

Q90R Radar Sensors



Powerful Detection and Measurement in Nearly Any Environment

- Robust design for superior and consistent operation in any environment
- Versatility to outperform optical and ultrasonic technologies in demanding conditions
- Intuitive interface enables simple integration and streamlines troubleshooting.
- Enhance equipment performance with advanced configuration and detection



Robust Design and Versatile Performance

IP67 and IP69K environmental ratings prevent ingress of dust and liquids

Bright LED indication enables at-a-glance output status and simplified troubleshooting

Solid-state design resists higher levels of shock and vibration compared to laser scanners

Durable aluminum housing withstands harsh conditions



Radar technology **ignores the effects** of ambient weather and light conditions

Reliably detect across a broad vertical and horizontal field of view

Short dead zone (150 mm) and long range (20 m) provides superior coverage.

Intuitive Interface



Configure the sensor with the easy-to-use PC GUI

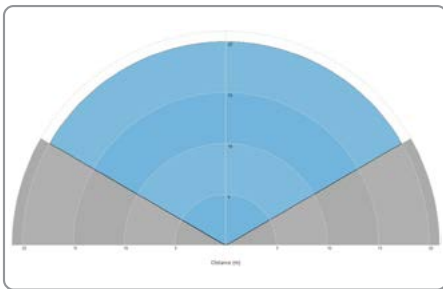


Access advanced diagnostics

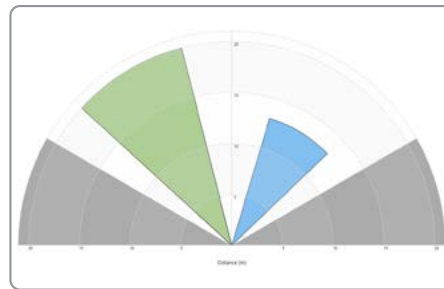


Connect to Banner lights to provide immediate visual feedback

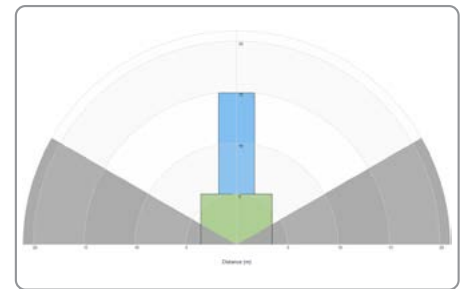
Enhanced Configuration with the Q90R2



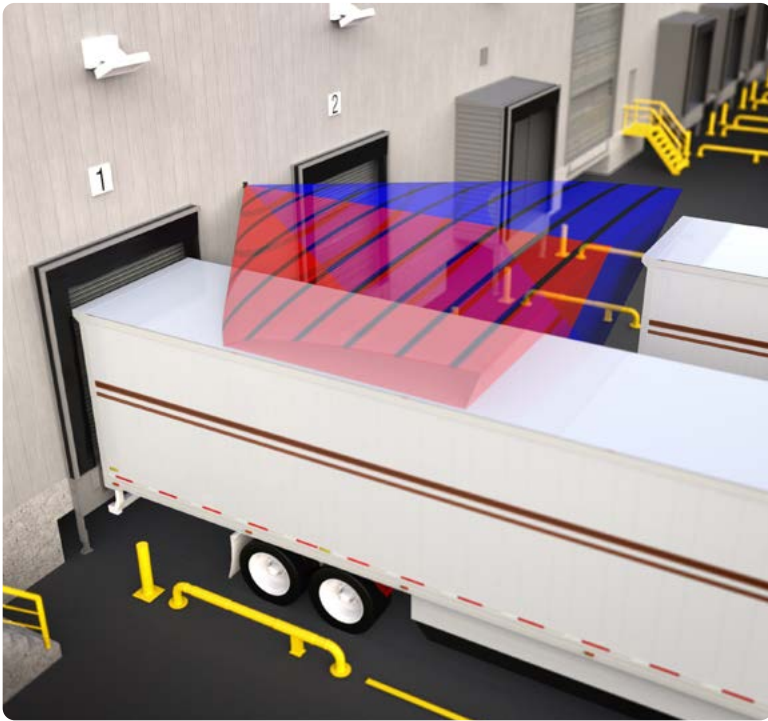
Feedback on targets includes radial distance, angular position, and target velocity, which are all useful for complex applications in difficult environments



The 120 deg x 40 deg field of view is highly configurable and enables precision positioning and control



Customize advanced parameters such as window shape and target setpoints to each application



Accurate Vehicle Detection at Loading Docks

Challenge

Accurate vehicle detection at loading docks is crucial for businesses to sustain productivity, safety, and environmental standards. Inaccurate detection can lead to inefficiency and hazardous situations.

