Honeywell

EWA1xxC-PO
Configuration and Setup Instructions

1   Introduction

EWA1xxC-PO are a range of clip on modules for EW110 and EW171 Series water meters. Meters fitted with this module have two configurable pulse outputs for remote readout. Per meter one module is required.The module is retro-fittable at any time, also when the meter is in operation. When the module is in place no other module can be fitted as EW110 and EW171 Series only provide space for one module. Other available modules are M-Bus (EWA1xxC-MBUS) and wireless (EWA1xxC-RF). However, this document only includes instructions for configuration of the pulse out module.

1.1   Scope

These instructions are valid for the following modules:

Table 1. OS-Numbers covered

| OS-Number	Item
EWA110C1520-PO	Pulse out clip on module for EW110 Series, DN15 and DN20
EWA110C2540-PO	Pulse out clip on module for EW110 Series, DN25 to DN40
EWA171C-PO	Pulse out clip on module for EW171 Series, DN40 to DN300

1.2   Specifications

Pulse outputs	2 open collector, class OD (0.17 A, 100 V)	**Cable length**	1.5 metres
Resistance	30 Ω closed state, 200 MΩ open state	**Ambient temperature**	0.1…60°C
		Storage temperature	-10…70°C
Pulse frequency	max. 4 Hz	**Protection class**	IP65
Pulse length	250 ms (stable pulse length, frequency changes signal repletion)	**Battery lifetime**	10 + 2 years

1.3 How to identify EWA1xxC-PO modules
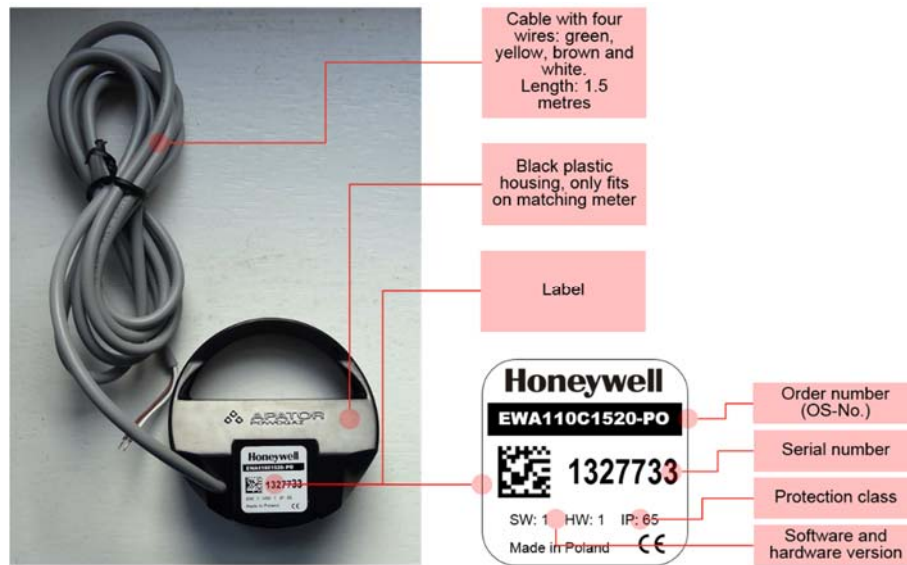
1.4 Connection Diagram
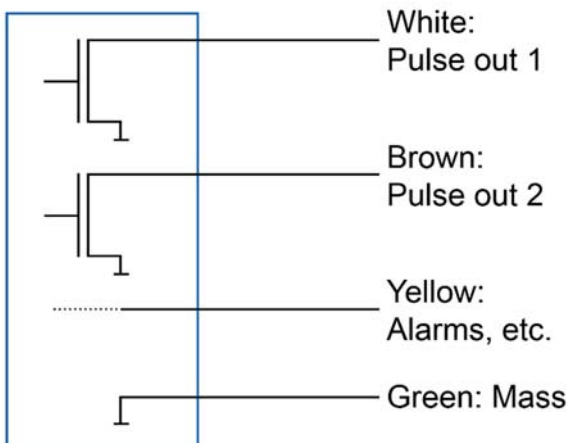
1.5 Standard Values

Table 2. Standard values

OS-No.	For DN sizes	Pulse value	Output 1	Output 2
EWA110C1520-PO	15…20	1 litre	IB	PR
EWA110C2540-PO	25…40	100 litres	IB	PR
EWA171C-PO	40…125	100 litres	IB	PR
EWA171C-PO	150…300	1 m³	IB	PR

NOTE: Meaning of output types is explained in chapter 3.2.2.3 on page 8.

