The RADius 550X 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 lightweight portable transponder is easy to deploy on targets for applications that require range and bearing during operation.

**EX certified**
The RADius 550X low power transponder is an intrinsically ATEX safe product (category 2) suitable to be installed in hazardous locations where there may be an explosive mixture of flammable gases belonging to gas groups IIB and/or IIA. The transponder can be used in hazardous zones 1 and 2. IECEx classification is Ex ib IIB T4 Gb.

**Battery powered**
The RADius 550X is powered from an intrinsically safe encapsulated battery with an integral current limiting resistor and has no wired connection to external equipment.

**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. The transponder is suited with dip switches for easy setting of the transponder ID.
TECHNICAL SPECIFICATIONS

RADIUS 550X

PERFORMANCE

Range
Operational range\(^1\) 550 m
DP range\(^2\) 350 m

Opening angle
Vertical ± 45°
Horizontal ± 45°

WEIGHTS AND DIMENSIONS

Transponder with battery connection box 400 x 220 x 147 mm
Weight without clamps 3.6 kg
Weight with clamps 4.0 kg

POWER SPECIFICATIONS

Current consumption transponder Approx. 0.6 mA

ENVIRONMENTAL SPECIFICATIONS

Humidity
Operational 10 to 100 % RH
Storage (recommended) 20 to 70 % RH

Ingress protection
Transponder electronic unit IP 66
Battery connection box IP 66

Temperature range
Operational -20 °C to +55 °C
Storage short term +5 °C to +40 °C
Storage long term +5 °C to +30 °C (due to battery)

IS battery module data
Type Primary cell, D-size, IEC 60086-1 type E
Open loop battery voltage Max. 3.7 V DC
Capacity 19 Ah (one cell)
Expected service life 2 years continuous
Storage time Over 10 years at temperatures between +5 °C to +30 °C
Self discharge rate 1 to 2 % per year at room temperature
Short circuit current Max. 9.7 mA

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

EX certificates
EC type examination certificate no. PRESAFE 17 ATEX 10742X
IECEx certificate of conformity no. IECEx PRE 17.0044X
Inmetro certificate no. DNV 13.0035 X

Specifications subject to change without any further notice.

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.

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July 2018