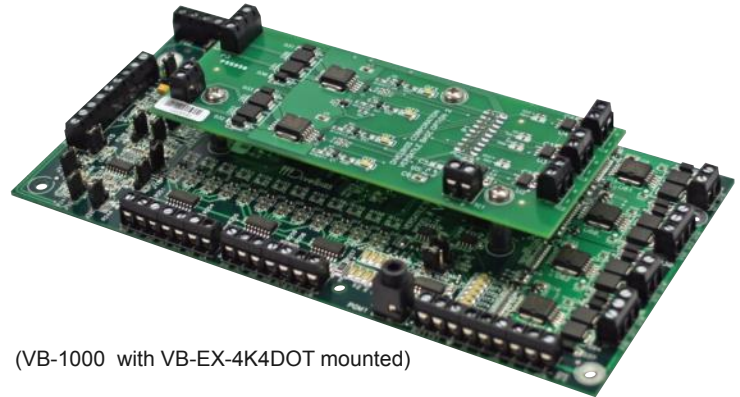


- ▶ Single Board Construction
- ▶ Low Mounting Profile
- ▶ J1939 Connectivity
- ▶ Thermocouple Inputs
- ▶ Modbus Slave Supported
- ▶ Supports Custom Expansion
- ▶ Analog Inputs Field Selectable
- ▶ High Speed (100Khz) Counter
- ▶ -40° to 80°C Operating Temperature



(VB-1000 with VB-EX-4K4DOT mounted)

The Versatile Base control board is designed for cost-effective control by providing powerful features in an open-board format including Digital and Analog I/O, High Speed Counting, Pulse Width Modulation (PWM) Outputs, and communications including SAE-J1939, OptiCAN, and Modbus Slave.

The Versatile Base controllers are ideal for many small to medium OEM system control and monitor requirements. In addition to the on-board functionality, a connector allows for I/O expansion via the processor's SPI port. This expansion capability is what makes the control so versatile as an OEM solution. Expanding the control to include additional functionality such as thermocouple input, quadrature counting, D/A and A/D conversion, motor and fan drive, real time clock, and much more can be done quickly - with minimal NRE cost - as only the smaller expansion board requires engineering design. The result is a quick to market, affordable, application specific solution.

