KNX-IMPZ-WZ-M

In Home Water Meters Modularis WZ-M	**Product Group 10**
EIB/KNX	Document: 5300_ex_WZ-M.pdf

Product Data Base:	**ARC_IMPZ.VD2**
KNX Readable Data:	Serial number Accumulated volume in l or m^3 Current flow rate in l or m^3/unit of time Current time Current date Last reference date Last reference value Next reference date Consumption value Consumption Reset Consumption last reset date Consumption last reset time
Connection box:	SK01 plastic housing 72 x 64 x 40 mm
IP65	Mounted with 2 skrews onto the wall.

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1 Application Description

Operating Principals and Areas of Application

The in home water meter is a package of the calibrated water meter „WZ-M“ from NZR and the impuls counting unit SK01-IMPZ1 from Arcus-EDS GmbH. The meter is approved by the PTB.

The internal lithium back up battery enables the functionality without KNX bus connection for over 5 years

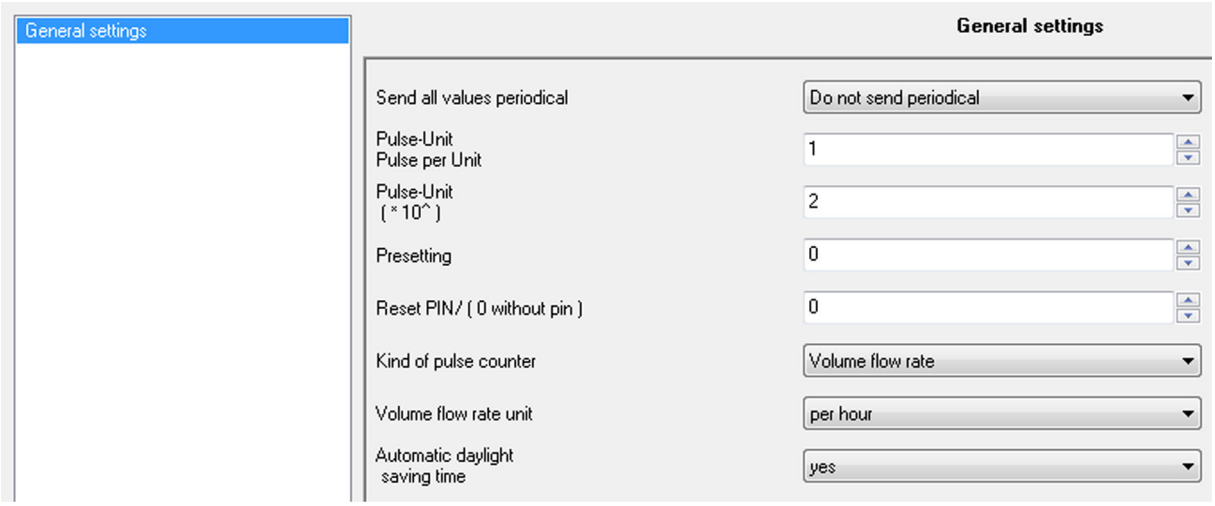
KNX sensors are set up using the ETS (KNX Tool Software) with the associated application program.
The device is delivered unprogrammed.
All functions are parameterized and programmed by ETS.

Functions

- Serial number
- Accumulated volume in l or m^3
- Current flow rate in l or m^3/unit of time
- Current time
- Current date
- Last reference date
- Last reference value
- Next reference date
- Consumption value
- Consumption Reset
- Consumption last reset date
- Consumption last reset time

2 KNX Parameter

General Settings



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General Settings - KNX-IMPZ-WZ-M

Parameter	Setting	Description
Sending values cyclically	• Do Not Send • 1 .. 120 minutes	Measured values will be sent in the preset cycle time. If cyclical sending is disabled, measured values will only be sent if changes in measured values occur. A minimum interval of 10 seconds is maintained in order to restrict bus load.
Counts per unit	1 .. 99	Impulse valence must be adjusted to the counter. The value to be set can be calculated from the impulse valence of the counter. see *4 Notes* Settings the Pulse Rating
Exponent to the base of 10	-10 .. 10	The value to be set can be calculated from the parameter value „Counts per unit“ and the display unit. see *4 Notes* Settings the Pulse Rating
Preset counter value (0-> no change)	0 .. 4.294.967.295	If there is a difference between the value displayed in the cyclometer register and the object value „Meter reading“, the counter can be synchronized. All impulses already counted will be entered. Example: A consumption of 12.553 cbm and 1 imp/l equal a correction value of 12553.
Reset-PIN (0 without PIN)	0 .. 65535	A „PIN“ can be assigned in order to prevent unauthorized persons from resetting the consumption value. In order to reset the consumption value, that „PIN“ must be confirmed. This feature is deactivated if the assigned „PIN“ is „zero“.
Type of flow rate measurement	• Volumetric flow • Electrical capacity	There are two settings available When setting „Electrical capacity“ , the Parameter „Flow measurement period“ is not available.
Flow measurement period	• per second • per minute • per hour • per day	Adjustment of the time base taken for the output of the amount of energy or the volumetric flow.
Use daylight saving time	• no • yes	

