ONWA®

MARINE ELECTRONICS

AVES Marine Ltd
01357 680013 (Sales)
01357 680054 (Support)

KP-25

KP-27

NEW!

KP-25/KP-27 SERIES

GPS Chart Plotter with built-in Fish Finder and Class B+ AIS Transponder

K-CHART
Free detailed sea map

C·MAP®
Support C-Map MAX

NAVIONICS®
A Garmin Brand
Compatible with Navionics+

SD
SD Card System Update

CLASS B+
Built-in AIS Transponder
KP-25A and KP-25X:
Built-in AIS

Built-in Fish Finder
KP-25F and KP-25X:
Built-in Fish Finder

NMEA 2000
NMEA0183
NMEA2000
NMEA Interface

Sunlight Viewable
LCD Brightness 1000 nit

IP66
Ingress Protection

KP-25
5" GPS Chart Plotter

KP-25A
5" GPS Chart Plotter with Class B+ AIS Transponder

KP-25F
5" GPS Chart Plotter with built-in Fish Finder

KP-25X
5" GPS Chart Plotter with built-in Fish Finder
and Class B+ AIS Transponder

KP-27
7" GPS Chart Plotter

KP-27A
7" GPS Chart Plotter with Class B+ AIS Transponder

KP-27F
7" GPS Chart Plotter with built-in Fish Finder

KP-27X
7" GPS Chart Plotter with built-in Fish Finder
and Class B+ AIS Transponder

Model	KP-25	KP-25A	KP-25F	KP-25X
Display Size	5"	5"	5"	5"
Resolution	800x480	800x480	800x480	800x480
LCD Brightness	1000 nit	1000 nit	1000 nit	1000 nit
GNSS	GPS + Beidou + Galileo + Glonass	GPS + Beidou	GPS + Beidou + Galileo + Glonass	GPS + Beidou
Navionics+ Compatible	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand
C-Map Max Compatible	C-MAP	C-MAP	C-MAP	C-MAP
K-Chart Map	K-CHART	K-CHART	K-CHART	K-CHART
NMEA Interface	NMEA0183 NMEA2000	NMEA0183 NMEA2000	NMEA0183 NMEA2000	NMEA0183 NMEA2000
GPS Antenna	(antenna)	(antenna)	(antenna)	(antenna)
Fish Finder Feature			Dual Frequency (50 &200KHz)	Dual Frequency (50 &200KHz)
Built-in AIS		Class B+		Class B+

Model	KP-27	KP-27A	KP-27F	KP-27X
Display Size	7"	7"	7"	7"
Resolution	800x480	800x480	800x480	800x480
LCD Brightness	1000 nit	1000 nit	1000 nit	1000 nit
GNSS	GPS + Beidou + Galileo + Glonass	GPS + Beidou	GPS + Beidou + Galileo + Glonass	GPS + Beidou
Navionics+ Compatible	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand	NAVIONICS A Garmin Brand
C-Map Max Compatible	C-MAP	C-MAP	C-MAP	C-MAP
K-Chart Map	K-CHART	K-CHART	K-CHART	K-CHART
NMEA Interface	NMEA0183 NMEA2000	NMEA0183 NMEA2000	NMEA0183 NMEA2000	NMEA0183 NMEA2000
GPS Antenna	(antenna)	(antenna)	(antenna)	(antenna)
Fish Finder Feature			Dual Frequency (50 &200KHz)	Dual Frequency (50 &200KHz)
Built-in AIS		Class B+		Class B+

