

Safety Information

- Comply with ESD protection measures
- Avoid short-circuits on the PCB
- Route connecting cables only through the bush sleeves of the meter
- Do not cut the bush sleeves shorter than necessary because this may lower the degree of protection

1 Description of function

The pulse module permits the output of pulses that can be derived from the quantity of heat, the volume, tariff register 1 or tariff register 2. Two channels are available whose functions can be parameterized with the service software.

Output takes the form of standard pulses or "fast pulses". The pulse duration is identical for channel 1 and channel 2.



If two pulse modules are plugged, please note the restrictions!

The pulse module is an add-on module for the type T550 (UH50...) and W550 (UW50...). The module enables the meter to communicate with a pulse collector to transmit measured values.

The module is available in two different versions:

- WZU-P2
- WZU-P2L (module with an Opto-Mos output, polarity protected)

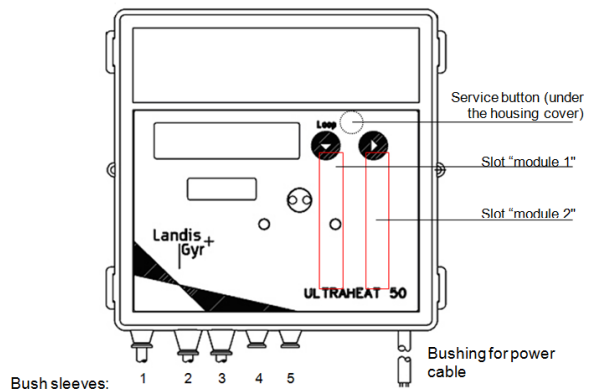
2 Installation and assembly

The meter has two module slots for additional modules. These are named „module 1“ and „module 2“ on the dial plate (visible after removing the cover).

The modules **WZU-P2** and **WZU-P2L** may be fitted on both of the slots, whereby **fast pulses** can be output only on **slot module 2**.

For connection with the pulse collector, a 2-conductor flexible cable with a conductor cross-section of 0.25 mm² to 0.75 mm² must be used.

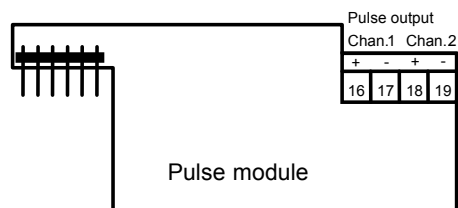
The outer diameter of the cable must be between 4 mm and 6 mm. All cables have to be routed through the existing bush sleeves 4, 5 in the meter. It may be convenient to connect the cables before the meter in a single multi-conductor cable on a splitting box.



If a **shielded cable** is used: The shield must not be connected at the meter end (only connect at one end).

3 Technical Data

Labeling	pulse module								
Display in LCD	CE, C2, CV, CT or RI								
Type	open collector								
Voltage	maximum 30 V _~								
Current	maximum 30 mA								
Dielectric strength	500 V _{eff} against ground								
Classification	OB (per EN 1434-2)								
Voltage drop	ca. 1.3 V at 20 mA								
Classification	OC (per EN 1434-2)								
Voltage drop	ca. 0.3 V at 0.1 mA								
Output connection (WZU-P2):	<table border="0"> <tr> <td>16 +</td> <td rowspan="2"> </td> <td>Channel 1</td> </tr> <tr> <td>17 -</td> </tr> <tr> <td>18 +</td> <td rowspan="2"> </td> <td>Channel 2</td> </tr> <tr> <td>19 -</td> </tr> </table>	16 +		Channel 1	17 -	18 +		Channel 2	19 -
16 +		Channel 1							
17 -									
18 +		Channel 2							
19 -									



A special version WZU-P2L of the pulse module is available with an Opto-Mos output. Advantages: low voltage drop and reverse polarity protected (bipolar).

4 Display on the LCD of the meter

The following displays are examples and may differ from the actual display list of the meter.

Service loop 4 („LOOP 4“)

The **device parameters** are displayed in service loop LOOP 4. LCD button 2 calls the displays one after the other.

