



The Mobile Robot Company

Knowledge Center — Performance Levels · 2026-08-04

<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels>

Performance Levels

A **Performance Level (PL)** describes the reliability of a safety function in a machine's control system, defined by [EN ISO 13849-1](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/>). Levels run from PL a (lowest) to PL e (highest). The J1600's certified safety functions are assigned levels from PL b to PL d.

Assigned levels

Safety function	Performance Level	Details
Braking system	PL d	Braking (https://info.mobilerobot.com/safety-compliance/safety-functions/braking/)
Emergency-stop button	PL d	Emergency stops and manual takeover (https://info.mobilerobot.com/safety-compliance/safety-overview/emergency-stops-and-manual-takeover/)
Person detection in safety field	PL d	Person detection (https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/)
Safety-field size adjustment	PL d	Safety-field adjustment (https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/)
Speed monitoring and control	PL c	Speed monitoring (https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/)
Automatic/manual mode selection	PL c	Mode selection (https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/)
Tiller-position detection	PL c	Tiller detection (https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/)
Load detection	PL b	Load detection (https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/)
Charging-current relay	PL b	Charging safety (https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/)

Reading the table correctly

- The levels apply to **individual safety functions** within the [safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>) — they are not a statement that every subsystem shares the same PL.
- The highest-rated functions (PL d) are those protecting people directly: braking, emergency stop, person detection, and safety-field adjustment.

- EN ISO 13849-1:2023 appears in the J1600's preliminary [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>) together with [EN ISO 3691-4:2023](https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/>), the standard for driverless industrial trucks. See [How J1600 safety works](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/>) for the full standards context.

PRELIMINARY SPECIFICATION

These Performance Levels come from the preliminary January 2026 product documentation and are subject to change. No [certificates](https://info.mobilerobot.com/safety-compliance/certificates/) (<https://info.mobilerobot.com/safety-compliance/certificates/>), test reports, declaration numbers, or notified-body information are published here; use current product documentation for deployment decisions.