

**SPECIFICATIONS OF GPS RECEIVER
GP-39**

1 ANTENNA UNIT

1.1	Receiving channel	
	GPS	12 channels parallel, 12 satellites tracking
	SBAS	2 channels
1.2	Rx frequency	1575.42 MHz ±1.023 MHz
1.3	Rx code	GPS: C/A code, SBAS: L1 C/A
1.4	Position fixing system	All in view, 8 state Kalman filter
1.5	Position accuracy	
	GPS	10 m (95% of the time, HDOP ≤ 4)
	WAAS	3 m (95% of the time, HDOP ≤ 4)
	MSAS	7 m (95% of the time, HDOP ≤ 4)
1.6	Tracking velocity	1000 kn
1.7	Position fixing time	Warm start: 30 s approx, Cold start: 90 s approx. Hot start: 1 s approx.
1.8	Position update interval	1 s

2 DISPLAY UNIT

2.1	Display system	4.2-inch Color LCD, 480 x 272 dots, 92.88 (W) x 52.632 (H) mm
2.2	Display mode	Plotter, Highway, Steering, NAV data, Satellite monitor, User display
2.3	Brilliance	700 cd/m ² nominal
2.4	Projection	Mercator
2.5	Range scale	
	Plotter	0.02/0.05/0.1/0.2/0.5/1/2/5/10/20/40/80/160/320 NM
	Highway	0.2/0.4/0.8/1/2/4/8/16 NM
2.6	Memory capacity	Track: 3000 pts, Waypoint: 10,000 pts w/ comment 13 character
2.7	Storage capacity	100 routes w/ 30 waypoint each
2.8	Alarms	Arrival and anchor watch, Cross track error, Ship's speed, WAAS, Time, Trip

3 INTERFACE

3.1	Number of ports	NMEA0183 V1.5/2.0/3.0: 1 port, current loop USB: 1 port, USB2.0
3.2	Data sentences	
	Input	RTE, TLL
	Output	AAM, APB, BOD, BWC, BWR, DTM, GGA, GLL, GSA, GSV, RMB, RMC, VTG, XTE, ZDA
3.3	Output proprietary sentences	
	PFEC	GPrtc, GPwpl, GPxfr, SDmrk

4 POWER SUPPLY

4.1 Display unit 12-24 VDC: 0.7-0.3 A

5 ENVIRONMENTAL CONDITIONS

5.1 Ambient temperature

Antenna unit -25°C to +70°C (storage: -30°C to +75°C)

Display unit -15°C to +55°C (storage: -30°C to +75°C)

5.2 Relative humidity 93% or less at +40°C

5.3 Degree of protection

Antenna unit IP56

Display unit IP55

5.4 Vibration IEC 60945 Ed.4

6 UNIT COLOR

6.1 Antenna unit RAL9010

6.2 Display unit N1.0