Solution

The Q90R's broad field of view and robust signal strength provides flexible mounting options in various orientations to accommodate customer requirements. The Q90R2 can track two different targets, effectively taking the place of two sensors and offering even more application flexibility.

Forklift Speed Control and Collision Awareness

Challenge

Forklifts used in manufacturing settings can pose a risk of damaging nearby equipment. Many obstructions in the environment may not be accurately detected by optical or ultrasonic technologies. Additionally, other sensing technologies struggle in the diverse environments where forklifts operate, particularly outdoors.

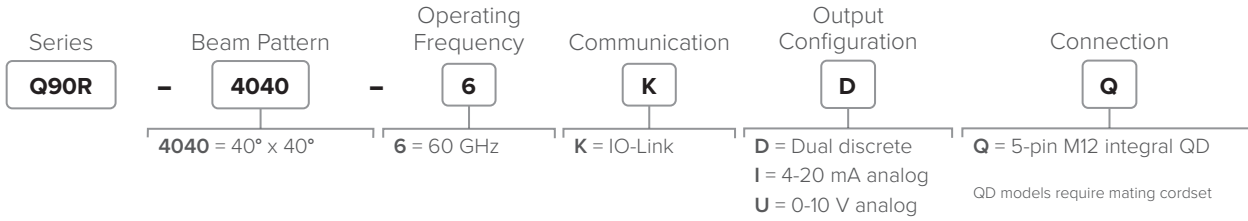
Solution

The Q90R2 has a large horizontal and vertical detection area, making it an effective solution for speed control and driver collision awareness. On a forklift, a top-mounted Q90R can detect the presence of a ceiling and send a signal to a controller that instructs the forklift to slow down. Likewise, if no ceiling is present, the forklift is allowed to speed up as it moves outdoors. Other forklift-mounted Q90R2 sensors can detect multiple objects ahead, behind, or on the sides, then communicate hazards to operators or bystanders via light or audible indicators. This keeps operations running smoothly and prevents damage to assets.

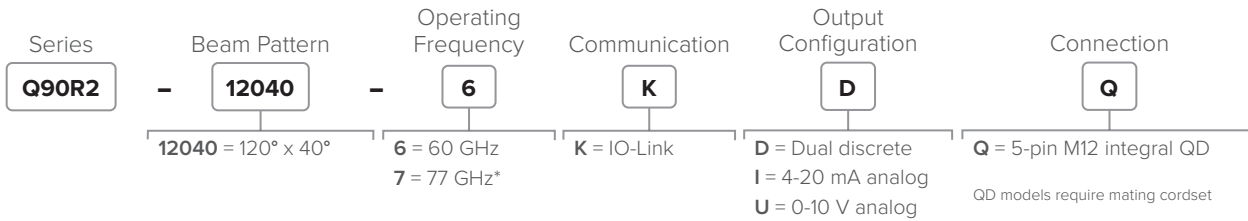


Q90R High Power, Multipurpose Radar Sensors

Q90R Series Radar: 40° x 40° field of view



Q90R2 Series Radar: Configurable 120° x 40° field of view and multi-target detection



*Global telecom approval for use in mobile equipment applications. Available with dual discrete model only.

Specifications



Supply Voltage	12 to 30 V DC
Range	0.15 to 20 m
Beam Pattern	Q90R: 40° x 40° Q90R2: 120° x 40°
Response Time	Q90R analog update rate: 15 ms Q90R discrete output response: 50 ms Q90R2: 48 ms
Telecom Approved	US, Canada, Europe, Australia, New Zealand
Construction	Housing: Aluminium, Window: Polycarbonate
Operating Conditions	-40 to +65 °C (-40 to +149 °F)
Environmental Rating	IP67, IP69K
Certifications	CE FC

Accessories

PRO-KIT
A single Pro-Kit provides everything required to program the Q90R Radar Sensor using the free Pro Editor software, and is required only for setup, not daily operation.

5-Pin M12
Straight connector models listed; for right-angle models, add **A** to the end of **M12F5** (example, BC-M12F5A-22-2)

BC-M12F5-22-2
2 m (6.5')
BC-M12F5-22-5
5 m (16.4')
BC-M12F5-22-10
10 m (32.8')

SMBAMSQ90R
Adjustable mounting bracket

SMBRAQ90R
Right-angle mounting bracket

DXMR90-4K
IO-Link Master

5-Pin M12 Double-Ended
Straight connector models

BC-M12F5-M12M5-22-2
2 m (6.5')
BC-M12F5-M12M5-22-5
5 m (16.4')
BC-M12F5-M12M5-22-10
10 m (32.8')



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