

# Result of area inspection

In following lines we are going to show you how you should take pictures of inspecting meters correctly. There are some examples of how it should be done. The pictures are graphically edited so it is obvious what is most important for us.

**The result is going to be composed by taken pictures and scan of inspected area scheme.**

You are going to need those tools:

- **Camera** (or smartphone with good camera lense)
- **Tape measure, caliper**
- **Screwdriver** (flat-type,cross-type)
- **Rag or pice of cloth** for cleaning the meters dial
- **Ladder** (stepladder) – if the ladder will not be available in the workplace
- **Pencil or pen**
- **Area scheme** (or a paper for sketching it)
- **Knee boots**– in case that water meters are located in a shaft
- **Flashlight**

Meters are dived into **main meters** and **submeters** . You can identify main meters easily. They are often equipped with safety seal, therefore you can't manipulate with them. Another sign of main meters are stickers with distributor's name and distribution number.

Now we will describe you which **parameters** are the most important for us and they should be **captured** on **pictures** you take.

## Water meters

### 1. Main

- **Distribution number, name of distributor** (see the picture below)
- **Installation length L, screw-thread diameter** (use caliper and measure-tape)
- **Output options** (if there is already output module installed – capture whether it is M-bus, Mod-bus, or pulse output + module **serial number**)
- **View from afar** to capture space around the meter

### 2. Submeters

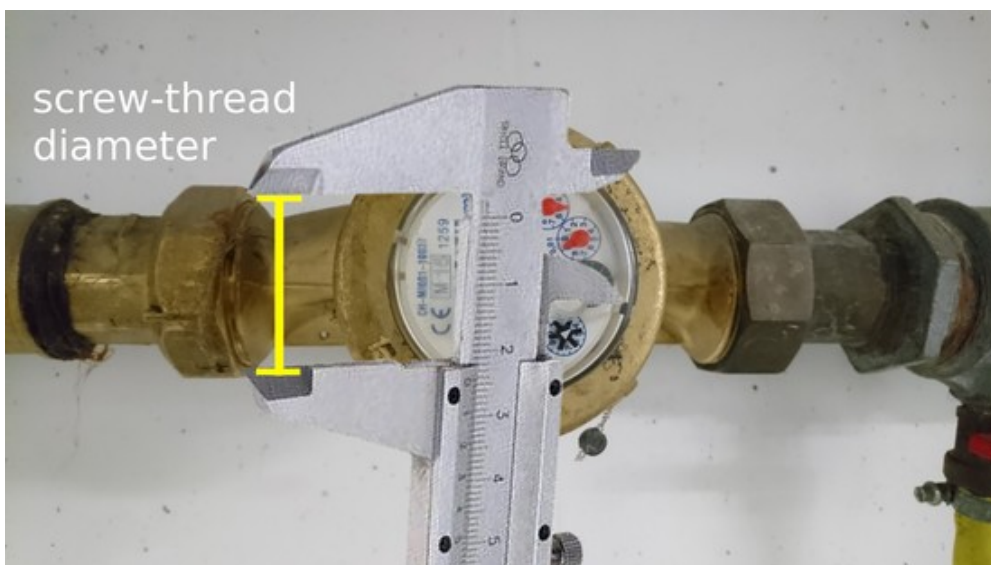
- **Producer, model, product number, nominal flow-rate  $Q_n$**



- **Installation length L** - is measured by measure-tape and means the longitudinal length of the water meter from one end to the other end including screw-threads.



