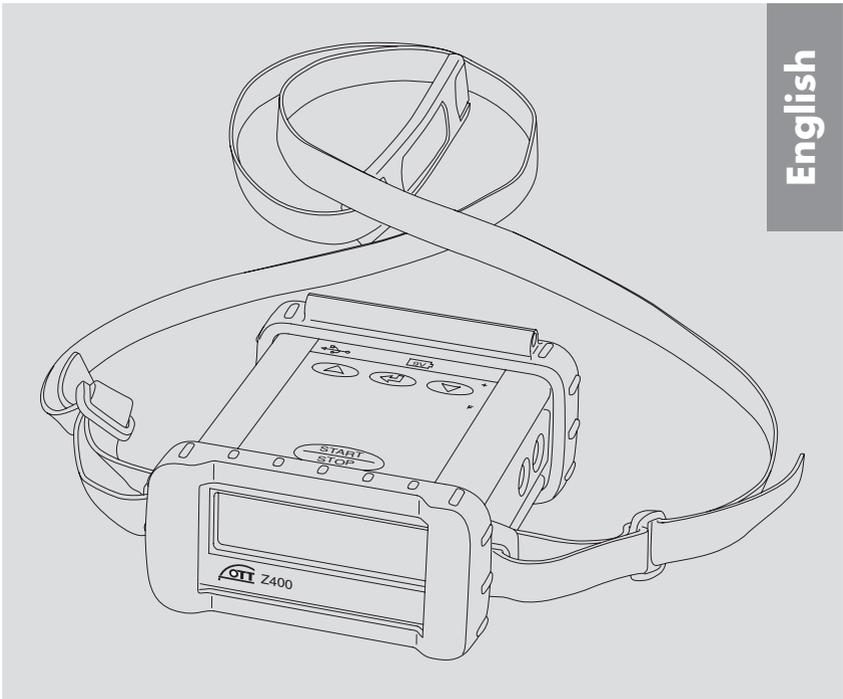




Operating instructions
Signal Counter Set OTT Z400



English

We reserve the right to make technical changes and improvements without notice.

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1 Scope of supply

- ▶ **OTT Z400**
 - 1 Signal Counter Set for hydrometric current meter, optionally with possibility of input of current meter equations for direct display of the flow velocity
 - 1 USB connection cable; 3 m; USB connector type A to USB type B
 - 1 carrying strap
 - 1 9 V battery (alkaline type)
 - 1 operating instructions
 - 1 factory acceptance test certificate (FAT)

2 Order numbers

- | | | |
|-------------------|--|----------------|
| ▶ OTT Z400 | OTT Z400 Signal Counter Set | 12.440.005.9.0 |
| | - version O: without display for the flow velocity | |
| | - version M: with display for the flow velocity | |

3 Safety information

- ▶ Read these operating instructions before using the Z400 for the first time! Become completely familiar with the function and operation of the Z400 and the hydrometric current meter equipment.
- ▶ Note all the information on dangers given within the individual work steps.
- ▶ Only use the Z400 in the way described in these operating instructions.
- ▶ It is essential to comply with the limits given in the "Technical Data"!
- ▶ Do not make any changes or retrofits to the Z400. (If changes or retrofits are made → all guarantee claims are voided.)
- ▶ Have a faulty Z400 inspected and repaired by our repair center. Never make any repairs yourself under any circumstances.
- ▶ Adhere to all accident prevention regulations, especially when using a Z400 in conjunction with a cable way.



4 Introduction

The OTT Z400 Signal Counter Set is used with a hydrometric current meter for a discharge measurement to determine the flow velocity of an open waterway. For this, for example, the Signal Counter Set measures the number of rotations of the blades of the current meter in a defined period of time (1 impulse per blade rotation). The following measurement modes are available:

- ▶ **Impulse measurement:** The number of impulses is defined. The Z400 determines the time until the number of impulses is reached.
- ▶ **Time measurement:** The measuring time is specified. The Z400 determines the number of impulses before the measuring time is over.
- ▶ **Integration measurement:** The current meter is lowered into the waterway using a cable way, for example, at a constant speed. The Z400 determines the measuring time and the number of impulses from the current meter entering the water until the ground contact is closed.
- ▶ **Integration measurement with remaining term determination:** In addition to the integration measurement, the Z400 determines the number of impulses for an additional defined measurement period to determine the remaining term. (Determining remaining terms: part of the discharge in deep area from the current meter axis to the lower edge of the ground contact.)

The impulse and time measurements are suitable for rod-mounted and suspended measurements. The integration measurement is intended especially for suspended measurements with ground contact. The signal counter is in the position to automatically detect a suspended current meter with ground contact (for detailed information: see Appendix A).

To operate the device it has 4 membrane buttons, an LCD display and a buzzer that can be deactivated.

A special feature is that the Signal Counter Set can immediately display the flow velocity measured. For this the current meter equations for the current meter have to be input when starting.

The basic settings of the Signal Counter Set can be made directly on the device or also conveniently using a PC with USB connection.

