FURUNO

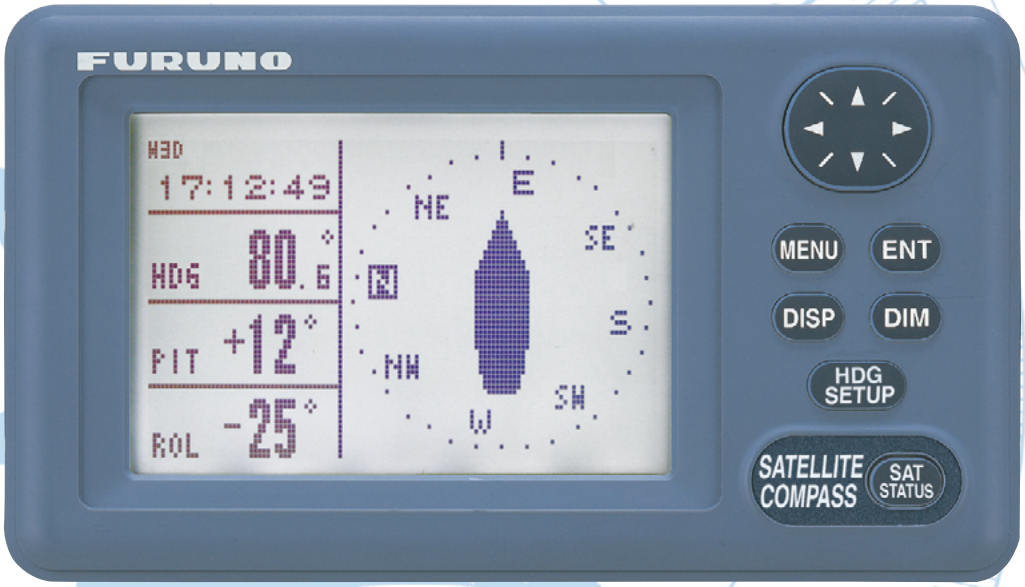
Revolutionary heading sensor

SATELLITE COMPASS

Model SC-110

www.furuno.com

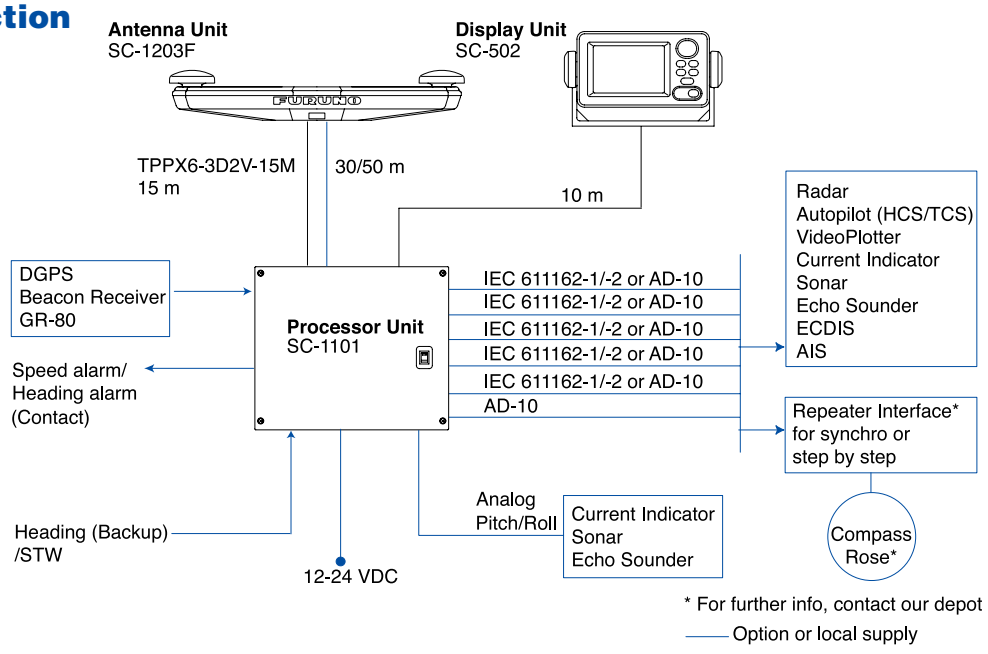
FURUNO high-grade satellite compass provides superior heading accuracy for AIS, ECDIS, Radar and more