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3 KNX Objects

Objects - KNX-IMPZ-WZ-M

No.	Label	Data Point Type				Function
0	Meter reading	DPT	14.076	Volume	4 Byte	Measured value
1	Capacity / Volumetric flow	DPT	14.077	Volumetric flow	4 Byte	Measured value
2	Current time	DPT	10.001	Time	3 Byte	Time
3	Current date	DPT	11.001	Date	3 Byte	Date
4	Last reference date	DPT	11.001	Date	3 Byte	Date
5	Reference value	DPT	14.076	Volume	4 Byte	Measured value
6	Next reference date	DPT	11.001	Date	3 Byte	Date
7	Consumption value	DPT	14.076	Volume	4 Byte	Measured value
8	Consumption reset	DPT	7.001		2 Byte	Reset
9	Consumption reset date	DPT	11.001	Date	3 Byte	Date
10	Consumption reset time	DPT	10.001	Time	3 Byte	Time
11	Serial number	DPT	16.001	String	14 Byte	Identification

Object Description - KNX-IMPZ-WZ-M

No.	Label	Description
0	Meter reading	Corresponds with current meter reading (total consumption)
1	Capacity / Volumetric flow	Current capacity in kWh per time unit or Volumetric flow in cbm per time unit. The time unit can be set using the parameter „Flow measurement period“.
2	Current time	Corresponds with internal time
3	Current date	Corresponds with internal date
4	Last reference date	The date when the last reference value was saved, 0:00 am.
5	Reference value	Meter reading at the last reference date, 0:00 am.
6	Next reference date	The date when the next reference value will be saved, 0:00 am.
7	Consumption value	The amount consumed since the last consumption value reset

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Object Description - KNX-IMPZ-WZ-M (continue)

No.	Label	Description
8	Consumption reset	Consumption value will be set to „zero“ , the objects „Consumption reset time“ and „Consumption reset date" will be refreshed and saved. If „Reset-PIN“ in „General Settings“ is other than „zero“, this „PIN" must be used in order to actuate a reset. If „Reset-PIN“ is set to „zero“, a different „PIN“ other than „zero“ must be used in order to actuate a reset.
9	Consumption reset date	The date when the last consumption reset was carried out.
10	Consumption reset time	The time when the last consumption reset was carried out.
11	Serial number	The distinct serial number (e.g. serial number of the counter).

Following Objects can be Sent to

Object	Function
Current date	Set internal date
Current time	Set internal time
Nächstes Stichdatum	Set next reference date
Consumption reset	Consumption value will be set to „zero“ , the objects „Consumption reset time“ and „Consumption reset date" will be refreshed and saved. If „Reset-PIN“ in „General Settings“ is other than „zero“, this „PIN" must be used in order to actuate a reset. If „Reset-PIN“ is set to „zero“, a different „PIN“ other than „zero“ must be used in order to actuate a reset.

4 Notes

Settings the Pulse Rating

Impulse Valence Counter	Impulse / Unit in ETS	Exponent in ETS Display in m^3
1 Imp. / 1 Liter	1	3
1 Imp. / 10 Liter	1	2
1 Imp. / 25 Liter	4	1
1 Imp. / 50 Liter	2	1
1 Imp. / 100 Liter	1	1

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5 Product Page

The Counter-Modul **KNX-IMPZ-WZ-M** is used for remote reading and remote monitoring of metering data.

The device has an integrated bus coupling unit and needs no auxiliary power.

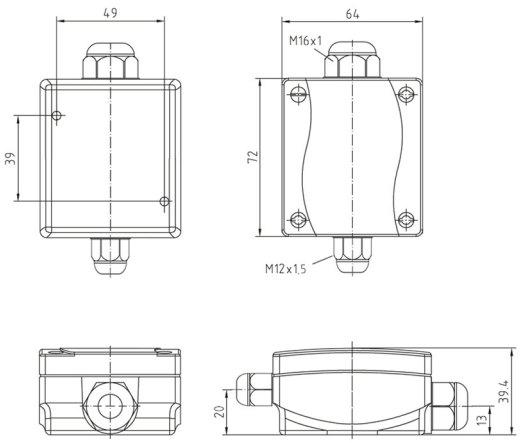
The Counter-Modul KNX-IMPZ-WZ-M is delivered in a housing of an impact resistant glass pallet reinforced plastic with gasket and achieves the protection class IP65.

