

ALYA

ALYA - lubrikacie communication protocol

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Supported device types and versions

This protocol supports data reading/writing from the controllers of ALYA lubricant reservoirs.
Since July 2015, this protocol supports a group of I/O tags for data reading / writing from Manex production lines - see [Table 4](#).

Communication line configuration

- Communication line category: [Serial](#).
- Serial line parameters:
 - Baud Rate: 38400 Baud
 - Odd parity, 8 data bits, 1 stop bit

Communication station configuration

- Communication protocol: **ALYA Lubrikacie**.
- Station address is an address of control station for the communication over RS485 bus. Address is a one-byte value.
Note: commonly used station addresses (A,B,C...) must be configured as their ASCII codes, i.e. 65, 66, 67 ..

Station protocol parameters

[Communication station - configuration dialog box](#) - "Protocol parameters" tab.
They influence some of optional parameters of protocol.

Table 1

Key word	Full name	Meaning	Unit	Default value
WT	Wait Timeout	Delay between the readings of response until it is completed.	ms	100 millisec.
WFT	Wait First Timeout	First waiting on response after sending the call.	ms	100 millisec.
RT	Retry Timeout	Delay between the retry of call if some error in communication occurs.	ms	100 millisec.
MWR	Max Wait Retry	Number of response reading retry until it is completed.	-	6
RC	Retry Count	Number of request retries in case of a communication failure.	-	2

String containing the protocol parameters is being defined as follows:

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

Example:

```
WT=150;MWR=10;
```

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, Di, Dout**.

I/O tag address is an abbreviation of mnemonic name of I/O object. The list of objects is listed in the table below:

Table 2

Address	Meaning	Value type	Read/Write
AV	Current weight [kg]	Ai	R
HI	Emergency minimum [kg]	Ai, Ao	R/W

HA	Emergency maximum [kg]	Ai, Ao	R/W
PN	Operating minimum [kg]	Ai, Ao	R/W
PX	Operating maximum [kg]	Ai, Ao	R/W
SP	Filling status (TRUE - filling, FALSE - draining)	Di	R
EN	Error number - see Table 3	Ai	R
WS	Write to serial EEPROM (all changes of Ao must be written to EEPROM, if not, they vanish at the next reset)	Do	W
RT	Reset (it retrieves the reset of control station)	Do	W

The list of error codes when reading the parameter "EN":

Table 3

Error code	Meaning
0	Weight is OK.
1	Weight is under permitted range.
2	Weight is over permitted range.
3	Weight is under emergency minimum.
4	Weight is over emergency maximum.
10	Weight converter does not respond.
20	Weight converter is not connected.
30	Strain gauge is not connected.

I/O tags for data reading / writing from Manex production lines:

Table 4

Address	Meaning	Value type	Read /Write
RN	New weighted roving. After weighting and printing the weight ticket, the application writes a text string into I/O tag in the format: ID;CV;VZ;POC;ZD; where: <ul style="list-style-type: none"> ID - identification number of weighting. Autoincrement integer [1, 2, 3, ...]. CV - number of scale [1, 2]. VZ - preparing from the outside in meters, integer. POC - number of unspool cycles [0, 1, 2]. ZD - including into the line. Integers separated by blank space. First number means a priority line, the second one and others represent the alternative lines, e.g. 7 5 6. Example of written value: "5247;2;60;1;6 4 5;"	TxtO	Write
RX	Cancelling a roving. After an operator puts down the roving from the scale, the application will write the number of scale (1 or 2) into the I/O tag.	Co	Write
PC	Number of spools on the lines. I/O tag is in the format "C1;C2;C3; ... Cn;", where Ci represents an integral number that indicates number of spools on the line i. Example: "626;42;0;78;562;489;28;55;"	TxtI	Read
NC	Reset the counters of spools on the lines. Write any valid value, to reset the counters. The control unit will send message in the format "C1;C2;C3; ... Cn;", where Ci represents an integer number that indicates the number of spools which were included on the line i since the most recent information on the number of spools (see PC). This message will be a new value of I/O tag with the address NC.	TxtO	Write

Literature

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Document revisions

- Ver. 1.0 - August 21, 2001 - creation of document
- Ver. 1.1 - July 15, 2015 - support of Manex production lines



Related pages:

[Communication protocols](#)