

Introduction

The Arcus-EDS Heat Meter is a „Dialog WZ-CD / -HY“ Heat Consumption Counter (calibration optional) from the company NZR, with an integrated KNX Bus Interface for remote reading and monitoring. The electronic counter is operated by a lithium battery with a 5-year lifespan and 1-year additional reserve. The KNX bus interface is built into the counter and is connected non-reactively with the external terminal block. The meter with the integrated bus interface is authorized by the Physikalisch Technischen Bundesanstalt (PTB) (German Federal Institute of Physics and Metrology).



Pic. 1 Heat Meter with KNX Connector



Pic. 2 Open KNX Connector Housing

KNX – Interface

The following items are available for remote reading with the KNX/EIB System:

Nr.		Data Point Type	Data Type
0	Current Output in kWh/h	<i>DPT14.056 = Output</i>	Measurement 4 Byte
1	Accumulated Volume in m ³	<i>DPT14.076 = Volume</i>	Integrator 4 Byte
2	Flow Temperature in °C	<i>DPT9.001 = Degrees Celsius</i>	Measurement 2 Byte
3	Return Temperature in °C	<i>DPT9.001 = Degrees Celsius</i>	Measurement 2 Byte
4	Current Flow m ³ /h	<i>DPT14.077 = Volume Flow</i>	Measurement 4 Byte
5	Current Consumption	<i>DPT14.056 = Output</i>	Measurement 4 Byte
6	Saved Value for Due Date	<i>DPT14.056 = Output</i>	Integrator 4 Byte
7	Serial Number	<i>DPT16.000 = String</i>	Identification 14 Byte
8	Error Message	<i>DPT7.001=2 Unsigned Byte</i>	System Status 2 Byte

Current Output	in kWh/h, the current output in the system.
Accumulated Volume	in m ³ , the total amount of flow through water.
Flow Temperature	in °C, the temperature of the water in the system.
Return Temperature	in °C, the temperature of the water returning to the system.
Current Flow	m ³ /h, the current amount of flow through water.
Current Consumption	in kWh, the accumulated warmth output.
Saved Value for Due Date	in kWh, the accumulated warmth output for a particular date (internal value in the meter).
Serial Number	String, for positive identification of the meter.
Error Message	Error Report with Error Code from the manufacturer.

None of the items can be altered from the bus.

Parameter:

The following settings are available to set the parameters with ETS:

Sending condition	
Thermal energy (kWh)	Send at variation <input type="button" value="v"/>
Accumulated volume (m3)	Send at variation <input type="button" value="v"/>
Flow temperature (°C)	Send at variation <input type="button" value="v"/>
Return temperature (°C)	Send at variation <input type="button" value="v"/>
Flow rate	Send at variation <input type="button" value="v"/>
current consumption value	Send at variation <input type="button" value="v"/>
Value at last due date	Do not send <input type="button" value="v"/>

The following is available for all items except Serial Number and Error Number:

Periodic Transmission (2min)	The current measurement is transmitted every 2 minutes to the bus.
Transmission - Change	The current measurement is transmitted to the bus only when a change occurs (minimum interval 2 min).
No Transmission	The current measurement is not transmitted automatically (Measurements are read manually).

Installation

The heat meter must only be installed and put into operation by an authorized specialist. In addition, knowledge of Engineering Tool Software (ETS) is required. Set-up is carried out with ETS Version 2 or higher. You will find the heat meter in ETS under manufacturer: Arcus-eds, Product Family: Meter, Product Type: heat meter.

The EIB programming button and programming LED are located on the attached housing. (see above).

Technical data for the heat meter can be found in the data sheet of the manufacturer NZR:

Technical Documentation Heat Meter Dialog WZ-HY **db-wz-cd.pdf** / **db-wz-hy.pdf** (see attached)