

INSTALLATION, SERVICE AND MAINTENANCE INSTRUCTIONS

## CONTROL HEAD

# C-TOP **S**



10.426.32.0013



We know your process flow



**INOXPA S.A.U.**

Telers, 60  
17820 - Banyoles (Spain)

hereby declare under our sole responsibility that the

Machine: **CONTROL HEAD**

Model: **C-TOP S**

Type: **C-TOP S 24V DC 0E, C-TOP S 24V DC 1E,  
C-TOP S 24V DC 2E, C-TOP S 24V DC 3E,  
C-TOP S AS-I 1E, C-TOP S AS-I 2E, C-TOP S AS-I  
3E, C-TOP S IO-Link 0E, C-TOP S IO-Link 1E,  
C-TOP S IO-Link 2E, C-TOP S IO-Link 3E**

Serial number: **IXXXXXXXXXX to IXXXXXXXXXX  
XXXXXXXXXXIINXXX to XXXXXXXXXXXXIINXXX**

fulfills all the relevant provisions of the following directive:

**Electromagnetic Compatibility Directive 2014/30/EU  
Low Voltages Directive 2014/35/EU  
Directive 2011/65/EU on the restriction of the use of certain  
hazardous substances in electrical and electronic equipment**

and with the following harmonized standards and/or regulations:

**EN 61326-1:2013  
EN 61010-1:2010/A1:2019/AC:2019-04  
EN 60204-1:2018  
EN IEC 63000:2018  
EN 61000-6-2:2005, EN 61000-6-2:2005/AC:2005  
EN 61000-6-4:2007, EN 61000-6-4:2007/A1:2011  
EN IEC 61131-9:2022**

The technical file has been prepared by the signer of this document.

A handwritten signature in black ink, appearing to read "David Reyero Brunet".

David Reyero Brunet  
Technical Office Manager  
1 April 2025



Document: 10.426.30.05EN  
Revision: (A) 2025/04



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XXXXXXXXXXIINXXX to XXXXXXXXXXXIINXXX**

fulfills all the relevant provisions of these regulations:

**Electromagnetic Compatibility Regulations 2016  
Electrical Equipment (Safety) Regulations 2016  
The Restriction of the Use of Certain Hazardous Substances in  
Electrical and Electronic Equipment Regulations 2012 (as amended)**

and with the following designated standards:

**EN 61326-1:2013  
EN 61010-1:2010/A1:2019/AC:2019-04  
EN 60204-1:2018  
EN IEC 63000:2018  
EN 61000-6-2:2005, EN 61000-6-2:2005/AC:2005  
EN 61000-6-4:2007, EN 61000-6-4:2007/A1:2011  
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## 2. Generalities

### 2.1. INSTRUCTIONS MANUAL

This manual contains information about the reception, installation, operation, assembly and maintenance of the control head C-TOP S.

Carefully read the instruction before starting the control head, familiarize yourself with the installation, operation and correct use of the control head and strictly follow the instructions. These instructions should be kept in a safe location near the installation area.

The information published in the instruction manual is based on updated data.

INOXPA reserves the right to modify this instruction manual without prior notice.

### 2.2. COMPLIANCE WITH THE INSTRUCTIONS

Not following the instructions may impose a risk for the operators, the environment and the machine, and may cause the loss of the right to claim damages.

This non-compliance may cause the following risks:

- failure of important machine/plant functions,
- failure of specific maintenance and repair procedures,
- possible electrical, mechanical and chemical hazards,
- the risk to the environment due to the type of substances released.

### 2.3. WARRANTY

The conditions of the warranty are specified in the General Sales Condition that has been delivered at the time of placing your order.



The machine may not undergo any modification without prior approval from the manufacturer.

For your safety, only use original spare parts and accessories. The usage of other parts will relieve the manufacturer of any liability.

Changing the service conditions can only be carried out with prior written authorization from INOXPA.

Please do not hesitate to contact us in case of doubts or if further explanations are required regarding specific data (adjustments, assembly, disassembly, etc.).

## 3. Security

### 3.1. WARNING SYMBOLS



Safety hazard for people in general and/or for the control head



Electrical hazard

#### ATTENTION

Important instruction to prevent damage to the equipment and/or its function

### 3.2. GENERAL SAFETY INSTRUCTIONS



Read the instruction manual carefully before installing and starting the control head. Contact INOXPA in case of doubt.

For a reliable and without problems function follow the instructions of this manual.

This control head cannot be used in atmospheres where exist explosion hazards.

The installation and the use of the control head always must be following the health and safety applicable regulations.

#### 3.2.1. During installation



Always take into account the [Technical Specifications in chapter 9](#).

Use the device only for its intended use and only with the recommended equipment by INOXPA.

Before performing the installation ensure that the compressed air and the power supplies are switched off and that the actuator of the process valve is pressureless.

Ensure that the power supply does not restart.

The electrical installation should be equipped with protection systems and disconnection devices, such as a residual current device or an automatic switch.

All the electrical work should be carried out by specialised personnel.

Use only power supplies that ensure electrical insulation of the operating voltage in accordance with IEC/DIN EN 60204-1 and IEC 62368-1.

Observe the general requirements for PELV circuits in accordance with IEC/DIN EN 60204-1.



Installation errors can damage the electronics or cause malfunctions.

The C-TOP S contains electrostatically sensitive components. Electrostatic discharge caused by improper handling or incorrect earthing can damage the internal electronics.

