

L&G Toccata

L&G Toccata 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

This protocol supports the following Landis&Gyr devices:

Table 1

Device type	Version of software in device	Protocol version
PRU1.64, RWP80		TOCCATA1 V.0
PRU1.64, RWP80		TOCCATA1 V.1
PRU10.64, PRV2.128		TOCCATA2 V.0
RWP80	AZA v. 07.10	TOCCATA1 V.2

Communication line configuration

- Communication line category: [Serial](#), [SerialOverUDP Device Redundant](#).
- Baud rate and transmission parameters according to a type of communication.
- 2400 Bd, 8 dat. bits, no parity, 1 stop bit in direct connection point-point (TOCCATA1 V.0 and V1).
- 9600 Bd, 8 dat. bits, no parity, 1 stop bit in direct connectionpoint-point (TOCCATA2 V.0).
- If devices communicates via the communication concentrators (KPX, radio modems), the transmission parameters are defined in accordance with the particular case.

Communication station configuration

- Communication protocol: **L&G TOCCATA**
- Station address is in the range of 0 up to 255 in decimal format. It is used only when communicating via the communication concentrators. In case of direct communication, the address is ignored.

Station protocol parameters

You can define the following parameters:

Table 2

Key word	Full name	Meaning	Unit	Implicit value
RC	Retry Count	Number of repeat calls if the communication error occurs.	-	1
RT	Retry Timeout	Delay between repeating the call if the communication error occurs.	ms	1000 millisec.
WFT	Wait First Timeout	First delay of response reading after the call is sent.	ms	300 millisec.
WT	Wait Timeout	Delay between reading the response until it is completed.	ms	300 millisec.
MWR	Max Wait Retry	Number of retry response reading until it is completed.	-	12
WBR	Wait Before Request	Delay that is used before each request.	ms	0
KPX	KPX Route	The communication via the communication concentrator. The station address is used.	YES /NO	NO

MPI	Maximum PA Items	Maximum number of PA data in one data blocks. You must always define an even number. If communicating via concentrator, maximum number is 10, otherwise it is 24.	-	10
LE	Log Events	It allows to save the text messages to TRACE.LOG from device. This file is in current working directory of communication process.	YES /NO	NO
KLRD	KL Read Delay	Time period to obtain the values of KL data. KL data are read when starting the communication process and again after elapsing of KLRD period.	min	30 minutes
SACK	Send ACK	Sending ACK message (DLE-ACK) after D2000 KOM receives the proper packet. A direct connection requires to set YES. Connection via concentrator (KPX=YES) requires to set NO (speeding up of communication).	YES /NO	YES
SENAC	Send Enhanced ACK	Sending enhanced ACK message with station address (DLE-ACK-CR-LF-StationAddress-CR-LF) after D2000 KOM receives the proper packet.	YES /NO	NO
PRUV	PRU Version	TOCCATA protocol: <ul style="list-style-type: none"> • value 0 : TOCCATA1 V.0 • value 1 : TOCCATA1 V.1 • value 2 : TOCCATA2 V.0 • value 3 TOCCATA1 V.2 	0, 1, 2, 3	0
PAF	PA First	At starting the communication, it gives priority to reading the PA instead KL parameters. KL parameters will be read after PA ones are received from all stations.	YES /NO	NO
FD	Full Debug	Activation of debug information about received values.	YES /NO	NO

String containing the protocol parameters is defined as follows:

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

Example:

```
RC=1;RT=500;KPX=YES;
```

If there is used a keyword with an invalid value in the initialization string, there will be used corresponding default value according the table 1.

I/O tag configuration

I/O tags: **AI, AO, CI, CO, DI, DO, TIR, TOR, TIA, TOA.**

In configuration you must define the following options:

- point type PA or KL
- address (for KL it is a physical address in device)
- size of data block of given point (for PA it is always 0)

Literature

-

Changes and modifications

- March 1999 - Completing the protocol TOCCATA2 V.0.
- April 1999 - Debugging the TOCCATA2 V.0.
- April 2002 - Added the version TOCCATA1 V.2.
- May 7, 2002 - change of behavior of KL points, size 2 bytes, types TiR and ToR - canceled the internal multiplication of received value *60, it is supposed that the input value is in seconds.

Document revisions

- Ver. 1.2 – February 8, 2000 – Update for version 4.07 and 4.10
- Ver. 1.3 – May 22, 2000 – Added parameter of protocol WFT.
- Ver. 1.4 – July 21, 2000 – Added parameter of protocol SACK.
- Ver. 1.5 - November 26, 2001 - Added parameter of protocol PAF.
- Ver. 1.6 - April 5, 2002 - Added version TOCCATA1 V.2.



Related pages:

[Communication protocols](#)