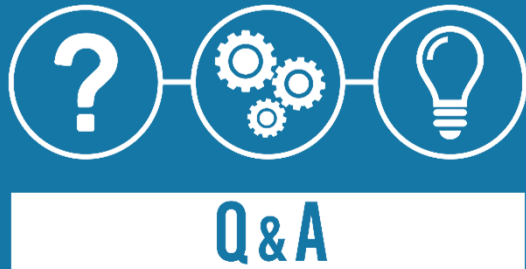


QUESTION TIME



A selection of the best Q&A.

LAUMAS[®]
Innovation in Weighing



PLC, FIELDBUSES AND INDUSTRIAL ETHERNET

Webinar 2020



#LAUMASKNOWHOW



Q&A

The questions of the participants, our answers.

PLC, FIELDBUSES AND INDUSTRIAL ETHERNET

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LAUMAS®

Q

How are LAUMAS weight transmitters with an **EthernetIP** output connected to the PLC?

A

To describe the procedure we have made **2 tutorials** explaining how to connect a LAUMAS weight transmitter with an EthernetIP output to the PLC either via an **EDS file** or via a **generic module**:

- [Integration, via an EDS file, of an ETHERNET/IP weight transmitter into RSLogix 5000](#)
- [Integration, via a generic module, of an ETHERNET/IP weight transmitter into RSLogix 5000](#)

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Q

How are LAUMAS weight transmitters with a **ProfinetIO** output connected to the PLC?

A

To describe the procedure we have made the **tutorial [Integration of a PROFINET weight transmitter in the TiA Portal](#)**, which explains how to connect a LAUMAS weight transmitter with a ProfinetIO output to the PLC.

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Q

Do LAUMAS instruments only connect to Siemens PLCs?

A

No, our instruments can be interfaced with the PLCs of the major manufacturers on the market via different types of fieldbus.
All the available fieldbuses for each individual instrument are described in its data sheet.

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Q

Is it possible to manage **emptying** a **tank** directly from the PLC via fieldbus?

A

Yes, this is possible via the single-product **unloading batching program** fitted on our instruments on request.

Its operation and features are described in detail in the blog article: [Features and operation of LAUMAS firmware](#).

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Q

What are the main **differences** between Ethernet-based **fieldbuses** and other fieldbuses?

A

The main difference regards the type of **connection**. Ethernet-based fieldbuses communicate via an **RJ45 port**, while the others communicate via a **terminal block** connection or a **connector**.

There are also some **communication-related** differences, such as the speed or parameters used for the configuration. For all the details regarding the operation of the different fieldbuses, you can refer to the protocol manuals of the individual instruments.

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Q What is the **minimum RPI** (Requested Packet Interval) value for LAUMAS dual Ethernet port instruments?

A Each instrument has its own minimum RPI value, which is the time interval used by the PLC for the cyclic data exchanges that take place during the communication.

To know the specific RPI value of the individual instrument, it is therefore necessary to refer to its protocol manual.

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Q Do you also support **cloud data management** and **transmission** solutions using protocols such as **MQTT** (Message Queue Telemetry Transport) or **OPC UA** (OPC Unified Architecture)?

A We don't have any solutions that use MQTT or OPC-UA protocols to transmit data to a generic Cloud platform chosen by the end customer or machine manufacturer.

However, we do have a solution that allows you to publish data to a specific platform, with which some of our instruments can be interfaced using additional devices.

For more information about the solution, you can contact the sales department at sales@laumas.it or [fill out the form](#).

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Q

Are you going to decrease the fieldbuses available on your instruments in the future?

A

No, having the main fieldbuses available on the market at our disposal allows us to provide our customers with a wide and versatile choice. Since many PLC manufacturers have chosen to develop their fieldbus, we have the opportunity to meet different needs and requirements.

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Q

What is the best value-for-money protocol?

A

There is no best protocol overall, our commitment is to advise the customer as to which is the most suitable one according to the type of PLC they use on the system and its communication standard.