Disconnect the PLC power supply before handling the control head, as it is part of the PLC input/output system. The control head must be powered by the same power supply as the PLC. The power supply must not be used to supply power to other equipment and must comply with the requirements of the EN 61131-2 standard. The installation must be protected against reverse polarity and short circuits

### 3.2.3. During operation



Always take into account the [Technical Specifications in chapter 9](#).

Only use the product if it is in perfect technical condition.

NEVER exceed the specified limit values.

Do not touch the inside of the control head when it is in operation.



All the electrical work should be carried out by specialised personnel.

The C-TOP S contains electrostatically sensitive components. Electrostatic discharge caused by improper handling or incorrect earthing can damage the internal electronics.

### 3.2.2. During maintenance



Always take into account the [Technical Specifications in chapter 9](#).

Before starting the maintenance work, make sure that the compressed air supply is switched off and that the air supply hoses are pressureless. Secure the system against accidental restarting.

Clean the control head according to the standard procedure and using neutral products. Do not use high-pressure cleaning machines or aggressive cleaning products to clean the control head.

All control heads and their replaced components must be disposed of or recycled appropriately, in accordance with the existing directives in each region.



All the electrical work should be carried out by specialised personnel.

Disconnect the PLC power supply before handling the control head, as it is part of the PLC input/output system.

Before starting the maintenance work, make sure that the power supplies are switched off. Secure the system against accidental restarting.

## 4. General Information

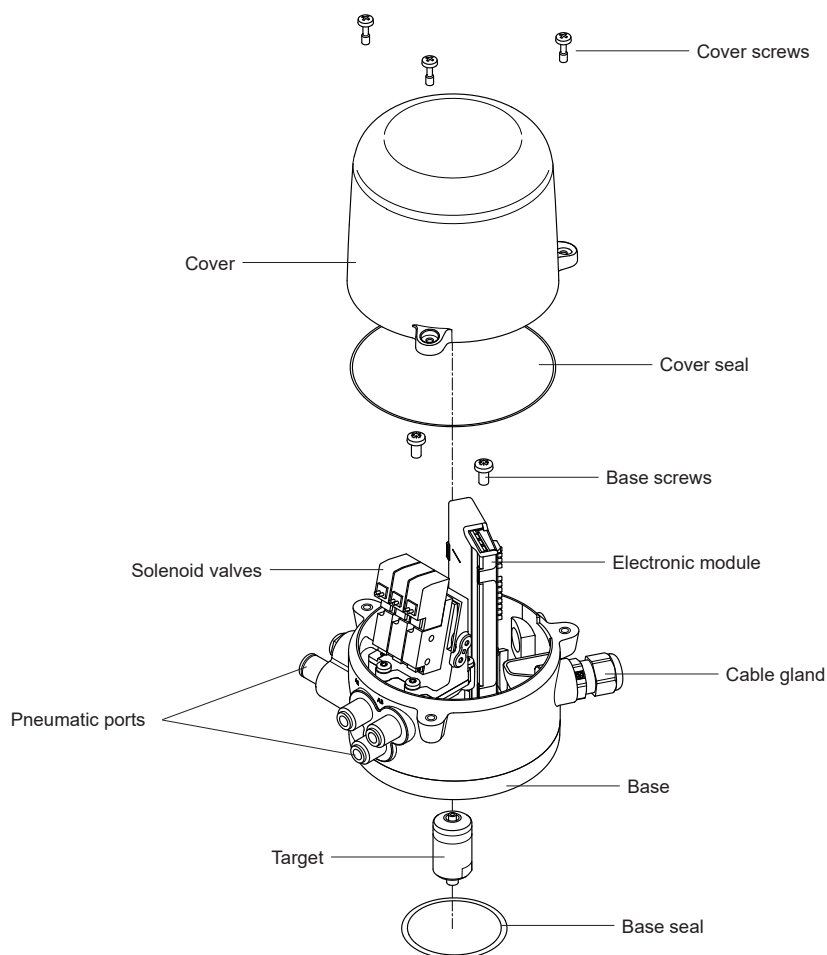
### 4.1. DESCRIPTION

The C-TOP S is a control head that adapts to all of the INOXPA actuators to automate pneumatic drive process valves. To automate the process valves, the control head can have up to three solenoid valves.

The control head contains a linear detection electronic module comprised of several hall-effect sensors. A PLC system sends signals to the solenoid valves of the control head through the unit's electronic module to control and operate the main valve. At the same time, the electronic module sends feedback signals to the PLC to indicate the current position valve. A particular colour for each valve position lights up to indicate its current status at all times.

The control head is set using the electronic module.

The control head main parts are:



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### 4.2. APPLICATION

The C-TOP S can install on any process valve (butterfly, ball, diaphragm and single or double seat valves) of the food, beverage, chemical or pharmaceutical industry.



# 5. Installation

## 5.1. RECEPTION OF THE CONTROL HEAD



INOXPA is not liable for any deterioration of the material caused by its transport or unpacking.

When receipt the control head, check to see whether all the parts listed on the delivery slip are present:

- control head,
- quick installation guide with access to the complete instructions manual.

INOXPA inspects all control heads before packaging. However, it cannot guarantee that the merchandise arrives at the user intact.

When unpacking the control head:

- take all possible precautions against damage to the control head and its components,
- inspect the control head or the parts that comprise it for possible damage incurred during shipping.

## 5.2. TRANSPORT AND STORAGE



The buyer or user shall be liable for assembly, installation, start-up and operation of the control head.

Take all possible precautions when transporting and storing the control head to avoid damaging it and its components.



The symbol indicates that the product should not be discarded as unsorted waste but must be sent to separate collection facilities for recovery and recycling.

