



KVH's C100™ Compass Engine is an innovative stand-alone design offering small size, low cost, and system flexibility to meet your demanding heading sensor applications.

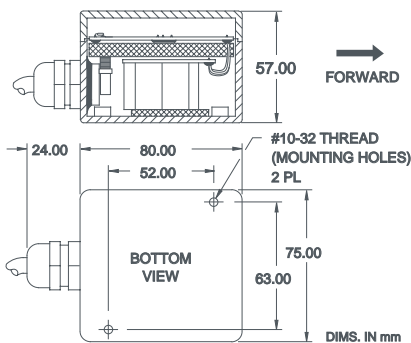
KVH C100™ Compass Engine Technical Specifications

Physical

Dimensions	114 mm(l) x 46 mm(w) x 28 mm(h) (4.5" x 1.8" x 1.1")
Weight	64 grams (2.25 oz.) – with SE-25 coil
Input Voltage	+8 to +18VDC or +18 to +28VDC (user selectable)
Current Drain	40 mA DC; maximum

Optional Aluminum Housing¹

Dimensions	80 mm(l) x 75 mm(w) x 57 mm(h) (3.15" x 2.95" x 2.25")
Weight	400 grams (14 oz.) excluding cable



Optional aluminum housing

Performance

Accuracy²	±0.5° or ±10 mils RMS (SE-25 coil assembly and digital outputs)
Repeatability	±0.2° or ±5 mils (SE-25 coil assembly and digital outputs)
Resolution	0.1° or 1 mil
Dip Angle	±80° (maintains stated accuracy after auto-compensation up to ±80° magnetic dip angle)
Tilt Angle²	±16°; Dev. = ±0.3° RMS (SE-25) ±45°; Dev. = ±0.5° RMS (SE-10)
Declination/Variation	±180.0° adjustment range (offset) (user selectable)
Index Error Correction	±180.0° adjustment range (offset) (user selectable)
Response Time	0.1 to 24 seconds (user selectable)

Environmental

Operating Temp	-40° C to +65° C (-40° F to +150° F)
Storage Temp	-57° C to +71° C (-71° F to +160° F)
Shock/Vibration	Designed to meet MIL-STD-810 shock and vibration requirements
Altitude	Designed to meet 12,192 meters (40,000 ft.) MSL (operating/non operating)
Reliability	MTBF calculated to >30,000 hours

¹ (SE-25 coil option only)

² Accuracy measurements apply to a level compass module after compensation in a free magnetic field. After installation and auto-compensation, typical accuracies of ±0.5° are achievable on most platforms.

KVH C100™ Specifications



KVH C100™ Compass Engine Technical Specifications – continued

Outputs and Interfaces

Digital Interfaces³

RS232 Compatible

Bidirectional Serial Data, UART format w/ASCII characters, (1 start, 8 data, 1 stop, no parity), 300 - 9600 baud (user selectable)

Serial Input Serial Output

Accepts RS232 levels or 0 to +5V logic levels
Same as RS232 except for 0 to +5V logic levels; (Logic "0" = +5V) 10K Ohm - min. load

Inv. Serial Output NMEA 0183

Same as Serial Output except logic "1" = +5V
NMEA 0183 compatible bidirectional data/levels/formats

Synchronous

Strobe Input: Ground momentarily to obtain data output
Clock Output: 0 to +5V sq.wave @ 10KHz rate
Data Output: 0 to +5V levels
Data Format: 4 digit BCD, 16 bit binary or 16 bit serial gray code – user selectable through serial port
10K Ohm minimum load on output signals

Analog Outputs

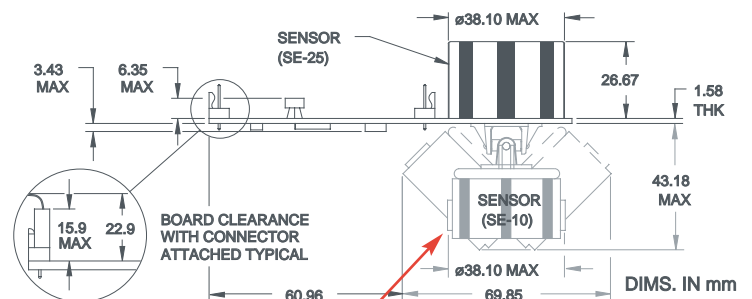
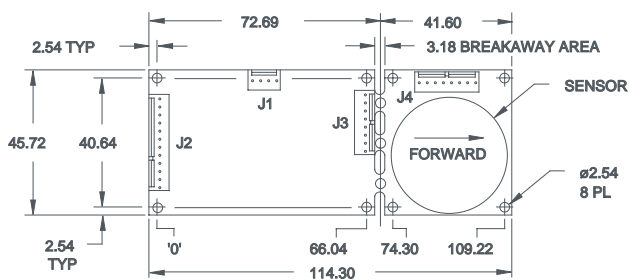
Sine/Cosine

Output Voltage: +1.5V ±1.0V
Reference Voltage: +1.5VDC;
20K Ohm minimum load capability

Linear Voltage

0.1 to 1.9VDC into 20K Ohm minimum load

³Digital outputs can be user configured to provide strobed or free running data at up to a 10Hz message rate.



Optional SE-10 coil with additional mechanical gimbal may replace SE-25 coil

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Specifications subject to change without notice

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