1. Safety Information

Please observe the technical data of the pulse output..

Ensure ESD protection.

Avoid short-circuits on the PCB.

Always route connecting cables through the grommets of the meter.

Do not cut the grommets shorter than necessary since this may lower the degree of protection.

Only ever touch the module on its plastic holder.

The meter has no lightning protection. Ensure lightning protection via the house installation.

2. Description of function

The pulse output module T45-PULSE enables the output of pulses on 2 configurable channels.

On channel 1 (terminals 16, 17)
- energy (CE)
- volume (CV)
- tariff register 1 (C1)

pulses can be output.

On channel 2 (terminals 18, 19)
- volume (CV)
- tariff register 1 (C1)
- tariff register 2 (C2)

pulses can be output.

The pulse duration is identical on both channels.

3. LCD

Note: Depending on the device parameterization, both the display scope and the displayed data may deviate from this description.

LOOP 2 “LOOP 2”

Loop head

Pulse function

Pulse duration

Pulse value of pulses for energy alternating with pulse value of pulses for volume

Channel assignment of pulse function

4. Parameterization

The pulse function is pre-parameterized with CE for channel 1 (CH1) and CV for channel 2 (CH2).
An adjustment can be made via UltraAssist.

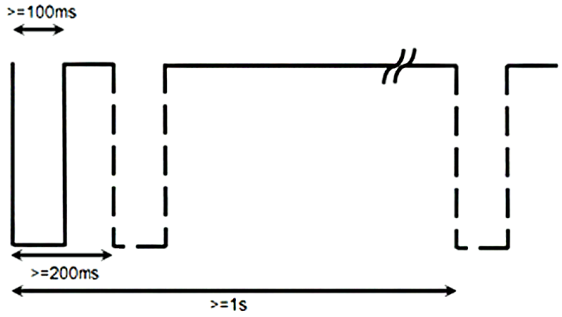
Pulse value

Standard pulses are set to
- 100 ms pulse duration and
- 1 kWh / 1 MJ or 10 l.

High-definition pulses are set to
- 10 ms pulse duration and
- 0.1 kWh / 0.1 MJ or 1 l.

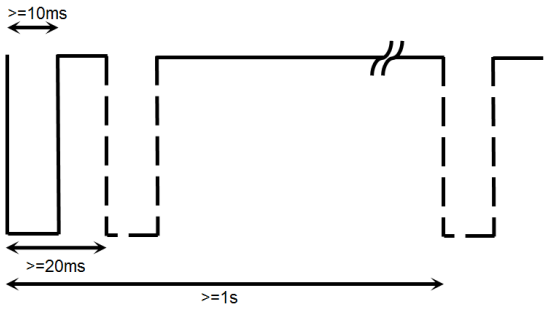
Settings for standard pulses

Pulse for energy, volume
Period duration > 200ms
Pulse duration 100 ms conducting



Settings for high definition pulses

Pulse for energy, volume
Period duration > 20 ms
Pulse duration 10 ms conducting



4.1 Installing the communication

Proceed as follows to install a communication module:
- If necessary, open the housing cover by loosening the screw.
- Run the cable from the outside through the grommet.
- Strip and connect the cable.
- Secure the cable with the strain relief clamp.
- Connect the cables to the module’s terminals.
- Pull the cables out through the housing while inserting the module.
- First attach the contact surfaces of the module to the module slot.
- Gently push the module in.

- Close the housing cover by tightening the screw (see chapter Torque, Installation Instruction) and press the housing cover tightly into place.

Depending on the design of the housing, please also observe the following points:

- For IP 68 versions of the housing, tighten the cable gland.
- For the IP 54 version of the housing, make sure that the grommet is seated correctly.

Note: No later than 60 seconds after installation, the meter automatically detects the inserted modules and is ready for communication or pulse output.

5. Testing the module

Proceed as follows to test the module:

- Press the service button for 3 sec. until the LCD displays

- Press button 2 to activate the parametrization.
- Press the button 1 until the LCD displays

- Press button 2 to test the module.

The 

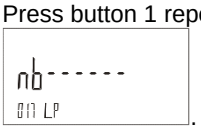
function in the parameter setting mode of the meter forces a pulse output on both channels.

Note: Each further pressing of button 2 causes a pulse to be output on both channels.

Finish module test

To exit the module test, proceed as follows:

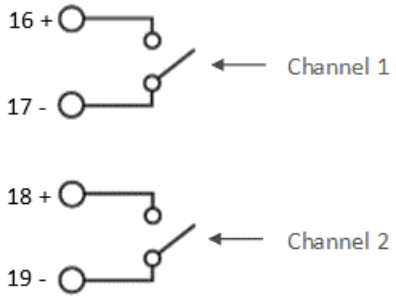
- Press button 1 repeatedly until the LCD displays



- To switch into normal operation press button 2.

6. Technical Data

Output type	Open drain
Classification	OB / OC (according EN 1434-2)
Voltage	Max. 30 V
Current	Max. 30 mA
Dielectric strength	500 V_{eff} against ground
Voltage drop	0.9 V at 30 mA (OB) / 0.1 V at 0.1 mA (OC)
Recommended cable diameter	4 – 6 mm
Recommended wire cross section	0.25 – 0.75 mm²
Output connection	



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

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