DIFFERENT DISPLAY MODES
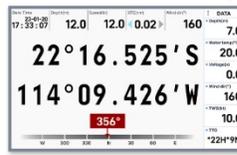
Plotter

Day mode
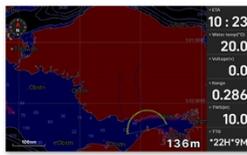
Night mode

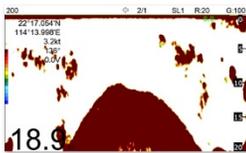### Navigation Data

Day mode

Night mode

Compass

Day mode

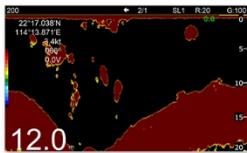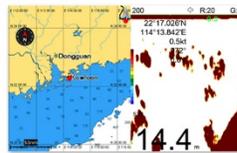Night mode

Highway

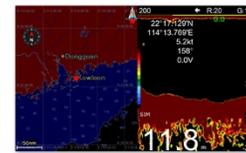Day mode

Night mode

Sounder
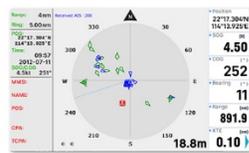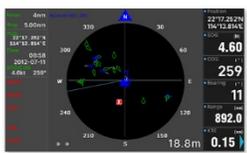

Day mode

Night mode

Sounder + Plotter

Day mode
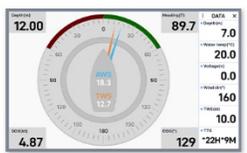

Night mode

AIS

Day mode

Night mode

Wind

Day mode

Night mode

Satellite
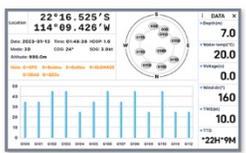
Day mode
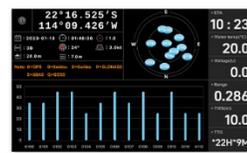
Night mode

GPS CHART PLOTTER

Compatible with the following mapping systems:

K-Chart Mapping System
ONWA Chart Plotters are compatible with K-Chart Mapping and displays worldwide Electronic Charts that users can use for FREE.
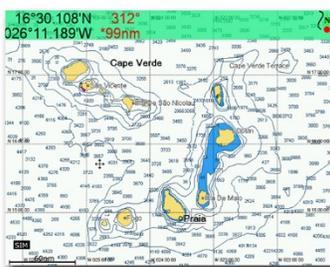
C-Map Max
ONWA Chart Plotters are also compatible with C-Map Max showing Nautical Charts

Navionics+
ONWA Chart Plotters when used with Navionics+ charts shows Nautical Charts and Sonar Charts. Advance options also include: Highlight Shallow Area, Adjust Contour Density and Shallow Fishing Range

Standard Accessory

GPS Patch Antenna
with 4m cable (SMA connector)
Ingress Protection IP66

Optional Accessory

KA-07
External GPS Antenna
with 10m cable

KA-GC9A
Heading Sensor E-Compass
(RS422 Connection)

> BUILT-IN HD FISH FINDER

Transducer required

- Applies the most advanced Digital Fish Finder Technology
- Dual Freqeuncy: 50 and 200kHz (alternately transmitted)
- Automatic Range and Gain adjustment depending on usage (Cruising or Fishing)

> Excellent Sea-bed Discrimination and easily identify fishes and school of fish
> Exact depth to where the school of fish is shown for ease of fishing
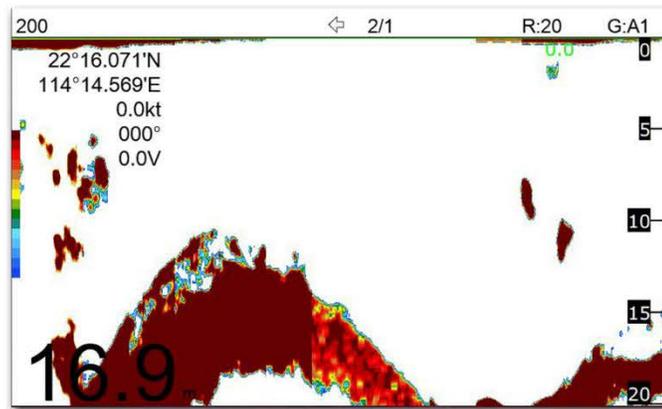
> DISPLAY MODES

