Bihl+Wiedemann

Programming in C with Control III activation

Possibility to execute functions of a small PLC via a C-program in the gateway via a C program

- **Control III functionality can be purchased separately for many Bihl+Wiedemann ASi Gateways** [1]

CE

[1]   The option to activation is to recognize by the note in the Gateway data sheet: "Optional programmable in C ".

Control III is a PLC-functionality integrated into the B+W ASi Masters forms a mini-PLC together with commercial ASi I/O modules. The programming of the mini-PLC is fully in Standard C.

In combination with B+W ASi Masters according to specification 3.0 Control III supports also the extension to 62 ASi nodes per ASi network, the evaluation of ASi peripheral faults as well as the automatic data exchange with ASi analog modules according to the standardized profile.

In that way up to 248 digital inputs and outputs or max. 248 analog values in pure ASi-3 operation or up to 3 MB I/O data of ASi-5 and ASi-3 modules in mixed operation can be processed.

Integrated in an ASi Master with serial interface Control III is the ideal mini-PLC for stand alone solutions for smaller machines or plants.

Use of Control III offers in ASi gateways the ability of the preprocessing of sensors and actuators.

The master PLC is relieved by. Control III thus makes possible a decentralization of control task.

Typical applications are the fast execution of time critical operations directly within the Gateway.

Article no.	BW2582	
	for ASi-3 Master (up to version 7.0.5.0)	**for ASi-5/ASi-3 Master (from version 8.0.0.0)**
General		
		• Complete IDE with Eclipse and GCC. • Complete debugging of the control program with Eclipse and GDB.
System requirements	32 bit version of Java Runtime Environment (JRE) or Java Development Kit (JDK) required, the Eclipse functionality is not suitable for use in a 64 bit Java environment.	
	Windows 7 / Windows 8 / Windows 10 (from version 7.00)	Windows 7 / Windows 8 / Windows 10 / Windows 11
Mini-PLC description		
Working memory (RAM) / programm memory (ROM) dynamically divided	ASi-3 max. 28 KByte	ASi-5/ASi-3 max. 256 KByte
Flag area / fieldbus	256 Byte	
Remanent data memory (also via chip card)	1 KByte	1 KByte [1]
Cycle time (1 KBit-/1000 word instructions)	1,0 ms up to 20 ms depending on device	typical cycle time 1 ms
Processing		
API	based on ASiDRV	
Timer	A configurable timer interrupt from which any number of timers and counters are derived	
Programmable time values	1 ms up to 2^{32} ms	
In -and outputs	up to 496 E/A's and 248 analog values via ASi-3 modules	up to 3 MB I/O data via ASi-5 nd ASi-3 modules

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Activation of the "Control"-functions

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Programming		
Compiler	GCC ARM C-Compiler	
Debugger	GDB with Eclipse	
Programming language	C (or Assembler)	
Programming device	PC	
Bus connections	PROFIBUS, PROFINET, EtherNet/IP, Modbus TCP	PROFINET, EtherNet/IP, Modbus TCP, Sercos III, POWERLINK, BACnet, EtherCAT
Extras		
Identification	unique 32 bit identifier in the device	
Chip card	redundant memory for control program and parameters	
Ethernet interface	remote maintenance	

[1] EtherNet/IP gateways have an additional 1 MB of memory, which is not synchronized with the smart card.

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