INSPEKTO

AUTONOMOUS MACHINE VISION

INSPEKTO S70

TCP/IP Integration guide

Contents

About this document

What's in the manual

This manual describes how to establish industrial communication between the S70 system to a PLC or other controller (such as robot or workstation) using TCP/IP, showing the commands and methods that can be transmitted between the two.

Inspekto S70

Powered by the Autonomous Machine Vision Artificial Intelligence (AMV-AI) technology, the INSPEKTO S70 Gen. 2 allows easy fit into dynamic and versatile production environments for a wide range of use cases, while maintaining superb visual inspection quality. It is the only self-contained vision inspection product on the market and represents the most user-friendly solution for industrial quality inspection currently available. It can be set up and deployed by the final user in about 45 minutes and can be trained to inspect new products using an average of only 20 good sample items, and no defective ones.

System Overview

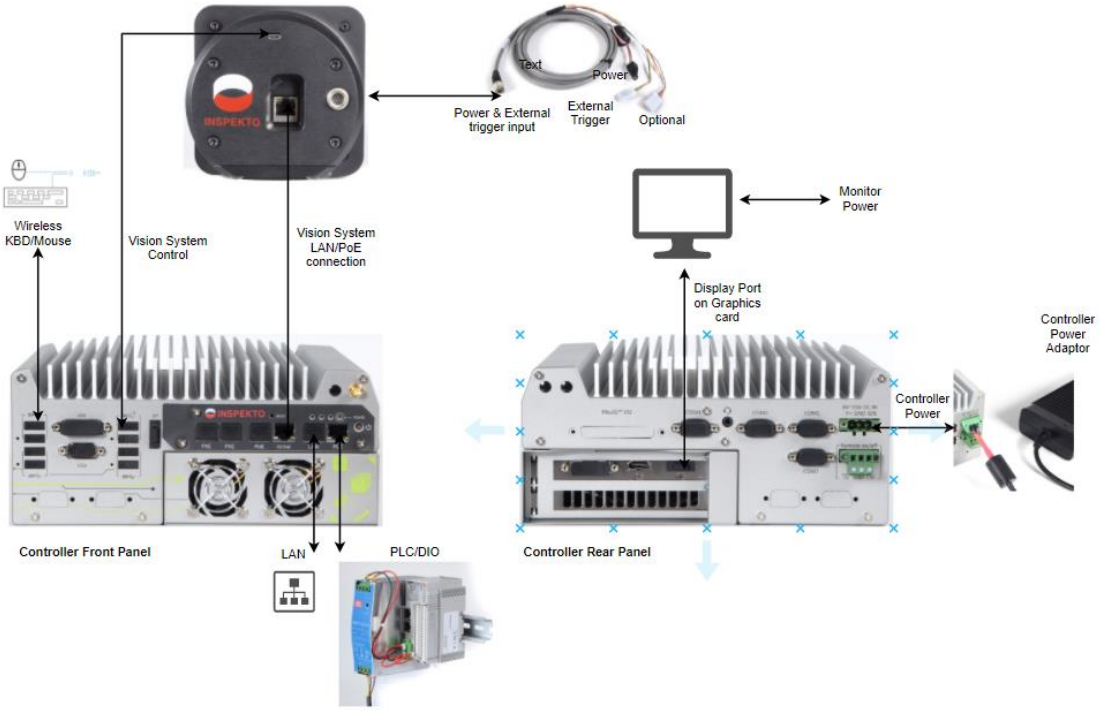
The Inspekto S70 Gen. 2 is installed on the production line and after a simple and short setup process, it captures images of the manufactured items using its vision system.
The captured image of the inspected item is compared with the good references, using AI capabilities and if there are any defects, the Inspekto S70 will present them. The inspection searches for physical abnormalities, which exceed the shape tolerances and surface variations visible in the reference items. The system will only present true defects, not those that can be explained by other phenomena, such as changes to lighting or movement. The AMV-AI technology is highly sensitive to details and identifies even minor differences between defects and permissible variations.
If the inspected item is defective, the S70 communicates to the PLC The images contain a timestamp and a running counter of the items, which can be used to track back any items inspected.

Document Number S70-DOC-0017
Revision 002 October 2021

INSPEKTO™
Information: info@inspekto.com
Support: support@inspekto.com
Web: http://www.inspekto.com
Zeev Zabotinsky St 7, Ramat Gan, 5252007, Israel