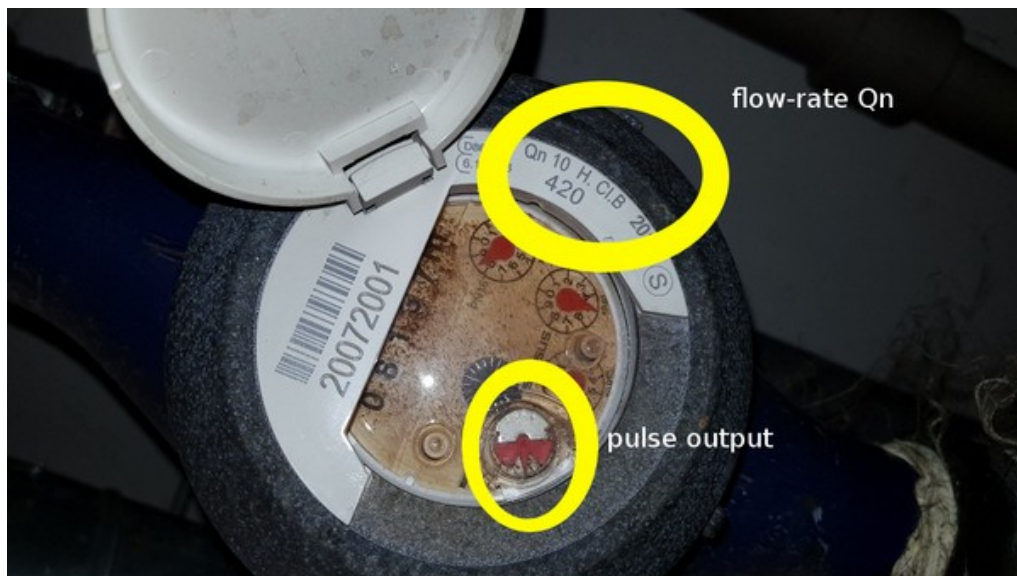
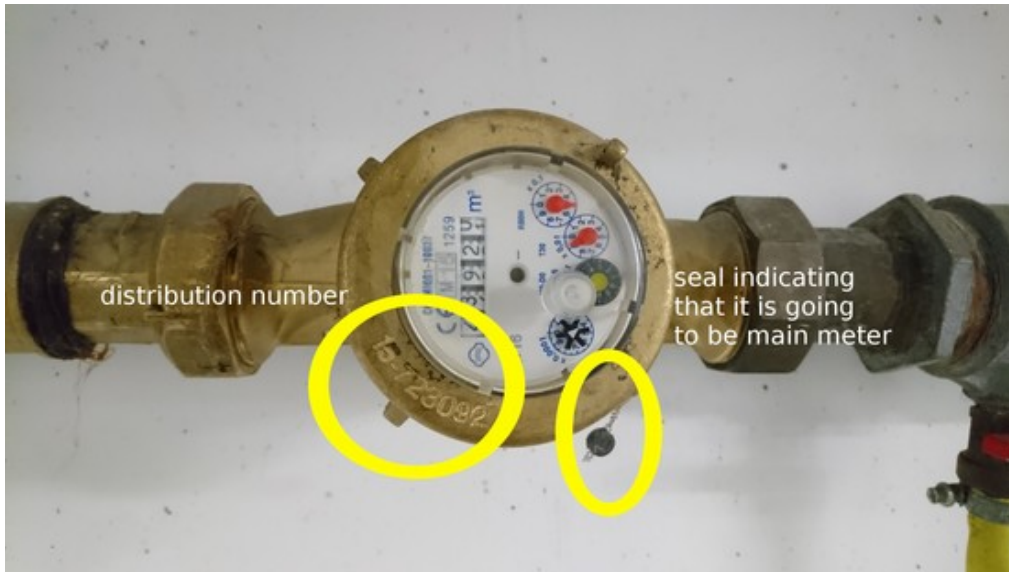
- **Nominal diameter** use caliper to measure the screw-thread diameter (right before the fittings - see the picture below)

