

**Features**

Standard Features

- Low power, small size, light weight Data Recorder.
- Rugged anodized aluminum enclosure; environmentally sealed<sup>1</sup>.
- 4 MBytes of memory, with data retention in case of power loss.
- 4 digital inputs<sup>2</sup>: period counter or switch-state.
- 3 internal sensors:
  - y-axis internal accelerometer:  $\pm 2G$  or  $\pm 6G$ .
  - Internal Temperature.
  - Supply Voltage
- 4 external analog inputs – 10-bit resolution.<sup>3</sup>
- 1 PWM control/alarm output.
- 1 USB 2.0 full-speed port.
- Connectivity to 1 peripheral:
  - COMGPS – 1Hz or 5Hz GPS receiver with integrated antenna.
  - COMBLU – Bluetooth module for wireless connection to PalmOS PDA or Windows PC.
  - COMMHV - Remote Recorder Management.
  - COMOBD - Vehicle Data bus: SAE-J1850VPW, SAE-J1850 PWM, ISO9141, KWP2000.
- Input activated recording – automatic start/stop.
- Sampling rate up to 4kHz per channel.
- Operating temperature from -25 to 85C.



**Installation**

- Attach the Recorder to the vehicle chassis using Dual-Lock™ Velcro or 4x#8-32 screws.
- Position the Recorder such that the three LEDs indicating the system status are visible.
- Align the Recorder's X,Y and Z axis along the sensing direction.
- Use the Standard Cable (CBLST7) to connect the Recorder to the power supply and peripherals.
- Protect the Recorder from extreme vibrations.
- Make sure that air flows over the Recorder to avoid high temperatures.
- The Recorder ground should connect straight to the power supply. Use 18-AWG for power connection.
- Keep the Recorder and its wires at least 20cm (8") away from high interference electrical devices, such as: ignition coils, plug leads, high-current leads, high emission electronic modules or antennas.

Optional Features

OPTMEM-016	Memory upgrade from 4 to 16 MB
OPTMEM-128	Memory upgrade from 4 to 128 MB
OPTMEM-512	Memory upgrade from 4 to 512 MB
OPTACX	x-axis accelerometer
OPTACZ	z-axis accelerometer
OPTCOM	2nd COM port: connectivity to 2 simultaneous peripherals.
OPTCAN	CAN1 port: Vehicle data bus connectivity - CAN 2.0a/b (HS-CAN, FT-CAN or SW-CAN).
OPTTMP	Extended operating temperature from -40 to 85C.

**Calibration**

This unit is supplied with calibration data for its three internal accelerometers.

<sup>1</sup> When used with the CBLST7 environmentally sealed cable connector  
<sup>2</sup> Number of digital inputs is expandable through the addition of the MODCAN-DIG module.  
<sup>3</sup> Number of analog inputs is expandable through the addition of the MODCAN-AN0 module.

**Specifications**

Description	Symbol	Min	Typ	Max	Unit
Power Supply 11-18V input					
Input Voltage	$V_{in}$	11.0		18.0	V
Supply Current @ 11.0V <sup>4</sup>	$I_{in-11}$		48		mA
@ 18.0V	$I_{in-18}$		30		mA
Operating Temperature	$T_O$	-25		85	C
Extended Operating Temperature <sup>5</sup>	$T_{O-Ext}$	-40		85	C
Storage Temperature	$T_S$	-40		85	C
DTC detector group					
Supply voltage <sup>6</sup>	$V_{DTC}$	$V_{in}-0.6$		$V_{in}$	V
Total supply current <sup>7</sup>	$I_{DTC}$			170	mA
Input low voltage <sup>8</sup>	$DTC_{Lo}$	-50		2.4	V
Input high voltage <sup>9</sup>	$DTC_{Hi}$	2.6		50	V
Internal pull-up resistor	$R_{pup}$		4.7		k $\Omega$
Input Capacitance	$C_{DTC}$		100		pF
Input Frequency	$F_{DTC}$	0.7		1000	Hz
A sensor group					
Supply voltage	$V_{SENA}$	$V_{in}-0.6$		$V_{in}$	V
Total supply current	$I_{SENA}$			170	mA
Input Voltage <sup>10</sup>	$SIG_{SENA}$	0		5.0	V
Input Capacitance	$C_{SENA}$		100		pF
COM group					
Supply voltage	$V_{COM}$	$V_{in}-0.6$		$V_{in}$	V
Total supply Current	$I_{COM}$			500	mA
Regulated Supply Voltage	$V_{COM-REG}$	4.75		5.25	V
Regulated Supply Current	$I_{COM-REG}$			500	mA
Control output Voltage	$V_{CTL}$	0		5	V
Effective download throughput					
USB			220		kBytes/sec
COM1, COM2 (RS-232)			10		kBytes/sec
Mechanical Specifications					
Height			31.75		mm
			1.25		in.
Depth			101		mm
			4.00		in.
Width			114.3		mm.
			4.5		in.
Weight			260		g.
			9.17		oz.