PLC – S70 integration

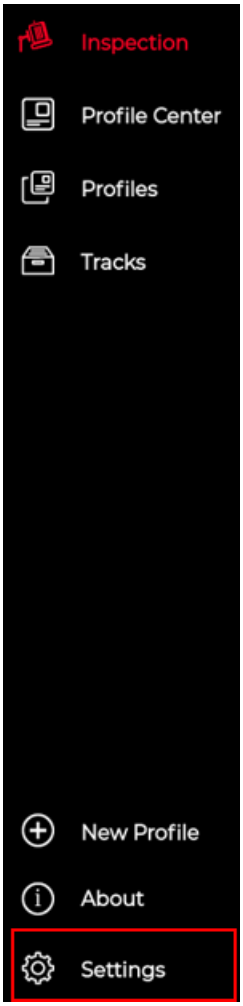
How to connect



Inspekto S70 side

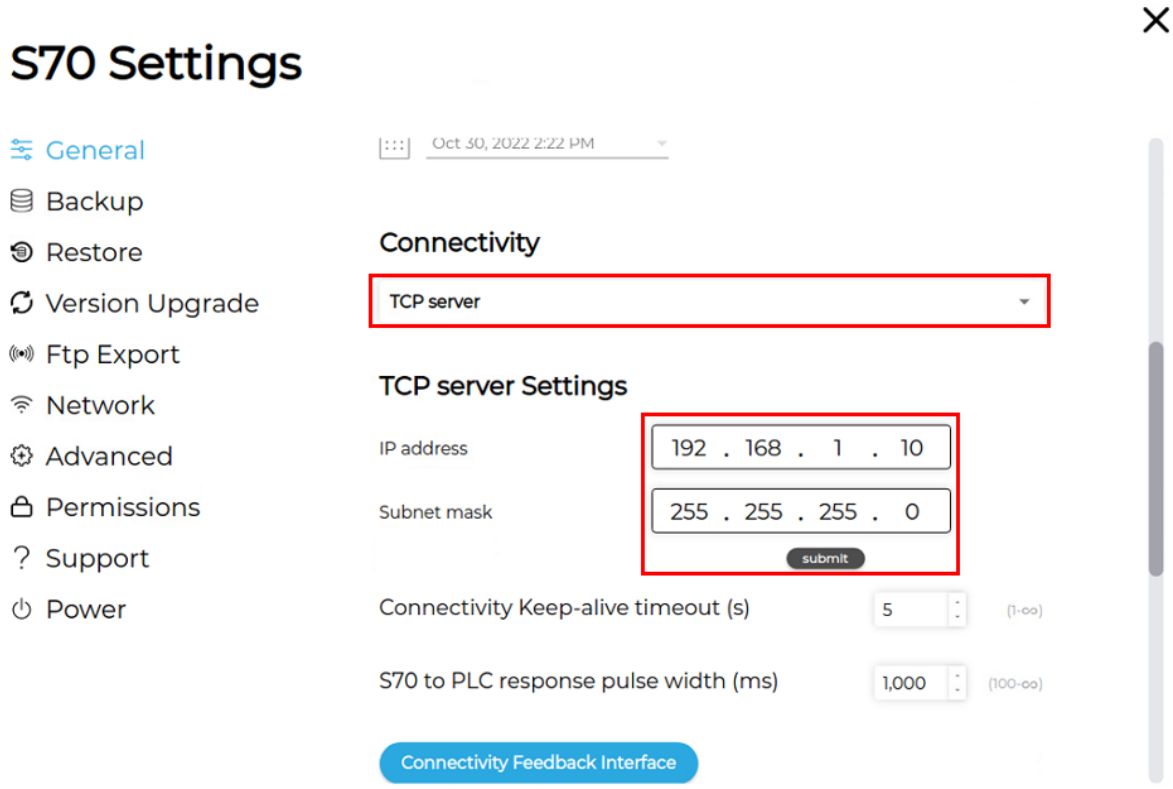
- The S70 will act as TCP server, the connected device should be configured as the client.

In the S70 screen hover over the left side of the screen so the menu will open, and press on “Settings”



Under General tab – scroll down to “Connectivity” section and choose “TCP Server” from the drop down menu.

- Set the IP address and the Subnet mask to fit your network and press the “submit” button



Data structure

- Any correspondence between the PLC and the INSPEKTO S70 must contain all of the header and data messages.
- The message contains two sections:
    - Header
    - Data
        - Header details are subject to change. In case it needs to be changed to fit your line requirements please contact Inspekto technical service.
- The TCP/IP server should be set to port 2052.

PLC ->INSPEKTO

In order to establish communication with the S70 the TCP/IP client should connect to the IP set in the INSPEKTO S70 under Connectivity -> TCP server IP.

- The INSPEKTO S70 TCP/IP server uses port 2052.

Telegram breakdown:

1. PLC INSPEKTO

	Start Location	Data Length	Data Sample	Description	Range	Alignmen	Fill Character
Header	0	6	S70_01	Header-ID	<any text>	Left	Any
	6	10	INSPEKTO_C	Telegram-ID	<any text>	Left	Any
	16	4	0112	Header Length	0112	Right	Any
	20	8	00000138	Data Length	00000138	Right	Any
	28	6	000001	Running number	000001-065535	Right	Any
	34	14	YYYYMMddHHmmss	Date and time	<Date and time>	-	-
	48	32	INSPEKTO	Destination	<any text>	Left	Any
	80	32	PLC	Source	<any text>	Left	Any
Data	112	4	0001	OUT_INSPECTION_MODE	0000-0255 or 'NA'	Right	Zero (0x30)
	116	64	OBJECT1256	OUT_NEW_OBJECT_TRIGGER	<any text> or 'NA'	Left	Space (0x20)
	180	6	000001	OUT_PROFILE_ID	000000-065535 or 'NA'	Right	Zero (0x30)
	186	64	BATCH17	OUT_BATCH_ID	<any text> or 'NA'	Left	Space (0x20)

I

2. INSPEKTO PLC

	Start Location	Data Length	Data Sample	Description	Range	Alignment
Header	0	6	S70_01	Header-ID	<any text>	Left
	6	10	INSPEKTO_C	Telegram-ID	<any text>	Left
	16	4	0112	Header Length	0112	Right
	20	8	00000214	Data Length	00000214	Right
	28	6	000001	Running number	000001-065535	Right
	34	14	YYYYMMddHHmmss	Date and time	<Date and time>	-
	48	32	INSPEKTO	Destination	<any text>	Left
	80	32	PLC	Source	<any text>	Left
Data	112	4	0001	IN_CUR_INSPECTION_MODE\	0000-0255 or 'NA'	Right
	116	64	OBJECT1256	IN_CUR_OBJECT_ID	<any text> or 'NA'	Left
	180	6	000001	IN_CUR_PROFILE_ID	000000-065535 or 'NA'	Right
	186	64	BATCH17	IN_CUR_BATCH_ID	<any text> or 'NA'	Left
	250	4	0000	IN_OBJECT_INSPECTION_RESULT	0000-0255 or 'NA'	Right
	254	64	000100……0010	IN_ROI_DEFECT_LIST	0 or 1	-
	318	4	0000	IN_SYSTEM_ERROR	0000-0255 or 'NA'	Right
	322	4	0000	IN_SYSTEM_READY	0000-0255 or 'NA'	Right

Detailed Functions Explanations

Each transmitted message must include the entire message components, and in the correct order, both on the PLC side and the Inspekto side.

For each message sent by the PLC a response is sent from the S70.

The INSPEKTO S70 can process one request in a single message, therefore when sending a request from the PLC to the S70, all other requests fields in the data section should be in full size and must contain 'NA' padded with spaces (' ')

For example: when sending an inspection mode change to "Auto-partID provided by the PLC" from the PLC to the S70:

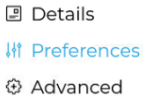
1. All header sections must be sent as described above.
2. IN_CUR_INSPECTION_MODE should be "0001".
3. All other data components should be "NA" following with spaces (" ") in the number of the remaining data length, for example – "IN_CUR_PROFILE_ID" should be "NA " (NA + 4 spaces).

- Since full transmissions must be sent for each telegram there are no Keep-alive or system-ready signals sent from the S70 to the PLC when using TCP/IP. The System Ready section in the telegram is used to describe a response for a request sent while the INSPEKTO S70 is processing a previous request. In this case, the INSPEKTO s70 response will state System Ready = 0.

