

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 own special printers, e.g. GA-46 serial printer. 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, Txtl, 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. Start time of weighing the components
3. Weighed components
4. End of weighing the components

Data from the printer are asynchronous. They must be synchronous to be read. For synchronization, there are used two I/O tags with the address "TRIGGER_IN", "TRIGGER_OUT". When publishing the new data, the value of I/O tag with "TRIGGER_IN" address is incremented. When the value of I/O tag with address TRIGGER_OUT is evened up, it is the acknowledgement of reading.

At the beginning of weighing, the terminal informs about the number or 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 recording 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	TxtI	

I/O tags that send the information about the start of weighing.

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	TxtI	
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 document.



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