



***CtProtherm300 - Driver of PROTHERM  
300 DIFF PLC Protocol  
User's Manual***

Doc. No. ENP4047  
Version: 29-08-2005

**ASKOM**<sup>®</sup> and **asix**<sup>®</sup> are registered trademarks of ASKOM Spółka z o.o., Gliwice. Other brand names, trademarks, and registered trademarks are the property of their respective holders.

All rights reserved including the right of reproduction in whole or in part in any form. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without prior written permission from the ASKOM.

ASKOM sp. z o. o. shall not be liable for any damages arising out of the use of information included in the publication content.

Copyright © 2005, ASKOM Sp. z o. o., Gliwice



ASKOM Sp. z o. o., ul. Józefa Sowińskiego 13, 44-121 Gliwice,  
tel. +48 (0) 32 3018100, fax +48 (0) 32 3018101,  
<http://www.askom.com.pl>, e-mail: [office@askom.com.pl](mailto:office@askom.com.pl)

# 1. CtProtherm300 - Driver of PROTHERM 300 DIFF PLC Protocol

---

## 1.1. Driver Use

The CtProtherm300 driver is used for data exchange between **asix** system computers and Protherm 300 DIFF PLC of Process-Electronic GmbH. The data are transferred over the RS-422 serial link.

## 1.2. Declaration of Transmission Channel

The CtProtherm300 driver is loaded by the universal **asix** system driver – UNIDRIVER. The declaration of transmission channel using the CtProtherm300 driver is as follows:

```
Channel=UNIDRIVER, CtProtherm300, Port=port_number [;RecvTimeout=ms_number]
```

where:

- |                    |  |
|--------------------|--|
| UNIDRIVER          | - universal <b>asix</b> system driver;   |
| CtProtherm300      | - name of the driver for communication with the Protherm PLC;  |
| <i>port_number</i> | - number of the serial link (1 is passed for COM1, 2 for COM2, end so on);                                     |
| <i>ms_number</i>   | - timeout of waiting for the controller response (in milliseconds); it is passed 1000 milliseconds by default. |

By default, the following transmission parameters are passed:

- transmission speed 9600 Bd;
- number of bytes in a character;
- parity check –EVEN;
- number of stop bytes – 1.

### EXAMPLE

An exemplary declaration of the channel using the CtProtherm300 driver on the serial port COM2 with receiving timeout that equals to 2000 ms is as follows:

```
PLC1 = UNIDRIVER, CTPROTHERM300, Port=2; RecvTimeout=2000
```

## 1.3. Addressing the Process Variables

The syntax of the variable address is as follows:

*V.group.unit.index*

where:

- |              |   |
|--------------|---|
| <i>group</i> | - number of the group to which the controller is assigned (a number form 0 to 9); |
| <i>unit</i>  | - number assigned to the controller within the group (a number form 0 to 9);      |

*index* - number of the variable in the controller, compatible with the specification 'Variablen-Liste fuer PT300' (in Protherm300/Protherm300 Kommunikation documentation).

The raw variables may have one of the following type:

- byte;
- byte table;
- float.

The type of raw variable is defined in the specification 'Variablen-Liste fuer PT300', in Protherm300/Protherm300 Kommunikation documentation with the symbol R411.0, published by Process-Electronic.

### EXAMPLE

Examples of variable declaration.

JJ_00, value CO (FLOAT),	V.1.2.6,	PLC1, 1, 1, NOTHING_FP
JJ_01, status STAT3 (BAJT),	V.1.2.18,	PLC1,1,1, NOTHING_BYTE
JJ_02, table of 4 statuses XRELi (BAJT),	V.1.2.14,	PLC1,4,1, NOTHING_BYTE

## 1.4. Time Stamp

The variables read from the Protherm300 system are stamped with a local PC time.

## 1.5. Driver Configuration

The driver configuration is performed by using the separate section named [CTPROTHERM300]. By means of this section it is possible to declare:

- log file and its size,
- log of telegrams.



**LOG\_FILE=file\_name**

Meaning - the item allows to define a file to which all the diagnostic messages of the driver will be written. If the item LOG\_FILE doesn't define a full path, the log file will be created in the current directory. The log file should be used only during the **asix** system start-up.

Default value - by default, the log file is not created.

Parameter:

*file\_name* - name of the log file.



**LOG\_FILE\_SIZE=number**

Meaning - allows to define the size of the log file in MB.

Default value - by default, the item assumes that the log file has a size of 1 MB.

Parameter:

*number* - size of the log file in MB.

***LOG\_OF\_TELEGRAMS=YES/NO***

Meaning	- the item allows writing to the log file (declared with use of the LOG_FILE item) the contents of telegrams transmitted during the data exchange between the <b>asix</b> system and Protherm 300 DIFF PLC of Process-Electronic GmbH company; writing the telegrams content to the log file should be used only during the <b>asix</b> system start-up
Default value	- NO.



<b>1.</b>	<b>CTPROTHERM300 - DRIVER OF PROTHERM 300 DIFF PLC PROTOCOL</b>	<b>3</b>
1.1.	DRIVER USE	3
1.2.	DECLARATION OF TRANSMISSION CHANNEL	3
1.3.	ADDRESSING THE PROCESS VARIABLES	3
1.4.	TIME STAMP	4
1.5.	DRIVER CONFIGURATION	4