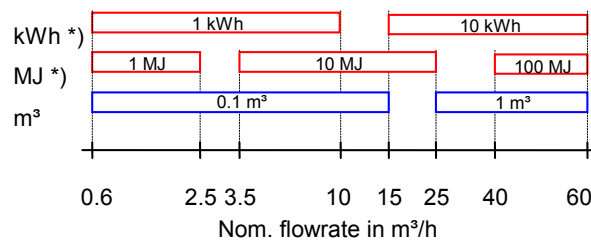
LOOP 4	Head of the loop
...	...
Modul 2-1 CE	Module 2: pulse module; channel 1 = energy quantity, Channel 2 = volume; at 2-sec. intervals
Modul 2-2 CV	
PO1 12500Wh/l	Significance for energy quantity pulses *)
PO2 00250 l/l	Significance for volume pulses *)
PO3 2ms	Pulse duration in ms *)

*) for „fast pulses“

5 Setting for standard pulses

The function or standard pulses are pre-parameterized with CE for channel 1 and CV for channel 2**). An adaption can be executed directly at the “Para menu” of the meter or with the service software. The standard pulse length is always 100 ms and the pulse value depends on the nominal flow of the meter.

Standard pulse significances

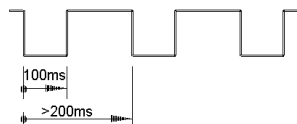


	Output mode	Output value
Channel 1	CE**) (Count Energy)	Pulse for quantity of energy
	C2 (Count Tariff 2)	Pulse for tariff register 2
Channel 2	CV**) (Count Volume)	Pulse for volume
	CT (Count Tariff 1)	Pulse for tariff register 1
	RI (Ready Indication)	Pulse for the operating states „Ready / Fault“

Parameter setting for standard pulses

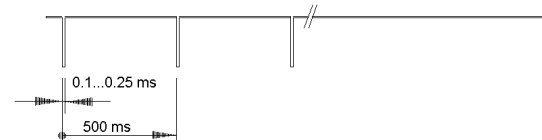
Pulse for energy, volume, tariff register

Period duration > 200 ms
Pulse duration 100 ms conducting



Pulse for operating states (RI):

„Ready“ pulsed „conducting“, i.e.
0.1..0.25 ms pulse duration,
500 ms period
„Fault“ constantly „non-conducting“



6 Setting for fast pulses

For applications, such actuating controllers or as flowrate transmitters, higher pulse rates are required. The parameters required for this (pulse significance, pulse duration), can be configured with the service software.



Note: Application has an influence on the battery life of the meter. With battery operation, a D cell for 6 years is required!

Detailed information for parameterization of „fast pulses“ you will find in the user manual of the service software.

The maximum pulse frequency is 33 Hz.

The following can be set:

- Pulse type: energy or volume
- Pulse type: "linear" or "scaled" pulses
- Pulse duration, if only 1 pulse module is fitted:
from 2 ms to 100 ms in steps of 1 ms;
- Pulse duration, if 2 pulse modules are fitted:
from 5 ms to 100 ms in steps of 5 ms

Parameter setting for „fast pulses“

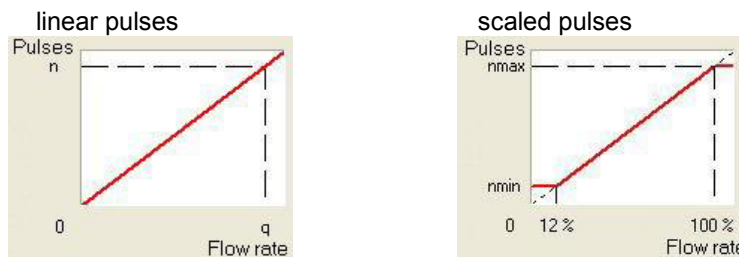
Channel 1	Channel 2
CE (Count Energy)	CV (Count Volume)
CV (Count Volume)	CV (Count Volume)
CE / CV * (Count Energy / Count Volume)	CV (Count Volume)

*) automatic output of the higher pulse rate

The pulses can be received and evaluated with a suitable device. The setting must be made in accordance with the information on the data sheet of the controller.

Linear pulses are output proportionally to the measured value. In the case of scaled pulses, the number of pulses at the upper and lower end of the range can be defined. In this case, the pulse receiving device can detect, for example, a connection error.

Example:



If standard pulses are needed, the fast pulses can be deactivated with the service software.



The „fast pulse“ of UH50 be output only at slot module 2!

7 Ordering data

As accessory:

WZU-P2 or WZU_P2L

For meter T550 (UH50...) with module:

UH50-xxxx-xxxx-xxx-xYZx-xxx

For meter W550 (UW50...) with module:

UW50-xxxx-xxxx-xxx-xYZx-xxx

Y = P for type „P2“ as module 1

Z = P for type „P2“ as module 2

Y = L for type „P2L“ as module 1

Z = L for type „P2L“ as module 2

You will also find up-to-date information on our heat meters in the INTERNET at: www.landisgyr.com

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