2   Preparation

2.1   Required Parts

The following parts are required to change the configuration of the module:

Table 3. Required parts

Part	Function	
Programming interface (OS-No. EWA3001797)	Interface between PC and module	
USB cable	Connect programming interface to PC	
Socket terminals (2)	Connect programming interface to module	
Configuration software EWASET-PO	Readout current state values from module and program new values into module	Downloadable free of charge from http://metering.ecc.emea.honeywell.com

2.2   Wiring to PC

Wiring between PC and module is done by a USB cable and programming interface EWA3001797.
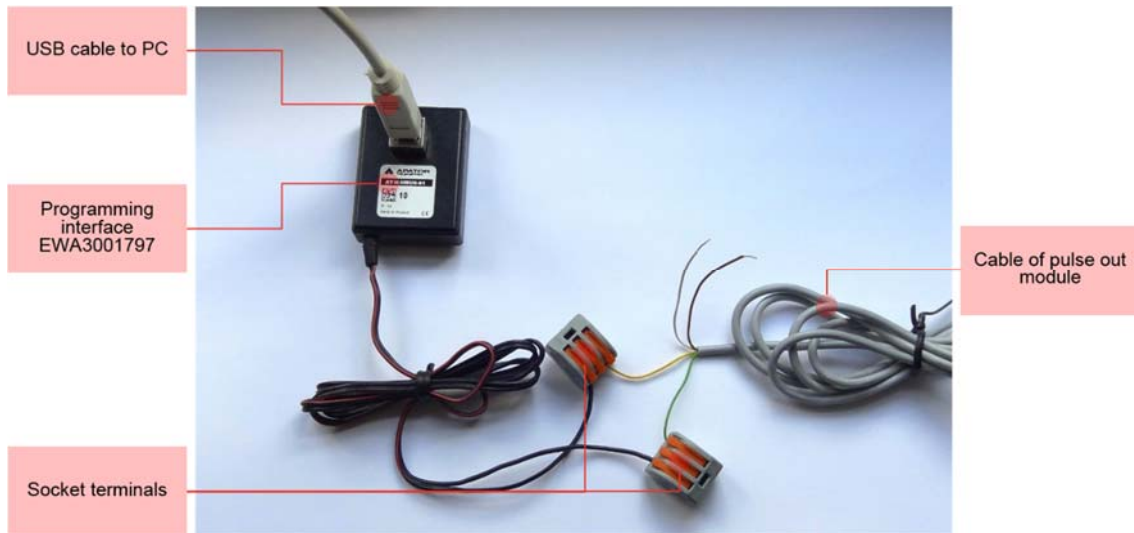

Figure 1. Connection of programming interface

The cables are connected as follows:

Table 4. Cable colours

Function	Wire colour pulse out module	Wire colour interface
Ground	Green	Black
Data	Yellow	Black and red

To wire the module into the programmer normal strip terminals can be used. If a number of modules have to be programmed consider reusable socket terminals, for example Wago type 222 as in above example.

2.3   Installation of Programming Interface

When the programming interface is connected with the PC the driver is automatically installed and displayed as "Silicon Labs CP210x USB to UART Bridge". The COM port used can be checked in the device manager of the PC. In below example it is COM6.
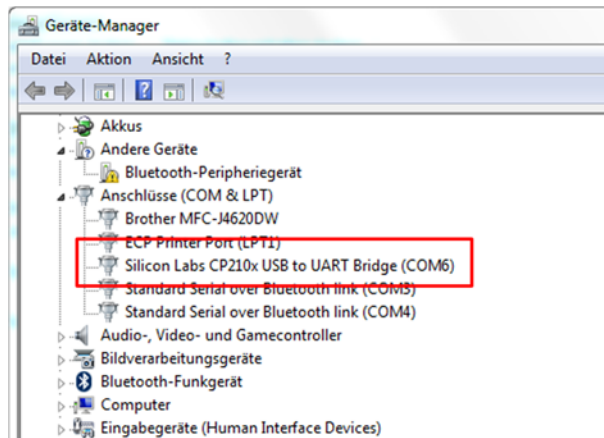

Figure 2. Device manager

When the software has been installed and the module connected it can be parametrised. Parametrisation is not mandatory, if the module is not parametrised standard values are applied (see Chapter 1.5 Standard Values above).