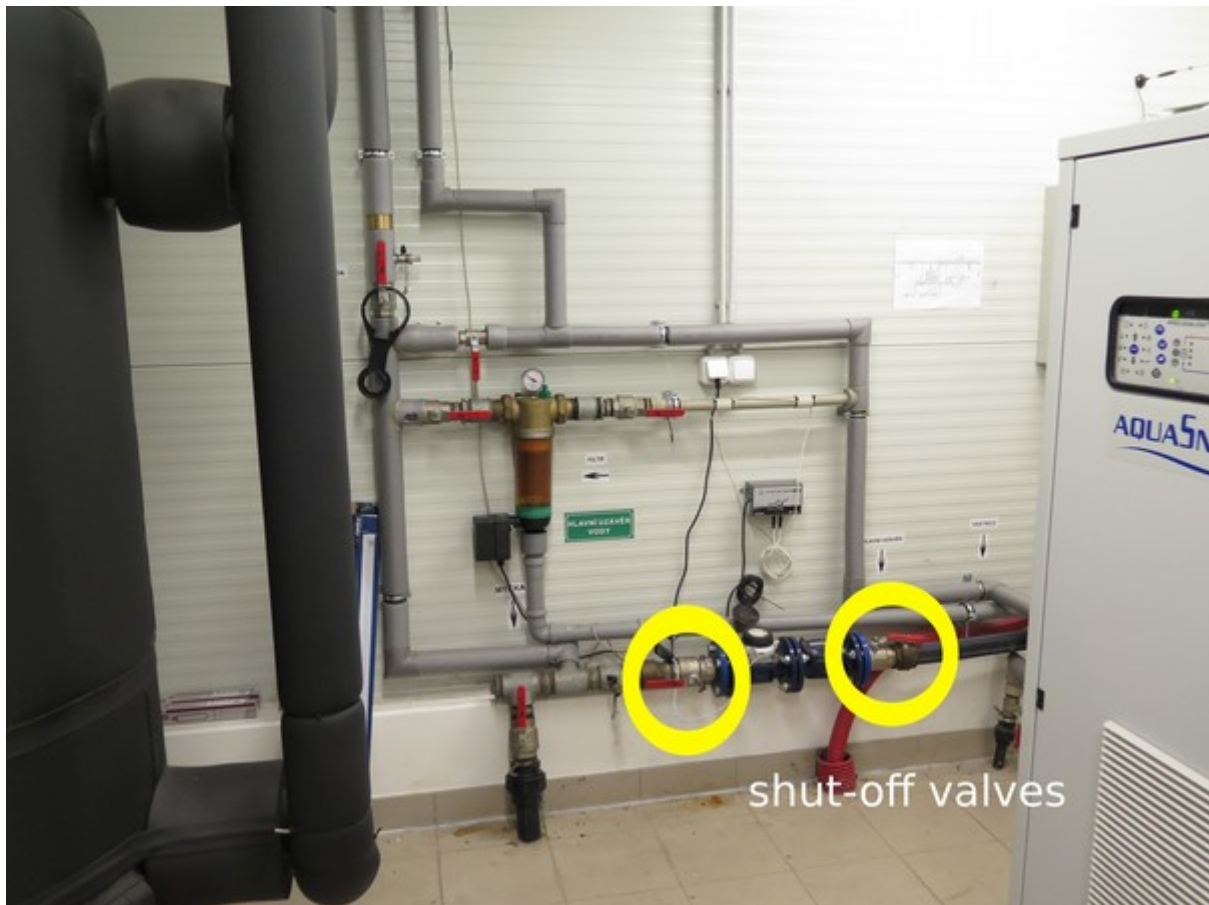


and using the table below you can easily determine the **nominal diameter (DN)** which is very important in case of watermeters.

Screw-thread diameter ([mm])	Nominal diameter [mm]
20,955	DN10
26,441	DN15
33,249	DN20
41,910	DN25
47,803	DN32
59,614	DN40

- **Output options** (see Main above)
- **View from afar** to capture space around the meter
- **Shut-off valves** (if there are some)





## Gas meters

### 1. Main

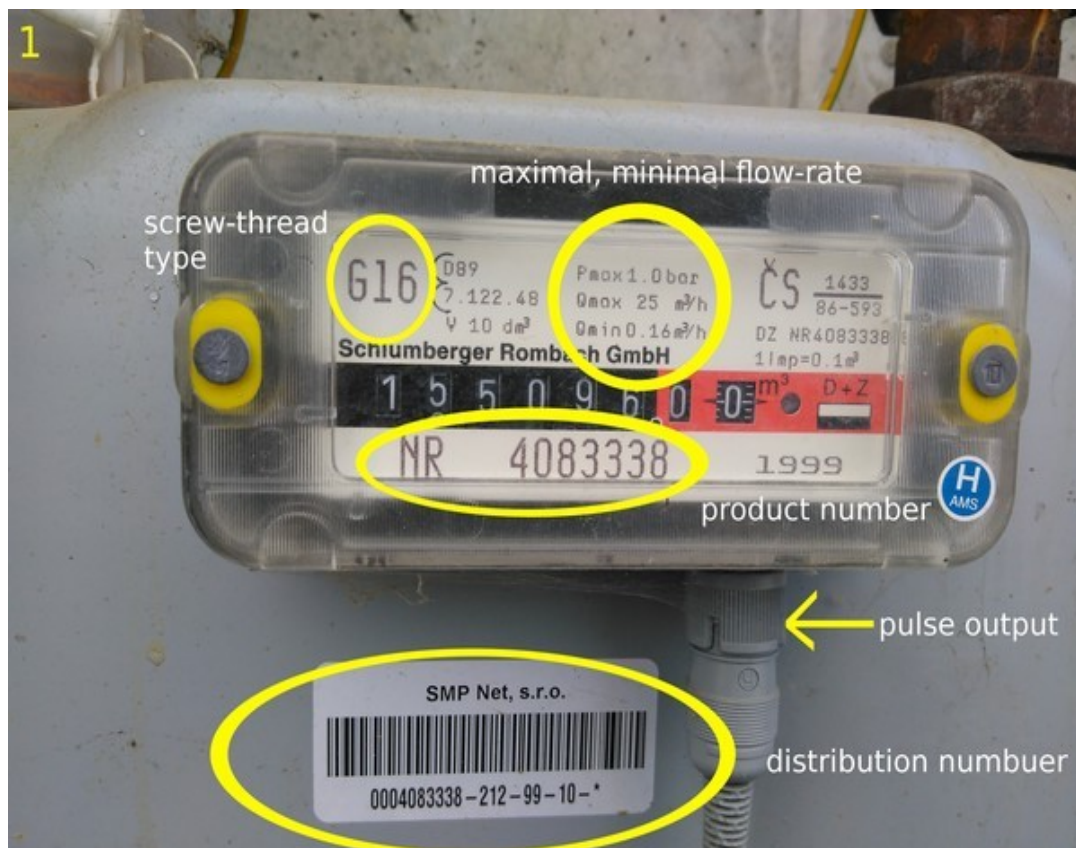
- **Screw-thread type** (G16,G10,...)
- **Distribution number, name of distributor** (captured on detail picture)
- **Product number**
- **Maximal, minimal flow-rate Q** (or nominal)
- **Output options** (see water meters)