All OTT current meters can be used. Current meters from other manufacturers can also be used as long as they have the so-called banana plugs (4 mm Ø) and correspond to the technical data of the Z400.

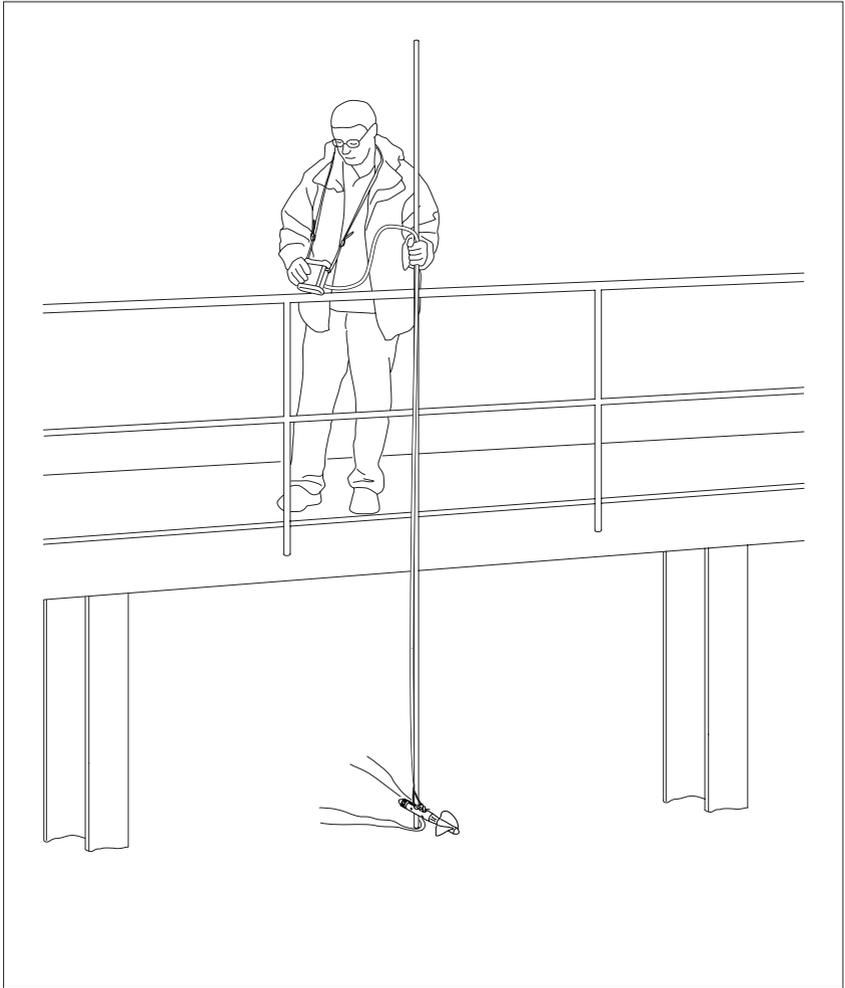


Fig. 1: Example of use for the OTT Z400 Signal Counter Set: Rod-mounted measurement using an OTT C31 current meter.

5 Starting up the Signal Counter Set

5.1 Supplying the Z400 with operating voltage

Operation of the Z400 requires a standard 9 V battery (alkaline type). The battery life is approx. 120 hours without buzzer operation, and approx. 80 hours with the buzzer. If a blinking battery symbol appears on the LCD display, there is a remaining battery life sufficient for approx. 8 hours of operation at room temperature.

