

Servomex XENTRA 4900

XENTRA 4900 communication protocol

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Supported device types and versions

Communication supports reading data from **Servomex XENTRA 4900** devices.

Communication line configuration

Required communication line parameters:

- Communication line category: [Serial](#).
- Baud rate of 2400,4800,9600 or 19200 Bd - according to the device settings.
- The number of stop bits - according to the device settings.
- The number of data bits - according to the device settings.
- Parity - according to the device settings.

For other parameters, see the topic [Communication line - configuration dialog box](#).

Communication station configuration

- Communication protocol: **Servomex XENTRA**.
- The station address is not used (one XENTRA device is being connected on the line)

Station protocol parameters

The following station protocol parameters can be defined:

Table 1

| Keyword | Full name | Meaning | Unit | Default value |
|---------|----------------|--|---------|---------------|
| WT | Wait Timeout | The delay between individual line readings. | ms | 1000 |
| MWR | Max Wait Retry | The maximum number of retries of the response reading. | - | 15 |
| XT | XENTRA Time | I/O tag value time allocated from the received message (YES) or from the computer (NO). | YES /NO | NO |
| SC | START CODE | A transmitted string containing object values (data frame) begins with the binary code of 0x01 (start code). Setting the parameter to NO disables searching for the start code. The setting is required by newer versions of the XENTRA device firmware. | YES /NO | YES |

A string containing the protocol parameters is being defined as follows:

```
Keyword=value;Keyword=value; ...
```

Example:

```
WT=2000;MWR=40;
```

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

I/O tag configuration

Possible I/O tag types: **Ai** (Analog Input) or **TiA** (Absolute Time Input).

Example of received data message:

14-07-97;16:15:32;06; O2 ; 20.95; % ; CO ; 6.2;vpm; NO ; 3.5;vpm; NOx ; 0.2;vpm;|||||; 0.0; mA;|||||; 0.0; mA;1EBF;

From the message format implies, that individual items are semi-colon separated (;) - it defines I/O tag addressing. In the tab Address of the I/O tag configuration dialog box, there is required one number - item index in the data packet. Index is defined as a decimal number from 1 (or as a hexadecimal number with a hash at the beginning, e.g. #0A). It means that the index of 1 contains the item **14-07-97**, the index of 5 contains the item **20.95**, the index of 8 contains the item **6.2**, etc.

Ai type: there can be used just the indexes (addresses) of I/O tags, which can be converted to a real number. In the example above: indexes (addresses) of 3,5,8,11,14,17 and 20 (their values are: 6.0, 20.95, 6.2, 3.5, 0.2, 0.0 and 0.0). If the item can't be converted to a real number, the I/O tag value is invalid.

TiA type: there can be configured only one I/O tag of TiA type - the index (address) of 0. The I/O tag gets the time and date from the items with indexes 1 and 2. In the example above - it is the value of 16:15:32 14-07-1997.

I/O tag value time

Times of new values of I/O tags can be:

- acquired from the data packet (identical with the value of the I/O tag of TIA 0)
- real-time of the computer, when the value was assigned to.

One of the options is being defined by means of the station protocol parameter XT (see table 1).

Literature

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Changes and modification

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Document revisions

- Ver. 1.2 – February 8th, 2000 – update of 4.07 and 4.10 versions
- Ver. 1.3 - April 12th, 2002 - the protocol parameters SC added



Related pages:

[Communication protocols](#)