RANGEGUARD

Targetless marine proximity sensor for hazard detection

RangeGuard measures the distance to the nearest object. Based on radar technology, it is a plug and play proximity sensor to detect unseen objects for vessel protection. With the size of today's vessels, more variable crew skills and greater bridge complexity, Hazard Detection is essential for safer operations.

Benefits

- Reduce the risk of collisions
- Detects objects within 300m of the vessel
- Making manoeuvring in tight spaces, docking, and ship to ship transfers safer
- Faster turnaround time (no target handover required)
- All weather operation
- Solid state - no moving parts
- Targetless operation
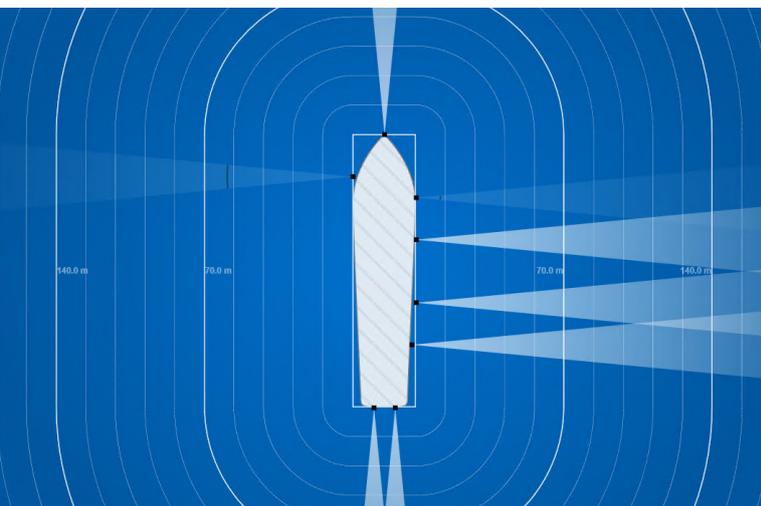- Spot or flood beam width options
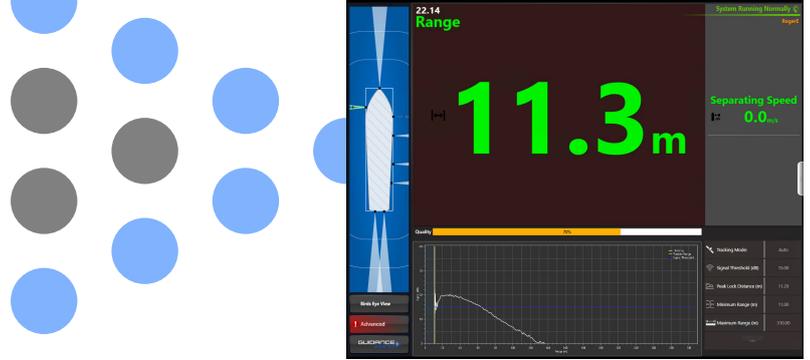
Typical Applications

RangeGuard is suitable for applications which use offshore installations such as:

- Platform supply vessels
- Offshore and wind farm support
- Tugboats
- Salvage vessels

RangeGuard is also suitable for applications which use mobile and fixed structures such as:

- Ship-to-ship transfers
- Super yachts and passenger ships
- Docking

Main data

Sensor Details	
Transceiver Type	Frequency Modulated Continuous Wave (FMCW)
Frequency Band	24.05GHz – 24.25GHz (Licence Exempt Short Range Device)
Maximum Power Output	<100mW EIRP
Maximum Operating Range	300m
Minimum Operating Range	1m
Range Accuracy	±2cm + 0.1% of Range
Azimuth Beam width	110° (flood) or 11° (spot) 10dB Width
Target Detection	Automatic or by manual selection
Vertical Beam Height	+/- 5.5°

Vessel Interface	
Sensor Power	IEEE802.3af (15.4 watts max)
Sensor Control	Sensor Control capable of displaying 4 sensors simultaneously
Control Interface	Ethernet

Environmental	
Operating Temperature Range	-25°C to +55°C
Atmospheric Conditions	Operates in fog, heavy rain, snow and ice conditions
Standards Compliance	EN 60945, FCC Approved
Ingress Protection Rating	IP67
RF Immunity	Resistant to S and X band Radar when installed as recommended

Sensor Weight & Dimensions	
Height	267mm
Width	296mm
Depth	70mm
Weight	5.5kg
Max Cable run per sensor	Up to 100m (CAT5e SCTP cable, Min AWG 24)
Control Unit	400 x 250 x 10mm

Guidance Marine empowers vessels with advanced sensor technology, delivering unmatched precision, safety, and control, even in the most challenging marine environments.