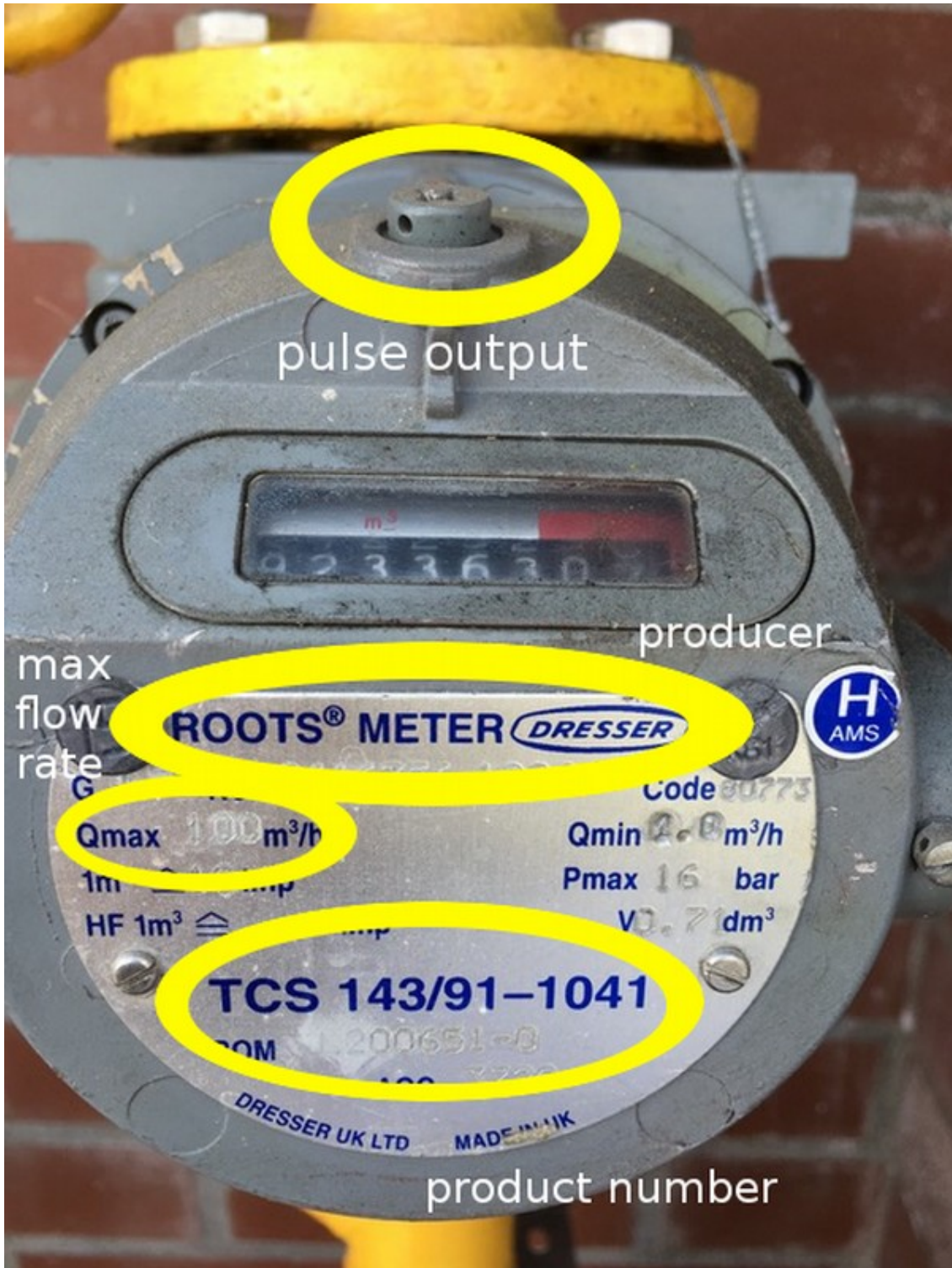
### 2. Podružné

- **Producer, model, product number**
- **Output options**



- Maximal, minimal flow-rate Q (or nominal)
- Installation length L, screw-thread diameter (use caliper and measure-tape)
- View from afar to capture space around the meter





