

# MODBUS Damatic RTU

## Valmet Damatic MODBUS RTU communication protocol

[Supported device types and versions](#)  
[Communication line configuration](#)  
[Communication station configuration](#)  
[I/O tag configuration](#)  
[Literature](#)  
[Changes and modifications](#)  
[Document revisions](#)

### Supported device types and versions

---

MODBUS protocol, version RTU, supports data reading from a Valmet Damatic control system by means of RTU GTW:LIS gateway.

### Communication line configuration

---

- Communication line category: [Serial](#).
- Parameters of the asynchronous line depending on the design and type of device connection – see the documentation "Overview of the Damatic XD System – VALMET Automation V.5.4 rev.7".

### Communication station configuration

---

- Communication protocol: **Valmet MODBUS RTU GTW:LIS**.
- The station address is a decimal number in the range of 0 to 255.

## Station protocol parameters

There can be defined the following parameters:

**Table 1**

Keyword	Full name	Meaning	Unit	Default value
RC	Retry Count	The number of request retries when an error in communication occurs.	-	2
RT	Retry Timeout	The delay between request retries if an error in communication occurs.	ms	300 millisec.
WFT	Wait First Timeout	First waiting for a response after sending a request.	ms	200 millisec.
WT	Wait Timeout	Delay between the readings of a response until it is completed.	ms	100 millisec.
MWR	Max Wait Retry	The number of reading the response until it is completed.	-	10

String with protocol parameters is written according to this rule:

```
Key_word=value;Key_word=value; ...
```

Example:

```
RC=1;RT=500;
```

If a keyword with a valid value has not been found in the initial string, the default value is used according to Table 1.

### I/O tag configuration

---

I/O tags: **Ai, Di**

**Address** – a decimal number in the range of 0 to 65535 – number of MODBUS register.

In general, 2 bytes are read (signed integer) from a particular register. For Ai points, **IEE 754** standard can be used, which means a reading of 4 bytes in format FLOAT, i.e. the registers with addresses *Address* and *Address+1*.

For Di points, the bit number must be specified, withing range 0 to 15 – it represents one bit from a 16-bit MODBUS register which was read.

### Literature

---

-

## Changes and modifications

---

-

## Document revisions

---

- Ver. 1.0 – February 9, 2000



### Related pages:

[Communication protocols](#)