

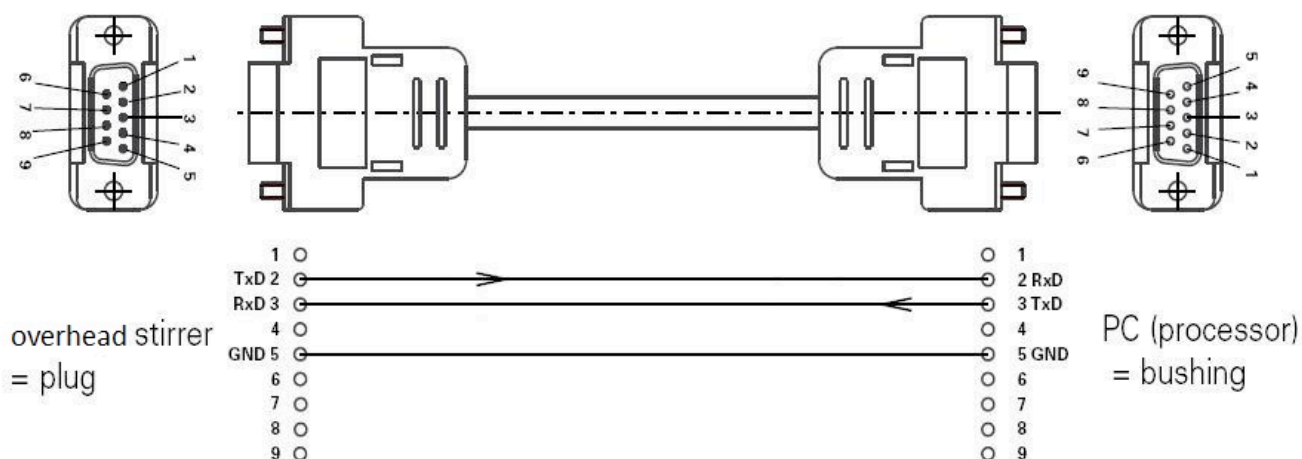
Overhead Stirrer Control Instruction

1 Introduction

Use with OS40-Pro and OS20-Pro.

The control instruction is composed by command and response, the command is the code and data that PC sends to instruments, the response is the code and data that instruments return to PC. All command and response are composed by code and data.

All the command and data send in a speed of 9600BPS, and N, 8, 1 format.



2 Instruction Overview

All instructions have the same structure as

Prefix	Instruction code	Data frame	Check sum
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Command:

1	2	3	4	5	6
0xfe	0x	Parameter1	Parameter2	Parameter3	Check sum

Response:

1	2	3	4	5	6
0xfd	0x	Parameter1	Parameter2	Parameter3	Check sum

For a command the Prefix should always be 0xFE.

For a Response the Prefix should always be 0xFD.

Add at least 50 ms delay between every byte.

For Data frame, always send high end data first and then low end.

The Check sum is the sum of all the Instruction code and Data Frame, not include Prefix.

Instruction			Notation
Information	CMD_HELLO	0xA0	Hello, link to instruments
	CMD_INFO	0xA1	Get information of instruments
	CMD_STA	0xA2	Get status of instruments
Control	CMD_MOT	0xB1	Stirrer function
	CMD_MOD	0xB3	Display mode change

3 Instruction detail

3.1 Hello

Command:

1	2	3	4	5	6
0xfe	0xA0	NULL	NULL	NULL	Check sum

Response:

1	2	3	4	5	6
0xfd	0xA0	Parameter1	NULL	NULL	Check sum

Parameter 1:

- 0: OK
- 1: fault

3.2 Get information

Command :

1	2	3	4	5	6
0xfe	0xA1	NULL	NULL	NULL	Check sum

Response:

1	2	3,4,5,6,7	8
0xfd	0xA1	Parameter 1...5	Check sum

Parameter 1: null

Parameter 2: stirrer status

0: close

1: open

Parameter 3: torque display status

0: close

1: open

Parameter 4: null

Parameter 5: null

3.3 Get status

Command:

1	2	3	4	5	6
0xfe	0xA2	NULL	NULL	NULL	Check sum

Response:

1	2	3,4,5,6,7,8,9,10	11
0xfd	0xA2	Parameter1...8	Check sum

Parameter 1: speed set (high)

Parameter 2: speed set (low)

Parameter 3: real speed (high)

Parameter 4: real speed (low)

Parameter 5: viscosity value (high)

Parameter 6: viscosity value (low)

Parameter 7: null

Parameter 8: null

3.4 Stirrer control

Command:

1	2	3	4	5	6
0xfe	0xB1	Speed(high)	Speed(low)	NULL	Check sum

Response:

1	2	3	4	5	6
0xfd	0xB1	Parameter1	NULL	NULL	Check sum

If speed=1000rpm, Speed (high) =0x03 Speed (low) =0xE8

Parameter 1:

0: OK

1: fault

3.5 Display mode control

Command:

1	2	3	4	5	6
0xfe	0xB3	NULL	NULL	NULL	Check sum

Response:

1	2	3	4	5	6
0xfd	0xB3	Parameter1	NULL	NULL	Check sum

Parameter 1:

- 0: OK
- 1: fault