## Electricity meters



## 1. Main

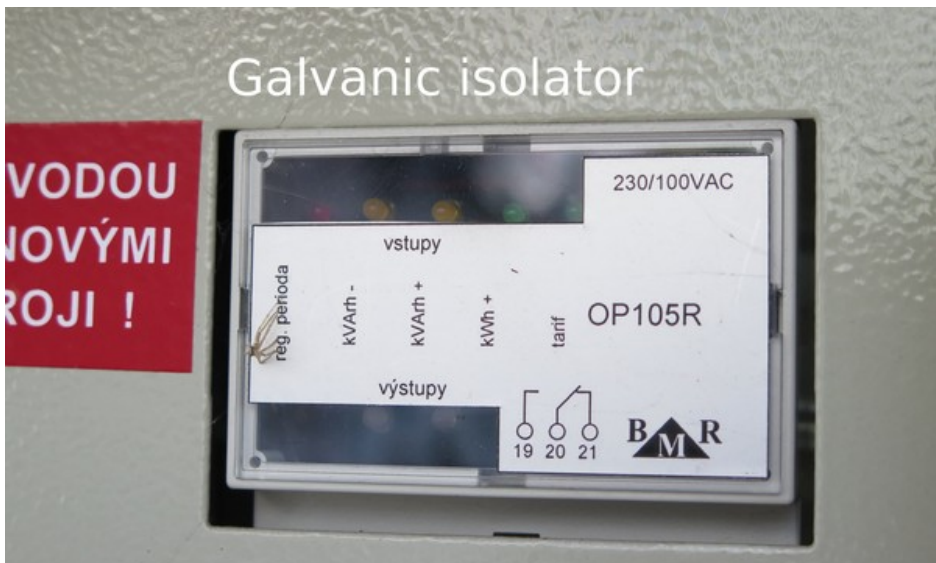
- Distribution number, name of distributor (captured on detail picture)
- Product number
- Production plate
- Connection options (e.g. Galvanic isolation)
- View from afar to capture space around the meter

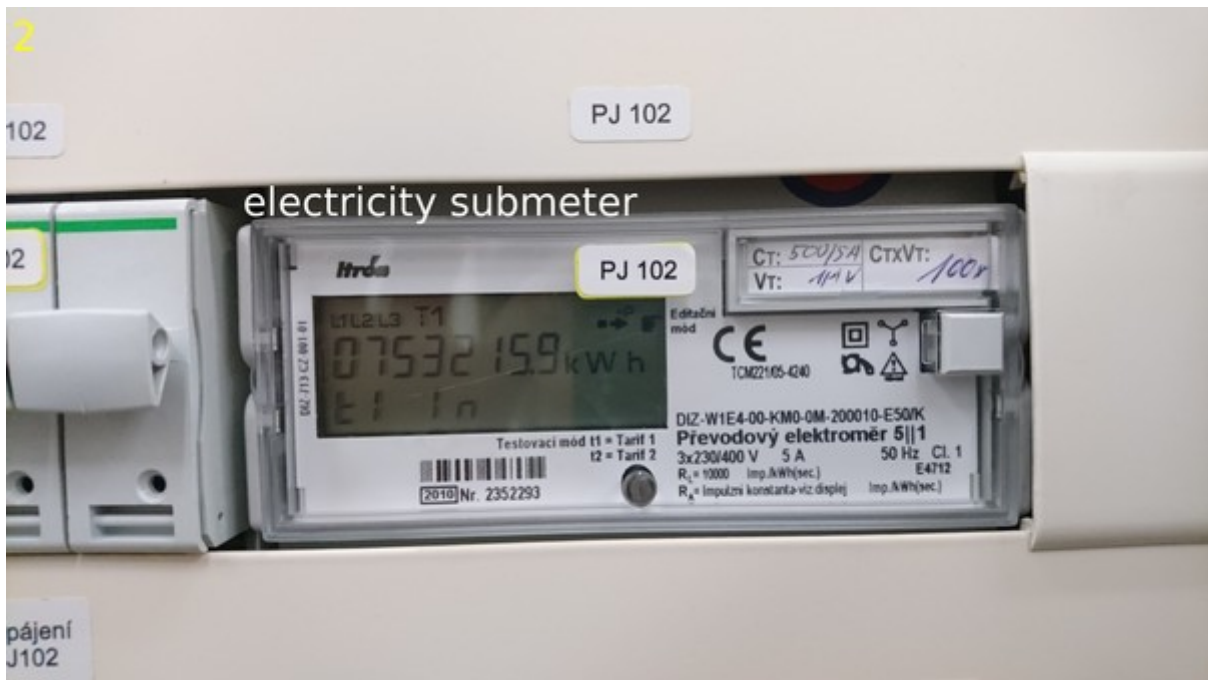
## 2. Submeters

- Producer, model
- Product number
- Production plate
- Connection options (e.g. Galvanic isolation)
- View from afar to capture space around the meter