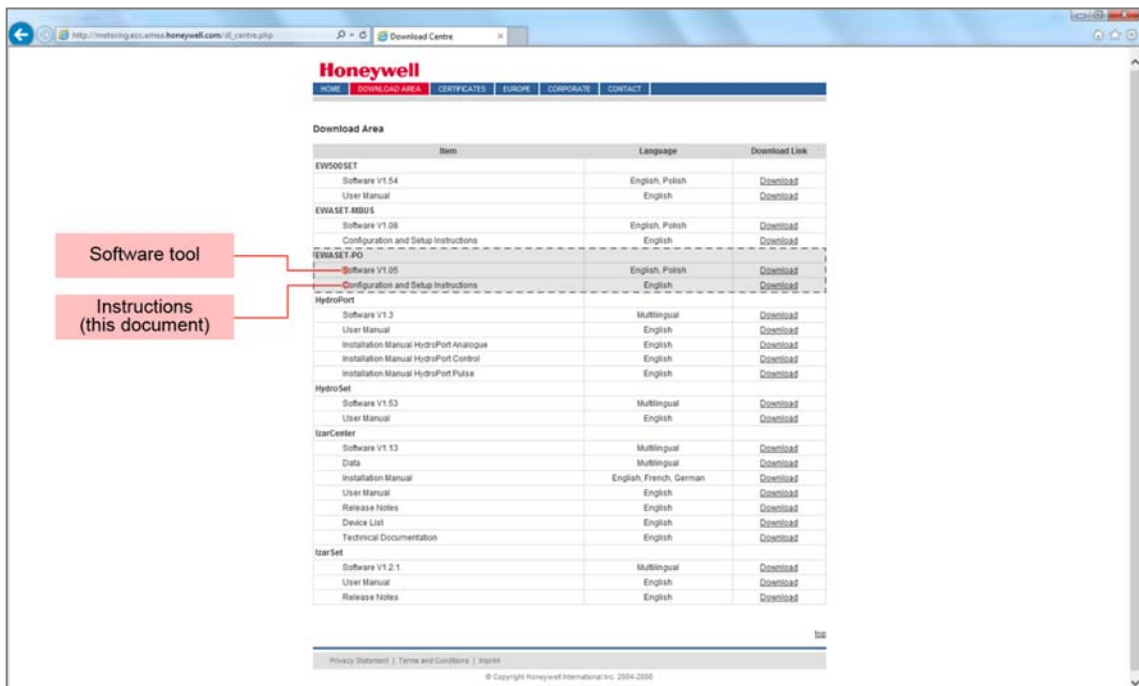The parametrisation software is available for free download in the download area of the Honeywell metering website under http://metering.ecc.emea.honeywell.com.

Figure 3. Download area of Honeywell metering microsite. EWASET-PO items are highlighted

3 Programming

3.1 Wake up

NOTE: This chapter applies only to modules produced before August 2015.

After production the module is put into sleep mode to save battery life. Before programming or installation briefly place a magnet near the reed switch of the module. By this the module is woken up from sleep mode.

Figure 4. Position of reed switch in module EWA110C1520-PO and EWA110C2540-PO

Figure 5. Position of reed switch in module EWA171C-PO

Figure 6. Briefly place magnet near reed switch

3.2 Software

The pulse out module configuration software is a simple tool with only few functions:

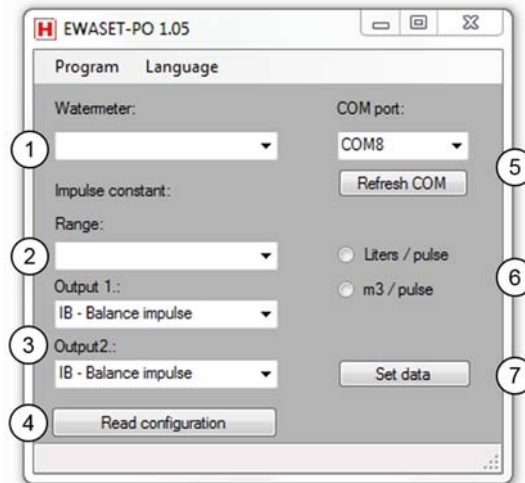Figure 7. Screenshot of parametrisation program

3.2.1 Fields

Table 5. Overview of fields

Field No.	Field name	Field type	Function
1	Watermeter	Pulldown	Defines meter connected to module

