

# MT Printer

## MT Printer communication protocol

[Protocol specification](#)  
[Communication line configuration](#)  
[Communication station configuration](#)  
[I/O tag configuration](#)  
[Set of I/O tags](#)  
[Document revisions](#)

### Protocol specification

---

The Mettler Toledo weighing terminals can print the results from the measurement and the information about the asynchronous activities on their own special printers, e.g. GA-46 serial printer. The MT Printer communication protocol is used for processing the information from the terminal output and publishing them in the form of I/O tags.

### Communication line configuration

---

When setting the serial communication interface, you should realize that the interface for the printer has the fixed parameters.

- **Baud rate:** 9600
- **Parity:** even
- **Flow control:** XON/XOF
- **Data bits:** 8
- **Stop bits:** 1

Supported line categories for the protocol: "Serial" and "SerialOverUDP Device Redundant".

### Communication station configuration

---

#### Station protocol parameters

Parameter	Description	Default value
Full Debug	Logging is enhanced with listings that enable fast error detection.	NO

### I/O tag configuration

---

Allowed I/O tags: **Ai, Ci, Co, Di, TxtI, TiA**

### Set of I/O tags

---

The outputs from the printer, which are necessary to analyze the weighing results can be categorized into four basic groups:

1. Components necessary to prepare the formulas
2. The start time of weighing the components
3. Weighed components
4. End of weighing the components

Data from the printer are asynchronous. To ascertain their reading, they must be processed synchronously. For synchronization, two I/O tags with addresses "TRIGGER\_IN" and "TRIGGER\_OUT" are used. When publishing the new data, the value of the I/O tag with the "TRIGGER\_IN" address is incremented. Set the value of the I/O tag with address TRIGGER\_OUT to the same value, as an acknowledgment that that data was processed.

At the beginning of weighing, the terminal informs about the formula number (a unique identifier of formula), which will be weighted. Then, the list of all necessary components is sent sequentially. I/O tags in the table below are used for receiving these data.

Address	Value type	Units
FORMULA NO.	Ci	
COMPONENT NO.	Ci	

NAME	Txtl	
TARG	Ai	kg
LIM1	Ai	kg
LIM2	Ai	kg
TOL	Ai	kg
END TIMER	Ci	S
VALVE	Ci	
OUTPUT 2	Txtl	

After a list of components, the start of weighing follows. The I/O tags that contain this information are:

Address	Value type	Units
FORMULA NO.	Ci	
START TIME	TiA	

I/O tags that inform about the results of weighing:

Address	Value type	Units
FORMULA NO.	Ci	
NAME	Txtl	
ACTUAL V.	Ai	kg
TGT - ACTUAL	Ai	kg
TARGET	Ai	kg

I/O tags that inform about the end of weighing:

Address	Value type	Units
FORMULA NO.	Ci	
STOP TIME	TiA	

## Document revisions

- Ver. 1.0 – October 8, 2012 – Creating of the document.



Related pages:

[Communication protocols](#)