## 5.3. IDENTIFICATION OF THE CONTROL HEAD

Each control head is inscribed a fabrication number for its identification. indicate the fabrication number on all documents to refer to the control head.

## 5.4. LOCATION

Place the control head leaving enough space around it to realize easily the dismantling, the inspection and the review of the control head. The installation should allow that the removable parts are could remove easily.

## 5.5. MECHANICAL INSTALLATION OF THE CONTROL HEAD

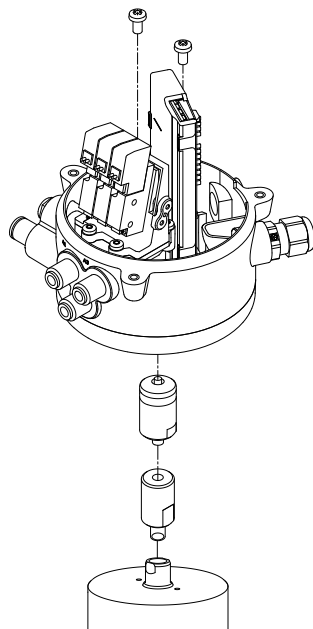


All the installation work of the control head should be carried out by specialised personnel. Always follow the instructions of the present manual.

Check that the compressed air and power supply are switched off and the actuator is pressureless before starting the assembly or disassembly works.

To mount the control head on the actuator of the valve follow the next process:

1. If necessary, fit the shaft adapter on the actuator shaft.
2. Place the target (10) on the shaft adapter.
3. Remove the cover screws (01).
4. Position the C-TOP S on the actuator.
5. Tighten the base screws (04) which join the head with the actuator.
6. Place the cover (02) and tighten the cover screws (01).



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## 5.6. PNEUMATIC INSTALLATION OF THE CONTROL HEAD



All the installation work of the control head should be carried out by specialised personnel. Always follow the instructions of the present manual. Check that the compressed air and power supply are switched off and the actuator is pressureless before starting the assembly or disassembly works.

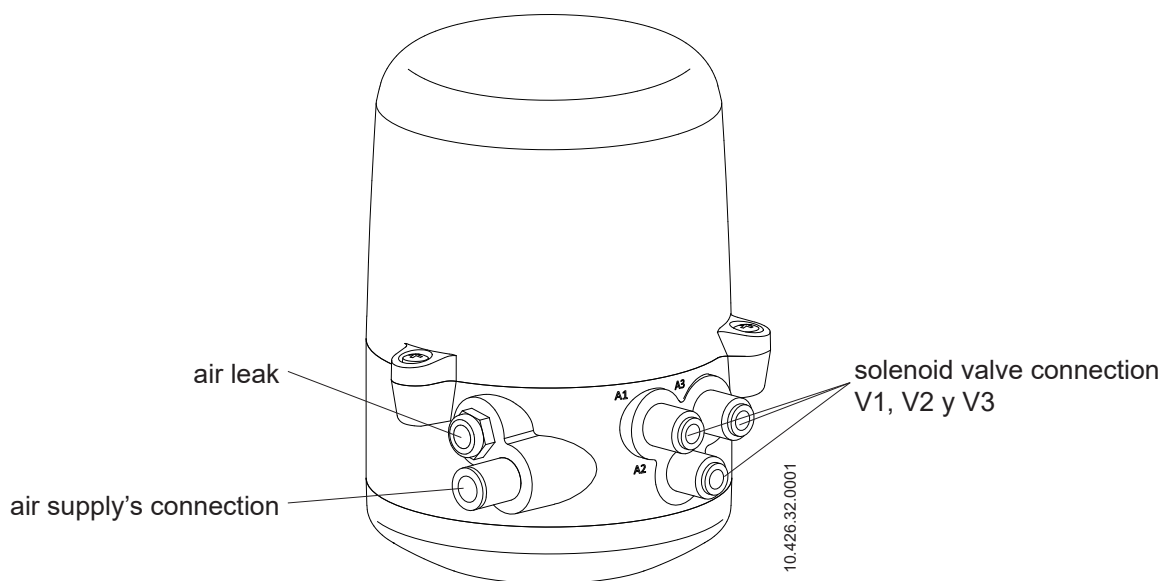
The identification of the connections is on the control head.

Cut the air hoses at the needed length before starting the pneumatic installation.

To perform the pneumatic installation follow the next process:

1. Connect the air hoses between the necessary air connections A1, A2 and/or A3 of the C-TOP S and the valve's air connections.
2. Connect the air supply hose to the air intake 1 of the control head.
3. Connect the compressed air supply.

Connection	Description	tube outer Ø	Thread
1	supply port for operating pressure	8 mm	
3	exhaust air connection	-	
A1	working port of solenoid valve V1		G 1/8"
A2	working port of solenoid valve V2	6 mm	
A3	working port of solenoid valve V3		



Use only approved air supply's connections and suitable quality for the installation. Cut the air connections with a suitable cutter to avoid damage to them. Use the air supply's connections with sufficient length to avoid tensions on them and to avoid its disassemble if separate the control head of the valve is needed.

## 5.7. ELECTRICAL INSTALLATION OF THE CONTROL HEAD



All the electrical work should be carried out by specialised personnel.

Check that the power supplies are switched off.

Secure the installation to prevent unintentional activation.

The C-TOP contains electrostatically sensitive components. The electrostatic discharge caused by improper handling or incorrect earthing can damage the internal electronics.

