



The Mobile Robot Company

Knowledge Center — Safety-Field Adjustment · 2026-08-04

<https://info.mobilerobot.com/de-de/safety-compliance/safety-functions/safety-field-adjustment>

Safety-Field Adjustment

Safety-field size adjustment is a certified J1600 safety function rated **Performance Level d (PL d)**. It matches the size of the protective field to the vehicle's current speed.

The 360-degree protective field

Two 2D safety LiDAR scanners, mounted front and rear on the chassis, together cover the vehicle's full perimeter. The resulting 360-degree protective field supports autonomous travel in both forward and reverse — including certified safe reversing without specially marked target zones.

Speed-dependent sizing

The protective field is not static:

- the field changes with travel speed;
- it expands as speed increases, up to the top speed of 5.4 km/h (1.5 m/s);
- certified [speed monitoring](https://info.mobilerobot.com/de-de/safety-compliance/safety-functions/speed-monitoring/) (https://info.mobilerobot.com/de-de/safety-compliance/safety-functions/speed-monitoring/) (PL c), built on safety-certified speed and direction encoders, supplies the speed signal.

A faster vehicle needs more room to react, so the monitored zone grows with speed. When a person enters the active field, certified [person detection](https://info.mobilerobot.com/de-de/safety-compliance/safety-functions/person-detection/) (https://info.mobilerobot.com/de-de/safety-compliance/safety-functions/person-detection/) (PL d) and [braking](https://info.mobilerobot.com/de-de/safety-compliance/safety-functions/braking/) (https://info.mobilerobot.com/de-de/safety-compliance/safety-functions/braking/) (PL d) respond.

Visible status on the floor

People near the vehicle can see what is protected:

- three blue light strips display the current safety zone in automatic mode;
- white light indicates manual mode;
- floor-indicator lights signal automatic operation.

Related pages

- [Navigation sensors vs. safety sensors](https://info.mobilerobot.com/de-de/safety-compliance/safety-overview/navigation-sensors-vs-safety-sensors/) (https://info.mobilerobot.com/de-de/safety-compliance/safety-overview/navigation-sensors-vs-safety-sensors/) — why the 2D safety LiDARs are separate from the 3D navigation LiDAR.
- [Safety architecture](https://info.mobilerobot.com/de-de/safety-compliance/safety-overview/safety-architecture/) (https://info.mobilerobot.com/de-de/safety-compliance/safety-overview/safety-architecture/) — the complete certified component list.
- [Performance levels](https://info.mobilerobot.com/de-de/safety-compliance/safety-functions/performance-levels/) (https://info.mobilerobot.com/de-de/safety-compliance/safety-functions/performance-levels/) — all assigned levels in one table.

PRELIMINARY SPECIFICATION

Performance Levels are preliminary (January 2026) and subject to change. Exact field geometries and safety-distance curves are not available.