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Q

What is the protocol for the **standard version** of the LAUMAS instruments?

A

The standard version of our weight transmitters comes with the **RS485** serial port and the **Modbus RTU** protocol on board.

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Q Are LAUMAS instruments born only with the chosen fieldbus, or is there a gateway that permits **converting the instrument** from modbus serial protocol to Modbus/TCP or Profinet?

A **No**, there is a single fieldbus and it is not possible to convert the instrument to another protocol.
Among the technical solutions adopted by LAUMAS for implementing the different fieldbuses supported, there is no multi-protocol solution.
Each specific instrument model can only manage the fieldbus interface for which it has been configured.

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Do the **Modbus TCP/IP** registers all have the same structure and are therefore in the same position on all LAUMAS products?



The Modbus TCP/IP interface consists of a set of **registers common** to all the instruments and a set of **specific registers** for each type of instrument or program running.

The common registers maintain the same position on all the instruments, while the specific registers are described in detail in each instrument's protocol manual.

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Q

Is it possible to connect to the weight transmitter to provide **remote support**?

A

Yes, to provide remote support you can connect to our instruments in two ways:

1. Via **fieldbus**, by connecting to the PLC via your company network;
2. Directly via the **instrument**, if equipped with an Ethernet TCP/IP port (integrated web server). By connecting the weight transmitter to the PC, you can go to a web page that lets you monitor the operating status and remotely manage simple operations such as the semi-automatic tare or semi-automatic zero

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Q Is it possible to **replace a faulty weight transmitter** with an identical one without changing the system settings?

A **Yes**, of course, thanks to the free LAUMAS software [Instrument Manager](#).

Instrument Manager is a configuration program in which all the calibration data of the weight indicator or weight transmitter can be saved. In the event of an instrument fault or failure, simply duplicate the data from the Instrument Manager archive and transfer it to the new device. This means you don't have to perform a new calibration or change the settings, as they are already saved in the program.

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Q

Do the different weight transmitters installed need to be **backed up**?

A

Yes. When installing a weight transmitter and working on a new system, our recommendation is to program the instrument always with [Instrument Manager](#), which gives this very benefit: save, store and transfer data to another device if needed.

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Q

Is the Instrument Manager supervisory **software free of charge**?

A

Yes, [Instrument Manager](#) is available free of charge to registered customers on the website in the "DOWNLOAD" section of the dedicated web page.

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Q

Can **Instrument Manager** be connected to a computer via an **RS232 port**?

A

No, Instrument Manager connects to the computer via an **RS485** serial port.

If you do not have this port on your PC, simply get a **USB-485 converter** and make the following connection: weight transmitter – converter – Instrument Manager.

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Q

What is the **maximum** number of **load cells** a device supports?

A

The **multichannel** weight transmitters ([TLB4](#) , [TLM8](#) and [CLM8](#)) can support up to **16 load cells** of 350 ohm, while the **single-channel** instruments ([TLB](#) and [W series](#)) support up to **8 load cells** of 350 ohm.

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Q

If you replace a **broken load cell** with an identical one, do you need to **calibrate** the weight transmitter again?

A

Yes. Each individual load cell has a response signal that is slightly different from the others, so it is never exactly the same as another one. For this reason, we recommend always **tare zero-setting** and **calibrating with test weights**. If it is not possible to repeat these 2 steps, the **theoretical calibration** can be performed by entering the rated output of the new load cell that replaces the old one in the weight transmitter parameters.

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Q

Do you have any **digital load cells**?

A

Yes, as regards digital load cells we provide several solutions:

- the **column** digital load cell **COD**, IP69K with dual connector.
- **LCB**, the universal load cell digitizer that allows converting the mV signal of any analog load cell into a digital signal via **14 different fieldbuses**.

LCB can be mounted in two ways:

- completely **integral** with the body of the load cell;
- away from the load cell, **by cable**, if there is a lack of space.

We are planning to expand our range of digital load cells, keep visiting our website and social network channels to stay up-to-date!

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