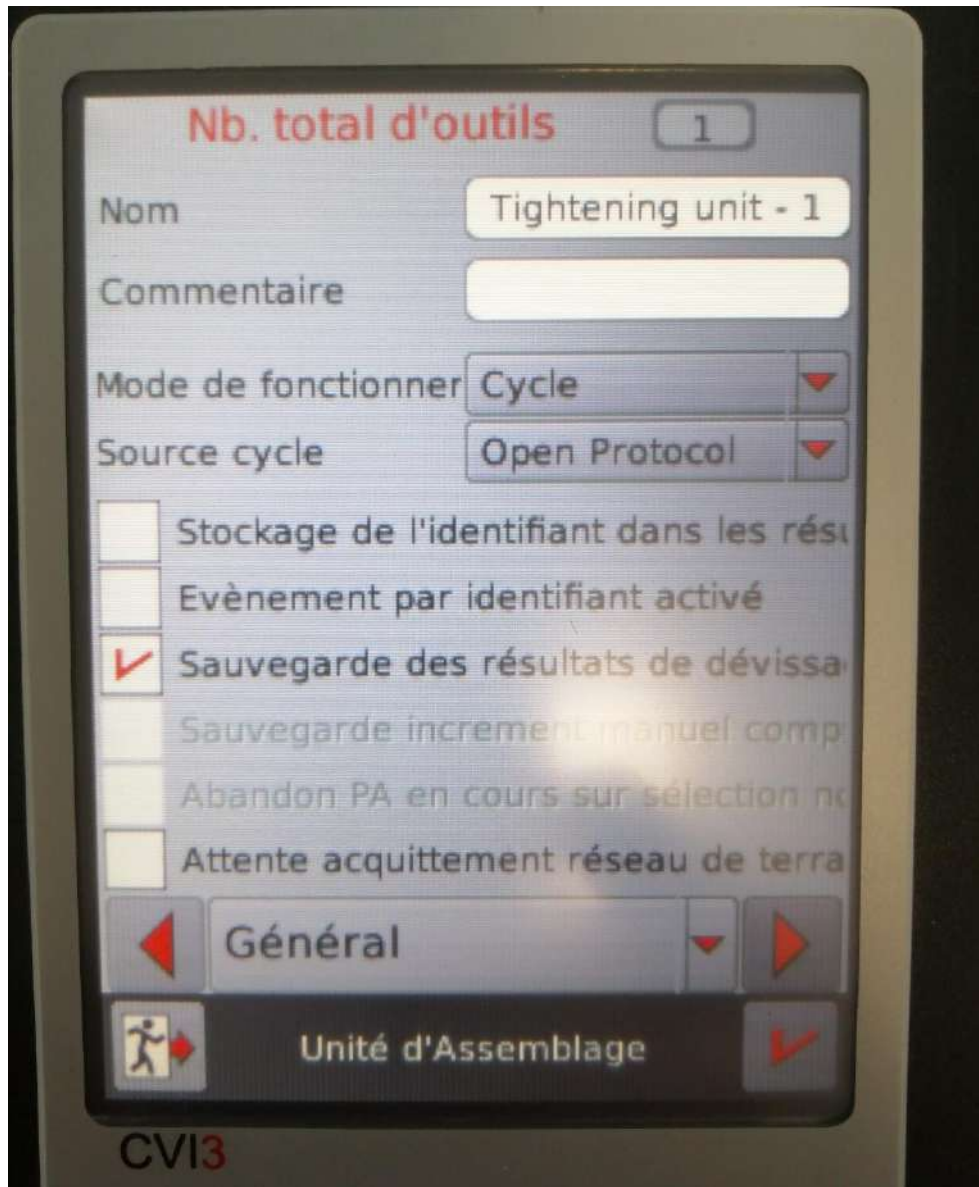


ADD AN ENTER KEY (CARRIAGE RETURN/LINE FEED)

12.7 SETTING UP THE CVI3 DESSOUTER TIGHTENING CONTROLLER

Set up the cycle call as follows:

- **"Assembly Unit"** Menu
- Mode of operation: **"Cycle"**
- Source cycle: **"Open Protocol"**.



13 LIST OF REVISIONS

Revision index	Date	Comment
or	12/07/2024	Creation



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