### Specifications:

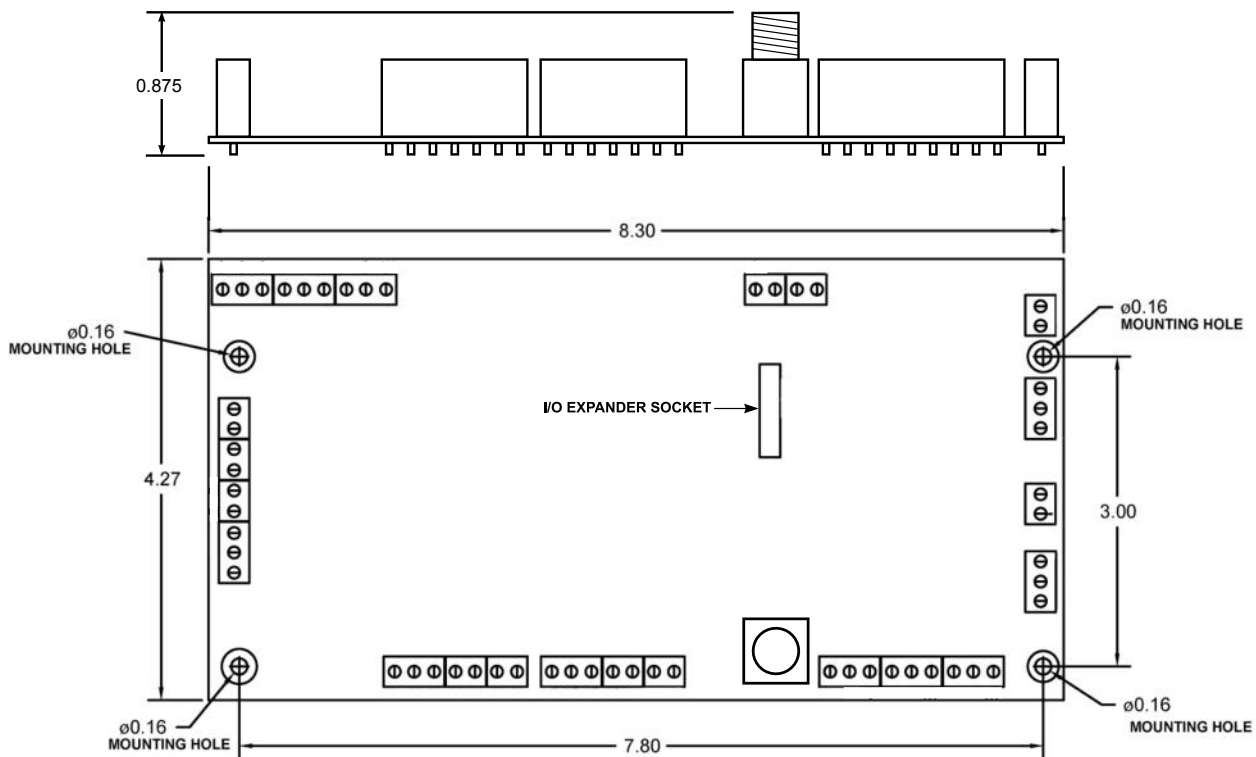
|  |  |
|--|--|
| <b>Digital Inputs:</b>                   | 12 - Inputs rated 8-32VDC, 2 Groups of 6, Groups may be wired for Sinking or Sourcing  |
| <b>Type:</b>                             | Optically Isolated, Solid State with LED Indicators  |
| <b>Analog Inputs:</b>                    | 7 Channels - 10bit resolution, field selectable as 0-20 mADC, 0-5 VDC, or 0-10 VDC   |
| <b>Counter Input :</b>                   | 2 Channels, Count Up, 1 - 100KHz (CTA, CTB). Field selectable as NPN or PNP type.  |
| <b>Maximum Frequency:</b>                | 100 KHz  |
| <b>Outputs - Digital:</b>                | 8 Solid State with LED Indicators rated 4A Max, Over-current protected. Sourcing as 2 Groups of 4 Outputs ( <b>NOTE: May also be used as PWM outputs per below</b> ) |
| <b>Outputs - PWM:</b>                    | 8 Channels 1.5Hz to 1KHz, Over current Protected - 4ADC Maximum - Sourcing, 2 Groups of 4 Outputs with Individual +V Power Source Terminal for Source                |
| <b>Pulse Width Modulation Frequency:</b> | 1.5Hz to 1KHz  |
| <b>Communication:</b>                    | 2 Serial Ports (1 RS232 Programming Port and 1 RS232 - Maximum Baud Rate: 57600 bps)   |
| <b>Networking:</b>                       | 2 CAN ports (SAE J1939 Communications or OptiCAN) and Modbus Slave   |
| <b>Operating Temperature:</b>            | -40° to 80° C (-40° to 176° F)   |
| <b>Input Power Voltage:</b>              | 8-32 VDC - features internal input power monitor using AN7 (PMON)  |
| <b>Input Current:</b>                    | 12VDC Input: 45mA Typical (No I/O Included) standard operation   |
|  | - Add 5mA for Each I/O Point (Input or Output)   |
|  | - Output Loads additional  |
|  | - Power for External Sensors, Communications, and Devices additional   |
| <b>Mounting:</b>                         | Subplate mount using #6 hardware   |
| <b>Memory:</b>                           | 256K FLASH, 4K E <sup>2</sup>  |
| <b>Programming:</b>                      | Divelbiss EZ Ladder® Toolkit software - Ladder Diagram with Function Block   |

# Versatile Base

## OEM Logic Controller

### Typical applications include:

- ▶ Mobile Equipment
- ▶ Proportional Valve Control
- ▶ Engine Control
- ▶ Furnace Control
- ▶ Hydraulic Equipment
- ▶ Refrigeration Control
- ▶ Access Control
- ▶ Pump Control



### Part Numbers:

**VB-1000**

Versatile Base Controller, Model 1000

### Standard Expanders:

**VBEX-4K**

VB Expander - 4 Type K Thermocouple

**Number of Thermocouple Inputs:** 4

**Input Rating:** Type K Thermocouple

**Thermocouple Input Resolution:** 12-Bit

**Measurement Range:** 0° C to 1023° C

**Accuracy:** 0.25° C per bit, +/- 7.75° C or better based on actual measured temperature

**VBEX-4K4DOT**

VB Expander - 4 Type K Thermocouple and 4 Digital Outputs

**Number of Outputs:** 4

**Output Type:** Sourcing Solid-State with Solid State Over-current Protection

**Output Voltage:** Individual Power Source, 8-32VDC

**Output Current:** Solid-State: 4ADC Maximum Resistive

**Number of Thermocouple Inputs:** 4

**Input Rating:** Type K Thermocouple

**Thermocouple Input Resolution:** 12-Bit

**Measurement Range:** 0° C to 1023° C

**Accuracy:** 0.25° C per bit, +/- 7.75° C or better based on actual measured temperature

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