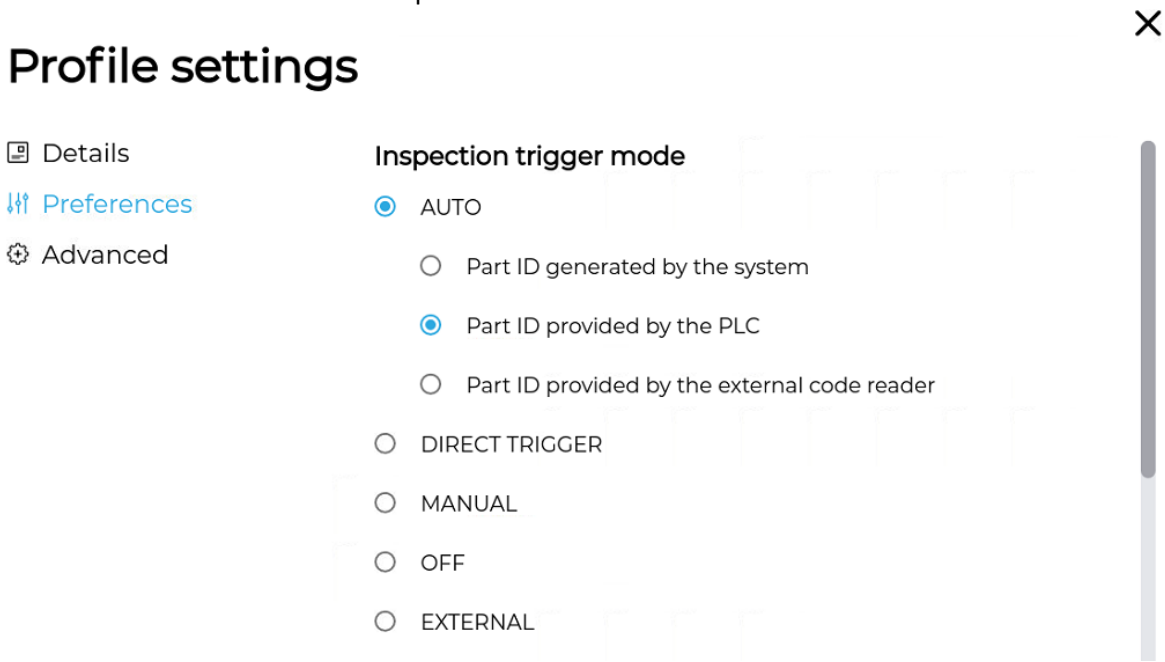
1. OUT_INSPECTION_MODE
   Inspection mode controls the INSPEKTO S70's trigger mode out of the following available options:

Inspection modes	**Value**
OFF	0
Auto - Part ID provided by the PLC	1
Auto - Part ID generated by the system	2
Manual	3
External - Part ID generated by the system	4
External - Part ID provided by the PLC	5
Direct Trigger - Part ID generated by the system	6
Direct Trigger - Part ID provided by the PLC	7
Auto - Part ID generated by the external code reader	8

- Users can also modify inspection modes using the system user interface by going to profile settings -> Preferences.
    - In the system, while profile is loaded, press on the  icon in the top left corner of the screen.
    - Select “Preferences” tab:



    - Select the wanted inspection mode:

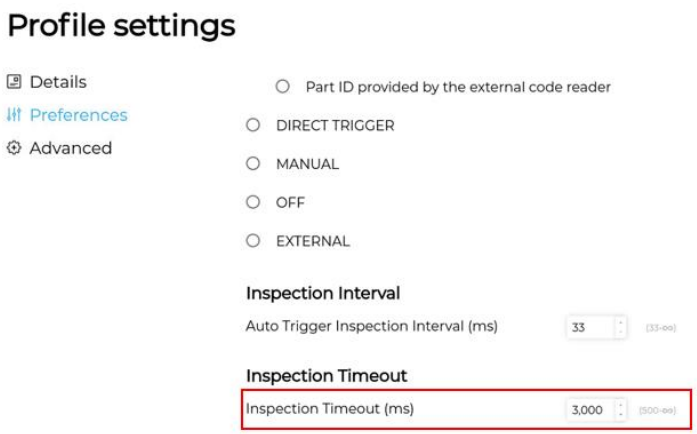


- Please note – the order in which trigger modes appear in the user interface is different from the associated value needed when using connectivity.

Inspection modes detailed explanation:

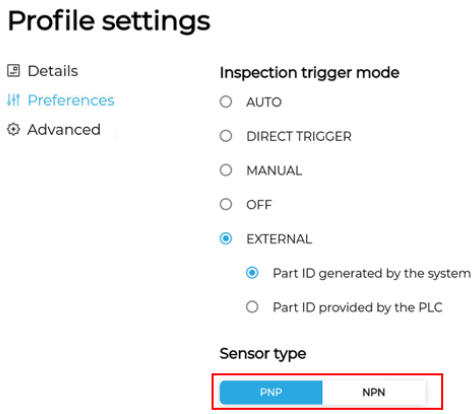
- **OFF** – in this mode the system will not respond to trigger signals and will not perform inspections. Use this mode if the system should not be active.
- **Auto – Part ID provided by the PLC** – in this mode the system will automatically identify the part for inspection, wait until it is stationary, and without vibrations and will perform the inspection.
    - In order to enable the system to identify the part the PLC needs to send a **new** part ID that will be assigned to the inspection image. If a new part ID will not be sent, a new inspection will **not** take place.
    - When using this option users should set “Inspection Timeout” that will fit to the line restrictions. Once a trigger signal has been sent, and a part was not identified before the timeout has been reached, the system will issue an “Alert” result stating “Part not found”.
        - It is recommended that the PLC will treat “Alert” result as NOK.