DISPLAY MODES
> Selection of Display Modes depending on your needs
50 KHz, 200KHz, Dual, 50KHz/Zoom and 200KHz/Zoom
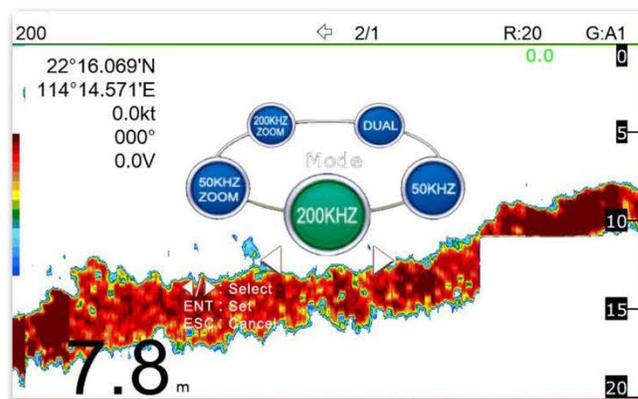
16 COLORS ACCORDING TO INTENSITY

Color bar shows 16 colors
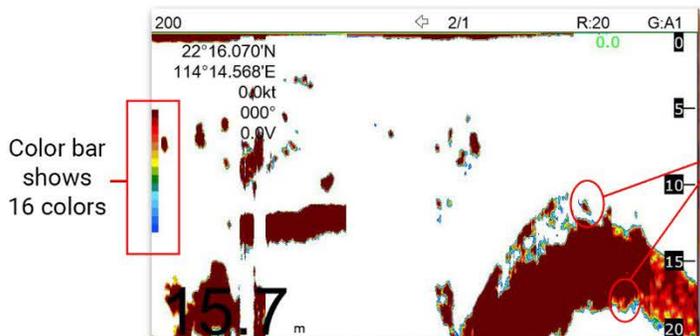
Can distinguish different strength of echoes by colors

SAVES THE POSITION OF A HISTORY ECHO IN WAYPOINT MEMORY
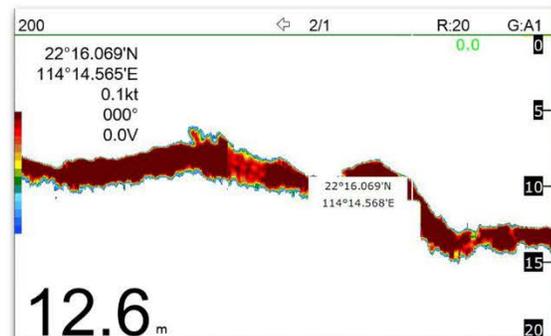
ZOOM MODES
Marker Zoom, Bottom Lock Zoom, & Bottom Zoom
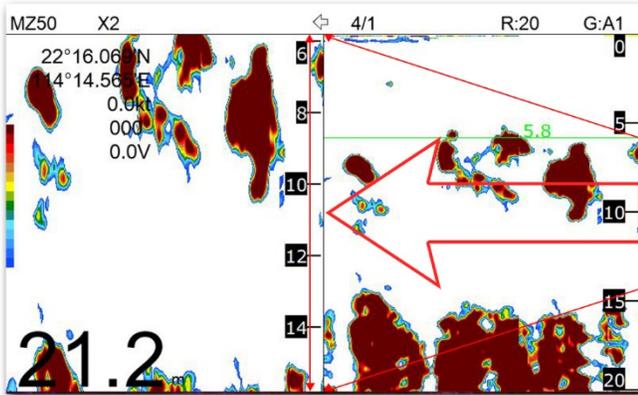
MARKER ZOOM