Article-No.: 60201-75124xx5

KNX-IMPZ-WZ-M Water Meter IP65

Areas of Application

- Monitoring of water consumption values

see *6 Technical Data*	

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6 Technical Data

Technical Data - KNX-IMPZ-WZ-M

Operating Voltage	EIB/KNX bus voltage 21 .. 32 VDC
Power Consumption	ca. 240 mW (at 24VDC)
Auxiliary Supply	not required
Bus Coupler	integrated
Ambient Temperature Electronic Measuring Equipment Casing	Operation: -20 .. +55 °C Storage: -20 .. +85 °C
Start-up with ETS	**ARC_IMPZ.VD2**
Curcuit Points	EIB-2-pole clamps (red / black)
Protection Class	IP65
Assembly Type	Assembly with 2 screws finery
Casing Type	Plastic housing grey
Casing Dimensions	115 x 65 x 50 mm (W x H x D)

WZ-M Technical Data		**Remarks**	**Article No.**
Nominal Flow Rate Nominal Diameter Maximum Flow Rate **Installation Length**	**1,5 m^3/h** 15 mm 3 m^3/h **80 mm**	WZK-M cold 30°C	60201-75124015
		WZW-M hot 90°C	60201-75124515
Nominal Flow Rate Nominal Diameter Maximum Flow Rate **Installation Length**	**1,5 m^3/h** 15 mm 3 m^3/h **110 mm**	WZK-M cold 30°C	60201-75124115
		WZW-M hot 90°C	60201-75124615
Nominal Flow Rate Nominal Diameter Maximum Flow Rate **Installation Length**	**2,5 m^3/h** 20 mm 5 m^3/h **130 mm**	WZK-M cold 30°C	60201-75124025
		WZW-M hot 90°C	60201-75124525

i	Other water meters, technical data and companion dimensions are available at NZR. www.nzr.de The NZR-article no. equals the second part of our article no. Prices on request.

i	All meters of the series WZ-M are equipped with an internal Impuls module, they are PTB approved and calibrated.

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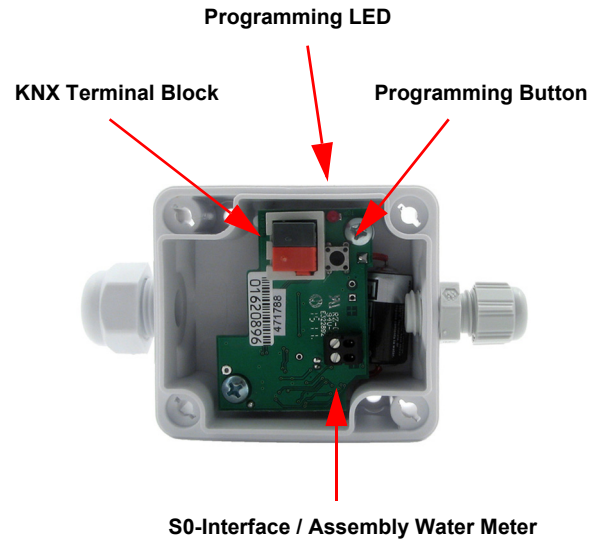
7 Startup

The KNX Sensor is set up using the ETS (KNX Tool Software) and the applicable application program.
The sensor is delivered unprogrammed.
All functions are programmed and parameterized with ETS.
Please read the ETS instructions.



KNX-IMPZ-WZ-M Assembly View

8 Assembly

The Counter-Modul **KNX-IMPZ-WZ-M** is for outdoor and indoor areas.
It fulfills protection class IP65.
Mounting is done on wall through 2 screw holes.

The cover of the device can be removed by turning the screws on the top.

First attach the sensor to the wall or ceiling, then insert the KNX Bus cable into the slot on the side of the casing (PG Connection).
Detach the bus clamp from the device, attach the cable and replace the clamp onto the board.
After successfully programming the device, screw the cover back on.

Be careful not to damage the electronics with tools and cable heads.

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In Case of Bus Voltage Recurrence

The outputs start with their current values and the ETS parameter settings are saved.

Discharge Program and Reset Sensor

In order to delete the programming (projecting) and to reset the module back to delivery status, it must be switched to zero potential (disconnect the EIB bus coupler).
Press and hold the programming button while reconnecting the EIB bus coupler and wait until the programming LED lights up (approx. 5-10 seconds).
Now you can release the programming button.
The module is ready for renewed projecting.
If you release the programming button too early, repeat the aforementioned procedure.

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Imprint

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We take over guarantees as required by law.
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Manufacturer

KNX arcus-eds electronic design services gmbh

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