- In order to set “Inspection Timeout”: in the inspection modes screen, scroll down and set the wanted value (minimum value is 500mSec)



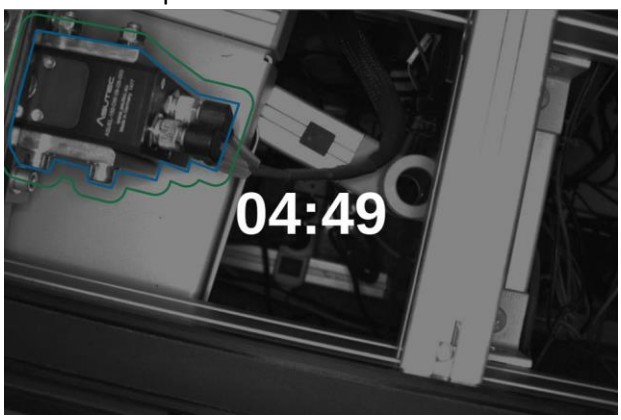
- **Auto – Part ID generated by the system** - in this mode the system will automatically identify the part for inspection, wait until it is stationary, and without vibrations and will perform the inspection.
  - In this mode there is no need to send a trigger signal from the PLC, the system will trigger automatically and assign a unique part ID to the inspection image.
- **Manual** – when selecting this mode, an “Inspect” button will appear in the center bottom of the screen: 

in this mode the only ways to start a new inspection are to manually press the “Inspect” button, or the keyboard “Space” key.
- **External – Part ID generated by the system** – this mode requires connection of an industrial sensor (i.e. photoelectric sensor) directly into the system’s power cable using the dedicated connector (see system installation manual for more details). A new inspection will be triggered when the connected sensor will issue a 24VDC signal.
  - in this mode there is no need to send a trigger signal from the PLC, the system will trigger automatically once a signal is issued from the external sensor.
- **External – Part ID provided by the PLC** - this mode requires connection of an industrial sensor (i.e. photoelectric sensor) directly into the system’s power cable using the dedicated connector (see system installation manual for more details). In order to start a new inspection, the PLC needs to send a **new** part ID that will be assigned to the inspection image.
  - **The system will react to the connected external sensor signal only after receiving a new part ID from the PLC**, the received part ID will be assign to the inspection image**.**
  - Comments for External inspection modes (applies to External – Part ID generated by the system, **and** External – Part ID provided by the PLC):
    - When selecting this inspection mode, it is also required to specify whether the connected sensor is of type PNP/NPN. In order to set the sensor type - in the inspection modes screen, scroll down and select the wanted type:

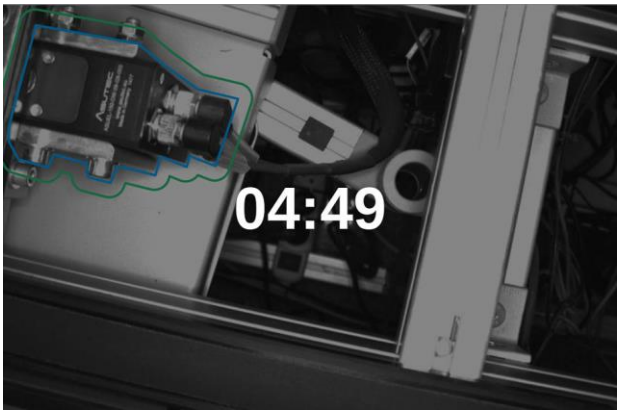


- This selection option will appear in the menu only after selecting "External – XXX" inspection mode.

- When selecting External trigger inspection mode, the system will not show a live video stream. Instead, the system will present a timer stating the time passed since the last inspection:



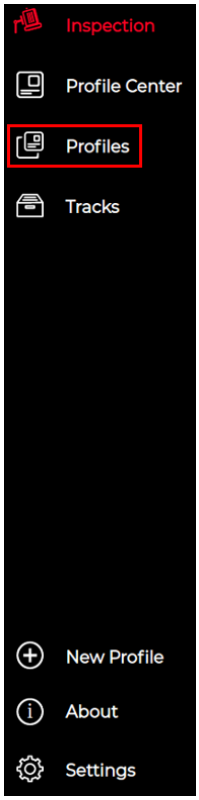
- **Direct Trigger – Part ID generated by the system** – this mode works in the exact same way as "External – Part ID generated by the system", but instead of receiving the trigger signal from an external sensor, it will receive it from the PLC. In order to generate a new inspection cycle the PLC needs to send a new part ID. **In this mode the new part ID will <u>NOT</u> be assigned to the inspection image, it is only used to initiate a new inspection cycle** and the system will assign a unique part ID to the inspection image.
- **Direct Trigger – Part ID provided by the PLC** – this mode works in the exact same way as "External – Part ID provided by the PLC", but instead of receiving the trigger signal from an external sensor, it will receive it from the PLC. In order to generate a new inspection cycle the PLC needs to send a new part ID. In this mode the new part ID will be assigned to the inspection image.
  - <u>Comments for Direct Trigger inspection modes</u> (applies to Direct trigger – Part ID generated by the system, **and** Direct trigger – Part ID provided by the PLC)<u>:</u>
    - When selecting Direct Trigger inspection mode, the system will not show a live video stream. Instead, the system will present a timer stating the time passed since the last inspection:



- **Auto - Part ID generated by the external code reader** – this mode requires a connection of a **USB** code reader to the INSPEKTO S70 controller. When this mode is selected, a new inspection cycle will start only after the connected code reader will stream the read string to the system.
  once a new string has been streamed from the code reader a new inspection will start and the streamed string will be assigned as the inspection image part ID.
  - The system can work with any USB code reader that has an option to act as UID, please refer to your code reader manual to verify this option is available.

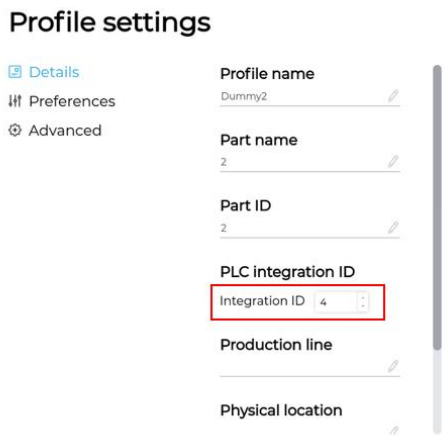
- Inspection modes comments:
  - in order to inspect moving objects the system will need to be set to one of the following inspection modes:
    - External – Part ID generated by the system.
    - External – Part ID provided by the PLC.
    - Direct Trigger – Part ID generated by the system.
    - Direct Trigger – Part ID provided by the PLC.

2. OUT_NEW_OBJECT_TRIGGER
   When selecting a corresponding inspection mode (any of the inspection modes that ends with “Part ID provided by the PLC), updating this value will start a new inspection cycle.
   In the INSPEKTO S70, in order to issue a trigger, the PLC needs to send a new object ID (sometimes referred to as “Part ID”) to the INSPEKTO S70.
   - The provided Part ID needs to be a different value than the previous part ID the system received.
   - In order for the system to receive the new Part ID and start a new inspection cycle:
     - The system needs to have an active profile loaded. If a new Part ID is sent when there is no active profile loaded, the system will return an Error (see below for errors details).
     - Verify that the INSPEKTO S70 has sent a response to any previous request sent from the PLC (if a request was sent and no response was sent from the INSPEKTO S70, the system must be considered as busy)
     - The maximum length of the provided Part ID is 64 characters.
     - The allowed characters are all numbers and letters.
3. OUT_PROFILE_ID
   When updating this value the system will load a profile with the corresponding PLC integration ID.
   - There are 2 ways to access a profile PLC integration ID:
     - When a profile is loaded: open profile preferences by pressing on the  icon in the top left corner of the screen.
     - When a profile is not loaded:
       - On the left side panel press on profiles



       - Press on the settings button -  for the relevant profile.

