SIEMENS

Pulse Adapter AEW310.2

The AEW310.2 pulse adapter acquires and handles the pulses from 1 or 2 consumption meters with pulse output and transmits the data to an M-Bus-network. For setting the parameters, the pulse adapter can be programmed via M-Bus interface before connecting to the network.

Use

The pulse adapter is a component of the M-Bus system. It is used when data of pulse output meters shall be collected by a M-bus system. Such devices can be meters for hot water, cold water, gas, electricity, etc.

Functions

- Acquisition of the pulses delivered by the connected consumption meters
- Monitoring the connecting cable in the case of metering devices with NAMUR circuit
- Handling of pulses and storage of consumption data and set day values
- Transmission of data telegrams on demand to the M-bus master

Siemens Building Technologies
HVAC Products

Type summary

Standard version AEW310.2:
Connection of 2 meters to the connecting cable by means of the cable connectors supplied with the unit.

Ordering

When ordering, please give type reference: **AEW310.2**

Equipment combinations

When installing, the pulse adapter must be programmed with the data set delivered with the parameter setting software for the respective meter. If meters not contained in the meter data base shall be connected, a new data set must be requested from:

Siemens
Building Technologies electronic GmbH
Sales Support   Tel.: +49 (0) 36 01 / 46 83 – 961
Sondershäuser Landstr. 27   Fax: +49 (0) 36 01 / 46 83 – 37
D-99974 Mühlhausen   E-Mail: hans-georg.ballstaedt@siemens.com

With the correct data set installed, the following types of meters can be connected:
– Water meters with pulse output
– Heat meters with pulse output
– Gas meters with pulse output
– Steam meters with pulse output
– Electricity meters with S0 interface (note: an additional S0 converter is required)

Technical design

The pulse adapter handles only pulses from potential-free pulse sources, according with the following specification:
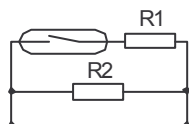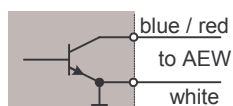
Pulse source	limit values (if parameters are appropriately set)	
Electronic outputs (Open Collector, Open Drain)	residual voltage when switched	< 0.7 V
	max. frequency	< 17 Hz
	min. pulse width	30 ms
Mechanical switches (Reed contact, re-lays)	bounce time	< 1 ms
	max. frequency	< 2 Hz
	min. pulse width	260 ms
Mechanical switches with NAMUR circuits	resistor R1	2.2 kΩ
	resistor R2	5.6 kΩ

The inputs are protected against overvoltages. Open collector outputs must be connected with the correct polarities:
Channel 1: + blue, ground white, Channel 2: + red, ground white

Power supply   The pulse adapter is powered by a lithium battery which has a service life of 12 + 1 years. It cannot be changed in the field. During connection to M-bus the pulse adaptor will be powered from M-bus.

Data transmission   Data are transmitted inside M-Bus network to the central unit on demand .

Engineering notes

Length of connecting cable	For immunity reasons, the total length of the connecting cable may not exceed **10 m**.

Mounting notes

When installing the meter, insert 1 wire of the pulse adapter's connecting cable and 1 wire of the meter's connecting cable into one of the cable connectors supplied with the unit.
Then, squeeze the connector with a pair of pliers.
This connection cannot be separated and offers degree of protection IP54.

Only for AEW310.2/DK:
With the housing cover open, insert the meter connecting cables with the O-ring from the rear of the unit into the cable strain relief and connect the cables to the terminal block. Then, close the housing.