The control head C-TOP S is available in three versions of the electronic module with three systems of communication:

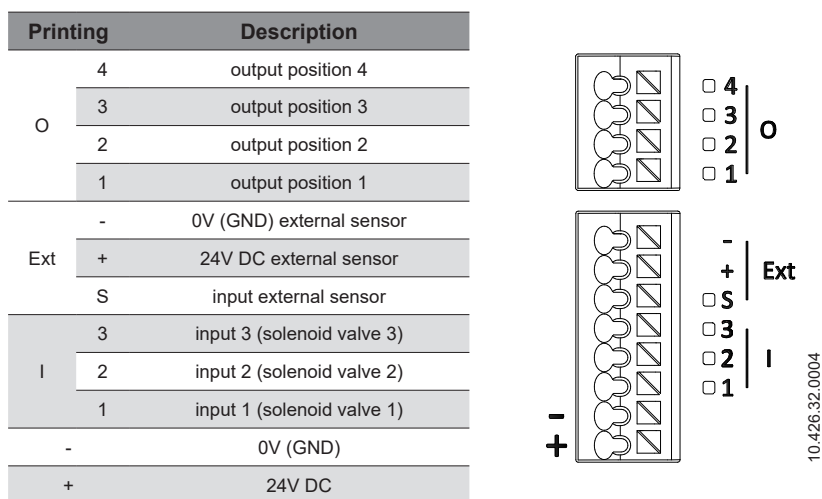
1. Digital 24V DC communication for 2 or 3 solenoid valves.
2. Digital 24 V DC communication for 0 or 1 solenoid valves.
3. AS-interface communication.

### 5.7.1. Electrical installations with digital communication 24V DC

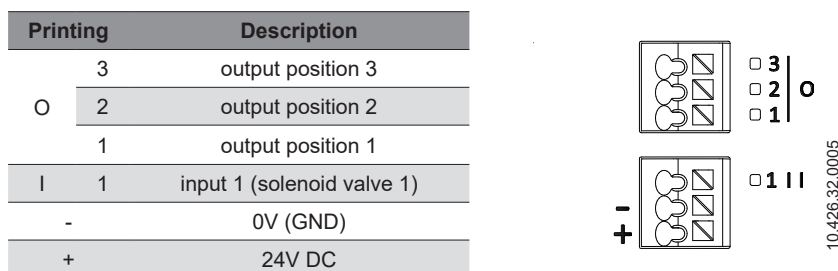
To perform the electrical installation of the control head with digital 24V DC communications follow the next steps:

1. Remove the cover screws (01).
2. Lift and remove the cover (02).
3. Route the electrical cable through the cable gland.
4. Connect the cables to the terminal according to the wiring diagram.
5. Tighten the cable gland (08).
6. Place the cover (01) and fix it with the cover screws (01).

Wiring diagram digital 24 V DC communication for 2/3 solenoid valves and 4 outputs:



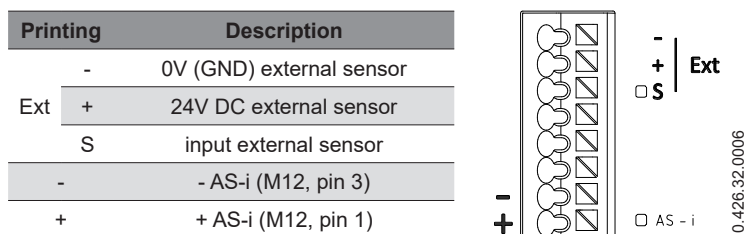
Wiring diagram digital 24 V DC communication for 0/1 solenoid valve and 3 outputs:



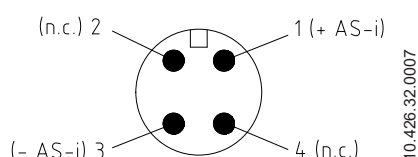
### 5.7.2. Electrical installation with AS-interface communication

The C-TOP S with AS-interface communication includes a cable with a multipole connector so it is not needed to perform any internal wiring.

Wiring diagram AS-interface communication:



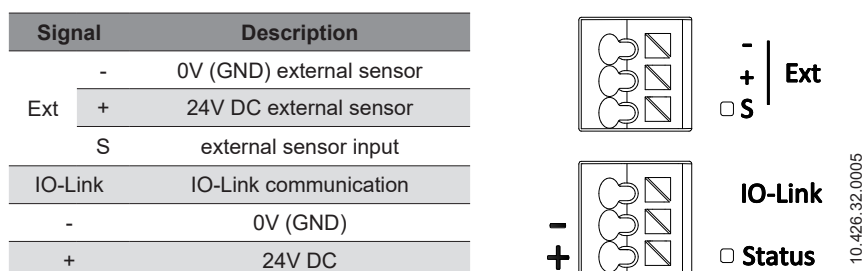
M12 male multi-pole connector:



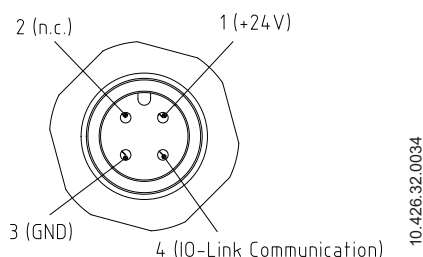
### 5.7.3. Electrical installation with IO-Link communication

The C-TOP S control unit with IO-Link communication comes with a Class A multi-pole connector.

IO-Link communication connection diagram:



M12 multi-pole male connector



## 6. Setup

The control head leaves the factory without configuration. Perform a previous setting that consists of memorizing different positions of the shaft of the valve actuator is needed to be able to use it. Once it is installed and is switched on for the first time, the C-TOP S flashes with a white and pink light to indicate that it has not any position memorized.

