

# Revolutionary heading sensor with advanced GPS technology **SATELLITE COMPASS** Model SC-50







The future today with FURUNO's electronics technology.
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TRADE MARK REGISTERED MARCA REGISTRADA

## FURUNO's advanced GPS technology ensures highly accurate heading data for AIS, ECDIS, Radar/ARPA, Autopilots and more.



- Heading accuracy ±1.0° complying with IMO MSC.116(73) as a THD (Transmitting Heading Device)\* \*Radome and open antenna type
- Excellent follow-up rate of 45°/s exceeding requirements for high speed craft (20°/s)
- Pitch and roll output in both analog and digital formats for ship's motion correction on FCV-30 and CH-250/270/300
- Tri-antenna system reduces the effect of pitching, rolling and yawing
- Free from regular maintenance

- Accurate SOG, COG, ROT, and L/L
- High speed heading data output in IEC 61162-2 format (38.4 kbps)
- Output in IEC 61162-1/2 or FURUNO AD-10 formats is available: up to 10 ports in IEC 61162-1/2 or up to 5 ports in AD-10 or combination of IEC 61162-1/2 and AD-10 formats
- Individual setting of output sentences and baud rate in each port for flexible interface with external equipment
- Clear 4.5" silver bright LCD



\* Base line length: Length between a pair of GPS antennas, which are installed along ship's fore-and-aft line.

The SC-50 is a satellite compass that uses FURUNO's advanced GPS technology. The satellite compass can be used for a wide range of applications for any type of vessel. Radar/ARPA, AIS, ECDIS, scanning sonar and autopilots can utilize the functions of this compass. As the SC-50 uses GPS carrier frequency to determine heading, the performance is not affected by ship's speed, latitude, geomagnetism, etc. Settling time is near instantaneous and the follow-up performance is excellent, achieving 45°/s (SOLAS HSC Code requires 20°/s as a minimum).

The satellite compass delivers GPS positioning, SOG (Speed Over Ground), COG (Course Over Ground) and ROT (Rate of Turn). SOG accuracy is achieved by decoding the Doppler shift in the received satellite signals. The information can be output in IEC61162-2 format, at the high update rate up to 38.4 kbps to satisfy the high speed data-output requirements in special applications.

The roll and pitch angle is also output both in analog and digital formats to external equipment. For sonar or fish finders, the SC-50 offers stable echo pictures by compensating the transmitted/received beams even in rough seas. Thus, the satellite compass can also function as a highly accurate motion sensor.

The SC-50 has a unique Set and Drift mode. In this mode set and drift (tide direction and speed) are calculated by connecting with a water-tracking speed log, such as the DS-80. This display is useful to the radar operator manually entering set and drift, to get accurate sea-stabilized pictures.

The SC-50 consists of an antenna, display and processor unit. The antenna is selectable from an open antenna featuring strong against snowfall, a stylish Radome antenna or separate antenna, installable anywhere onboard. Each accommodates three GPS antennas. The tri-antenna system helps reduce the influence of vessels' motions

rather than dualantenna system.



**Processor Unit** 



### **SPECIFICATIONS OF SC-50**

1. Accuracy	
Heading	±1.0° (95% static accuracy)
GPS Fix	10 m (95%)
DGPS Fix	5 m (95%)
WAAS Fix	3 m (95%)
2. Follow-up	45°/s rate-of-turn
3. Settling Time	
Radome/Open	3 min
Separate	5 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	I, 2 s data rate:
	HDT, HDM(Heading), ROT(Rate of turn)
1. O o doto voto:	ATT(Pitch and Roll)
1, 2 S data fate.	$V \cap W( \cap eauing), V \cap G, V \cap W( O \cap G),$
	VDP( Set and Drift)
	1 port: 200/400 p/pm (closure)
	1 port: Alarm signal (closure)
	1 port. Alarm Signal (closure signal)
Heading input	
DCPS input	1 port: PTCM SC 104 format
	Typelve discrete channels
5. Receiver Type	C/A code, all in view
6 Dessive From	
7. Display Unit	LT (1575.42 MHZ)
i. Display Unit	4.5 HIGHORITOTHE LCD, $05 (M) \times 60 (H)$ mm 120 × 64 rivele
0 Diamlay Mada	$90 (vv) \times 00 (\Pi) \Pi \Pi, 120 \times 04 \rho IXels$
o. Display wode	Steering, Nav Data, Compass Rose,
	ROT, neading and Set and Drift modes

#### EQUIPMENT LIST

Sta	andard	
1.	Display Unit SC-502	1 uni
2.	Antenna Unit (Specify when ordering)	
	SC-303 or SC-603 with 15 m cable	1 uni
	GSC-001 with 15 m cable	3 uni
3.	Processor Unit SC-501	1 uni

#### Option

2. Flush Mount Kit S type CP20-17, F type CP20-29



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE 05033SS Printed in Japan

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POWER SUPPLY 12-24 VDC, 15 W ENVIRONMENTAL

IEC 60945 for EMC, Vibration, Temperature



<sup>1.</sup> Antenna Cable, 30 m CP20-01700, 50 m CP20-01710