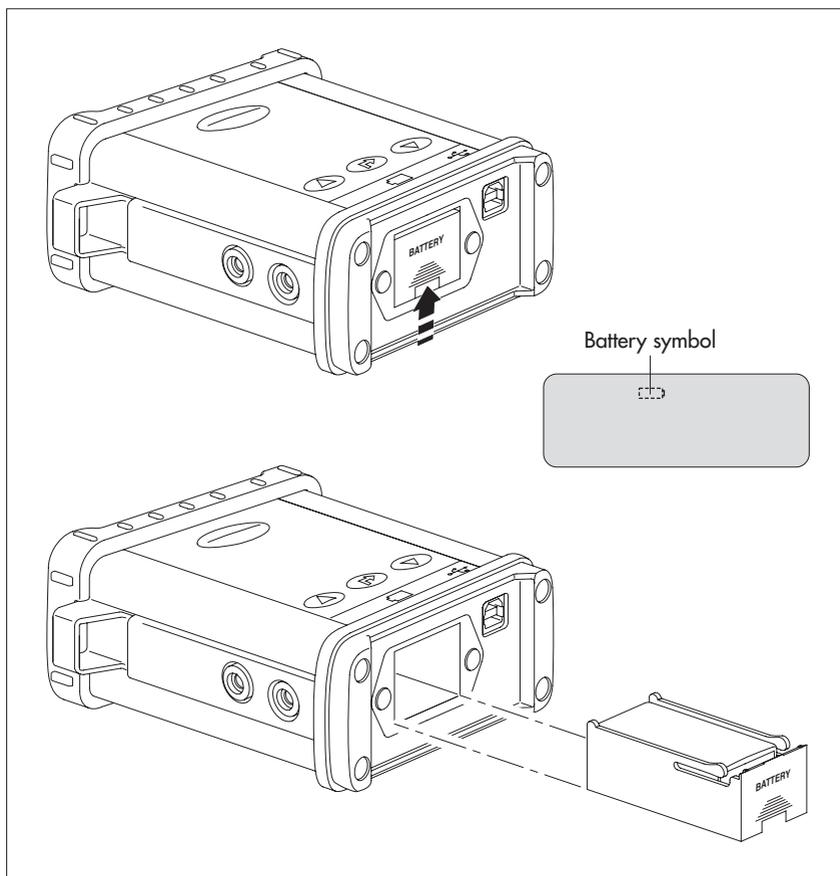


Fig. 2: Replacing 9 V battery for the Z400. The LCD display shows a blinking battery symbol.

How to replace the battery:

- Remove the yellow rubber cover on the rear of the Z400.
- Open the battery compartment as shown in Figure 2 and replace the exhausted battery with a charged battery of the same type.
- Close the battery compartment.
- Replace the yellow rubber cover.
- Properly dispose of dead batteries! Do not include with the normal household trash!

Notes:

- ▶ Never operate the Z400 without the yellow rubber cover! The Z400 only fulfills protection class IP 65 with a correctly fitted rubber cover.
- ▶ With very cold temperatures ($< 0\text{ }^{\circ}\text{C}$), the battery capacity is reduced depending on its construction by up to 50 % of the capacity at room temperature.

5.2 Connecting the current meter to the Z400

All OTT current meters can be used. Current meters from other manufacturers can also be used as long as they can be connected with so-called banana plugs (4 mm Ø) and correspond to the technical data of the Z400. Current meters with and without ground contacts can be used (for detailed information: see Appendix A).

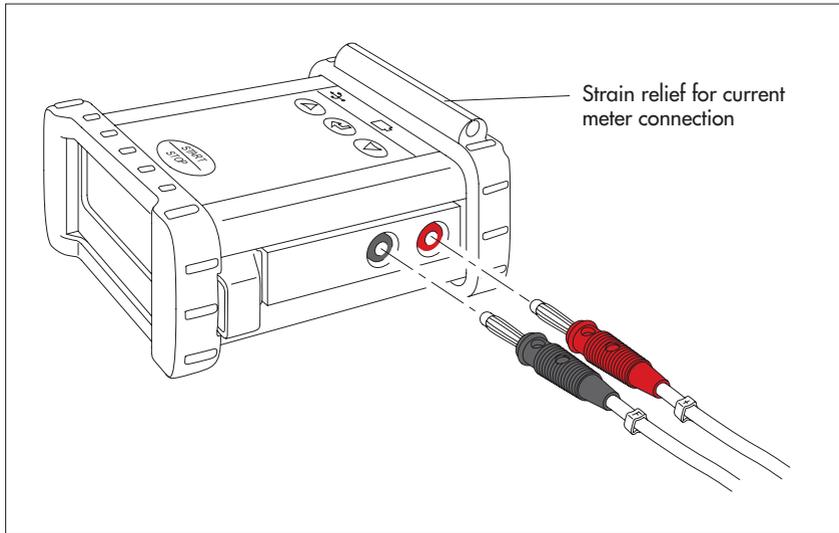


Fig. 3: Connecting the current meter to the Z400. For strain relief purposes, the current meter connection can be laid in the groove of the rear rubber cover.

How to connect the current meter:

- Connect the current meter to the Z400 as shown in Figure 3. Ensure correct polarity ("+": red socket; "F" (current meter contact): black socket). If the polarity is transposed, this leads to increased corrosion of the current meter (electrochemical corrosion).

Note

With a measurement using a suspended current meter, the connection of the current meter is made via a special adapter cable directly to a mechanical/electrical single winch or to the control electronics (control cabinet) of a double electrical winch.

5.3 Basic information for operating the Z400

The Z400 Signal Counter Set has 4 membrane buttons on the upper surface of the device.

Using these membrane buttons and the LCD display on the front of the Z400, the basic settings for the Signal Counter Set can be made (basic setting dialog) as well as for the actual discharge measurement (measurement mode).

In addition, the Z400 offers the possibility to make the basic settings using a standard PC via a USB connection. See Chapter 7.

