## KNX-IMPZ-WZ-M

| In Home Water Meters Modularis WZ-M | Product Group 10 |
|---|---|

**ATTENTION**

**Please note the technical documentation of NZR for the installation and operation of the water meter.**

| KNX | Document: 5300_ex_WZ-M.pdf |
|---|---|

| | |
|---|---|
| Product Data Base: | **IMPZx.vd4** |
| KNX Readable Data: | Serial number<br>Accumulated volume in l or $m^3$<br>Current flow rate in l or $m^3$/unit of time<br>Current time<br>Current date<br>Last reference date<br>Last reference value<br>Next reference date<br>Consumption value<br>Consumption Reset<br>Consumption reset date<br>Consumption reset time |
| KNX Connection: | plastic housing 72 x 64 x 40 mm<br>Mounted with 2 skrews onto the wall. |
| NZR Water meter | NZR datasheet<br>see www.nzr.de |



# 1 Application Description

The water consumption meter of the company Arcus-EDS GmbH consists of a calibrated water meter "Modularis WZ-M" of the company NZR northwest German meter revision with built-in pulse module and a counting module "IMPZ" with battery-backed data storage and KNX bus coupler for remote readout and remote monitoring.
The technical data of the water meter "Modularis WZ-M" can be found in the data sheet provided on the website of NZR.

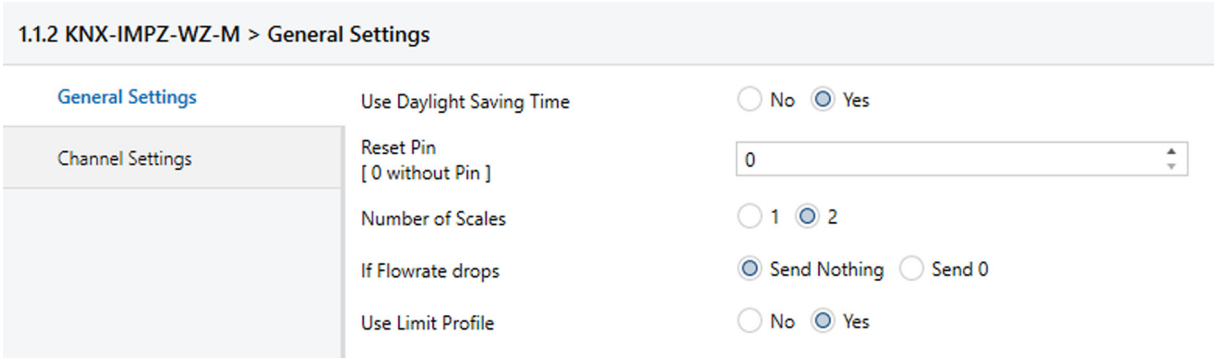
KNX sensors are set up using the ETS Tool Software with the associated application program.
The device is delivered unprogrammed.
All functions are parameterized and programmed by ETS.



Arcus-EDS GmbH
www.arcus-eds.de
Rigaer Str. 88 , 10247 Berlin
sales@arcus-eds.de
Tel.: +49 / (0)30 / 2593 3914
Fax.: +49 / (0)30 / 2593 3915

# 2 KNX Parameter

## General Settings




### General Settings - KNX-IMPZ-WZ-M

| Parameter | Setting | Description |
|---|---|---|
| Use Daylight Saving Time | • No<br>• Yes | Automatic daylight saving time |
| Reset-PIN<br>[ 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“. |
| Number of Scales | • 1<br>• 2 | There are two tariffs with separate meter and consumption levels as well as limits are used.<br>Switching is done with the *object 9 : Selected Scale*. |
| If Flowrate drops | • Send Nothing<br>• Send 0 | If the current consumption goes to zero, this can be shown by sending a zero on the *object 2 : Flow Rate* to be indicated. |
| Use Limit Profile | • No<br>• Yes | **No:**<br>The ***object Limit Alarm Scale1 resp. 2*** is set as soon as ***one of the two parameterized limits*** is reached.<br><br>**Yes:**<br>The ***object Limit Alarm Scale1 resp. 2*** is set depending on the ***object 19 Alarm Profile*** .<br><br>**object 19 = 0**<br>***object Limit Alarm Scale1 resp. 2*** is set if the parameterized value ***Limit1 scale1 resp. 2*** is reached.<br><br>**object 19 = 1**<br>***object Limit Alarm Scale1 resp. 2*** is set if the parameterized value ***Limit2 Scale1 resp. 2*** is reached. |



