

- ▶ Full Featured
- ▶ Single Board Construction
- ▶ Low Mounting Profile
- ▶ Fully Industrialized
- ▶ Relay Outputs
- ▶ J1939 Connectivity
- ▶ Modbus Slave Supported
- ▶ High Speed (100Khz Counter)
- ▶ Programs with EZ Ladder® Software



The Enhanced Baby Bear series of programmable logic controllers offers dimensions and mounting identical to the original Baby Bear product while adding expanded features and versatility. Based on patented* PLC on a Chip® technology, the controller is easy to apply and program using the EZ Ladder PC based software. The base control board offers 5 inputs and 5 outputs with maximum expansion capability to 120 in and 120 out using standard expander modules.

The Expanded Baby Bear controllers are ideal for small system control and monitor applications, particularly in instances where panel space is limited. The low profile allows side as well as back-panel mounting in standard NEMA enclosures.

Typical applications include:

- | | | |
|----------------------|-----------------------|---------------------|
| ▶ Machine Control | ▶ Water Lift Stations | ▶ Elevator Control |
| ▶ Compressor Control | ▶ Label Machines | ▶ Remote Monitoring |
| ▶ Engine Control | ▶ Screen Printers | ▶ Motor Control |
| ▶ Conveyor Systems | ▶ Pump Control | ▶ Valve Control |

Partial Specifications:

NOTE: More detailed specifications can be found in the product datasheet available for download from our website: www.divelbiss.com

Digital Inputs: 5

Type: Optically Isolated, Solid State

Polarity Sensitive: No

Input Voltage: 10-32 VDC / 10-30 VAC RMS

LED Indicators: Yes

Input Current: Typical 9mA @ 30 VDC / VAC

Digital Outputs: 5

Type: Relay, Normally Open Contact

Output Voltage: 1/8 HP, 125 VAC / 250 VAC

5A @ 30VDC / 250 VAC Resistive

Output LED Indicators: Yes

Counter Input (Optional): Yes

Type: Up Count Pulse Input, Optically Isolated

Maximum Frequency: 100 KHz

Output Power (to I/O):

+5VDC 5VDC +/- 5%, 360mADC Max.

+V 12VDC +/- 15%, 600mADC Max.

Mounting: Stand-off Hardware

Memory: 128K FLASH - 256K FLASH, Model Dependent

Real Time Clock (Optional): Month, Day, Day of Week, Year, Hour, Minute and Second

COM 1 (Optional 256K Models Only): General Purpose Port, RS232 or RS422 or RS485

Maximum Baud Rate: 57600 bps

Modbus: Slave

CAN1 (Optional): CAN Bus Interface Port

J1939: Receive Only

*Patent 7,299,099

Enhanced Baby Bear

Programmable Logic Controllers

Hardware Selection Guide

Model	Flash Memory	On-board I/O	I/O Expansion Type	CAN Port	Real Time Clock	Counter Input	Comport 1	Comport 2	Board Power
EBB-100	128K	5 Inputs 10-32VDC/ 10-30VAC RMS 5 Relay Outputs	None	No	No	No	Programming Port, RS232	None	12 VDC or *10 VAC
EBB-200	128K	5 Inputs 10-32VDC/ 10-30VAC RMS 5 Relay Outputs	None	No	No	Yes	Programming Port, RS232	None	12 VDC or *10 VAC
EBB-300	128K	5 Inputs 10-32VDC/ 10-30VAC RMS 5 Relay Outputs	None	No	Yes	Yes	Programming Port, RS232	None	12 VDC or *10 VAC
EBB-400	128K	5 Inputs 10-32VDC/ 10-30VAC RMS 5 Relay Outputs	Baby Bear I/O Expander (8 DC Inputs 8 Relay Outputs)	No	Yes	Yes	Programming Port, RS232	None	12 VDC or *10 VAC
EBB-500	128K	5 Inputs 10-32VDC/ 10-30VAC RMS 5 Relay Outputs	High Density I/O Expanders (120 Inputs 120 Outputs)	No	Yes	Yes	Programming Port, RS232	None	12 VDC or *10 VAC
EBB-600	256K	5 Inputs 10-32VDC/ 10-30VAC RMS 5 Relay Outputs	Baby Bear I/O Expander (8 DC Inputs 8 Relay Outputs)	Yes	Yes	Yes	Programming Port, RS232	**RS 232, **RS422, or **RS 485	12 VDC or *10 VAC
EBB-700	256K	5 Inputs 10-32VDC/ 10-30VAC RMS 5 Relay Outputs	High Density I/O Expanders (120 Inputs 120 Outputs)	Yes	Yes	Yes	Programming Port, RS232	**RS 232, **RS422, or **RS 485	12 VDC or *10 VAC

* with optionally purchased transformer.

** with optionally purchased serial port module. Specify RS232, RS422 or RS485.

Optional Hardware Add-ons

Description	Divelbiss Part #
Serial Port Module RS232	ICM-EBB-RS232
Serial Port Module RS485	ICM-EBB-RS485
Serial Port Module RS322	ICM-EBB-RS422
Transformer 115V primary - 10V secondary	109-101153
Transformer 230V primary - 10V secondary	109-100924
8 in / 8 relay out - Stackable EBB Expander	ICM-EBB-IO-54RE-P
High Density I/O Expander (Various Models Available)	ICM-HDIO-XXP
RS232 Null Modem Programming Cable	ICM-CA-34

Programming Software

Description	Divelbiss Part #
EZ Ladder® Development Platform	ICM-EZLDCD-01
Includes: EZ Ladder Development Platform CD	

Programming the Controller

The Enhanced Baby Bear Series PLCs program in Ladder Diagram using the Divelbiss EZ Ladder®, a Ladder Diagram Development Platform. The 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 Enhanced Baby Bear via the serial port. The program is stored on non-volatile FLASH memory and is automatically executed on power up. Once the download is complete, the controller is successfully programmed and begins executing the program.

Refer to the EZ Ladder User's Manual for more detail on creating ladder diagram programs, connecting to targets and downloading the program to targets. The manual can be downloaded from our website.

<http://www.divelbiss.com>

NOTE: Specifications are subject to change without notice.

