

Allen-Bradley CSP/PCC communication protocol (Client Server Protocol / Programmable Controller Communication Command)

[Supported device types and versions](#)

[Communication line configuration](#)

[Station configuration](#)

[I/O tag configuration](#)

[Document revisions](#)

Supported device types and versions

The protocol Allen-Bradley CSP/PCC supports communication with Allen-Bradley devices of the SLC-500 series through a TCP connection. It also supports communication via DF1 gateway with SLCs that communicate via DH+ or DH485.

Communication line configuration

- Communication line category: [TCP/IP-TCP](#).

Station configuration

- Communication protocol: "Allen-Bradley CSP/PCC".
- Station address is not configured.

Station protocol parameters

Dialog window [station configuration](#) - tab "Protocol parameters".

They influence some optional protocol parameters. The following station protocol parameters can be entered:

Parameter	Description	Unit	Default Value
Response Wait Timeout	Timeout to receive a response from PLC.	s	1.000
Retry Count	Number of request retries in case of a communication failure.	-	3
Destination Node Address	If using a DF1 gateway, the node address of the destination device in question (e.g. on DH+ or DH485 node). If the DF1 gateway is not in use, the default value of 0 must be used.	-	0
Block Read	Activates the block reading mode (types Integer, Binary, Status, Float, Timer a Counter). Types Input and Output don't support block reading mode.	YES /NO	NO
Max. Block Length	Maximum block size (2-255 bytes) if block reading mode is active.	bytes	40
Full Debug	Activates detailed listings about sending and receiving values.	-	False

I/O tag configuration

Possible I/O tags: **Ai, Ao, Ci, Co, Di, Dout**.

The address of I/O tag is a text in a format SLC-500. The address format is:

[$\$$] X [file] : element [.field] [/bit]

Explanatory notes:

\$	- optional character
X	- file identifier (required - see Table 2)
file	- file number (optional, if it is empty, the default file number is used - see Table 2)
element	- element number in the file (required)
.field	- number of sub-element (optional, it is used only for Output, Input files)
/bit	- bit number (optional, it must be in the range of 0..15)

Table 2

X	File Type	Default file number (file)
O	Output	0
I	Input	1
S	Status	2
B	Binary	3
T	Timer	4
C	Counter	5
N	Integer	7
F	Float	8

File type - Output

```
[ $\$$ ]O[n]:e[.s][ /b]
```

"n" - file number, if there is used other than the default number 0,

"e" - number of element in a file,

"s" - number of sub-element (0..255),

"b" - bit number (0..15).

Example:

```
O:2
 $\$$ O0:2/0
O:1.0/1
```

Note: The files of Output type are read-only.

File type - Input

```
[ $\$$ ]I[n]:e[.s][ /b]
```

"n" - file number, if there is used other than the default number 1,

"e" - number of element in file,

"s" - number of sub-element (0..255),

"b" - bit number (0..15).

Example:

```
I:1
 $\$$ I1:2/0
I:2.0/15
```

Note: The files of Input type are read-only.

File type - Status

```
[ $\$$ ]S[n]:e[ /b]
```

"n" - file number, if there is used other than the default number 2,

"e" - number of element in file,

"b" - bit number (0..15).

Example:

```
S:0
 $\$$ S2:40
S:2/15
```

Note: As regards the files of Status type, data can not be written bit-by-bit (input tags with the parameter [/b]).

File type Binary

```
[ $\$$ ]B[n]:e[ /b]
```

"n" - file number, if there is used other than the default number 3,
"e" - number of element in file,
"b" - bit number (0..15).

Example:

```
B:2
$B3:0
B3:2/1
```

File type - Timer

[$\$$]T[n]:e[/b]

"n" - file number, if there is used other than the default number 4,
"e" - number of element in file,
"b" - optional prefix /EN, /TT, /DN (bit values) or /PRE, /ACC (integer values).

Example:

```
T:2
$T4:0/ACC
```

File type - Counter

[$\$$]C[n]:e[/b]

"n" - file number, if there is used other than the default number 5,
"e" - number of element in file,
"b" - optional prefix /DN, /CU, /CD, /OV, /UN, /UA (bit values) or /PRE, /ACC (integer values).

Example:

```
C:17
$C5:34/DN
```

File type - Integer

[$\$$]N[n]:e[/b]

"n" - file number, if there is used other than the default number 7,
"e" - number of element in file,
"b" - bit number (0..15).

Example:

```
N7:2
$N:0
N27:0/1
```

File type - Float

[$\$$]F[n]:e

"n" - file number, if there is used other than the default number 7,
"e" - number of element in file.

Example:

```
F:0
$F8:0
F29:1
```

Document revisions

-
- Ver. 1.0 - July 12th 2017 - Document creation.



Related pages:

[Communication protocols](#)