Compass Rose Mode

- Provides highly accurate heading data for autopilot, radar, AIS, Sonar and plotting systems
- IMO MSC.116(73) type approved as a verified THD (Transmitting Heading Device) with high accurate ±0.6°
- Rapid 45°/s follow-up rate greatly exceeds IMO High Speed Craft requirements 20°/s
- High accurate GPS, SBAS (WAAS/EGNOS/MSAS) Data – SOG, COG, ROT, and L/L
- High Contrast 4.5" Silver Bright LCD
- Precision Pitch/Roll Data in Analog and Digital formats for vessel stabilizers, sonar, etc.
- Multiple High Speed Heading Data Output in IEC 61162-1/2 (NMEA0183/HS)
- 100% free of yearly or regular maintenance – No Recurring Costs
- Unique Tri-Antenna System improves system accuracy and reduces the effects of yaw, pitch and roll

Interconnection Diagram



The SC-110 is an enhanced satellite compass that uses Furuno's advanced GPS technology. This satellite compass can be used for a wide range of applications that require a heading signal, such as Radar, AIS, ECDIS, Scanning Sonar, Echo Sounders, Autopilots, etc. The SC-110 utilizes a GPS carrier frequency to determine heading and the performance is not affected by ship's speed, latitude, geomagnetism, etc. Settling time is nearly instantaneous and the follow-up performance is excellent, achieving 45°s (SOLAS HSC Code requires 20°s as a minimum).

The SC-110 delivers GPS positioning, SOG (Speed Over Ground), COG (Course Over Ground), and ROT (Rate of Turn). SOG is remarkably accurate through decoding the Doppler shift in the received satellite signals.
The information can be output through up to 11 ports in IEC61162. The heading information is output in IEC61162-2 format at the high rate of 38.4 kbps to satisfy the high speed data-output required in special applications.

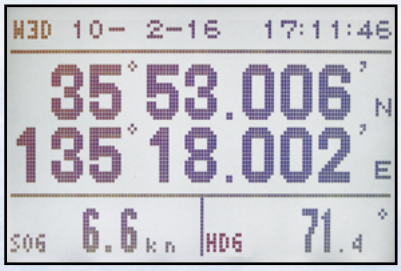
Precision roll and pitch data is output in both analog and digital formats to external equipment. For sonar and echo sounders, the SC-110 offers stable echo pictures by compensating the transmitted/received beams even in rough seas. Thus, the SC-110 can also function as a highly accurate motion sensor.

The SC-110 has a unique Set and Drift mode.
When connected with a water-tracking speed log, such as the DS-80, it calculates set and drift (tide direction and speed). The display helps a radar operator manually enter set and drift for accurate sea stabilization pictures.

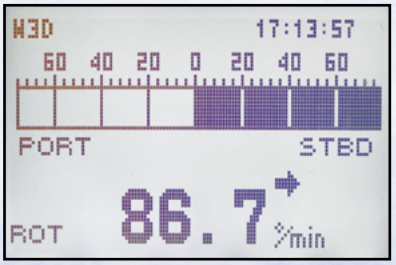
The SC-110 consists of three GPS antennas on a solid precision support, a processor unit and a display unit. The tri-antenna system helps reduce the influence of vessels' motions more than dual-antenna systems. There are no mechanical parts such as gimbals or rotating meters, making the SC-110 free from regular costly maintenance experienced with other compasses.

Heading Mode

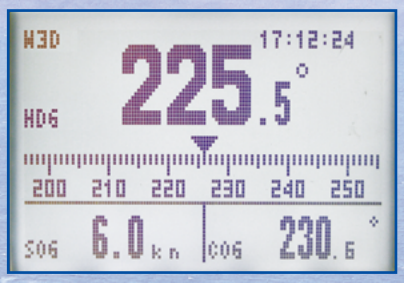
NAV Data Mode



ROT Mode



Steering Mode



Set & Drift Mode

(Current (Set and Drift) and Distance Run is selectable.)