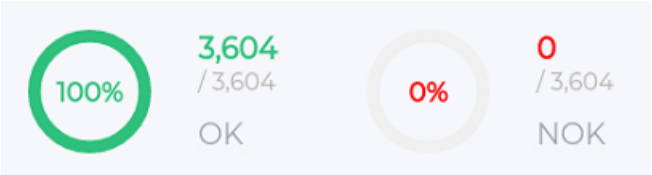
- The PLC integration ID will appear under “Details” tab:



  - Users can modify the PLC integration ID of a profile to any number ranging from 1-99,999.
  - PLC integration ID’s must be unique per profile.
- In order for the system to receive the Profile ID value and load a new profile:
  - Verify that the INSPEKTO S70 has sent a response to any previous request sent from the PLC (if a request was sent and no response was sent from the INSPEKTO S70, the system must be considered as busy)
  - The system must have a profile with the received PLC integration ID value. If received a value that does not apply to any profile in the system the system will send a “Profile not loaded” error (see below for details).

4. OUT_BATCH_ID

When updating this value the system will reset all counters and assign a new batch ID.



- Batch ID can not be seen in the ISNPEKTO S70 screen.
- The system needs to have an active profile loaded. If a new Batch ID is sent when there is no active profile loaded, the system will return an Error (see below for errors details).
- Verify that the INSPEKTO S70 has sent a response to any previous request sent from the PLC (if a request was sent and no response was sent from the INSPEKTO S70, the system must be considered as busy)
- The maximum length of the provided Part ID is 64 characters.
- The allowed characters are all numbers and letters.

S70 -> PLC

After receiving an “OUT” command from the PLC the INSPEKTO S70 will respond with a corresponding “IN” response.

1. IN_CUR_INSPECTION_MODE
   After successfully receiving a new OUT_INSPECTION_MODE command, the system will update this value to the current inspection mode.
2. IN_CUR_OBJECT_ID
   After successfully receiving a new OUT_NEW_OBJECT_TRIGGER command and the inspection cycle is completed, the system will update this value to the current Object ID (also refers to as PART ID).

3. IN_CUR_PROFILE_ID
   After successfully receiving a new “OUT_PROFILE_ID” command and the new profile has been loaded, the system will update this value to the current active profile.
   - This value will stay constant until there is a change in the active profile of the system (either done by sending OUT_PROFILE_ID command from the PLC or by changing the profiles in the system user interface).

4. IN_CUR_BATCH_ID
   After successfully receiving a new “OUT_BATCH_ID” command, the counters has been reset and the new batch ID was received, the system will update this value to the current batch ID.
   - This value will stay constant until there is a change in the batch ID (either done by sending OUT_BATCH_ID command from the PLC or by resetting the batch in the system user interface).

5. IN_OBJECT_INSPECTION_RESULT
   This value will update after an inspection cycle has been completed with the following possible values:
      - 0 = IDLE – the system will show this value if there is no new OUT_NEW_OBJECT_TRIGGER command or after the pulse width stated in “S70 to PLC response pulse width(ms)” has passed.
      - 1 = Inspection result PASS.
      - 2 = Inspection result FAIL.
      - 3 = Object detected but not inspected – when received, this value means that the system was able to detect the part but not to inspect it, due to its position in the image (see profile setup manual for detail explanation).
        - It is recommended that the PLC will treat this value as a FAIL result.
      - 255 = Object not detected, timeout reached – when received, this value means that the system was not able to detect the part for inspection.
        - It is recommended that the PLC will treat this value as a FAIL result.

6. IN_ROIS_DEFECT_LIST
   The Inspekto S70 reports inspections results not only as a general OK/NOK result (as described in IN_INSPECTION_RESULT above), but also a result dedicated per ROI (**for detailed explanation regarding profiles and ROIs please see profile setup manual**).
   - ROI_DEFECT_LIST is represented with an array of 64 characters, where the position in the array represents the ROI ID.
     - Value of "0" = ROI PASS.
     - Value of "1" = Defect in ROI.
   - In cases where there are less than 64 ROIs in the active profile, only the characters representing the existing ROIs in the profile will update according to the inspection result.
     - For example when receiving: 00101000….00 it means that there are defects in ROI 3 and 5.
   - The default values are "0" in all of the characters, and the values will change only after an inspection took place **and** the inspection result was FAIL (IN_OBJECT_INSPECTION_RESULT = 2).

7. IN_SYSTEM_ERROR
   This value will update in case that there is an error in a command received from the PLC.
   Possible values:
     - **0 = IDLE** – the system will show this value if there is no new command received or at system startup.
     - **1 = Camera disconnected** – this error means that the system does not identify the vision system is connected to the controller.
     - **2 = Connectivity sync problem** – this error means that the system identifies a communication problem with the PLC.
     - **3 = Trigger mode OFF** – this error means that a trigger command was sent from the PLC while the system is in inspection mode = OFF (see above for detailed explanation).
       - This value will appear after receiving a trigger while inspection mode is set to OFF.
     - **4 = No profile loaded** - this error means that a command that requires an active profile in order to perform was sent while there was no active profile running (see above for the various commands requirements)
       - This value will appear after receiving an OUT_PROFILE_ID command, with an ID that does not exist.
     - **5 = Trigger stopped but not started** – internal error, if encountered repeatedly please contact Inspekto support.
     - **6 = System not ready** – this error means that a command was sent from the PLC before a previous command was executed successfully, or the system is in an error state.
     - **7 = Multiple commands received** – this error means that the PLC sent multiple commands at once. In this situation the system will respond with an error because it will have no ability to know which command to perform first.
     - **8 = Profile incompatible with requested operation** – this error means that the requested operation could not be performed with the current active profile.

- IN_SYSTEM_ERROR describes an error regarding the last command that was received from the PLC, there is no need to perform a reset operation after receiving an error as the value will change automatically back to IDLE (“0”) according to the details stated above.