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## 3 KNX Objects

| Number | Name | Object Function | Description | Length | C | R | W | T | U | Data Type | Group Address | Priority |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Value Scale 1 | Counted Value | | 4 bytes | C | R | - | T | - | amplitude | | Low |
| 1 | Value Scale 2 | Counted Value | | 4 bytes | C | R | - | T | - | amplitude | | Low |
| 2 | Flow Rate | Calculated Flow Rate | | 4 bytes | C | R | - | T | - | amplitude | | Low |
| 4 | Reference Value Scale 1 | Consumption Last Due Date | | 4 bytes | C | R | - | T | - | amplitude | | Low |
| 5 | Reference Value Scale 2 | Consumption Last Due Date | | 4 bytes | C | R | - | T | - | amplitude | | Low |
| 6 | Consumption Value Scale 1 | Consumption Value | | 4 bytes | C | R | - | T | - | amplitude | | Low |
| 7 | Consumption Value Scale 2 | Consumption Value | | 4 bytes | C | R | - | T | - | amplitude | | Low |
| 8 | Serialnumber | Serialnumber | | 14 bytes | C | R | - | T | - | Character... | | Low |
| 9 | Selected Scale | Scale | | 1 bit | C | R | W | T | U | switch | | Low |
| 10 | Limit Alarm Scale 1 | Limit | | 1 bit | C | R | W | - | U | switch | | Low |
| 11 | Limit Alarm Scale 2 | Limit | | 1 bit | C | R | W | - | U | switch | | Low |
| 12 | Current Time | Time | | 3 bytes | C | R | W | T | U | time of day | | Low |
| 13 | Current Date | Date | | 3 bytes | C | R | W | T | U | date | | Low |
| 14 | Last Reference Date | Due Date | | 3 bytes | C | R | - | T | - | date | | Low |
| 15 | Next Reference Date | Due Date | | 3 bytes | C | R | W | T | U | date | | Low |
| 16 | Consumption Reset | Consumption Reset | | 2 bytes | C | R | W | - | U | pulses | | Low |
| 17 | Consumption Reset Time | Reset Time | | 3 bytes | C | R | - | T | - | time of day | | Low |
| 18 | Consumption Reset Date | Reset Date | | 3 bytes | C | R | - | T | - | date | | Low |
| 19 | Alarm Profile | Limit Selection | | 1 bit | C | R | W | - | U | switch | | Low |

### Object Description - KNX-IMPZ-WZ-M

| No. | Label | Description |
|---|---|---|
| 0 | Value Scale 1 | Current meter reading Scale 1<br>( Total consumption scale 1 ) |
| 1 | Value Scale 1 | Current meter reading Scale 2<br>( Total consumption scale 2 ) |
| 2 | Flow Rate | 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“. |
| 4 | Reference Value Scale 1 | Meter reading scale 2 at the last reference date, 0:00 am. |
| 5 | Reference Value Scale 2 | Meter reading scale 1 at the last reference date, 0:00 am. |
| 6 | Consumption Value Scale 1 | The consumed amount scale 1 since the last consumption reset |
| 7 | Consumption Value Scale 2 | The consumed amount scale 2 since the last consumption reset |
| 8 | Serialnumber | The serial number of the counter.<br>**Not changeable !** |
| 9 | Selected Scale | Switching the both tariffs ( scales ) |
| 10 | Limit Alarm Scale 1 | see under parameter "Use limit profile" |
| 11 | Limit Alarm Scale 2 | |
| 12 | Current Time | current device time |
| 13 | Current Date | current device date |