<sup>4</sup> Recorder with no sensor attached

<sup>5</sup> Extended operating temperature range option is available when the system is ordered

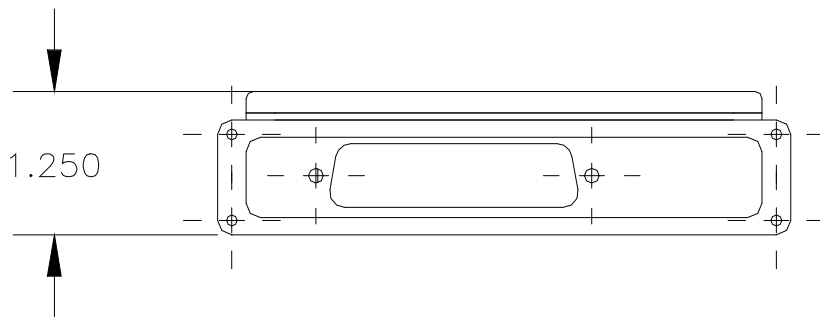
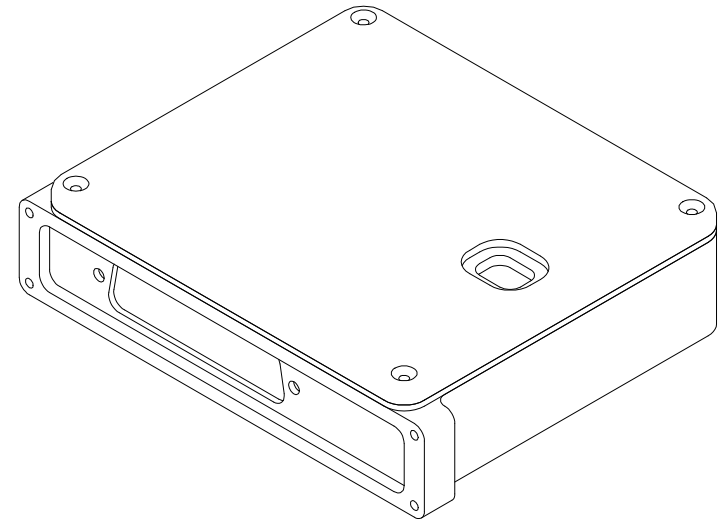
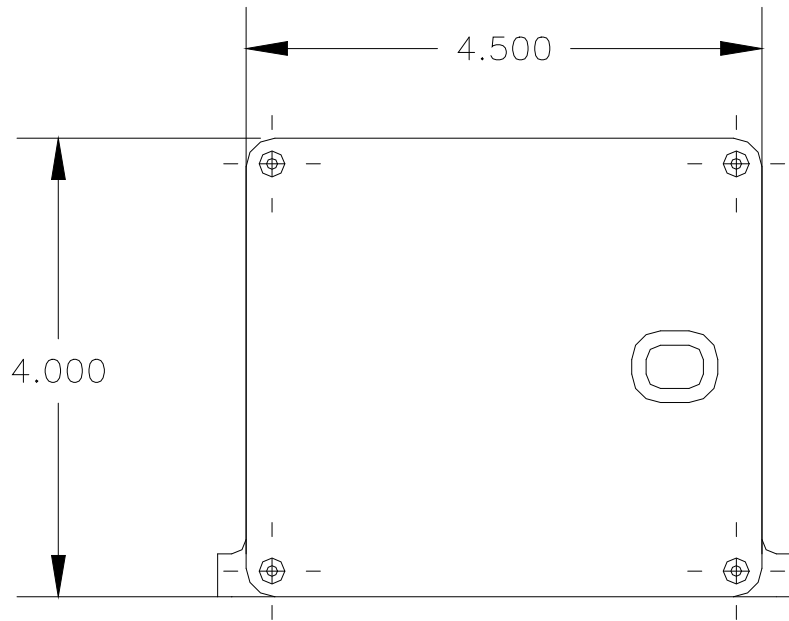
<sup>6</sup> Voltage supplied by the Recorder to the given sensor or detector group.

<sup>7</sup> Maximum current before the auto-reset fuse interrupts supply to the given sensor or detector group.

<sup>8</sup> Single-ended voltage for each detector input.

<sup>9</sup> Single-ended voltage for each detector input.

<sup>10</sup> Single-ended voltage for each sensor input



All dimensions are in inches [millimeters].