8. IN_SYSTEM_READY
   This value indicates that the system is ready to receive a new command from the PLC.
   Possible values:
   - 1 = System ready.
   - 0 – System **not** ready.
     - When IN_SYSTEM_READY =”0”, any command sent from the PLC will result with an IN_SYSTEM_ERROR = 6 and the requested command will not be performed.

Examples:

1. Setting inspection mode to “Auto – part ID provided by the system”

PLC Message:

S70_01INSPEKTO_C0112000138 000001202109301728 50INSPEKTO
PLC 0002NA NA NA

S70 Response:

S70_01INSPEKTO_R0112000001500000032021101409153 2PLC
INSPEKTO
0002000000000000000000000000000000000000000000000000000000000000000000240228
000034NONE
0002000000000000000000000000000000000000000000000000000000000000000000000000
00000001

PLC -> INSPEKTO

		Start Location	Data Length	Value
Header	Header-ID	0	6	S70_01
	Telegram-ID	6	10	01INSPEKTO_C
	Header Length	16	4	0112
	Data Length	20	8	000138
	Running Number	28	6	000001
	Date and Time	34	14	20210930172850
	Destimation	48	32	INSPEKTO
	Source	80	32	PLC
Data	OUT INSPECTION MODE	112	4	0002
	OUT NEW OBJECT TRIGGER	116	64	NA
	OUT PROFILE ID	180	6	NA
	OUT BATCH ID	186	64	NA

INSPEKTO -> PLC

		Start Location	Data Length	Value
Header	Header-ID	0	6	S70_01
	Telegram-ID	6	10	INSPEKTO_R
	Header Length	16	4	0112
	Data Length	20	8	00000150
	Running Number	28	6	000003
	Date and Time	34	14	20211014091532
	Destimation	48	32	PLC
	Source	80	32	INSPEKTO
Data	IN CUR INSPEKTION MODE	112	4	0002
	IN CUR OBJECT ID	116	64	0000000000000000000000000000000000000000000000000000000000000240228
	IN CUR PROFILE ID	180	6	000034
	IN CUR BATCH ID	186	64	NONE
	N OBJECT INSPECTION RESUL	250	4	0002
	IN ROI DEFECT LIST	254	64	0000000000000000000000000000000000000000000000000000000000000000
	IN SYSTEM ERROR	318	4	0000
	IN SYSTEM READY	322	4	0001

2. Sending load profile with ID 34:

PLC Message:

S70_01INSPEKTO_C0112000138 00000120210930173212INSPEKTO
PLC NA NA 000034NA

S70 Response:

S70_01INSPEKTO_R01120000015000000420211014091615PLC
INSPEKTO
00020000000000000000000000000000000000000000000000000000000000240228
000034NONE
00020000000000000000000000000000000000000000000000000000000000000000
00000001

PLC -> INSPEKTO

		Start Location	Data Length	Value
Header	Header-ID	0	6	S70_01
	Telegram-ID	6	10	01INSPEKTO_C
	Header Length	16	4	0112
	Data Length	20	8	000138
	Running Number	28	6	000001
	Date and Time	34	14	20210930173212
	Destimation	48	32	INSPEKTO
	Source	80	32	PLC
Data	OUT INSPECTION MODE	112	4	NA
	OUT NEW OBJECT TRIGGER	116	64	NA
	OUT PROFILE ID	180	6	000034
	OUT BATCH ID	186	64	NA

INSPEKTO -> PLC

		Start Location	Data Length	Value
Header	Header-ID	0	6	S70_01
	Telegram-ID	6	10	INSPEKTO_R
	Header Length	16	4	0112
	Data Length	20	8	00000150
	Running Number	28	6	000004
	Date and Time	34	14	20211014091615
	Destimation	48	32	PLC
	Source	80	32	INSPEKTO
Data	IN CUR INSPEKTION MODE	112	4	0002
	IN CUR OBJECT ID	116	64	00000000000000000000000000000000000000000000000000000000000000240228
	IN CUR PROFILE ID	180	6	000034
	IN CUR BATCH ID	186	64	NONE
	IN OBJECT INSPECTION RESULT	250	4	0002
	IN ROI DEFECT LIST	254	64	00000000000000000000000000000000000000000000000000000000000000000000
	IN SYSTEM ERROR	318	4	0000
	IN SYSTEM READY	322	4	0001

3. Sending new batch ID with ID = TestBatchID:

PLC message:

S70_01INSPEKTO_C0112000138 00000120211002152814INSPEKTO
PLC NA NA NA TestBatchID

S70 Response:

S70_01INSPEKTO_R01120000015000000520211014091724PLC
INSPEKTO
00020000000000000000000000000000000000000000000000000000000000240228
000034TestBatchID
00020000000000000000000000000000000000000000000000000000000000000000
00000001

PLC -> INSPEKTO

		Start Location	Data Length	Value
Header	Header-ID	0	6	S70_01
	Telegram-ID	6	10	01INSPEKTO_C
	Header Length	16	4	0112
	Data Length	20	8	000138
	Running Number	28	6	000001
	Date and Time	34	14	20211002152814
	Destimation	48	32	INSPEKTO
	Source	80	32	PLC
Data	OUT INSPECTION MODE	112	4	NA
	OUT NEW OBJECT TRIGGER	116	64	NA
	OUT PROFILE ID	180	6	NA
	OUT BATCH ID	186	64	TestBatchID

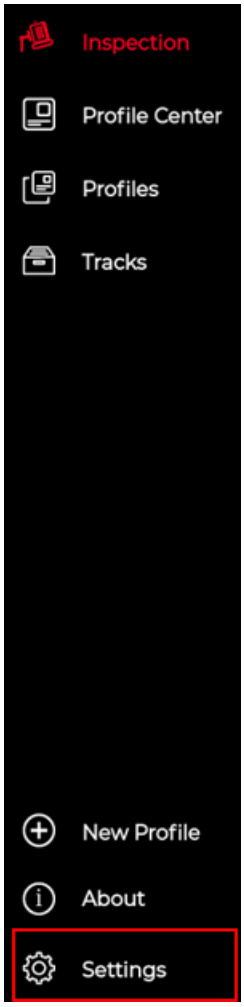
INSPEKTO -> PLC

		Start Location	Data Length	Value
Header	Header-ID	0	6	S70_01
	Telegram-ID	6	10	INSPEKTO_R
	Header Length	16	4	0112
	Data Length	20	8	00000150
	Running Number	28	6	000003
	Date and Time	34	14	20211014091532
	Destimation	48	32	PLC
	Source	80	32	INSPEKTO
Data	IN CUR INSPEKTION MODE	112	4	0002
	IN CUR OBJECT ID	116	64	00000000000000000000000000000000000000000000000000000000000000240228
	IN CUR PROFILE ID	180	6	000034
	IN CUR BATCH ID	186	64	TestBatchID
	N OBJECT INSPECTION RESUL	250	4	0002
	IN ROI DEFECT LIST	254	64	00000000000000000000000000000000000000000000000000000000000000000000
	IN SYSTEM ERROR	318	4	0000
	IN SYSTEM READY	322	4	0001