The control head C-TOP S has two setting modes:

- manualtune for control heads without solenoid valves and double effect actuators, or for situations where you want to activate more than one solenoid valve simultaneously,
- autotune for all other cases.

The different setting modes of the control head are performed through the of pulsations the “I” and “II” buttons which are in the top part of the electronic module of the control head, so to configure it will be necessary to lift its cover.

The “I” y “II” buttons of the electronic module answer to three types of pulsations according to the following table:

	Pulsation	short pulsation	long pulsation
Time (s)	< 1	1 - 3	> 3
Signalling		light green continuous light	light green flashing light

### 6.1. AUTOTUNE

The autotune configuration allows an automatic configuration and it works well for most applications. This configuration mode is recommended whenever possible.

With this configuration, the control head activates the solenoid valves sequentially and memorize the different positions of the valve.

The autotune configuration can be carried out in two ways:

- by external signals
- by the internal signals generated by the control head itself

In the autotune configuration by the external way, when the control head receives a signal, the corresponding solenoid valve will be activated and memorize the new position. The control head will be pending to receive new signals for 10 minutes maximum. When the control head receives the external signal, the new position will activate the corresponding digital output and will light the control head according to the configured colour for this position. The control head configuration will finish if, during these 10 minutes, all the possible input signals have been received. Otherwise, is possible to configure the control head by internal signals generated by the control head itself.

To perform the autotune configuration by internal signals follow the next steps:

1. Do a long press on the “I” button. The end of the long press will be indicated by a light green flashing illumination and the start of the configuration by a white flashing light for 2 seconds.
2. The control head’s configuration will start automatically activating and memorising the different positions of the valve. The transitions between different positions will be indicated by a pink flashing light. When memorizing each position, the control head will be illuminated by the configured colour for such position, it will activate the corresponding outlet and it will start the transition to the next position.
3. To indicate the end of the autotune configuration the control head will be illuminated by a white continuous light for 5 seconds.

Do a short press on the “II” button to cancel the process of the autotune configuration.

Consult chapter 8. [Operating problems](#) if an error occurs during the autotune configuration.

## 6.2. MANUALTUNE

The manualtune programming allows the manual configuration of the control head. This mode is used for control heads without solenoid valves and double effect actuators, or for situations where you want to activate more than one solenoid valve simultaneously.

In this configuration mode, the positions associated with each output must be memorized one by one.

To perform the manualtune configuration follow the next steps:

1. Do a long press on the “II” button. The end of the long press will be indicated by a light green flashing illumination and the start of the configuration by a white flashing light for 2 seconds.
2. Perform the following steps for each possible valve’s position that have to be memorized:
  - place the valve on the position to be memorized. To do this you can use the manual locking of the solenoid valves.
  - the control head will be illuminated by the corresponding configured colour.
  - do a long press on the “II” button to memorize the position or press “I” to discard it.
    - If the position is memorized, the control head will be illuminated continuously light by the corresponding configured colour for 5 seconds. Once the position is saved the control head will be illuminated by a flashing light of the colour of the next position which has to memorize.
    - If the position is discarded the control head illuminates by a flashing light of the colour of the next position which has to memorize.

The maximum time to memorize the valve’s position or discard it is 120 seconds. After this time, the configuration process will be cancelled.

- to indicate the end of the manualtune configuration the control head will be illuminated by a white continuous light for 5 seconds.

Do a short press on the “I” button to cancel the process of the manualtune configuration.

Consult chapter 8. [Operating problems](#) if an error occurs during the manualtune configuration.

## 6.3. AUXILIARY MODES

The control head has two additional modes which can be useful to do check and maintenance tasks:

- test
- maintenance

### 6.3.1. Test mode

The test mode allows checking the control head’s configuration. Only if you create a configuration previously, manually or automatically, you can access the test mode.

To perform the test mode follow the next steps:

1. Do a short press on the “I” button. The start of the test mode will be indicated by a white flashing light.
2. A test sequence is executed for each solenoid valve. If the target’s position is the memorized position is checked for each solenoid valve. If the target’s position is correct, the control head will be illuminated by the corresponding configured colour for each solenoid valve.
3. The control head’s light is closed during the change of the solenoid valve.
4. To indicate the end of the test mode the control head will be illuminated by a white flashing light for 2 seconds.

During the performance of the test mode, you can pass from checking one solenoid valve to another by doing a short or long press on the “I” button.

Do a short or long press on the “II” button to cancel the test mode.

### 6.3.2. Maintenance mode

The maintenance mode is used to activate the solenoid valves manually.

To entry to the maintenance mode, situate the DIP switch 4 in the ON position.

The entry to the maintenance mode is indicated with a white flashing light for 2 seconds.

Once inside the maintenance mode, the solenoid valves can be activated manually doing pressing the “I” and “II” buttons according to the combinations of the following table:

“I” button	“II” button	Activate solenoid valve
Pressed	Not pressed	1
Not pressed	Pressed	2
Pressed	Pressed	3
Not pressed	Not pressed	None

If the control head is configured for each solenoid valve that is activated manually, the control head will be illuminated by the corresponding configured colour. If instead, the control head has not any configuration, the control head will be illuminated by a white light.

To finalize the maintenance mode, situate the DIP switch 4 in the OFF position. The end of the maintenance mode will be indicated by a flashing light for 2 seconds.

### 6.4. RESET

To restore the default settings, reset the control head pressing the “I” and “II” buttons until the control head illuminates by a white continuous light.

### 6.5. COLOUR CODING

The control head is illuminated by different colours to inform the status of the valve and the control head. There are some default colours and other ones that be chosen to configure the different positions of the valve.

