



AFORMIC

FP12

UNDERRIDE ROBOT WITH LOW-PROFILE DESIGN

A low-profile transport robot designed for space-constrained environments, capable of operating under loads with minimal ground clearance.

UNDERRIDE PLATFORM DESIGN

The FP12 is a low-profile underride platform robot designed to operate beneath loads with limited ground clearance. With a total height of just 200 mm (7.9 in), it can easily enter and lift standard racks or carriers, enabling efficient automation of intralogistics processes in space-constrained environments.

HIGH PAYLOAD CAPACITY

Capable of transporting loads up to 1000 kg (2,200 lb), the FP12 is engineered for demanding industrial applications. Its durable construction ensures consistent performance under full load, offering a reliable and versatile solution across a wide range of intralogistics environments.



ADVANCED SLAM NAVIGATION

Equipped with SLAM technology, the FP12 enables real-time mapping and accurate localization. This supports efficient route planning, dynamic obstacle avoidance, and adaptability to changing environments, ensuring reliable operation in dynamic and complex intralogistics settings.

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COMPREHENSIVE SAFETY SYSTEM

FP12 is equipped with a safety package, including two SICK Micro and two Nano safety scanners, four emergency stop buttons, 360° laser coverage, and blue spot warning lights. Its onboard IMU module ensures stability and precise motion control even in complex environments, making it safe for operation alongside people and machinery.

GENERAL SPECIFICATIONS

- Payload capacity: 1000 kg (2,200 lb)
- Dimensions (L x W x H):
1612 x 830 x 200 mm (63.5 x 32.7 x 7.9 in)
- Lifting height: 20 mm (0.8 in)
- Weight: 333 kg (730 lb)
- Maximum speed: 1.8 m/s (5.9 ft/s)
- Drive type: differential
- Drive power: 2 x 0.7 kW

POWER SYSTEM

- Battery type: Lithium-ion (Li-ion)
- Battery capacity: 120 Ah
- Battery voltage: 48 V

TERRAIN CAPABILITIES

- Maximum longitudinal inclination: 2.0°
- Maximum lateral inclination: 5.0°
- Positioning accuracy (+/-): 1.0 cm (0.4 in)

SAFETY FEATURES

- Laser scanner field of view: 360°
- Safety scanners:
 - Sick Micro Scanners: 2 units
 - Sick Nano Scanners: 2 units
- Emergency push buttons: 4 units
- Blue spot lamp: 2 units
- Front and rear safety bumpers

NAVIGATION SYSTEMS

- SLAM Technology: yes
- Odometry: yes
- IMU (Inertial Measurement Unit): yes

ENVIRONMENTAL CONDITIONS

- Operating temperature: 15°C – 40°C (59–104 °F)
- Relative humidity: >70%

DIMENSIONS [MM]