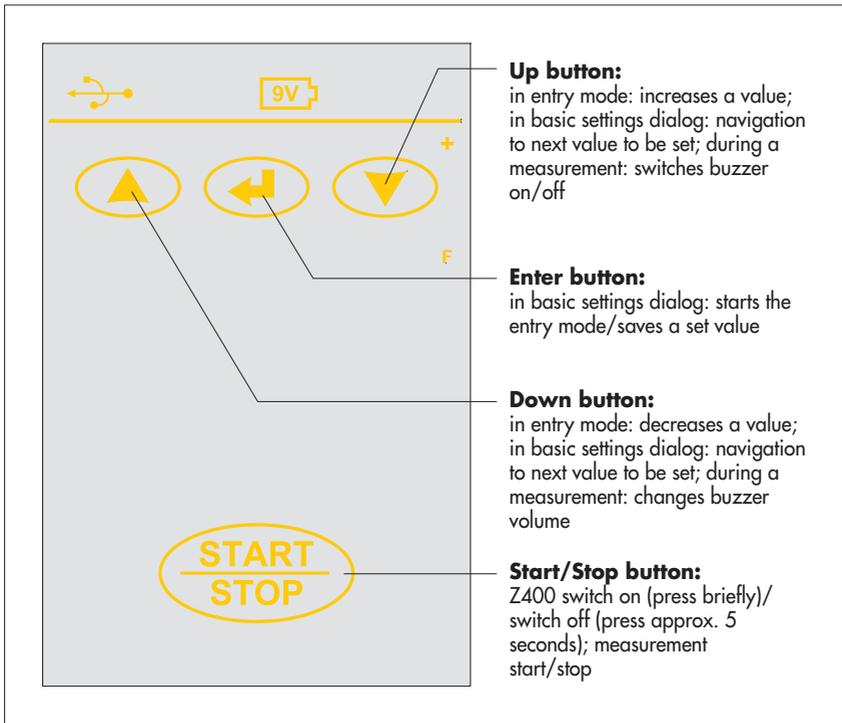
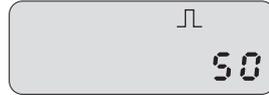


Fig. 4: Operating controls of the Z400. In addition, with Z400 version M: at the end of a measurement, changes display between time/pulse count and calculated flow velocity: press /.

5.4 Making basic settings

- Switching on Z400: press .
 - A short tone sounds.
 - The LCD display initially displays the available symbols for approx. 2 seconds (displaytest) and then the measurement mode currently set (example: impulse measurement) and the number of impulses selected.
- **Starting basic setting dialog:**
 - Press  for 3 seconds (display blinks).
- Switch from the displayed example *impulse measurement* displayed to *time measurement*: press  2 x.



5.4.1 Setting time measurement

- Starting entry mode: press  → the time symbol blinks.
- Select the measuring time with /; value range: 5, 10, 15, 20, 30, 40, 50, 60, 80, 100, 120 seconds and unending (999.9); factory setting: 20 seconds.
- Ending entry mode: press .
- Leaving basic setting dialog and continuing with measuring mode: press  or



5.4.2 Setting integration measurement

- Press  → display changes to integration measurement (no further setting possible).
- Leaving basic setting dialog and continuing with measuring mode: press  or



5.4.3 Setting integration measurement with remaining term determination

- Press ∇ → display changes to integration measurement with remaining term determination.
- Starting entry mode: press \odot time and sum symbols blink.
- Select the measuring time for remaining term determination with $\triangleleft/\triangleright$; value range: 1 ... 10 seconds; factory setting: 6 seconds
- Ending entry mode: press \odot .
- Leaving basic setting dialog and continuing with measuring mode: press START/STOP or



5.4.4 Set buzzer function

- Press ∇ → display changes to buzzer setting.
- Starting entry mode: press \odot → the buzzer symbol blinks.
- Select the buzzer function with $\triangleleft/\triangleright$.
 - **Off**: the buzzer is always switched off. Only when switching the Z400 on/off a short sound is heard.
 - **On** (beep): the buzzer is always switched on. Each current meter impulse (also with a current meter contact closed for a long time) and each time a button is pressed, a **short** sound is produced. A finished measurement produces a longer sound. A closed ground contact produces a continuous sound.
 - **Quiet** (hush): like "On", however without current meter impulse sounds.
 - **Cont.** *: as "On", however, the length of the tone is proportional to the period of time the current meter contact is closed (meter is stationary with closed contact or with ground contact → continuous tone). The buzzer is also active when there is no measurement taking place.



Factory setting: On

- Ending entry mode: press \odot .
- Leaving basic setting dialog and continuing with measuring mode: press START/STOP or

* for further information: see Appendix A

5.4.5 Setting buzzer volume

- Press → display changes to buzzer volume setting.
- Starting entry mode: press → the buzzer symbol blinks.
- Select the volume with /. Value range: 1 (quiet) or 2 (loud); factory setting: 2.
- Ending entry mode: press .
- Leaving basic setting dialog and continuing with measuring mode: press or



5.4.6 Select current meter equation

(Only with Z400 with display of the flow velocity; the current meter equations must be entered before with the Z400 operating software. See Chapter 7.)

