

RIA 15.08

INDUSTRIAL MOBILE ROBOT CLASSIFICATIONS

For many years, ANSI B56.5 safety standards applied to all industrial mobile robots - though written for machines with limited path following functionality. The new ANSI/RIA R15.08 standard is designed to offer updated safety requirements around adaptive navigation functions that have surpassed basic AGV functionality.

The standard also clarifies nomenclature based on vehicle intelligence and path planning capabilities, rather than the size, payload capacity, or localization method and defines an AMR as a mobile robot that operates in a structured or semi-structured industrial setting that can dynamically plan and adjust its path.

See the chart below for the full classification logic.

IS IT A MOBILE PLATFORM FOR USE IN INDUSTRIAL SETTINGS?

YES

NO

CHOOSE NAVIGATION TYPE

AUTONOMOUS
Path Planning

GUIDED
Path Following

MANUAL

IS IT A MANIPULATOR?
With 3 or more axes

YES

NO

AUTONOMOUS
MOBILE ROBOT

AUTOMATIC
GUIDED VEHICLE

CHOOSE ATTACHMENT TYPE

NONE

NON-MANIPULATOR

MANIPULATOR
With 3 or more axes

NON-MANIPULATOR

NONE

AUTONOMOUS
MOBILE
ROBOT

MOBILE
MANIPULATOR

AUTOMATIC
GUIDED
VEHICLE

INDUSTRIAL MOBILE
ROBOT

AUTOMATIC
GUIDED
VEHICLE

INDUSTRIAL
ROBOT

NOT AN
INDUSTRIAL
MOBILE ROBOT

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Source: American National Standards Institute, Inc. American National Standard for Industrial Mobile Robots - Safety Requirements. Part 1: Requirements for the Industrial Mobile Robot. R15.08-1-2020. 25 December 2020.