

PCS PLC on a Chip[™] Control System

- Supports up to 128 Digital Inputs / 128 Digital Outputs
- Analog Inputs
- Analog Outputs
- > 2 PWM Output Channels
- Synchronous Serial Interface (SSI) Port
- 2 CAN Network Ports
- SAE J1939 Connectivity
- Modbus Slave Supported
- Serial Port (RS232 / RS422 / RS485)
- > 2 High Speed Counters
- Programs in Ladder Diagram / Function Block
- DIN Standard Rail Mounting



Overview:

Designed for speed, the PCS series of programmable logic controllers replaces the High Density Bear Bones product while adding expanded features and versatility. These features include analog I/O capability, expanded communication ability via a CAN network with J1939 support, Synchronous Serial Interface (SSI), truly high speed counting, and broad frequency range Pulse Width Modulation (PWM) outputs. Based on the patented PLC on a Chip® technology, the controller is easy to apply and program using the EZ LADDER Toolkit PC based software.

The PCS controllers are ideal for small system control and monitor applications, particularly in instances where higher speeds or positioning accuracy is required. The SSI port allows direct reading of absolute encoder outputs for increased operating speed.

PCS Controller Specifications / Features					
Specifications / Features	PCS-1XX	PCX-2XX			
Processor / Memory / EEPROM	M-Series PLC on a Chip™ 12K RAM 256K Flash / 2792 Bytes EEPROM				
Retentive Memory	100 Bytes				
Programming	Ladder Diagram / Function Block				
Digital I/O					
Digital Inputs	None on Unit, Up to 128 Digital Inputs using High Density I/O Expander Cards, Various I/O Types and Ranges Available				
High Speed Counters	None	Qty 2, Count Up, 100KHz Max.			
Digital Outputs	None on Unit, Up to 128 Digital Outputs using High Density I/O Expander Cards, Various I/O Types and Ranges Available				
Pulse Width Modulation Outputs (PWM)	1 Channel, 16 bit resolution or 2 Channels, 8 bit resolution, Open Collector Output, 1.436Hz to 47.058KHz (Model Dependent)				
Synchronous Serial Interface (SSI)	None	Graycode SSI Interface			
Analog I/O					
Analog Inputs	6 Channels, 0-5VDC or 0-20mADC, 10 Bit Resolution (Model Dependent)				
Analog Outputs	4 Channels, 0-5VDC or 0-20mADC, 8 Bit Resolution or 2 Channels, 0-5VDC or 0-20mADC, 16 Bit Resolution (Model Dependent)				
User Interface					
Status LED Indicators	Input Power, Watchdog				
Communications					
Serial Ports	1 Programming, RS232, 1 Optional RS232, RS422 or RS485 Port - Modbus Slave				
CAN Ports	None	Qty 2, SAE J1939 (read only), OptiCAN			
Other					
Real Time Clock	Month, Day, Year, Day of Week, Hour, Minute, Second				
Input Power	10VAC or 10-30VDC				
I/O Expander Power (HDIO)	with 10VAC Input Power, +VA (approx 12VDC) @.5A Max, 5VDC @.5A Max				
	with DC Input Power, +VA (=+DC Input) @.5A Max, 5VDC @.5A Max				
Style / Mounting	Plastic Enclosure / Din Rail or Open Board / Din Rail				
Dimensions	6.4" L x 3.54" W x .2.4"H				
Operating Temperature	0°C to +60°C				



Models / Ordering Guide:

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Α	BASE SYSTEM OPTIONS	\vdash			
1	256K PLC on a Chip [™] Processor, High Density I/O Interface and Real Time Clock				
2	256K PLC on a Chip [™] Processor, High Density I/O Interface, Real Time Clock, 2 CAN Ports, SSI Port, 2 High Speed Counter Inputs				
B		<u>د</u>	_	1	
	No Serial Port Installed	5			
1	PS222 Social Port Installed				
י ר	RS232 Serial Port Installed				
2					
3	RS485 Serial Port Installed]	
С	ANALOG I/O OPTIONS				
0	No Analog I/O Installed				-
1	6 Analog Inputs rated 0-5VDC, 4 Analog Outputs rated 0-5VI Outputs	DC and	2 PV	VM	
2	6 Analog Inputs rated 0-20mA, 4 Analog Outputs rated 0-20mA and 2 PWM Outputs				

PCS - A B C

Example Part Numbers: PCS-100, PCS-201, PCS-112

Optional Hardware Add-ons/Accessories:

Model #	Description
126-102860	Null Modem Cable
109-101153	Transformer, 115V Primary, 10V Secondary
109-100924	Transformer, 230V Primary, 10V Secondary
ICM-HDIO-XXP	High Density I/O (Various Models Available)
EZLDCD-01	EZ LADDER Toolkit Development Software on USB Flash Drive (Free with Controller Purchase)

Programming the Controller

The PCS controllers program in Ladder Diagram using the Divelbiss EZ LADDER® Toolkit, a Ladder Diagram Development Platform. EZ LADDER software parallels the IEC-61131 standard and provides an easy to use interface.

After a ladder diagram program is developed, it can be downloaded to the PCS controller via the programming port. The program is stored on non-volatile FLASH memory and is automatically executed on power up. Once the download is complete, the PCS is successfully programmed and begins executing the program.

Refer to the EZ LADDER Toolkit's User Manual for more detail on creating ladder diagram programs, connecting to targets and downloading the program to targets.

The PCS Controller User Manual and EZ LADDER Toolkit can be downloaded from <u>http://www.divelbiss.com</u>.

Specifications are subject to change without notice.