- Press → display changes to current meter equation setting.
- Starting entry mode: press → the number symbol blinks.
- Select the current meter equation with /. Value range: 1 ... 30; factory setting: 1.
- Ending entry mode: press .
- Leaving basic setting dialog and continuing with measuring mode: press or



5.4.7 Setting ground contact function *

- Press → display changes to ground contact setting.
- Starting entry mode: press → the ground contact symbol blinks.
- Select the ground contact function with /. Value range: 0 = without ground contact (no); 1 = with ground contact (yes); 2 = automatic ground contact detection (auto); factory setting: 2.
- Ending entry mode: press .
- Leaving basic setting dialog and continuing with measuring mode: press or



* for further information: see Appendix A

5.4.8 Setting impulse measurement

- Press ∇ → display changes to impulse setting.
- Starting entry mode: Press \leftarrow → the impulse symbol blinks.
- Select the number of impulses with $\blacktriangle/\blacktriangledown$; value range: 10 ... 50 impulses; factory setting: 10 impulses.
- Ending entry mode: press \rightarrow .
- Leaving basic setting dialog and continuing with measuring mode: press START/STOP or



5.4.9 Setting impulse display accuracy

- Press ∇ → display changes to impulse display accuracy.
- Starting entry mode: Press \leftarrow → the impulse symbol blinks.
- Select accuracy with $\blacktriangle/\blacktriangledown$; value range: "P.P" (one decimal place) or "P" (no decimal places); factory setting: "P".
- Ending entry mode: press \rightarrow .
- Leaving basic setting dialog and continuing with measuring mode: press START/STOP .



Note:

- ▶ Ensure that the required measuring mode is selected when exiting the basic setting dialog!

6 Carrying out a flow velocity measurement

6.1 Measuring mode: Impulse measurement

Requirements: Measuring mode impulse measurement is set and the number of impulses required is defined. In addition with Z400 version M: current meter equation entered and selected. See Chapter 5.4.6.

- Connecting the current meter to Z400.
See Chapter 5.2.
- Switching on Z400: press .
 - A short tone sounds.
 - The LCD display initially displays all available symbols for approx. 2 seconds (display test) and then the selected measuring mode (impulse measurement) and the selected number of impulses. (If necessary, start basic setting dialog: press  for 3 seconds, see Chapter 5.4.)
- Starting the measurement: press .
 - The impulse symbol blinks during the current measurement.
 - The first current meter impulse starts the measuring time; the next current meter impulse increases the impulse counter to 1.
 - As soon as the preset number of impulses is reached, the Z400 stops the measurement and shows the measured time.
- Z400 version M: Switching display between the measured time/preset impulse number and the calculated flow velocity: press /.
- Starting another measurement with the same settings: press  (the Z400 automatically sets the display to 0).
- To switch off the Z400: press  for 5 seconds.



Note:

- ▶ Ending the measurement at any chosen point in time: Press .

- ▶ If the ground contact is closed, the Z400 ends the measurement. The LCD display shows the ground contact symbol (with ground contact function: 1 and 2).
- ▶ Acoustic signal during the measurement. See Chapter 5.4, setting buzzer function. Switching the buzzer on/off during the measurement: press ; changing the volume: press .

6.2 Measuring mode: Time measurement

Requirements: Measuring mode time measurement is set and the measuring time required is defined. In addition with Z400 version M: current meter equation entered and selected. See Chapter 5.4.6.

- Connecting the current meter to Z400. See Chapter 5.2.
- Switching on Z400: press .
 - A short tone sounds.
 - The LCD display initially displays all available symbols for approx. 2 seconds (display test) and then the selected measuring mode (time measurement) and the selected measuring time. (If necessary, start basic setting dialog: press  for 3 seconds, see Chapter 5.4.
- Starting the measurement: press .
 - The time symbol blinks during the current measurement.
 - The first current meter impulse starts the measuring time; the next current meter impulse increases the impulse counter to 1.
 - The next impulse after expiry of the time period stops the measurement and displays the measured number of impulses.
- Z400 version M: Switching display between the set time/measured number of impulses and the calculated flow velocity: press /.
- Starting another measurement with the same settings: press  (the Z400 automatically sets the display to 0).
- To switch off the Z400: press  for 5 seconds.



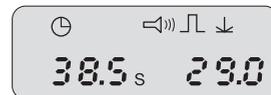
Notes:

- ▶ With basic setting "P.P" for the impulse display accuracy, the Z400 calculates the impulse display with one decimal place.
- ▶ Ending the measurement at any chosen point in time: press .
- ▶ If the ground contact is closed, the Z400 ends the measurement. The LCD display shows the ground contact symbol (with ground contact function: 1 and 2).
- ▶ Acoustic signal during the measurement. See Chapter 5.4, setting buzzer function. Switching the buzzer on/off during the measurement: press ; changing the volume: press .

6.3 Measuring mode: Integration measurement

Requirements: Integration measurement measuring mode is set. In addition, with Z400 version M: current meter equation entered and selected. See Chapter 5.4.6.

- Connecting the current meter to Z400.
See Chapter 5.2.
- Switching on Z400: press .
 - A short tone sounds.
 - The LCD display initially displays all available symbols for approx. 2 seconds (display test) and then the selected measuring mode (integration measurement). (If necessary, start basic setting dialog: press  for 3 seconds, see Chapter 5.4.)
- Starting the measurement: press  (axis of current meter is at the level of the water surface) and smoothly lower the current meter, for example using a cable way.
 - The integration symbol blinks during the current measurement.
 - The first current meter impulse starts the measuring time; the next current meter impulse increases the impulse counter to 1.
 - As soon as the ground contact is closed, the Z400 ends the measurement and displays the ground contact symbol, the measured time and number of impulses.