The default colours to operate the C-TOP S are:

- White: to get in and out of the different operating modes. If no change has occurred at the exit of the setting mode, the light of the control head will be flashing. Instead, if any changes have occurred, the light of the control head will be continuous.
- Pink: to indicate transition.
- Red: to indicate an electronic fault.



Other colours can be configured for each outlet according to the following table:

DIP 1	DIP 2	DIP 3	OUT 1	OUT 2	OUT 3	OUT 4
0	0	0	blue	green	yellow	orange
1	0	0	green	blue	yellow	orange
0	1	0	green	yellow	blue	orange
1	1	0	blue	yellow	green	orange
0	0	1	yellow	blue	green	orange
1	0	1	yellow	green	blue	orange
0	1	1	blue	green	orange	yellow
1	1	1	green	blue	orange	yellow





## 7. C-TOP S IO-Link configuration

The control unit is supplied without configuration. In order to be able to use it, it needs configuring first, which involves memorising the different positions of the valve actuator shaft. Once installed and turned on for the first time, the C-TOP S IO-Link flashes with a pink light, indicating that no positions have been memorised.

The control unit has two configuration modes:

- manualtune, for units with 0 solenoid valves and double-acting actuators,
- autotune, for all other cases.

Pressing the “I” and “II” buttons on the top of the electronic module accesses the different configuration modes, so the cover of the C-TOP S IO-Link has to be removed to configure it.

The “I” and “II” buttons of the electronic module respond to three types of presses based on the table below:

	Short press	Long press	Very long press
	SBx	LBx	VLBx
Time (s)	$100 \text{ ms} < t < 2$	$2 < t < 5$	$t > 5$
Light signal	blinking	flashes quickly	steady

Press and hold the “I” and “II” buttons simultaneously for a long time (for  $> 5\text{s}$ ) in order to reset the unit.

Once the module positions have been programmed, an IO-Link protocol interface can be used to choose whether two solenoid valves can be activated at the same time.

To check the parameters for this device, see document 10.426.30.09EN (IO-Link Interface Description).

A software file (IODD) from the INOXPA website (<https://www.inoxpa.com/downloads/documents/valves-and-fittings/valve-automation>) is required and must be uploaded to the control unit before its start-up and configuration. Which software is needed will depend on how many solenoid valves the control unit contains.

### 7.1. AUTOTUNE

Autotune programming enables automatic configuration and works well for most applications. Running this configuration mode whenever possible is recommended.

With this configuration, the control unit activates the solenoid valves sequentially and memorises the different valve positions.

This can be done in two different ways:

- using external signals,
- using internal signals generated by the unit itself.

#### External signals

With programming using external signals, when the unit receives a signal, it will activate the corresponding solenoid valve and memorise the new position. The unit will wait to receive new signals for up to 10 minutes. On receiving the external signal, the new position will activate the corresponding digital output and light up the unit based on the colour configured for that position. If all the possible input signals have been received before that period is up, the unit will be configured. Otherwise, it will complete configuration using internal signals generated by the unit itself.

### Internal signals

To sequence automatically using internal signals, follow these steps:

1. Press and hold the “I” button for a long time (for 2s - 5s). Release when a light flashes quickly.
2. The configuration of the control unit starts automatically, activating and memorising the different valve positions. A flashing pink light will indicate the transitions between different positions. On memorising each position, the unit will light up that position’s colour, activate the corresponding output, and initiate transition to the next position.
3. To indicate the autotune configuration is complete, the control unit lights up with a steady white light for 5 seconds.

Please see section [8. Operating problems](#) if an error occurs during autotune configuration.

## **7.2. MANUALTUNE**

For manualtune programming, press and hold the “II” button (for 2 - 5 s) on the electronic module of the control unit. The light of the unit will flash quickly to indicate the configuration has initiated. Follow the steps below after initiating the configuration:

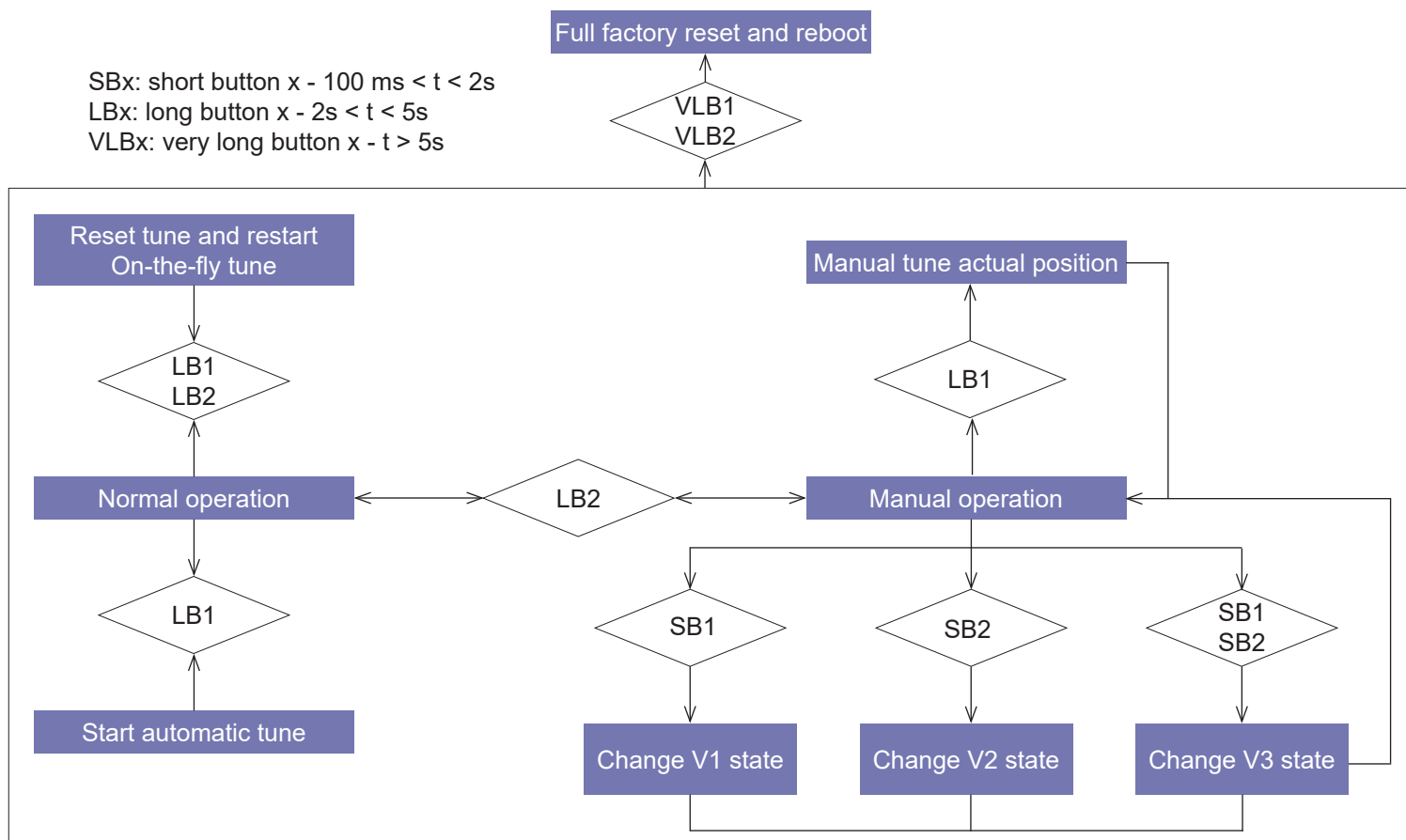
1. Record the valve rest position by pressing and holding the “I” button. A light will flash quickly while pressing and a steady light will indicate when the valve position recording is complete.
2. Activate each solenoid valve and record the valve position for each solenoid valve:
  - press the “I” button for a short time (for  $100\text{ ms} < t < 2\text{ s}$ ) to activate solenoid valve 1.
  - press the “II” button for a short time (for  $100\text{ ms} < t < 2\text{ s}$ ) to activate solenoid valve 2.
  - press the “I” and “II” buttons simultaneously for a short time (for  $100\text{ ms} < t < 2\text{ s}$ ) to activate solenoid valve 3.

Every time a solenoid valve activates, its position should be recorded by pressing and holding the “I” button (for 2 - 5 s). A light will flash quickly while pressing and a steady light will indicate when the valve position recording is complete.

3. Press and hold the “II” button for a long time (2 - 5 s) to exit the manualtune programming mode.

### 7.3. PUSH-BUTTON OPERATION OVERVIEW

Below is an overview in the form of a block diagram, which shows the different operating modes available for this C-TOP S variant.



## 8. Operating problems

Before doing a fault diagnosis check that the control head is correctly connected.

Fault description	Possible causes	Action
The electrical signal is NOT sent or received	The cables are defective or improperly connected	Check the electric connection and the power supply
	The electronic module is defective	Replace the electronic module
The electrical signal is NOT sent or received and the control head NOT be illuminated	The control head is in maintenance mode. The rest position light saved flashes	Move the "DIP Switch 4" to the right to exit the maintenance mode. See chapter 6.3.2. Autotune
The electrical signal is NOT sent or received and the control head FLASHES alternatively with WHITE and PINK light	There is not any saved configuration in the control head	Perform the configuration process according to chapter 6.1. Autotune or 6.2. Manualtune
	The magnet (target) is defective or is not installed	Check that the magnet is installed. If yes, check its state
The electrical signal is NOT sent or received and the control head be illuminated with a CONTINUOUSLY LIGHT	The control head has a configuration that does not correspond with the valve/s	Perform the configuration process according to chapter 6.1. Autotune or 6.2. Manualtune
The process valve does NOT act and the light of the current position FLASHES	The control head is receiving a signal to act but it has not compressed air supply	Check the compressed air supply arrives at the control head
	The external sensor is defective or is not correctly configured or installed	Check that the external sensor is installed and/or is not defective. Then, perform the configuration according to chapter 6.1. Autotune or 6.2. Manualtune
The control head can not act two internal solenoid valves at a time	The control head has not compressed air supply	Check that pneumatic pressure arrives at the control head
The control head does NOT respond at the autotune configuration through external signals. It flashes alternatively with WHITE and PINK light	10 minutes have passed after that the control head has been connected to the power supply	At the end of this time, perform the autotune configuration by internal signs or the manualtune configuration
Wrong operation of the process valves	The pneumatic connections are not correctly connected	Check that each pneumatic hose is connected to the corresponding output of the control head

# 9. Technical Specifications

## 9.1. MATERIALS

Plastic parts	PA6
Screws	A2
Seals	NBR
Air fittings	nickel-plated brass

## 9.2. ENVIRONMENT

Outdoor use	protected areas
Storage temperature	-20°C to 50°C
Environment temperature	-5°C to 50°C
Relative humidity	80% until 31°C reducing until 50% to 40°C
Maximum height	2000 m
Overvoltage category	II
Degree of pollution	2
Degree of protection	IP65/67