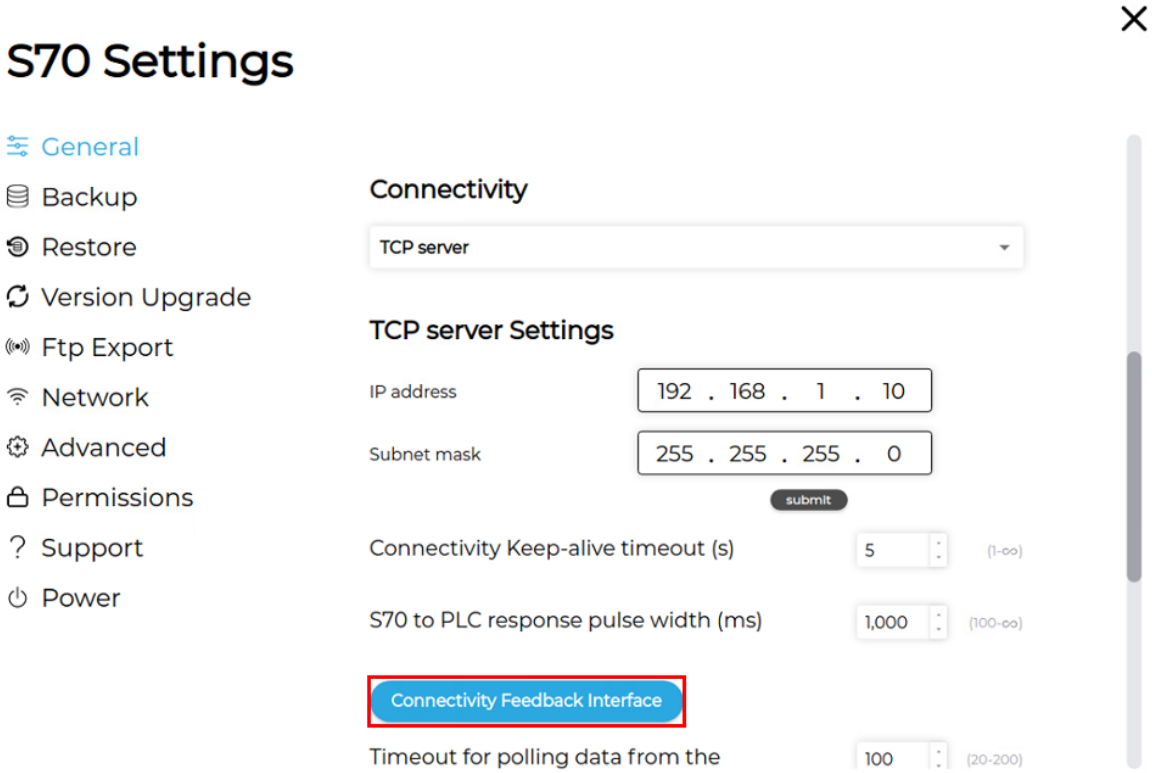
Using the INSPEKTO S70 Connectivity Feedback Interface

the INSPEKTO S70 system includes a feature called connectivity feedback. This feature is aimed to test and ensure correct communication with all type of connectivity available in the INSPEKTO S70. When integrating the INSPEKTO S70 using TCP/IP, it is recommended to first test all of the messages using this interface to verify that (A) messages are going back and forth between the INSPEKTO S70 and the PLC and (B) that they are received in the right place and form. For example, when sending an OUT_PROFILE_ID command from the PLC with value of "2" we would want to make sure that the exact data appears in the correct place in the INSPEKTO S70.

In the S70 screen hover over the left side of the screen so the menu will open, and press on "Settings"

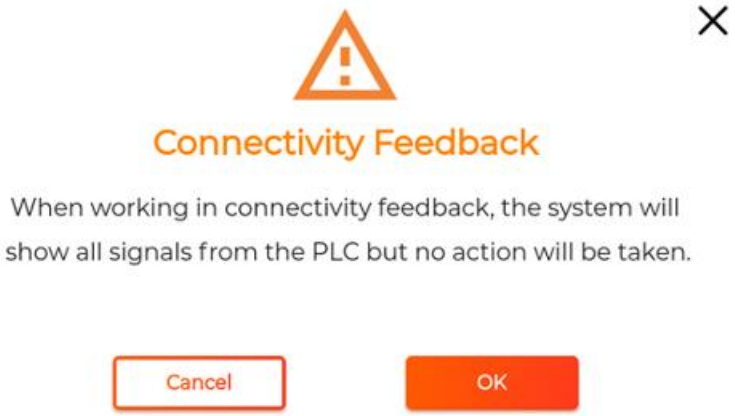


Under general tab scroll down to the connectivity section and press on the “Connectivity Feedback Interface” button:



Once selected, the system will show a pop-up message stating that the system will now only show signals coming from the PLC but will not act on them. This means that when working in “Connectivity Feedback Interface” all signals coming from the PLC will be received and shown in the interface but no action will take place.