- Z400 version M: Switching display between the measured time/number of impulses and the calculated flow velocity: Slightly raise the current meter until the ground contact symbol goes out and press \triangle/∇ .
- Starting another measurement with the same settings: press START/STOP (the Z400 automatically sets the display to 0).
- To switch off the Z400: press START/STOP for 5 seconds.



Notes:

- ▶ Ending the measurement at any chosen point in time: press START/STOP .
- ▶ Acoustic signal during the measurement. See Chapter 5.4, setting buzzer function. Switching the buzzer on/off during the measurement: press ∇ ; changing the volume: press \triangle .

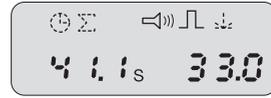
6.4 Measuring mode: Integration measurement with remaining term determination

Requirements: Integration measurement with remaining term determination measuring mode set and required measuring time for the remaining term determination specified. In addition, for the Z400 version M: current meter equation entered and selected. See Chapter 5.4.6.

- Connecting the current meter to Z400. See Chapter 5.2.
- Switching on Z400: press START/STOP .
 - A short tone sounds.
 - The LCD display initially displays all available symbols for approx. 2 seconds (display test) and then the selected measuring mode (integration measurement with remaining term determination) and the selected measuring time for the remaining term determination. (If necessary, start basic setting dialog: press M for 3 seconds, see Chapter 5.4.)
- Starting the integration measurement: press START/STOP (axis of current meter is at the level of the water surface) and smoothly lower the current meter, for example using a cable way.
 - The time symbol blinks during the measurement.



- The first current meter impulse starts the measuring time; the next current meter impulse increases the impulse counter to 1.
- As soon as the ground contact is closed, the Z400 ends the measurement and displays the ground contact symbol, the measured time and number of impulses.
- Start remaining term determination: slightly raise the current meter until the ground contact symbol goes out and press .
 - The integration, time and ground contact symbol blinks.
 - The remaining term determination runs for the specified time period. The Z400 adds the values to the counter levels previously determined.
- Z400 version M: Switching display between the measured time/number of impulses and the calculated flow velocity: press /.
- Starting another measurement with the same settings: press  (the Z400 automatically sets the display to 0).
- To switch off the Z400: press  for 5 seconds.



Note:

- ▶ Stop integration measurement: press . (This allows the remaining term determination to continue even if there is no ground contact signal.)
- ▶ End measurement between the integration measurement and the remaining term determination: press  for 3 seconds.
- ▶ Acoustic signal during the measurement. See Chapter 5.4, setting buzzer function. Switching the buzzer on/off during the measurement: press ; changing the volume: press .
- ▶ If the ground contact is closed during the remaining term determination, the Z400 subtracts the measured time and the impulses that occurred from the current counter level.

7 Making Z400 basic settings using a PC

You can also easily make the basic settings for the Z400 using a standard PC with USB connection. For this, a removeable storage medium (comparable with a USB memory stick) containing the *operating software for the Z400* is used.

How to make the basic settings:

- Remove the yellow rubber cover on the rear of the Z400.
- Connect the USB cable to the Z400 as shown in Figure 5.
- Attach the USB cable to a USB socket on the PC.
- Switching on Z400: press  → the PC recognizes the Z400 as an external removeable storage medium.
- Start file *Z400.exe* (e.g. double click on the file icon).
- Make the basic settings in the *Z400 operating software*. Further information on this subject can be found in the online help for the operating software.
- Disconnecting USB cable from PC: Call the *Safely Remove Hardware* function.
- Disconnect USB cable → the Z400 switches off automatically.
- Replace the yellow rubber cover.
- Restart the Z400: first press  for 5 seconds (switch off) and then press briefly again (switch on).

Note:

- ▶ There are two configuration files on the Z400 (*Configuration.ini* and *Z400-Configuration.txt*). The content of these files must not be changed under any circumstances. Otherwise the Signal Counter Set becomes unusable.
- ▶ Never operate the Z400 without the yellow rubber cover! The Z400 only fulfills protection class IP 65 with the rubber cover correctly fitted.
- ▶ Z400 version M: the signal counter works internally with a higher resolution than can be shown on the display. To calculate the flow velocity, the signal counter always uses the internal resolution. Therefore, the flow velocity calculated by the Z400 will deviate from a manually calculated flow velocity using the displayed pulses and time.