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sales@arcus-eds.de

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

| No. | Label | Description |
|---|---|---|
| 14 | Last Reference Date | The date when the last reference value was saved, 0:00 am. |
| 15 | Next Reference Date | The date when the next reference value will be saved, 0:00 am. |
| 16 | Consumption Reset | see above |
| 17 | Consumption Reset Time | The time when the last consumption reset was carried out. |
| 18 | Consumption Reset Date | The date when the last consumption reset was carried out. |
| 19 | Alarm Profile | see under parameter "Use limit profile" |

## Following Objects can be Sent to

| Object | Function |
|---|---|
| Current Time | Set internal time |
| Current Date | Set internal date |
| Next Reference Date | 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. |



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# 4 Product Page

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

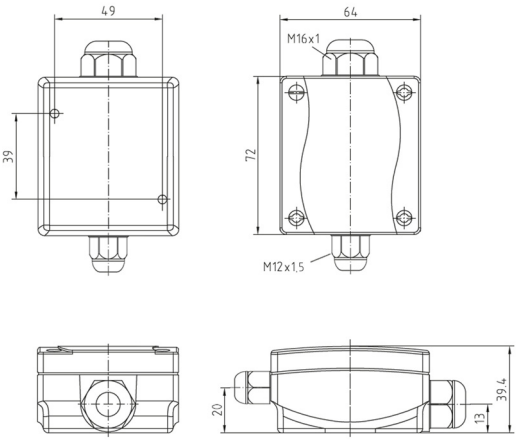
The device has an integrated bus coupling unit and needs no auxiliary power.

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 IP54/65.

Article-No.: 60201-75124xx5

KNX-IMPZ-WZ-M
Water Meter
IP54/65

see *5 Technical Data*



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## 5 Technical Data

**Technical Data - KNX-IMPZ-WZ-M**

| | |
|---|---|
| Operating Voltage | 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<br>Storage: -20 .. +85 °C |
| Start-up with ETS | **IMPZx.vd4** |
| Curcuit Points | KNX 2-pole clamps ( red / black ) |
| | |
| Protection Class | IP54/65 |
| Assembly Type | Assembly with 2 screws finery |
| Casing Type | Plastic housing grey |
| Casing Dimensions | ( 72 x 64 x 40 ) mm |

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

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.

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



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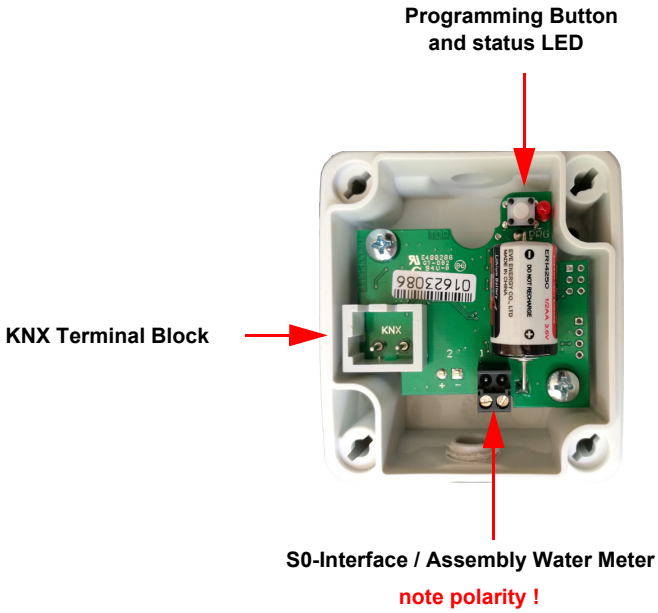
## 6 Startup

The KNX Sensor is set up using the ETS 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

The Counter-Modul **KNX-IMPZ-WZ-M** is for outdoor and indoor areas.
It fulfills protection class IP54/65.
Mounting is done on wall through 2 screw holes.

### 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 KNX bus ).
Press and hold the programming button while reconnecting the KNX 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

Editor: Arcus-EDS GmbH, Rigaer Str. 88, 10247 Berlin
Responsible for the contents: Hjalmar Hevers, Reinhard Pegelow

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KNX arcus-eds electronic design services gmbh

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