

# COMBICONTROL



S7-Parameterizing Channel  
Block  
for KEB COMBIVERT F5  
with PROFIBUS-DP

**GB** Information

Mat.No.	Rev.
CPF50EI-K001	1B



# S7-Parameterizing Channel Block for COMBIVERT F5

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## Description of the Function Block KEB\_Parameter\_F5

The function block can be integrated into each PLC program. It is a matter of a function block with one own instance data block. A new instance data block must be specified for each request.

The function block can be re-designated easily in order to integrate it into the valid program. **Important!**

The parameterizing channel should be setup in the hardware configuration before the process channel. Addressing for the inputs and outputs must be one after another. The inputs and outputs can have different address ranges.

Control variable:

Adr_Param_In	INT	Start address parameterizing channel input
Adr_Param_Out	INT	Start address parameterizing channel output
Read	BOOL	Edge triggered start signal to read the preset parameter
Write	BOOL	Edge triggered start signal to write the preset parameter
Parameter	Word	Parameter address in the inverter
Param_Set	BYTE	Parameter set number in the inverter
Value_Write	DINT	Value of the write parameter

Return variable:

Done	BOOL	Ready message after successful reading or writing. The signal is output only for a PLC cycle
Value_Read	DINT	Read parameter value. This value remains up to the next read or write instruction. The output value is set to zero by a write instruction.
ERROR	BOOL	This output is set to „1 “ in the case of an error in executing the read or write instruction. The signal is reset to „0 “ with a renewed read or write instruction.
ErrorCode	DWORD	Display of the error cause: 0x 0000 0000 No error 0x 0000 XXXX S7 system error (see SFC 14/15) 0x FFFF FFFF Exceeding the time of communication 0x XXXX XXXX Parameter error F5 (see description PROFIBUS-DP operator)

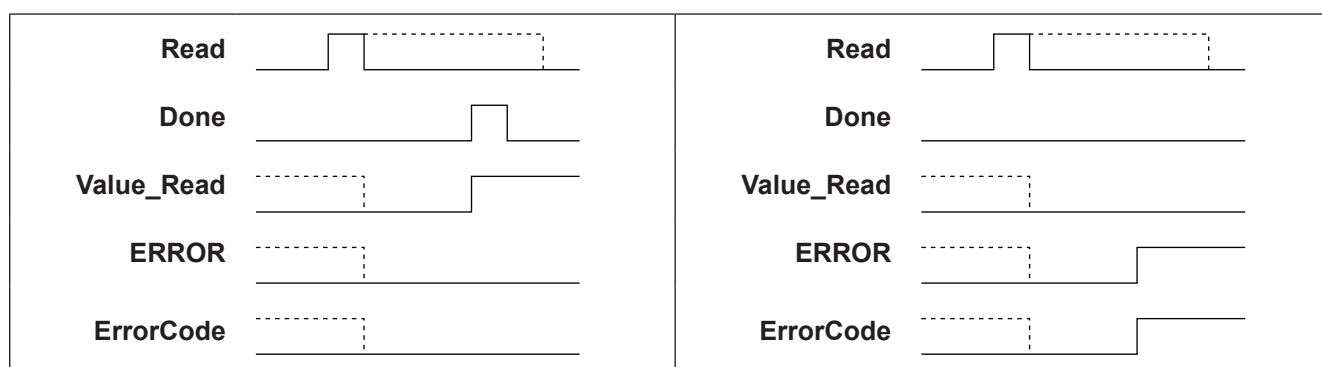
The communication works with the system blocks SFC 14 (consistent reading of a DP standard slave) and SFC 15 (consistent writing of a DP standard slave). These function blocks are system blocks and integrated in the firmware of the CPU.

Communication with the frequency inverter F5 via the parameterizing channel needs several PLC cycles, since it does not concern to a simple write or read instruction.

