

## Introduction

The Enica Pulse-Splitter range is designed to split the pulse signal from a utility meter to several dataloggers. The device is passive and does not have any moving parts or batteries. The splitter can be used with electric, gas, water or in fact any meter with a pulse output (Volt-free contact, Reed relay or Open-collector).

**For the purposes of gas meter installations, Enica Pulse Splitters could be regarded as “Simple Apparatus”, however, the device provides no Intrinsic Safety isolation via optical or galvanic barriers and the details within this instruction manual MUST be adhered to. Only loggers with suitable Ex certification and conforming to the electrical ratings detailed in this document should be connected to the Pulse-Splitter when being used in a gas meter situation.**

## Installation Procedure – Pulse-Splitter

**Note: The standard version of the pulse splitter is not waterproof and is not suitable for use in wet environments such as water meter pits.**

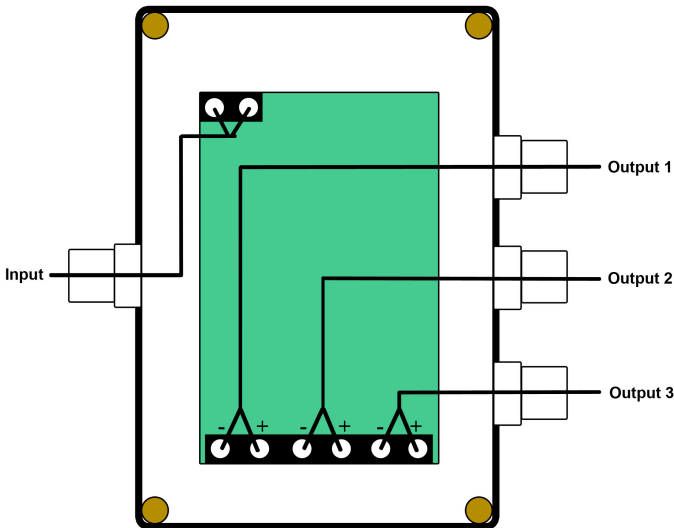
**Step 1:** Open the enclosure.

**Step 2:** Wire the pulse input (coming from the utility meter) to the terminals labelled INPUT. Please observe polarity if applicable.

**Step 3:** Wire the 1st datalogger to Output 1. Please observe polarity marked + and – on the terminal blocks

**Step 4:** Wire the 2<sup>nd</sup> and 3<sup>rd</sup> dataloggers to Output 2 and 3 respectively. Please observe polarity marked + and – on the terminal blocks

**Step 5:** Close the enclosure using the screws provided. Mount the Pulse-Splitter in a suitable location.



## Installation Procedure – Waterproof Pulse Splitter

The waterproof version of the pulse splitter has all internal components encapsulated within waterproof gel compound. There are no serviceable parts inside and the enclosure should not be opened.

**Step 1:** Wire the pulse input (coming from the utility meter) to IN cable. Please observe polarity if applicable (Red = Positive, Black = Negative)

**Step 2:** Wire the 1st datalogger to any of the OUT cables. Please observe polarity on cable (Red = Positive, Black = Negative)

**Step 3:** Wire the 2<sup>nd</sup> and 3<sup>rd</sup> dataloggers the second and third OUT cables respectively. Please observe polarity on cable (Red = Positive, Black = Negative)

## Safety Warnings

- No user serviceable parts inside.
- Observe the instructions and all warnings on the device and within these instructions.
- The installer/end-user is responsible for safe installation.
- Local working practices should be adhered to for installation.
- The enclosure of the device should be fully fitted.

## Use of the Device in a Gas/Potentially Explosive Environment

The Enica Pulse Splitter could be regarded as “Simple Apparatus” and could therefore be utilised to split meter pulses within a gas meter/potentially explosive atmosphere as long as the loggers connected have suitable Ex certification and do not exceed the following electrical ratings:

Electrical Ratings for Meter Input  
 $U_i=0$ ,  $C_i=0$ ,  $L_i=0$

Electrical Ratings for Connected Loggers  
 $U_i= 7.0V$ ,  $L_i = 14mA$ ,  $P_i = 20mW$ ,  $C_i = 0$ ,  $L_i = 0$   
 Cable length must be a maximum of 10m

“Simple Apparatus” as defined in the European harmonised standards for electrical equipment intended for use in potentially explosive atmospheres are excluded from the Directive, as they have no own source of ignition. Therefore, they do not have to meet the relevant Essential Health and Safety Requirements or be subject to the conformity assessment procedures under Directive 94/9/EC.

**IMPORTANT:** The Pulse-Splitter does not provide any isolation and therefore all connected loggers MUST carry suitable Ex Certification. When used in a gas environment, loggers without Ex Certification MUST NOT be connected to the pulse splitter without suitable intrinsically safe isolation.

## Troubleshooting

In some circumstances, especially when logging systems utilise alternative ground/earth paths without the pulse connection returning through the meter/splitter, the splitter may show the following symptoms:

Pulses are received by a logger only when a single logger is connected to the splitter. When connecting a second or third logger, the pulses are not received by any device. In these cases, attempt to ensure pulse wiring makes a true circuit through the splitter and back to the meter.

In some other cases, especially if the voltage being applied to the splitter from a logging device is low, the splitter can cause a slight volt drop in the logger output to the extent where the logger may not detect the pulses.

In this case, carefully remove diodes D1, D4, D5, D8, D9 and D12 from the circuit board using wire cutters or similar. This will make the pulse splitter polarity sensitive and in most cases resolve the symptoms. All diodes are clearly marked/numbered.

## Special Conditions

In some extreme conditions, the enclosure of the Pulse-Splitter may be capable of generating an electrostatic charge, which could potentially cause ignition. When the Pulse-Splitter is being used in a gas meter environment, the device shall not be positioned in such a way where external conditions are likely to cause an electrostatic charge on the enclosure of the device. In addition, the device shall only be cleaned with a damp or conductive cloth.

## Disposal

The device must be disposed of as unsorted waste and must be collected separately to ensure correct environmentally sound disposal. Where possible, the device should be returned to the manufacturer (or their authorised agent) for correct disposal. If this is not possible, your local Waste Disposal Authority should be consulted to ensure disposal in compliance with waste electrical and electronic equipment (WEEE) regulations that may be in force at the time.

## Support and Contact Information

For technical support and queries, please contact:

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