> The marker area is zoomed and displayed on the left side screen
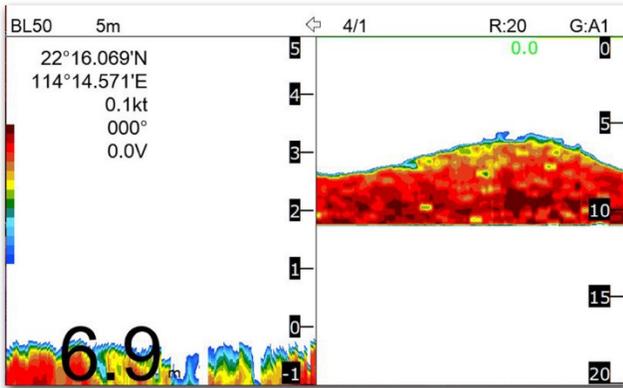
BOTTOM LOCK ZOOM
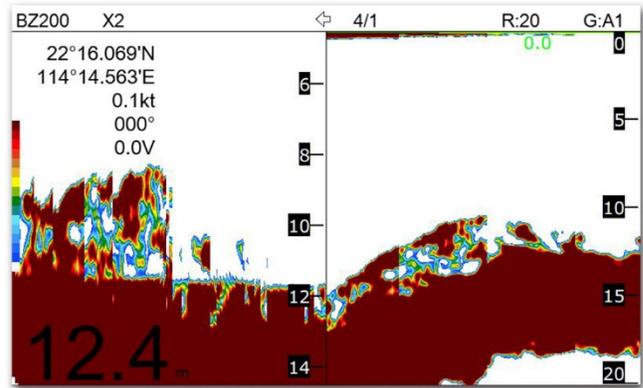
BOTTOM ZOOM

› FISH, BOTTOM, AND TEMPERATURE ALARMS

Temperature sensor required for Temperature Alarm

Fish Alarm:　　　　Alarms when fish is seen at set range
Bottom Alarm:　　　Alarms when the set bottom range is reached
Temperature Alarm:　Used to warn the user when temperature reaches set temperature range

OPTIONAL ACCESSORIES
(not included in the standard set)

KTD-520_TM
Transom Mount
Transducer 600W

Bronze Transducer
Thru-hull Transducer
600W

Plastic Transducer
Thru-hull Transducer
600W

KTS-10K_TM
Transom Mount
Temperature Probe

KTS-10K_TH
Thru-Hull
Temperature Probe

VHF Antenna needed

CLASS B+

Class B+ AIS Technology

- **SOTDMA Technology** - Same technology used by Class A
  - Guaranteed time slot allocation
- **5W Transmission Power** - increases the range and AIS Satellite reception enabling Global tracking
- **Increased Transmission Rate** (Based on speed)

exactTrax™

exactTrax Tracking

> Integrated with exactTrax AIS satellite tracking technology service which provides the ability to track fishing boats and small commercial vessels with AIS Class B type transceivers across the globe

NOTE: In order to use exactTrax, user must avail ExactEarth Service

ExactTrax showing position of a vessel sailing for 1 week from Hong kong to Malaysia in multi-hour vessel track

AIS Target Tracking

REC.

ONWA AIS Plotters now has the ability to record tracks of AIS Targets
> **Manual AIS saved tracks:** Record Manually selected AIS targets, Max = 10 targets/records
- Recorded tracks are useful when checking the records during an accident
- Recorded tracks can be saved as a route

Points in the track shows the location, date, time, SOG and COG, etc.

Recorded Track saved as a route

CPA and TCPA Alarm

Alarm that helps the user to be aware of nearby vessels stating possible CPA and TCPA. The unit alarms until acknowledged

Vessel List

Shows nearby vessels, distance to your vessel and information. Selecting a target from the list shows the vessels details

AIS Targets Overlay in the Plotter Screen

Targets are overlaid in the Plotter screen and shows nearby AIS, pointing the cursor at one target shows the MMSI number and Location, selecting the target shows the targets ship details

