

# 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 FPSO.

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

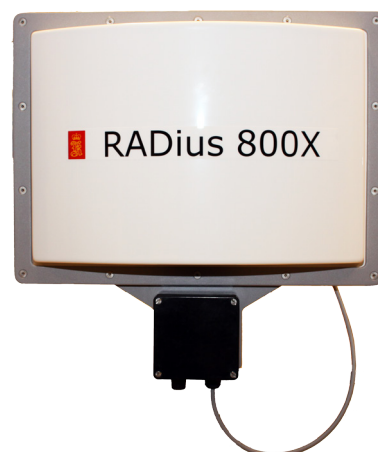
- The transponder consisting of the transponder electronic unit located behind a plastic cover (cover transparent to radio frequency used - 5.5 to 5.6 GHz), and the connection box with terminals for the DC voltage cable and a DIP switch for setting the Transponder Identification code.
- The Field Power 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

## PERFORMANCE

### Range

Operational range	Up to 1000 m *)
DP range	< 550 m **)

### Opening angle

Vertical	± 45°
Horizontal	± 45°

## WEIGHT 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
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### Field Power Unit

Dimensions	255 x 250 x 120 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

### RADius 800X transponder

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

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

## ENVIRONMENTAL SPECIFICATIONS - EX ZONE

### Transponder and Field Power Unit

Humidity operational	20 to 100 % RH
Humidity storage	20 to 70 % RH
Ingress protection transponder electronic unit	IP 66
Ingress protection connection box	IP 66
Ingress protection Field Power Unit	IP 66
Temperature range operational	-40 °C to +60 °C
Temperature range storage	+5 °C to +40 °C

### Electromagnetic compatibility

Compliance to EMCD, immunity/emission	IEC 60945 ed. 4
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### ATEX certificate

EC type examination certificate number DNV 13 ATEX 3925X

*\*) 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.*

*\*\*\*) The system will be fully operational both in range and bearing.*

Specifications subject to change without any further notice.

