

DHZ Three Phase Electricity Meters

DHZ current transformer electricity meters are used to measure electricity in 2, 3 and 4-conductor networks (three phase). Meters are connected to current transformers to calculate the electricity consumption.

M-bus interface option allows accurate data transmission to management systems.

Features

- Digital A/C Current Transformer Electricity Meter
- Optional 2-Tariff Meters Available
- Pulse Output according to DIN 43864 or M-Bus according to EN1434-3 Connectivity Options
- Adjustable Transforming Ratio
- Installation Error Correction
- DIN-rail mounting according to EN50022 (TS35)
- Multi-Use Display
- Optional with Battery

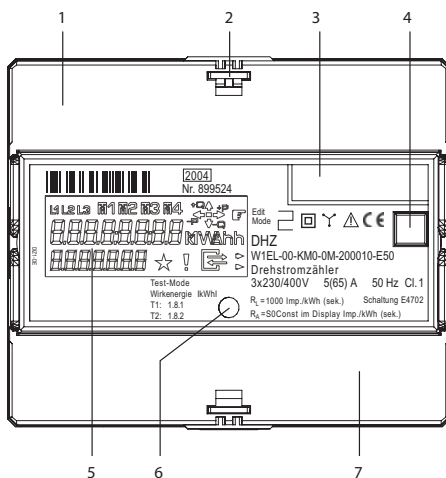


Model Type	Model	Description
	DHZ-5-1	Three Phase Current Transformer Electricity Meter, S0 Impulse Output
	DHZ-5-1-M-BUS	Three Phase Current Transformer Electricity Meter, M-Bus Network
	DHZ-5(65)	Three Phase Electricity Meter with Direct Connection, S0 Impulse Output
	DHZ-5(65)-M-BUS	Three Phase Electricity Meter with Direct Connection, M-Bus Network
Technical Data	Operating Voltage	3 x 230 / 400V
	Current:	DHZ-5-1: 5//1 A DHZ-5(65): 5(65)A
	Frequency	50-60Hz
	Precision	1%
	Impulse Output	According to DIN43863 Mosfet 5(65): Length 100 ms, 100 Imp/kWh 5(65): Length 100 ms, 1000 Imp/kWh Length and number of pulses adjustable
	M-Bus Interface	According to EN1434-3 Readable Data: Energy Counter Reading, Monthly Consumption for One Year, Momentary Power, Media, Status, Manufacturer
	Protection Class	Housing - IP51 Connections - IP20
	Mounting	DIN-Rail
	Display	8-Digit LCD - Energy value tariff 1 & 2 - Display Test - Converter Constants - Impulse Constants - Impulse Length - M-bus address and baud rate
	Mounting	DIN-rail

Dimensions W108 x H90 x D65 mm

Meter Overview

Meter Overview



1. Hinged terminal cover
2. Seal eye
3. Panel for transformer plate
4. Call-up button for operation of the meter
5. LCD-Display
6. Test LED
7. Hinged terminal cover

Standard Menu Structure

The menu below illustrates the standard menu structure. In addition to the items displayed on the menu three phase meters show amperes and voltages to each phase.

In normal operation the meter is in standard menu. In the display the energy value of tariff 1 is displayed. With a short press of the button it is switched over to the next menu option. At the end of the standard menu, with a long press of the button, there is the possibility to change into test mode address mode¹⁾ or into the edit mode²⁾. The possibility to switch to another menu / mode is represented in the display by „Go“. With a longer press of the button the display jumps from every position in the standard menu back to the standard display. This also happens when the button is not operated for longer than 5 minutes.

- 1) only with meters with M-BUS-interface
- 2) only with uncertified meters and meters with an unlocked edit mode

Standard menu

Meaning	Display
Standard display, tariff 1	<div style="border: 1px solid black; padding: 5px;"> 00023625 kWh T1 </div>
Display test	<div style="border: 1px solid black; padding: 5px;"> 8888888 kWh 8888888 * ! </div>
Tariff 1	<div style="border: 1px solid black; padding: 5px;"> 00023625 kWh T1 </div>
Tariff 2 (if configured)	<div style="border: 1px solid black; padding: 5px;"> 00005702 kWh T2 </div>
U-transformer constant (only with transformer meters)	<div style="border: 1px solid black; padding: 5px;"> 100 U-Const </div>
I-transformer constant (only with transformer meters)	<div style="border: 1px solid black; padding: 5px;"> 10 I-Const </div>
Output constant in Imp./kWh (only with meters with S0-output)	<div style="border: 1px solid black; padding: 5px;"> S000 S0Const </div>
Impulse length in seconds (only with meters with S0-output)	<div style="border: 1px solid black; padding: 5px;"> 0.0S0 SEC S0LEN6 </div>
Primary address (only with meters with M-BUS-interface)	<div style="border: 1px solid black; padding: 5px;"> 001 AdrESS </div>
Secondary address (only with meters with M-BUS-interface)	<div style="border: 1px solid black; padding: 5px;"> 00000356 2AdrESS </div>
Baud rate (only with meters with M-BUS-interface)	<div style="border: 1px solid black; padding: 5px;"> 9600 BRUdrAt </div>
Error register	<div style="border: 1px solid black; padding: 5px;"> 00000000 Error </div>
Firmware version	<div style="border: 1px solid black; padding: 5px;"> 21200000 UErSi on </div>
Activation of the test mode	<div style="border: 1px solid black; padding: 5px;"> 60 tEST </div>
Activation of the address menu	<div style="border: 1px solid black; padding: 5px;"> 60 AdrESS </div>
Activation of the edit menu	<div style="border: 1px solid black; padding: 5px;"> 60 Edi t </div>

Installation

The meters from the series DHZ are planned for DIN-Rail mounting in accordance with EN 50 022. With connection of the meter please pay careful attention to the relevant connection diagram which can be found on the inside of the terminal cover and also with the delivery documents. If the connection diagram is not included, please contact the supplier.