Example: call of the function block to read the last error from the frequency inverter:

```
CALL FB 400, DB400
Adr_Param_In:      256           // start address parameterizing channel In
Adr_Param_Out:     256           // start address parameterizing channel Out
Read:             M400.0        // read instruction (edge triggered)
Write:           M400.1        // write instruction (edge triggered)
Parameter:       W#16#0E18     // address of the parameter (e.g. last error)
Param_Set:       B#16#0        // parameter set 0
Value_Write:     L#0           // value of the parameter when writing
Done:            M400.3        // ready message for one cycle
Value_Read:      MD410         // read parameter value
Error:           M400.4        // error message
ErrorCode:       MD414         // error cause
```

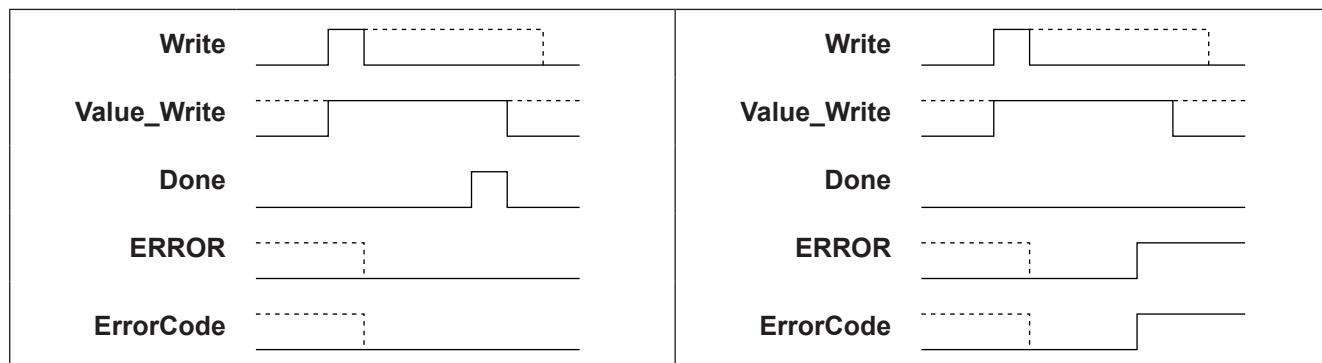
Instruction execution reading



Example: call of the function block for writing of the acceleration ramp in the frequency inverter:

```
CALL FB 400, DB400
Adr_Param_In:      256           // start address parameterizing channel In
Adr_Param_Out:     256           // start address parameterizing channel Out
Read:             M400.0        // read instruction (edge triggered)
Write:           M400.1        // write instruction (edge triggered)
Parameter:       W#16#031C     // address of the parameter (acceleration ramp)
Param_Set:       B#16#0        // parameter set 0
Value_Write:     L#1000        // value of the parameter when writing (e.g. 10,00s)
Done:            M400.3        // ready message for one cycle
Value_Read:      MD410         // read parameter value
Error:           M400.4        // error message
ErrorCode:       MD414         // error cause
```

Instruction execution writing



## S7-Parameterizing Channel Block for COMBIVERT F5

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### Annex

Excerpt from the description of the KEB PROFIBUS-DP operator for the parameter error messages:

#### 12.2 Reference list

- [1] PROFIBUS standard EN 50170 Vol. 2, Version 1.0.
- [2] PROFIL drive systems (21) of the DRIVECOM user group e.V. from 16.12.1991.

#### 12.3 Table error messages of the parameterizing channel

Error class (EB5)	Error code (EB6)	Additional code (EB7, EB8)	Meaning
5	4	0000h	Bits for writing and reading are set simultaneously.
6	2	0000h	No connection to the inverter.
6	3	0000h	Parameter write protected.
6	3	0030h	Access to the parameter is not possible with the actual adjusted password.
6	4	0000h	Invalid parameter address (Index).
6	5	0000h	Invalid process data description.
6	5	0011h	Invalid subindex.
8	0	0022h	Inverter busy.
8	0	0030h	The written value lies outside of the valid value range.
8	0	0033h	The addressed parameter set is invalid.
8	0	0034h	Operation not possible.

#### 12.4 Unit master file for KEB F5 PROFIBUS-DP operator

The unit master file (\*.GSD) can be loaded via the KEB homepage.





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