

RADIUS 800X



KONGSBERG



EX CERTIFIED FIXED POWER TRANSPONDER

The RADIUS 800X transponder is a part of the short-distance relative positioning system RADIUS, developed for use in applications where the need for a robust and highly accurate relative positioning system is crucial. The system comprises an interrogator, installed on a vessel, operating in the 5.5 GHz band and transponders which are deployed on the target. The RADIUS 800X has an operating range of up to 1000 metres, and is suitable for fixed installations on typical a platform or an FPSO.

The main parts of the RADIUS 800X transponder equipment are:

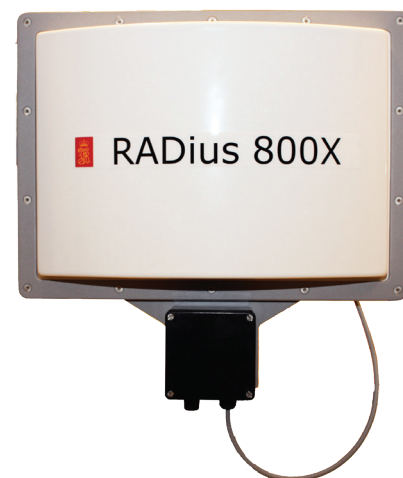
- The transponder consisting of the transponder electronic unit located behind a plastic cover (cover transparent to radio frequency used - 5.5 to 5.6 GHz), and the connection box with terminals for the DC voltage cable and a DIP switch for setting the Transponder Identification code.
- The Field Power Unit, with the intrinsically safe DC/DC PSD1004 power supply, located in the proximity of the transponder equipment.
- The safe area equipment: The Phoenix QUINT AC/DC power supply and the PSD1001C DC/DC barrier and power supply.

ATEX certification

ATEX category 2 G product, gas group II B, temperature class T4, specified ambient temperature rating -20 °C to +60 °C.

Unique ID

The transponders are coded with unique IDs ensuring reliable identification and tracking of vessels in demanding environments. Several interrogators can approach the same transponders, ensuring multi-user capabilities. Up to five transponders can be tracked simultaneously by the interrogator.



TECHNICAL SPECIFICATIONS

RADIUS 800X

PERFORMANCE

Range

Operational range¹ Up to 1000 m
DP range² > 550 m

Opening angle

Vertical/horizontal ± 45°/± 45°

WEIGHTS AND DIMENSIONS

RADius 800X transponder

Transponder with connection box 564 x 562 x 214 mm
Weight without clamps 7.4 kg
Weight with clamps 9.1 kg

Connection box

Dimensions 122 x 92 x 120 mm

Field Power Unit

Dimensions 255 x 120 x 250 mm
Weight 3.1 kg

PSD1001C power supply

Type GM International PSD1001C
Dimensions 22 x 111 x 99 mm
Weight 0.11 kg

Phoenix QUINT power supply

Type Phoenix QUINT
Dimensions 55 x 130 x 125 mm
Weight 0.85 kg

POWER SPECIFICATIONS

RADius 800X transponder

Transponder with connection box Input 5 V DC from Field Power Unit

Field Power Unit

Power supply type GM International PSD1004
Input voltage from PSD1001C Nominal 19 V DC, range 12 to 21 V DC.
Output voltage 5 V DC
Maximum current 160 mA

ENVIRONMENTAL SPECIFICATIONS

Transponder and Field Power Unit

Operating humidity 20 to 100 % RH
Storage humidity 20 to 70 % RH (recommended)

Ingress protection transponder electronic unit IP 66

Ingress protection connection box IP 66

Ingress protection Field Power Unit IP 66

Operating temperature range -20 °C to +60 °C

Storage temperature range +5 °C to +40 °C (recommended)

Regulatory

Compliance to Radio Equipment Directive (RED) 2014/53/EU

ATEX certificate

EU-type Examination Certificate Number: Presafe 19 ATEX 14991X

¹ Possible to acquire the signal, typically range only in order to verify that your reference system is available. At a certain range, the system will track both range and bearing with a large probability. However, the bearing will have limited accuracy.

² The system will be fully operational both in range and bearing.

Specifications subject to change without any further notice.

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