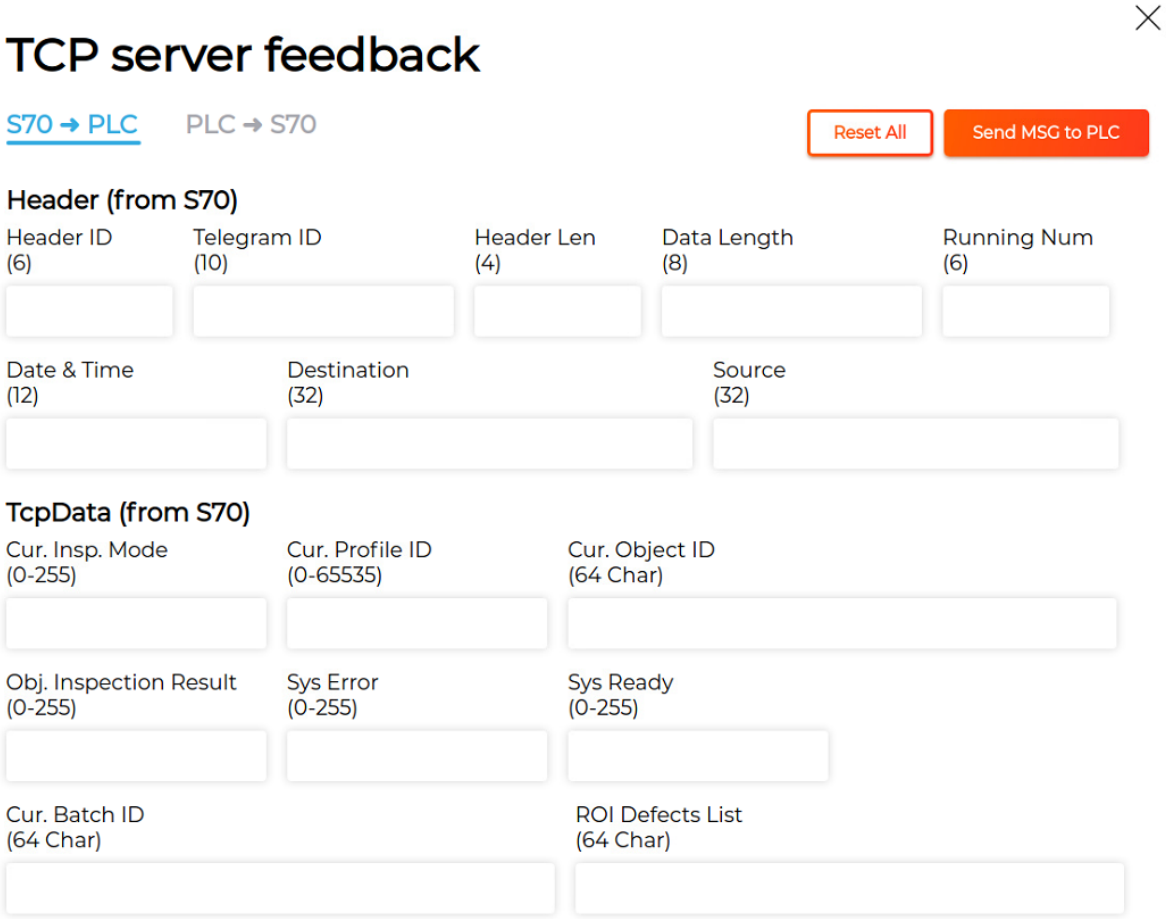
- When closing the Connectivity Feedback Interface all PLC communication will return to normal state automatically.



The Connectivity Feedback screen has 2 tabs, one for messages going from the INSPEKTO S70 to the PLC, and the other from messages going from the PLC to the INSPEKTO S70.

- The content of the Connectivity Feedback screen will change according to the selected connectivity method. This manual relates to the TCP/IP Connectivity Feedback screen only. For other connectivity methods please see the relevant integration manual.

S70 -> PLC screen:



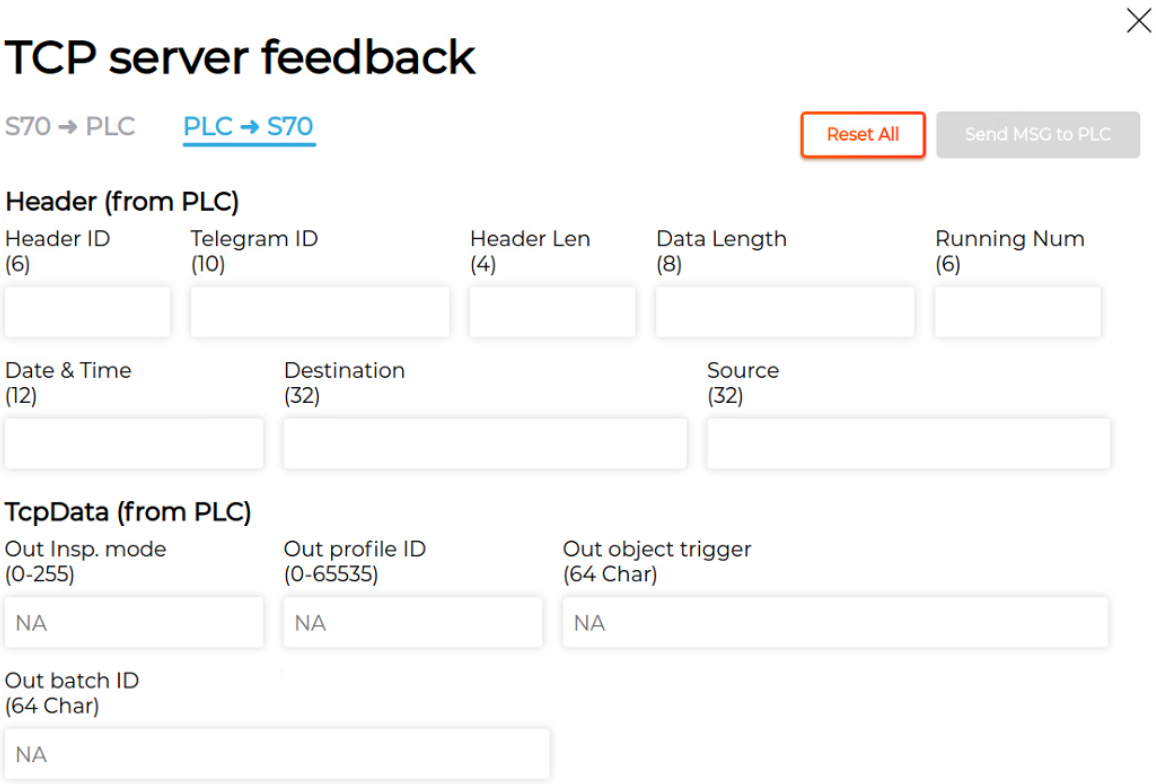
This screen contains all of the possible messages going from the INSPEKTO S70 to the PLC.

In order to send a message to the PLC fill the data in the correct field.

Pressing the “Send MSG to PLC” button will send the message to the PLC.

If the connection is established successfully, you will be able to see the corresponding message in the PLC.

PLC -> S70 screen



This screen contains all of the possible messages going coming from the PLC to the INSPEKTO S70.

When connection is established successfully, the fields will be updated automatically every time a message is being sent from the PLC to the INSPEKTO S70.