PLOTTER CHARACTERISTICS

Waypoints/icons	12000 user waypoints with name, symbol 3 system waypoints: MOB, Start , Cursor 10 proximity waypoints
Routes	30 routes waypoint up to 170 points each, plus MOB and Track Navigation or GOTO Track modes
Tracks	16,000 points automatic track log; 10 saved tracks (up to 16,000 track points each) lets you retrace your path in both directions
Alarms	XTE, Anchor drag, arrival, speed, voltage, proximity waypoint, Timer and AIS (CPA and TCPA) alarm
Drawing	1000 Drawing Marks; 2000 Drawing Lines (40 points each); 1000 Drawing Place Name; 8 Colors for Drawing
Palette	Normal Daylight exposed to sunlight Night in dark environment NOAA paperchart colors
Tides	Built-in Worldwide Tide data
Position format	Lat/Lon
Basemap	Worldwide
External Map	Compatible with K-Chart 2.0, K-Chart 3.0, C-Map Max and Navionics+
User data storage	Internal backup of user settings or external SD-card
Plot Interval	5secs to 60 mins or 0.01 to 10nm
Plotting scales	0.001 to 700nm
AIS	700 targets display
AIS Target Tracking	10 Manually saved tracks (300 points each)
Perspective View	On/off (Available for C-Map only)
Celestial	Sunrise/Sunset Moonrise/Moonset

NMEA SENTENCE SUPPORTED

INPUT: (Auto scan Baudrate)
GGA, GLL, GSA, GSV, RMC, HDG, HDM, HDT
VTG, ZDA, MTW, VWR, VWT, MWD, VPW, VHW
TLL, TTM, VDO, VDM, GNS, MTA
RMA, DBT, DPT, MWV, BWC, XTE, ZDL, WPL, AAM,
APB, BOD, RMB, DSC, MDA, RPM, XDR

OUTPUT:
Baudrate : Selectable 4800, 9600, 19200, 38400
GGA, GLL, RMC, GSA, GSV, AAM, APA
APB, BOD, BWC, BWR, DBT, DPT, HDT
MTW, RMB, TLL, VTG, WPL, XTE, ZDA
ZTG, ZDL, MWD, VPW, VWR, VWT
Outputs for autopilot:
APA, APB, BOD, XTE

GPS RECEIVER CHARACTERISTICS

Receiver	50 parallel channel GNSS receiver continuously tracks and uses up to 50 satellites to compute and update your position
Acquisition time	Cold start: 29 seconds Hot start: 1 second
Update rate	1 second
Accuracy	Position: 3 meters(95%) without S/A Velocity: 0.1 meter/sec without S/A
SBAS	Supported
Satellite System	GPS and BeiDou
GNSS	GPS and Beidou (KP-25A, KP-25X, KP-27A and KP-27X) Choice of 4 GNSS (KP-25, KP-25C, KP-27 and KP-27C): GPS, Beidou, GLONASS, Galileo
Dynamics	Altitude: 18,000 m Velocity: 515 m/s
Datum	WGS 84 & User defined
Antenna	GPS Patch Antenna

GPS INTERFACE

GPS Data	RS2422 input/output, NMEA 0183 V3.01 and V4.11
GPS Input Baudrate	Auto Scan (4800, 9600, 19200 and 38400)
GPS Output Baudrate	Selectable among 4800, 9600, 19200 and 38400

EQUIPMENT LIST

Display unit
Quick manual
Mounting Bracket
GPS Patch Antenna with 4m cable (SMA connector)
Standard Accessories Pack

AIS INTERFACE

AIS Data:	RS232 output VDO, VDM, GGA, GSA, GSV and RMC
AIS Output Baudrate:	38,400