Commissioning notes

The pulse adapter has to be programmed during installation. A first select the data set of the meter. Following data are determined:
− Type of medium (gas, water, etc.), physical variable (kWh, m^3, etc.) and pulse valency per input
− Type of pulse source (Reed switch, Reed switch with NAMUR, Open Collector, etc.) per input
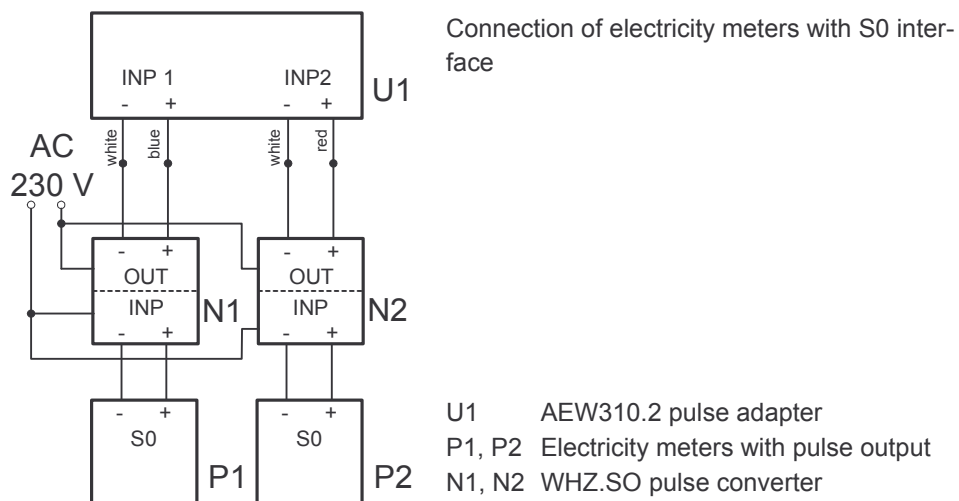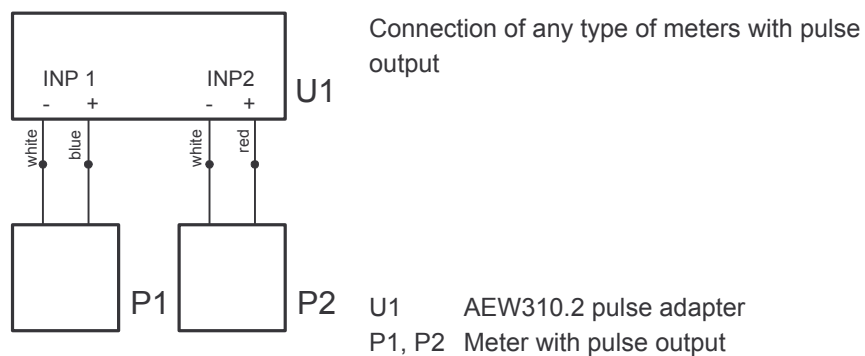Then some additional data have to be programmed per input:
− Set day (1 set day per year), meter readings when commissioning the pulse adapter, meter number (identification number)
The parameterization has to be done via wire-bound (M-Bus) before connecting adapter to the network. For parameterization, a laptop (Windows XP), the ACT20 parameter setting software and the WFZ.MBM programming adapter or USB-Toolset WHZ3.USB are required.
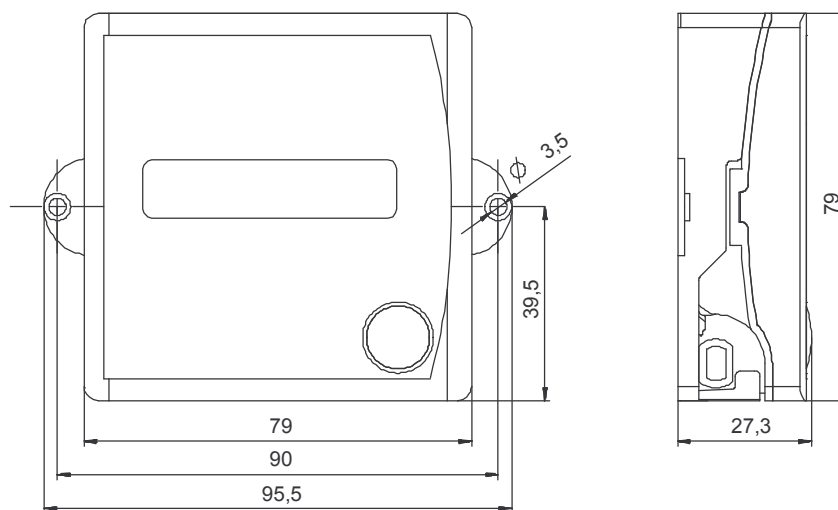
Technical data

$C\,\epsilon$ conformity	89/336/EEC (EMC directive)
Degree of protection	IP 54 to EN 60 529
Safety class	III to EN 60 950
Electromagnetic compatibility	EN 61000-6-2:2001
Emissions	EN 55022:1998 +A1:2000 +A2 :2003
Immunity	EN 55024:1998 +A1:2000 +A2 :2003
Security of IT equipment	EN 60950-1:2001
Operating voltage	DC 3 V
Life expectancy	12 +1 years
Max. cable length pulse input	10 m
Perm. ambient temperature	
Transport and storage	−25...+60 °C
Operation	0...55 °C
Weight	0.3 kg

Connection diagrams

Connection of any type of meters with pulse output

U1   AEW310.2 pulse adapter
P1, P2 Meter with pulse output

Connection of electricity meters with S0 interface

U1   AEW310.2 pulse adapter
P1, P2 Electricity meters with pulse output
N1, N2 WHZ.SO pulse converter

Dimensions

Dimensions in mm

Connecting cable length is 350 mm.

The information provided in this Data Sheet only gives general descriptions and general technical features which, in the case of specific applications, may not necessarily apply, or which may change due to further development of the product. Technical features are binding only when expressly agreed upon at the time a contract is concluded.