

# BAYLAN

WATER METERS

## UM1-B MODBUS



## ELECTRONIC

- *RS485 Modbus communication*
- *Internal RTC*
- *Direct connection to Modbus system*
- *Protection against removal*
- *Inductive sensor reading*

# UM1-B MODBUS

Modbus modules; which is designed to calculate value of Baylan mechanical water meter reading coil compatible. Counted values of consumption in the memory module saved and can be read with Modbus communication protocol.

## PROPERTIES

- RS485 Modbus communication
- Direct connection to Modbus system
- IP68 Protection class
- Inductive sensor reading
- Internal RTC
- Protection against removal
- 3 years guaranty



Model Type	Definition
Modbus Module	Mechanical counter the consumption of to be counted and recorded.
Technical Information	
Power	Built-in Lithium battery 3,6V
Battery Consumption	13 uA (Average)
Reading Pals	inductive sensor reading
Maximum Reading Period	1 minute
RS485 MODBUS COMMUNICATION	
Parameters	8N1 9600 bps
Protocol	Modbus – ASCII or RTU
Adress	1...247
The maximum distance	1000 m

# MODBUS REGISTER MEMORY

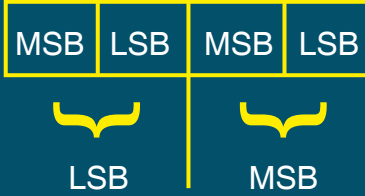
Register *	Definition	Data Type	Property
4001 - 4002	Module Id Number	BCD	Read only
4003 - 4004	Consumption (Pulse)	Int	Read/write
4005	Slave ID number	Int	Read/write
4006	Tamper	Int	Read/write
4007	Second	Int	Read/write
4008	Minute	Int	Read/write
4009	Hour	Int	Read/write
4010	Day	Int	Read/write
4011	Month	Int	Read/write
4012	Year	Int	Read/write
4013	Pulse Resolution (K)	Int	Read/write
4014	Battery status	Int	Read/write
4015	Version	Int	Readonly
4016	Query Counter	Int	Readonly

- \* **Minus Offset** = 4001
- \* **Default Slave ID** = 1
- \*\* **Module ID** = The module ID that's been assigned to the AMR device during manufacture.
- \*\* **Consumption** = Represents the mechanical pulses, the value recognized by the inductive sensor. For ex : 1234 recognized determines the 123,4 m3 value (for K=100).
- \*\* **Slave Id** = Address of module used in the Modbus communication
- \*\* **Meter Tamper** = This register indicates the meters alarm status as bit wise. Total register is 16 of bits and bits meanings defined respectively. Leakage, reserved bit, reserved bit, Module attached, reserved bit, calibrated, low battery, reserved bit, module removed, reserved bit, reserved bit, reverse flow, reserved bit.
- \*\* **Second, minute, hour** = Time info of module
- \*\* **Day, month, year** = Date info of module
- \*\* **Pulse Resolution** = This value indicates K value. For example, for K=1, pulse resolution is 1, for K=10, pulse resolution is 2, for K=100, pulse resolution is 3, for K=1000, pulse resolution is 4.
- \*\* **Battery status :** = Battery voltage level of the module. This value based on 100 mV step.
- \*\* **Version** = Embedded software version of the module.
- \*\* **Query Counter** = This register indicates how many queries has been reached to the module. Max value is 255.

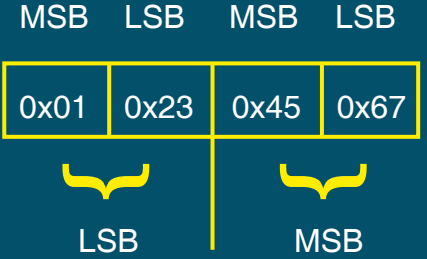
# FORMAT OF THE INFORMATION PACKAGE SENT

## \*\* Module Id and consumption format

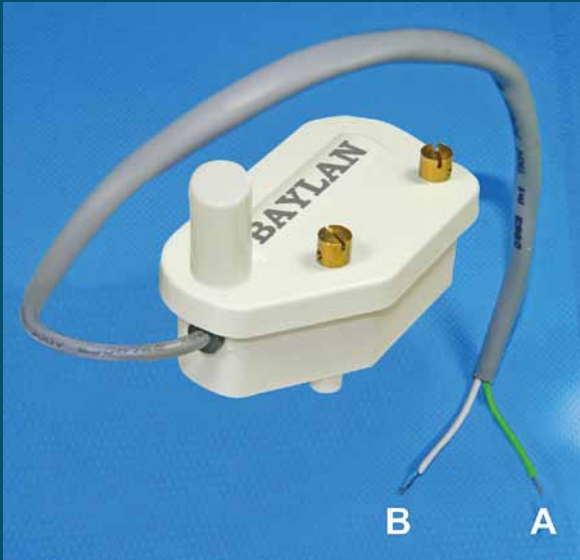
4 Byte Format



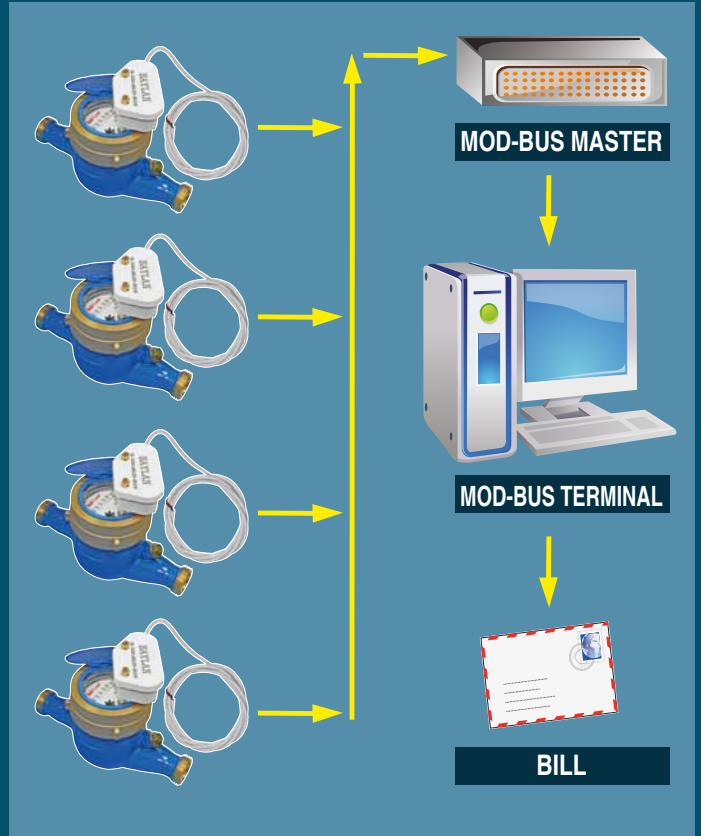
**For ex:** 01234567 define  
as BCD  
Low = 0x0123  
High = 0x4567



## \*\* Cable connection



## \*\* Other information



**NOTE:** Consumption register and command 06 cannot be changed. Should be use up to date software.

Maximum number of registers that can be read is 16. The properties defined above may vary according to the mechanical structure/type of the water meter.

*“Due to continuous development of our products, we reserve the right to modify our product design or construction without prior notice.”*

## **BAYLAN ÖLÇÜ ALETLERİ SAN. VE TİC. A.Ş.**

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