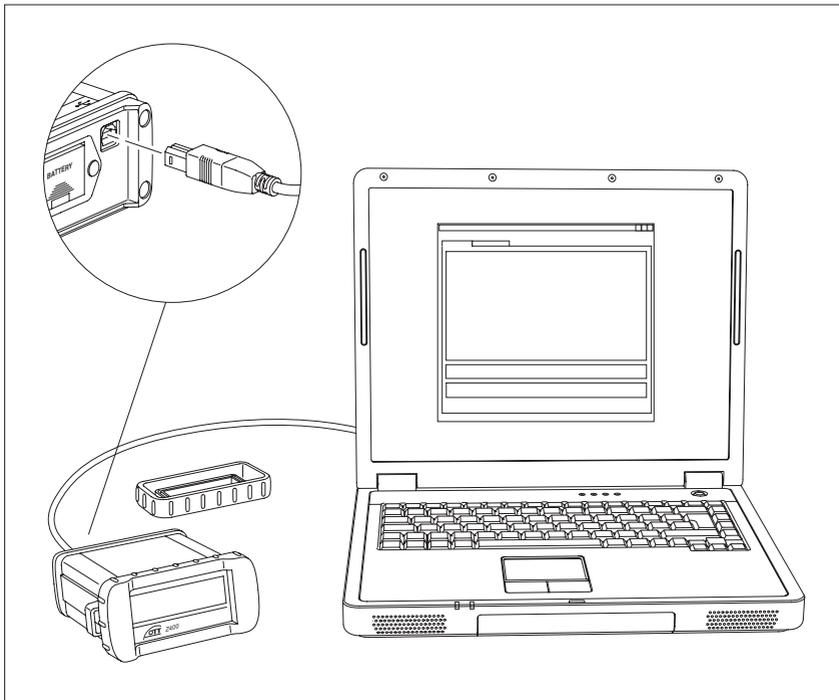


Fig. 5: Connecting the Z400 to the PC with a USB cable.

8 Carrying out maintenance work

The Z400 Signal Counter Set is almost completely maintenance free.

- If required: dry the Z400 after use with a soft cloth.
- Remove the battery if the Z400 is to be stored for a long time. Even high-quality batteries are not 100 % proof against leakage.



Never open the casing of the Z400. There are no adjustment or control elements inside the housing!

In the case of device defects, contact the OTT repair center:

OTT MESSTECHNIK GmbH & Co. KG
Repaircenter
Ludwigstrasse 16
87437 Kempten · Germany
Tel. +49 (0)831/5617-433
Fax +49 (0)831/5617-439
repair@ott.com

9 Note about the disposal of old devices



In accordance with the European Union guideline 2002/96/EC, OTT takes back old devices within the member countries of the European Union and disposes of them in an appropriate way. The devices concerned by this are marked with the symbol shown aside. For further information about the return procedure, please contact your local sales contact. You will find the addresses of all sales partners in the internet on www.ott.com. Please take into consideration also the national implementation of the EU guideline 2002/96/EC of your country.

10 Technical Data

Power supply	9 V battery (IEC: 6LR61; JIS: 6AM6)
Reverse battery protection	yes
Battery life	approx. 120 hours without buzzer, approx. 80 hours with buzzer. If the blinking battery symbol appears on the display, there is a remaining battery life sufficient for approx. 8 hours of operation at room temperature
Measurement method	Starting the measuring time when the current meter contact closes for the first time
Measuring times	5, 10, 15, 20, 30, 40, 50, 60, 80, 100, 120 s and unending (999.9)
Measurement modes	Impulse measurement, time measurement, integration measurement, integration measurement with remaining term determination
Resolution	
Time measurement	0.1 seconds
Impulse measurement	0.1 impulses
Measurement accuracy	
Time measurement	± 0.01 seconds
Impulse measurement	± 0.5 impulses
"Timeout time" for unending measurement time	no
Limit frequency for current meter impulses	50 Hz (680 Ohm) / 100 Hz
Max. contact bounce of the current meter contact	2 ms
Measurement with 680 Ohm (series) possible	yes
Coding	
Ground contact	< 400 Ohm
Current meter contact	< 1200 Ohm
Display of the flow velocity	optional (Z400 version: M)
Automatic switching off	yes (can be set from 1 – 59 minutes)

LCD display	4-digit, numbers 10 mm high
Time measurement	decimal number, 1 decimal place, unit "s" (seconds)
Impulse measurement	choice of integer or decimal number, 1 decimal place
Counting method impulse measurement	additive
Counting range	
Impulse measurement	0 ... 9999, no overflow
Time measurement	0 ... 999.9, no overflow
Flow velocity (optional)	
Units	m/s
Resolution	0.001 m/s
Current meter connection	2 banana plugs Ø 4 mm, red "+" / black "F"
Buzzer volume (setting: 2)	typically 90 dB(A) at a distance of 10 cm
Housing material	aluminium
Permitted environmental temperature	-20 °C to +60 °C
Dimensions (D x W x H)	128 mm x 125 mm x 65 mm
Weight	670 g
Protection class	IP 65
Interface	USB 1.1 (removable drive)
Z400 operating software	Can be run directly on device via USB connection from a PC. Entry of 30 current meter equations (Z400 version: M); all basic settings for the device can be set