AIS CHARACTERISTICS   *For KP-25A/27A KP-25X/27X*

Frequency Rate	156.025 MHz~162.025 MHz
Access Scheme	SOTDMA
Channel Bandwidth	25 KHz
Modulation	GMSK
Data Rate	9,600 bps
Number of AIS Transmitter	1
Number of AIS Receiver	2
AIS Channel 1	CH 87B (161.975 MHz)
AIS Channel 2	CH 88B (162.025 MHz)
Tx Power Output	> 5 Watt (37 dBm ± 1.5 dB)
RX Sensitivity	>123dBm @ 20% PER
RX Message Format	AIS Class A and B messages
Comply Standard	IEC-62287 IEC 62287-2 Ed. 2.0:2017

ECHO SOUNDER   *For KP-25F/27F KP-25X/27X*

Echo Color	16 colors (including background color) according to echo intensity. The background color is selectable from blue, light blue, white and black.
Basic Range *The basic ranges can be changed on the system menu*	Meters 5/10/20/40/80/150/200/300/600/1000 Feet 15/30/60/120/200/400/600/1000/2000/3000 Fathoms 3/5/10/20/40/80/100/150/300/600
Range Shift	Up to 1000 meters (3000 feet, 600 fathoms)
Zoom Range	Times 2, 3, 4 and 6 ranges
Bottom Lock Expansion Range	5/10 meters,10/20 feet, 2/5 fathoms
Auto Mode	Automatic adjustment of range and gain
Display Mode	High Frequency (200K), Low Frequency (50K), Dual (200K and 50K 1/2 display on each), Zoom (200K and 50K zoom) and A-scope Display
Zoom Display	Marker Zoom, Bottom Zoom and Bottom-lock Expansion
Display Advance Speed	Lines/TX: Freeze, 1/8, 1/4, 1/2, 1/1, 2/1, 4/1, 6/1, 8/1 and 10/1
TX Frequency	50 and 200kHz (alternately transmitted)
Power Output	600W

Pulse-Length/TX Rate

Display End Depth (m)	5	10	20	40	80	150	200	300	600	1000
Pulse Length 200K (µs)	120	220	320	520	920	1020	1020	1020	1020	1020
Pulse Length 50K (µs)	170	270	370	570	970	1070	1070	1070	1070	1070
TX Rate (pulse/min)	2000	1333	706	353	171	98	75	53	38	27
TX period (millisecond)	30	45	85	170	350	610	800	1120	1580	2200

Interference Rejecter	Rejects unwanted signals by comparing last and present echoes in strength
Alarm	Fish and Bottom alarms, Temperature alarm (sensor required)

POWER SUPPLY
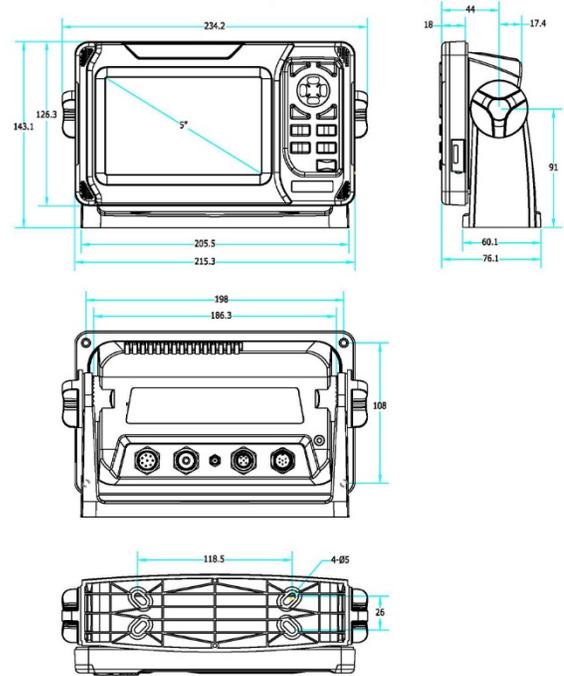
10.5 to 35VDC, current drain <1.0A at 12V