## Calorimeters

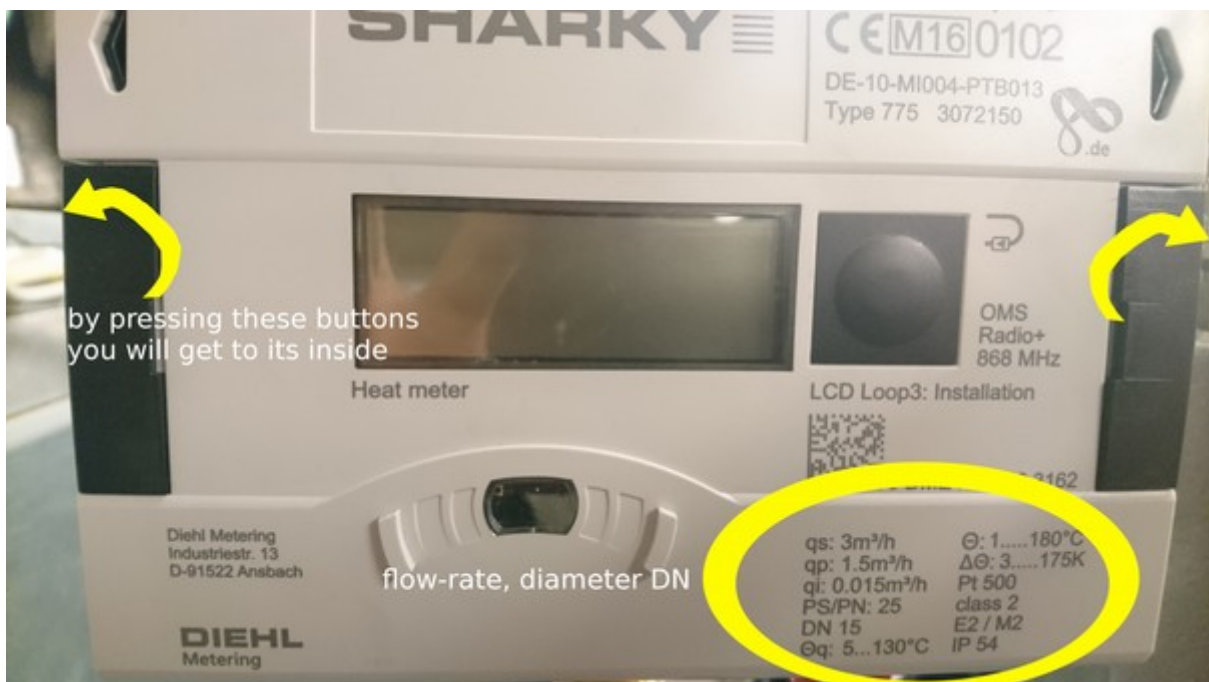
### 1. Main

- **Distribution number, name of distributor** (captured on detail picture)
- **Output options**
- **Maximal, minimal flow-rate Q** (or nominal)
- **Installation length L, screw-thread diameter** (use caliper and measure-tape)
- **View from afar** to capture space around the meter