The direct connected version from the DHZ [5(65) A] can be connected to a 3- or 4-phase busbar (with a left-sided Nconnection).

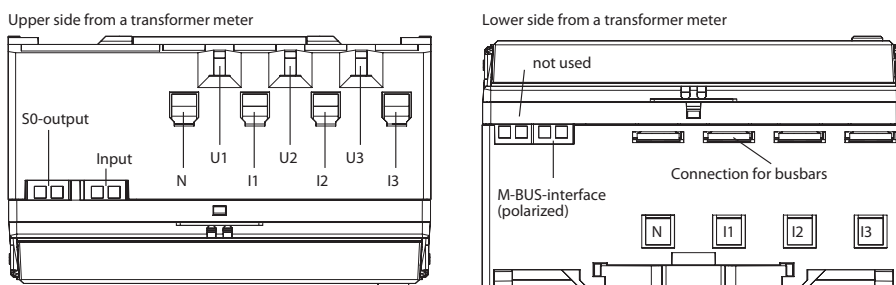
Meters for direct connection are to be protected against short circuits with a back-up fuse of max. 63 A and with transformer connected meters with a max. of 6 A in the voltage path. The control input is to be secured with a back-up fuse of 0.5 A

On the upper part of the meter the following can be found:

- the inputs for the current- and voltage feeding / supply
- the control input
- the pulse output

On the lower part of the meter the following can be found:

- the voltage outputs
- the M-BUS-interface (optional)
- the connection for the busbars (only with direct connection meters 5(65) A)



Terminal		Terminal dimensions (W X H)	Cross section (incl. connector sleeve)
Current terminal	5(65)A	6,9 x 7,9	max. 16 mm ²
	5I11 A, 1 A	3,3 x 3,0	max. 4 mm ²
Voltage terminal	5(65)A	---	---
	5I11 A, 1 A	2,7 x 3,0	max. 2,5 mm ²
Auxiliary terminals		d = 2,5 mm	max. 2,5 mm ²

SAFETY PRECAUTIONS

The meters are to be used exclusively for measuring electrical energy and must only be operated within the specified technical data.

When installing or changing the meter, the conductor to which the meter is connected must be de-energized. Contact of parts under voltage is extremely dangerous. Therefore the relevant back-up fuses are to be removed and stored so that other people cannot insert this unnoticed.

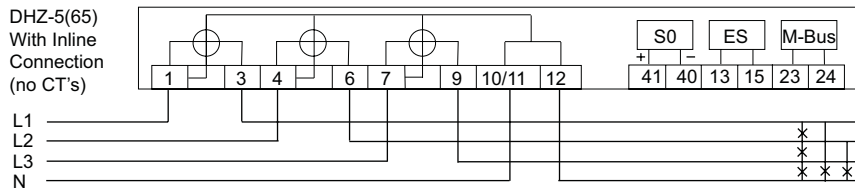
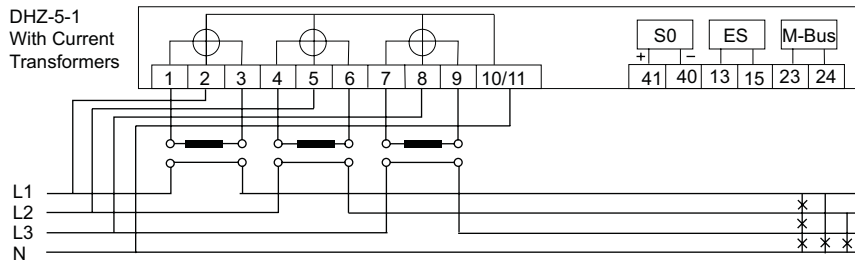
Before opening the meter the secondary circuit of the current transformer must be short circuited. The high voltage on the current transformer is extremely dangerous and destroys the current transformer.

The system voltage input is under voltage.

WARNING: The local standards, guide lines, regulations and instructions are to be obeyed. Only authorized personnel are permitted to install the electricity meters.

When storing, transporting and operating the meter it should be protected against dampness, dirt and damage and also not be operated outside the specified technical data (see also name plate). During the operation of the meter pay attention to the temperature range (see technical data).

Wiring Diagrams



Accessories

Model	Description
DHZ-3010-xxx	Solid Core Current Transformers up to 500A (xxx = rating)
DHZ-4012-xxx	Solid Core Current Transformers 600A to 800A (xxx = rating)
DHZ-TKxx-xxx	Split Core Current Transformers up to 3000A (xxx = rating)
MA6	Panel Door Installation Frame for DHZ

Dimensions