## 9.3. CONTROL HEAD

Working pressure	300 - 700 kPa (3 - 7 bar)
Stroke	≤ 80 mm
Maximum shaft diameter	22 mm
Assembly type	screws
Fluid	filtered compressed air per ISO 8573-1:2010: <ul style="list-style-type: none"> <li>- <u>Solid particulate content</u>: quality class 3, max. particle dimension = 5 µ, max particle density = 5 mg/m<sup>3</sup>.</li> <li>- <u>Water content</u>: quality class 4, max. dew point = 2°C. If the valve is used at a high altitude or under low ambient temperature conditions, the dew point must be adjusted accordingly.</li> <li>- <u>Oil content</u>: quality class 5, preferentially oil free, max. 25 mg oil per 1 m<sup>3</sup> air.</li> </ul>
Measuring principle	HALL sensor without contact
Measured quantity	position
Accuracy	± 0,8 mm
Visual indicators	LED
Type of solenoid valves	3/2 way, normally closed with manual locking

## 9.4. POWER CONSUMPTION

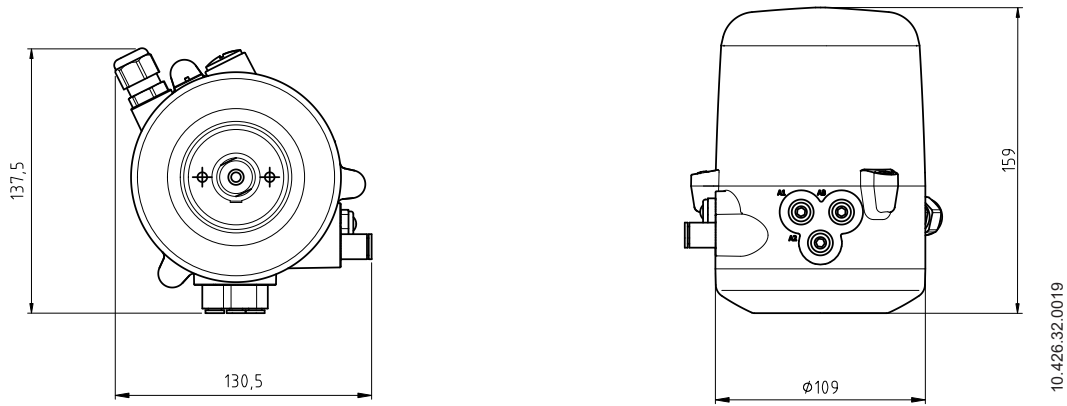
	C- TOP S	Power [W]
24V DC	0 solenoid valves	1,3
	1 solenoid valves	1,7
	2 solenoid valves	2
	3 solenoid valves	2,4
AS-I	1 solenoid valves	1,7
	2 solenoid valves	2
	3 solenoid valves	2,4

	C- TOP S	Power [W]
IO-Link	0 solenoid valves	1.3
	1 solenoid valves	1.7
	2 solenoid valves	2.0
	3 solenoid valves	2.4

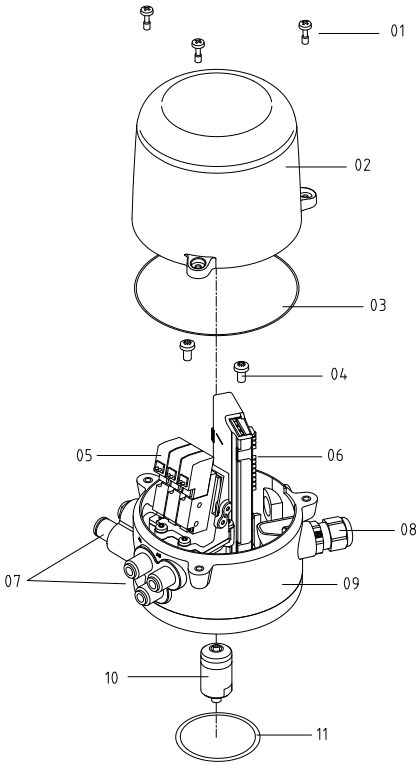
9.6. COMUNICATION

	Digital 24 V DC / IO-Link	AS-interface
Operatin voltage	24 V DC ± 10%	by wire AS-i de 29,5 to 31,6 V DC
Outlets	PNP normally open	-
Terminal	type push-in, nominal cable section 0,2 a 1,5 mm <sup>2</sup> (22 AWG a 16 AWG)	type push-in, nominal cable section 0,2 a 1,5 mm <sup>2</sup> (22 AWG a 16 AWG)
Main input	Digital 24V DC: cable gland M16 x 1,5 (4 to 10 mm diameter cable) IO-Link: M12 4-pole male connector	cable gland M16 x 1,5 with 2 m cable and M12 4 pole male connector
External sensor input	M16 x 1,5 plug	M16 x 1,5 plug
Version	-	v 3.0 (A/B addressing and up to 62 nodes)
Slave profile	-	7A77
Additional functionality	IO-Link: device update via the IO-Link protocol	-

9.5. DIMENSIONS OF THE C-TOP S



9.7. EXPLODED DRAWING AND PARTS LIST



10.426.32.0002

Position	Description
01	cover screws
02	cover
03	cover seal
04	base screws
05	solenoid valves
06	electronic module
07	pneumatic ports
08	cable gland
09	base
10	target
11	base seal

**How to contact INOXPA S.A.U.:**

Contact details for all countries are continually updated  
on our website

Please visit [www.inoxpa.com](http://www.inoxpa.com) to access the information.



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