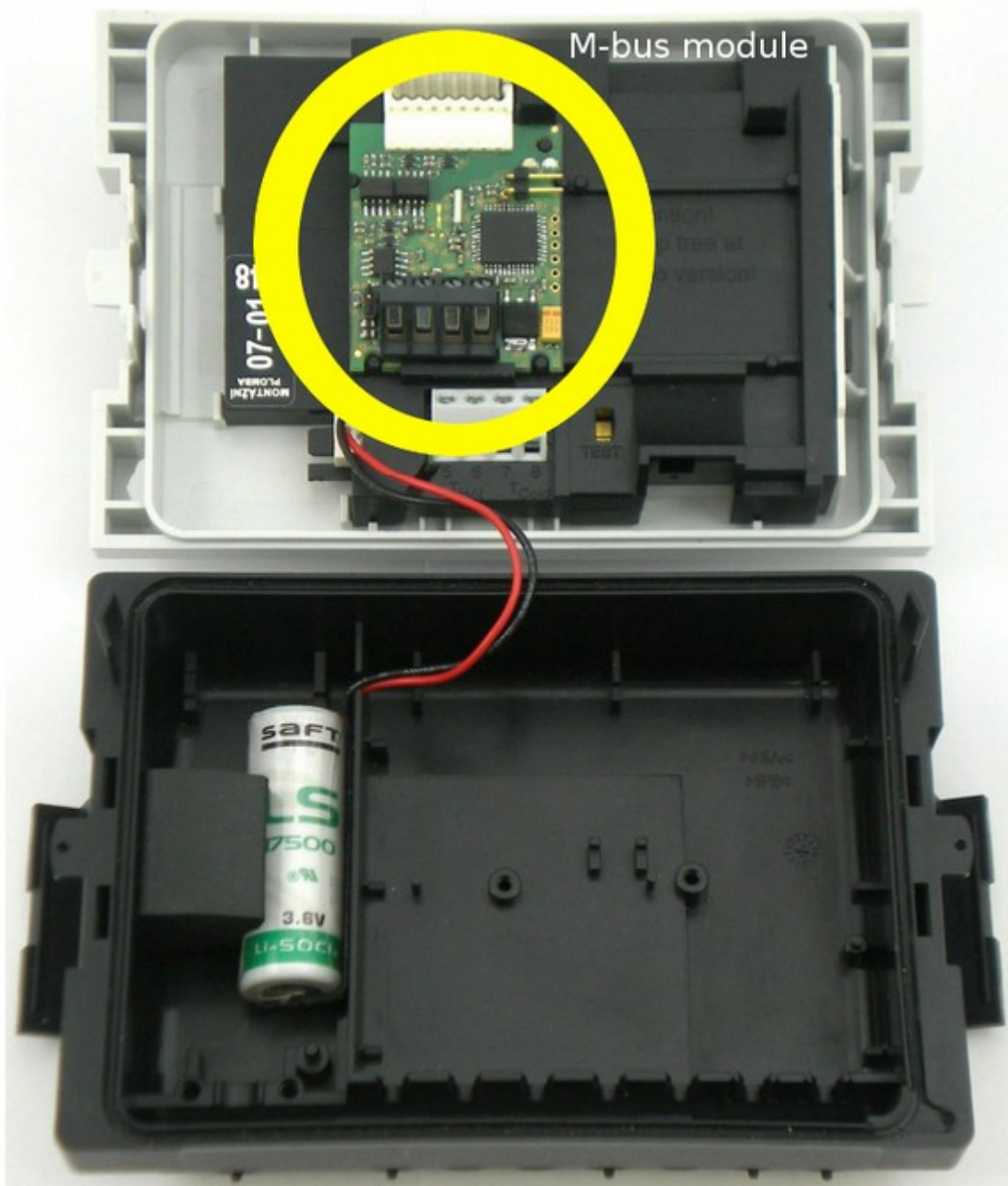
### 2. Submeters

- **Producer, model**
- **Product number**
- **Output options:** You need to open the **meter case** and see whether it contains **output board** for smart metering
- **Maximal, minimal flow-rate Q** (or nominal)
- **Installation length L, screw-thread diameter** (use caliper and measure-tape)

- View from afar to capture space around the meter







## Marking system of meters in pictures

It is important to **systematically name** pictures, especially in case if there is many of them.

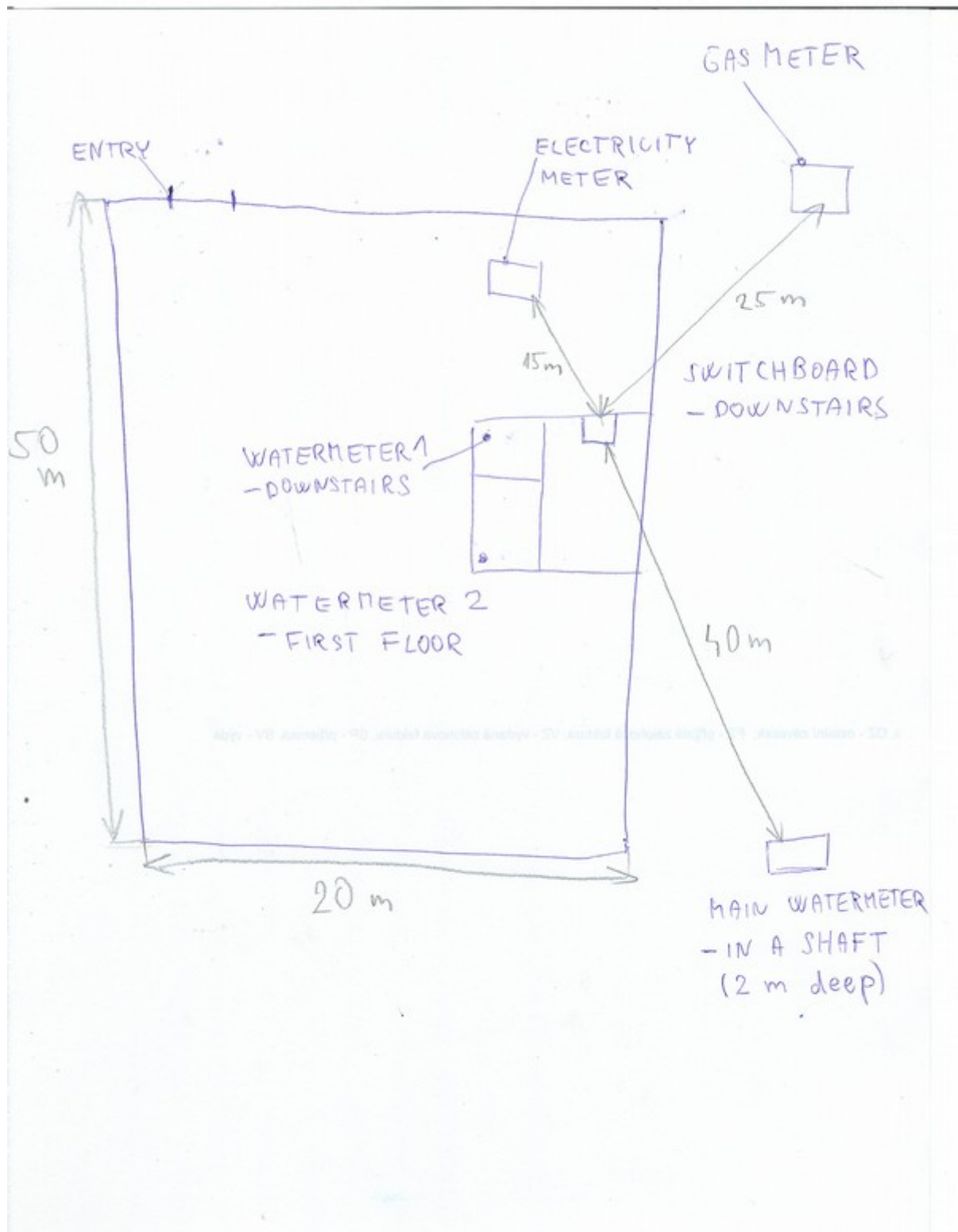
Take a piece of paper with meter's name (e.g. Watermeter n.1 - downstairs) and place it by the meter. **In area scheme, mark the meters the same way you marked them in the photos, please.**