Field No.	Field name	Field type	Function
2	Range	Pulldown	Selection of pulse value
3	Outputs	Pulldown	Selection of pulse output 1 and 2
4	Read configuration	Execute button	Read and display configuration of module
5	COM port setting	Pulldown	Selection of COM port
6	Units	Radio buttons	Selection of unit for pulse value
7	Perform	Execute button	Write data into module

3.2.2   Field Description

3.2.2.1   Watermeter

Required to select type of water meter connected and in that way define range limits.
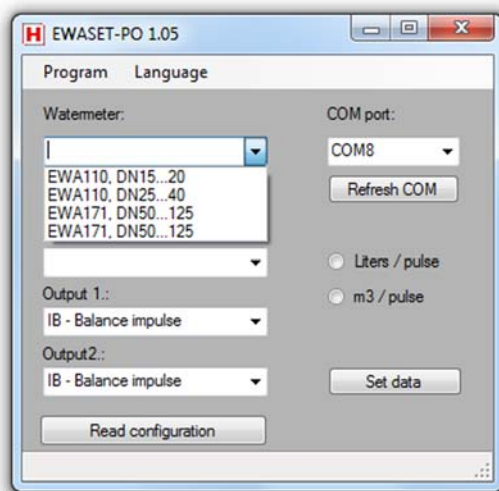

Figure 8. Pulldown of field "Watermeter"

3.2.2.2   Range and Unit

Allows selection of pulse value within a given range based on meter size (see field Watermeter above). Acceptable ranges are:

Table 6. Pulse value ranges and increments

OS-No.	For DN sizes	Pulse value range	Increment
EWA110C1520-PO	15…20	1…255 litres	1 litre
EWA110C2540-PO	25…40	100…25 500 litres	100 litres
EWA171C-PO	40…125	100…25 500 litres	100 litres
EWA171C-PO	150…300	1…255 m³	1 m³

The unit can be selected independently by pressing the radio button for "Litres per pulse" or cubic metres per pulse ("m³ / pulse").

3.2.2.3   Output 1 and Output 2

Defines type of output for pulse output 1 and pulse output 2. Both pulse outputs can be programmed with any value. Available values are:

Table 7. Output pulse types

Value	Function
IB – Balance impulse	Only forward flow pulses are sent. Backward flow pulses are compensated by suspending forward flow pulses of same value.
WP – Forward flow impulse	Only forward flow pulses are sent.
WS – Backward flow impulse	Only backward flow pulses are sent.
PR – Flow impulse	Any flow pulse is sent, regardless of direction.
PT – Forward and backward flow impulse	Only backward flow pulses are sent. Forward flow pulses are compensated by suspending backward flow pulses of same value.
SK – direction state	A pulse is sent at change of flow direction.
AW – failure state	A pulse is sent when a failure is detected.

3.2.2.4   Read configuration

Current configuration of the pulse out module is read and shown on the display in a separate window.
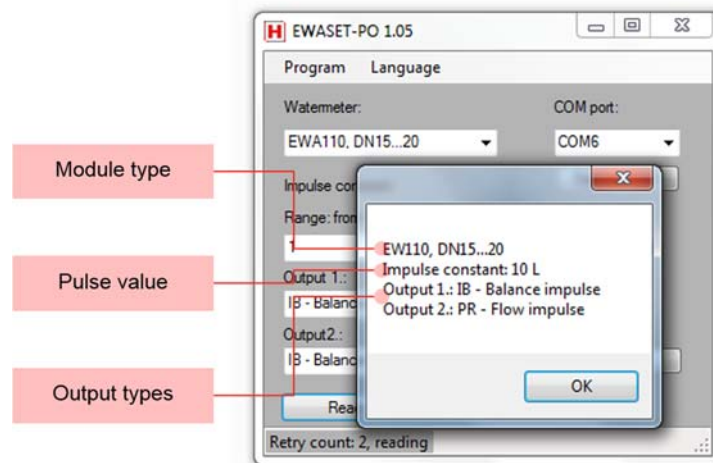

Figure 9. Window with configuration information

It may take several retries until the configuration window appears. The reason is that the module only checks once per minute if it is connected to a programming interface. Retries are done automatically, standard value is 20 retries, with 5 000 ms time between each retry.

3.2.2.5   COM Port

Allows to select the COM port to which the programmer is connected. (Also see chapter 0 above.) Press "Refresh COM" button in case COM port used is not shown in drop down list.

3.2.2.6   Perform

When all inputs have been done the data is written onto the module by pressing the "Perform" button.