PHYSICAL

Size	KP-25: 143.1(H)mm X 215.3mm(W) X 63.1mm(D) KP-27: 155.1(H)mm X 241.3mm(W) X 62.9mm(D)
Weight	KP-25: 1.0Kg KP-27: 1.3Kg
Display	KP-25: 5-inch Color TFT dayview LCD 800x480 pixels KP-27: 7-inch Color TFT dayview LCD 800x480 pixels
Waterproofing	Display unit (front panel): IP66 Antenna unit: IP66
Temperature range	Display unit: -15°C to +55°C Antenna unit: -25°C to +70°C

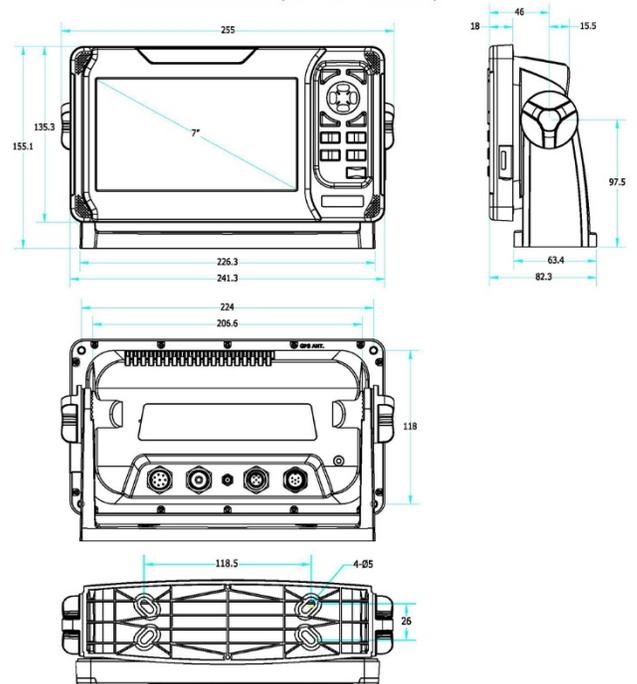| Description	PGN	CONTENT
GNSS	126992	System Time
	129026	COG & SOG, Rapid Update
	129540	GNSS Satellites in View
	129033	Local Time Offset
	129029	GNSS Position Data
	127250	Vessel Heading
	127258	Magnetic Variation
	129025	Position, Rapid Update PGN: 129025
	129539	GNSS DOPs
	129291	Set & Drift, Rapid Update
	129044	Datum
AIS	129810	AIS Class B "CS" Static Data Report, Part B
	129809	AIS Class B "CS" Static Data Report, Part A
	129798	AIS SAR Aircraft Position Report
	129793	AIS UTC and Date Report
	129040	AIS Class B Extended Position Report
	129039	AIS Class B Position Report
	129038	AIS Class A Position Report
	129041	AIS Aids to Navigation (AtoN) Report
	129802	AIS Safety Related Broadcast Message
	129801	AIS Addressed Safety Related Message
	129795	AIS Addressed Binary Message
	129797	AIS Binary Broadcast Message

Description	PGN	CONTENT
Sounder	128267	Water Depth
Navigation	127237	Heading/Track Control
	129284	Navigation Data
	129283	Cross Track Error
	127245	Rudder
	127251	Rate of Turn
	128259	Speed, Water Referenced
	128275	Distance Log
Environment	130306	Wind Data
	130310	Environmental Parameters - DEPRECATED
	130311	Environmental Parameters - DEPRECATED
	130312	Temperature - DEPRECATED

INTERCONNECTION DIAGRAM

AIS Antenna
(Supplied as an option)
For KP-25A, KP-25X,
KP-27A and KP-27X

External GPS Antenna
(KA-07 / KA-GC9A
supplied as an option)

10.5 to 35 VDC

Radar
VDR
ECDIS

N2K network
(Supplied as an option)

Fishfinder Transducer
(Supplied as an option)
For KP-25F, KP-25X,
KP-27F and KP-27X

DIMENSIONS (KP-25 SERIES)

DIMENSIONS (KP-27 SERIES)