## Area scheme

Area scheme should contain **simply sketched floor plan** of area where are **marked individual meters, switchboards** and another important elements in the area.

You can do it as simple as it is on the picture below. If the meter (e.g. water meter) is situated somewhere in a shaft, please write how **deep** the shaft is. Or if it is situated in a high position then also mark how **high** it is.





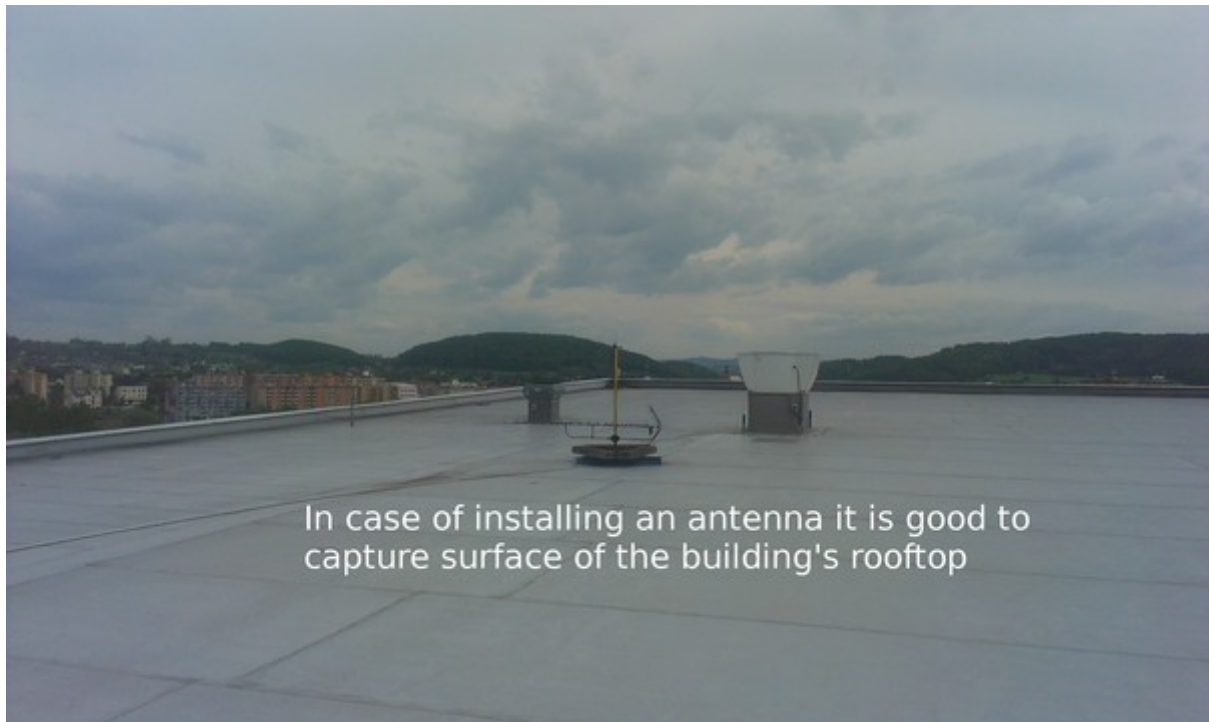
## Additional pictures

If you find any **complications** concerning the meters, which can be useful for us to know, then please take a picture of it so we know what to be prepared for.

*Example n. 1 Water in a shaft*



*Example n. 2 Rooftop of a building*



## How NOT to take pictures

Following pictures are examples of how you **should not** take pictures.

*Example n.1 Unreadable dial of water meter - wrong exposure*



Example n. 2 Unreadable dial of watermeter - blurred dial



Example n.3 Unreadable product number of output module



Example n. 4 Unreadable distribution plate





*Example n.5 No data to be found at all - product plate is on the side*

