

# XPR 100



KONGSBERG



## LONG-RANGE RELATIVE POSITIONING SYSTEM

The XPR 100 is a microwave-based solution developed for DP applications in need for long-range relative positioning. With no moving parts and with its compact and lightweight design, installation is simple and quick.

### **Long-range operation**

Operating in the 9.2-9.3 GHz band, the XPR 100 operates in all weather conditions, and has an unmatched performance in range and bearing accuracy. Each lightweight panel has an opening angle of 100°.

### **Multiple panels**

XPR 100 can be deployed as an omni directional system utilising several sensor panels, to have an operational area of up to 360° dependent on the construction and operation. This provides an extended operational area as well as avoidance of blind angles.

Application software makes configuration and monitoring of the XPR 100 operation easy and effective, and interfaces to remote systems like Dynamic Position may either be serial lines or Ethernet based. XPR 100 is designed to fill the need specified by IMO for DP Class 2 vessels.

### **Automatic target selection**

Targets are stored in the system, and continuous monitoring in all directions (area of operation) mitigates false target lock, and secures a very fast target acquisition.

### **In-built system test and verification**

Prior to a operation, the XPR 100 performs a check and verification of the system to secure a safe and efficient operation.

### **Ease-of-use HMI**

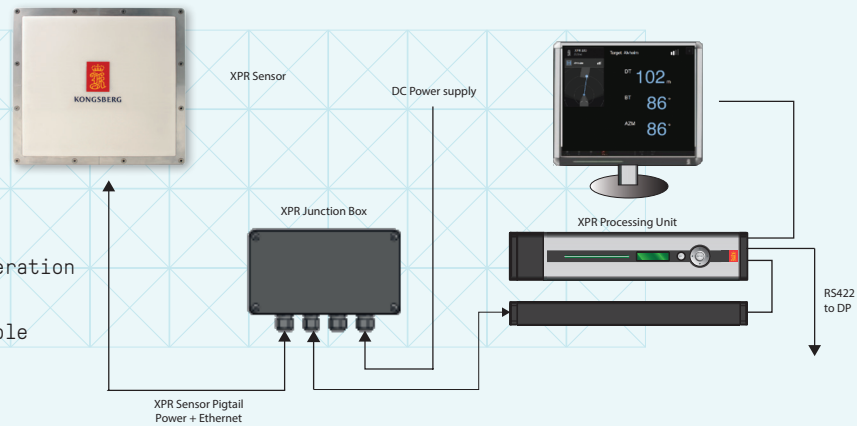
The XPR 100 features a highly intuitive HMI enabling the operators to assess the quality of their positioning quickly and effectively during operation. For better visibility under different light conditions, the operator can easily select between a set of colour palettes, including a well proven night display.

### **Complementary solution**

KONGSBERG offers a range of different positioning solutions for use in DP operations. The XPR 100 is complementary to other solutions technology-wise, and incorporates decades of experience and application understanding.

## FEATURES

- No moving parts
- No regular maintenance
- Compact and light weight sensors
- Easy and quick installation
- Support for multi-panel site for extended operational area (100-280° coverage)
- Automatic built-in system test - prior to operation
- Automatic target selection
- Use of existing cabling infrastructure possible
- Operate in all weather conditions



## TECHNICAL SPECIFICATIONS

### XPR 100

#### PERFORMANCE

Operating range	10m - 10km
Range accuracy	1m standard deviation
Range resolution	0.1m
Range update rate	4 Hz
Bearing accuracy	0.02° standard deviation
Bearing update rate	4 Hz
Horizontal opening angle	± 50°
Vertical opening angle	25°
Operating frequency band	9.2 - 9.3 GHz

#### INTERFACES

XPR Sensor Unit	
Ethernet/LAN	1
XPR Control Unit	
Serial ports	6 x RS-422/RS-232 (isolated)
Ethernet/LAN	4, RJ45
USB	3, 1 in front and 2 in rear

#### DATA OUTPUTS

Message formats	Proprietary NMEA 0183
Message types	PSXXPR, PSXRAD, Artemis BCD, Artemis ADB

#### WEIGHTS AND DIMENSIONS

XPR Sensor	9.9 kg, 391 x 391 x 50 mm
XPR Control Unit	5.4 kg, 88 x 485 x 412 mm

#### POWER SPECIFICATIONS

XPR Sensor	20-28 V DC, max. 70 W
XPR Control Unit	100 to 240 V AC, 50/60 Hz max. 60 W

#### ENVIRONMENTAL SPECIFICATIONS

##### XPR Sensor Unit

Operating temperature range	-25 °C to +55 °C
Storage temperature range	-40 °C to +70 °C
Operating humidity	100 %
Storage humidity	Max. 60 %
Enclosure protection	IP 66

##### XPR Control Unit

Operating temperature range	-15 °C to +55 °C
Storage temperature range	
Short term	-20 °C to +70 °C
Long term	+5 °C to +35 °C
Operating humidity	Max. 95 % non-condensing
Storage humidity	Less than 55 %
Enclosure protection	Front IP42, rear IP21

#### Mechanical

Vibration, all units	IEC 60945/EN 60945
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#### Regulatory

Compliance to Radio Equipment Directive (RED)	2014/53/EU
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This implies compliance with applicable EMC and LVD standards.

Specifications subject to change without any further notice.

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