Factory settings

Impulse measurement	10
Impulse display accuracy	P (integer)
Time measurement	20 seconds
Remaining term determination	6 seconds
Buzzer function	on
Buzzer volume	2 (loud)
Selected current meter equation	1 (Z400 version: M)
Ground contact recognition	2 (automatic)

Appendix A: Note on ground contact recognition

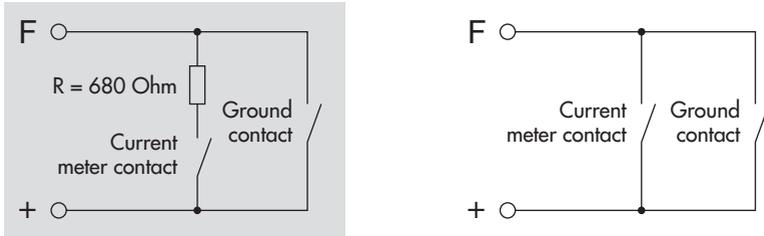
Automatic integration measurement using a cable way requires a ground contact signal to switch off the electrical winch and to stop the existing measurement in the signal counter. The ground contact signal can also be used for depth determination of the flowing waterway.

In order to be able to distinguish between the electrical meter/ground contact signals with a two-pin lifting cable, they are coded. For this purpose, a 680 Ohm resistance (R) is integrated into the meter contact in series in the lifting cable adapter of electrical OTT winches (see Fig. 6; top left). In this way, the signal counter and the cable way are in the position to distinguish a closed ground contact ($R < 400 \text{ Ohm}$) from a closed meter contact ($400 \text{ Ohm} < R < 1200 \text{ Ohm}$).

Using ground contact function "2; automatic ground contact detection" (see Chapter 5.4.7), the signal counter recognizes a measurement automatically at the beginning, whether a ground contact exists or not, and selects the appropriate ground contact function. Alternatively, you can also set the ground contact function permanently to "with ground contact" (= 1) or "without ground contact" (= 0). This is helpful above all with mechanical and older electrical winches without a 680 Ohm resistance, with suspended meter/winch combinations from different suppliers and with faults in the automatic ground contact recognition.

In this respect, it is useful to set the buzzer function to "Cont." for an integration measurement with a suspended meter without coding (see Chapter 5.4.4). This function allows the acoustic recognition of a ground contact where there is no 680 Ohm coding present: with a ground contact, a continuous tone is heard.

Suspended current meter with ground contact



Suspended current meter without ground contact

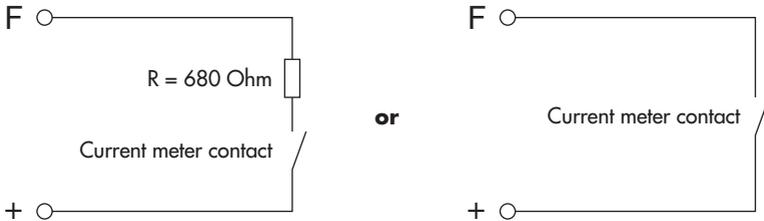


Fig. 6: Possible wiring diagrams for mechanical/electrical winches and suspended meters in combination with the OTT Z400 signal counter. The application type with a gray background is the standard type when using electrical OTT winches. In both cases with "suspended current meter without ground contact", you have to stop the integration measurement manually. If no 680 Ohm resistance is used (cases shown on the right), the ground contact function must be set permanently to "without ground contact" (= 0) or "automatic ground contact detection" (= 2).

Appendix A: Declaration of conformity



Konformitätserklärung Declaration of Conformity Declaration de Conformité

Wir/ We/ Nous
Anschrift/ Address/ Adresse

OTT Messtechnik GmbH & Co. KG
Ludwigstraße 16
D-87437 Kempten

erklären, daß das Produkt/ declare, that the product/ declaron, que le produit

Bezeichnung/ Name/ Nom

Z400

Artikel- Nr./ Article No./ No. d' Article

12.440.005.9.0

mit den Anforderungen der Normen/ fulfills the requirements of the standard/ satisfait aux exigences des normes

EG (89/336/EWG):

national:

international:

EN 61326

Störaussendung/ emission/ émission

IEC 61326

Klasse/ class/ classe B

class/ classe B

Störfestigkeit/ noise immunity/ immunité

EN 61000-4-2 (4 kV/8 kV)

IEC 61000-4-2 (4 kV/8 kV)

EN 61000-4-3 (10 V/m)

IEC 61000-4-3 (10 V/m)

EN 61000-4-4 (4 kV)

IEC 61000-4-4 (4 kV)

EN 61000-4-5 (4 kV)

IEC 61000-4-5 (4 kV)

EN 61000-4-6 (10 V)

IEC 61000-4-6 (10 V)

und den hinterlegten Prüfberichten übereinstimmt und damit den Bestimmungen entspricht/
and the taken test reports and therefore corresponds to the regulations of the Directive/
et les rapports d'essais notifiés et, ainsi, correspond aux réglement de la Directive.

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Nom et signature de la personne autorisée

i.v. Peter Fend

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