SPECIFICATIONS OF SC-110

1. Accuracy

Heading:	±0.6° (95 % static accuracy) (IMO THD MSC.116(73) static accuracy: ±1.0° x secant Lat.)
GPS:	10 m (95 %)
DGPS:	5 m (95 %)
2. Follow-up	45°/s rate-of-turn
3. Settling time	4 min
4. Interface	
Number of ports	
10 ports*	5 ports in AD-10 or 10 ports in IEC 61162-1/-2 * can be utilized in menu selection
1 port	AD-10 only
Serial data sentence	
25, 100, 200 ms, 1, 2 s data rate:	HDT, HDM(Heading), ROT(Rate of turn) ATT(Pitch and Roll)
1, 2 s data rate:	VHW(Heading), VTG, VBW(SOG), GGA, GLL, GNS(L/L), ZDA(UTC), VDR (Set and Drift)
Log Output	1 port: 200/400 p/nm (closure)
Alarm Output	1 port: Alarm signal (closure signal)
Heading Input	1 port: Backup Heading (AD-10/IEC 61162-1) HDT, HDG, HDM, VBW, VHW, VLW
DGPS Input	1 port: RTCM SC-104 format
Analog data sentence	
Output	1 port: Roll 1 port: Pitch
5. Receiver Type	Twelve discrete channels. C/A code, all-in-view
6. Receive Freq	L1 (1575.42 MHz)
7. Display Unit	Monochrome LCD, 4.5" diagonal 95 (W) x 60 (H)mm, 120 x 64 pixels
8. Display Mode	Steering, Nav Data, Compass Rose, ROT, Heading and Set and Drift modes
POWER SUPPLY	12-24 VDC, 15 W

ENVIRONMENTAL

IEC 60945 for EMC, Vibration, Temperature

EQUIPMENT LIST

Standard

1. Display Unit* SC-502	1 unit
2. Antenna Unit* SC-1203F with 15 m cable	1 unit
3. Processor Unit* SC-1101	1 unit

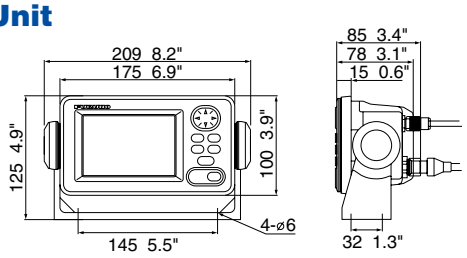
(* Including Installation Materials and Spare Parts)

Option

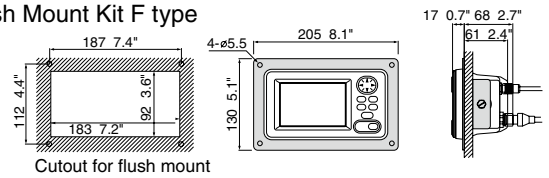
1. Antenna Cable 30 m CP20-01700, 50 m CP20-01710
2. Flush Mount Kit S type CP20-17, F type CP20-29

Display Unit

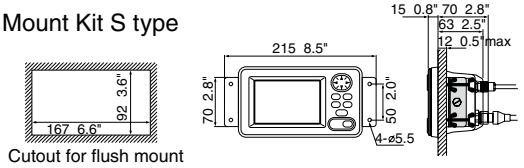
0.55 kg 1.2 lb



Flush Mount Kit F type

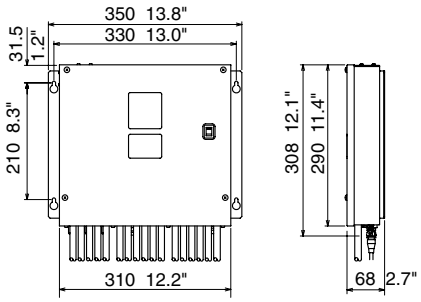


Flush Mount Kit S type



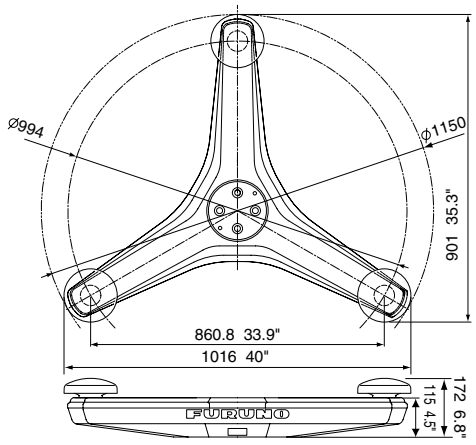
Processor Unit

4.2 kg 9.3 lb



Antenna Unit

6.8 kg 15.0 lb



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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