Innovative AMR Technologies for Your Business

Technical Specification

EMP10S

Pay Load

1000KG

Lifting Height

156MM

Turning Radius

1037MM

Handling Robot

The MP10S boasts exceptional positioning performance with an innovative dual-wheel differential structure, enabling picking and placing of goods in aisles as narrow as 2 meters. It is ideal for light-duty handling scenarios such as line-side transportation and 3C electronics. Featuring high positioning accuracy, the MP10S supports 2D/3D SLAM and reflector/column feature navigation, achieving precision up to ±10 mm. Multiple positioning algorithms enable pallet recognition and identification of material cages and racks for precise picking and placing. For safety, the MP10S offers 360° planar safety stop and forward 3D obstacle avoidance, capable of detecting low-hanging and suspended obstacles. It is equipped with fork-tip collision detection, emergency stop switches, and protective bumpers, and complies with CE certification to ensure safe and reliable operation.

AiTEN

Translog SYSTEMS

Motion Performance

The MP10S supports a maximum operating speed of 1.5 m/s when fully loaded. It can overcome obstacles with a step height of up to 5 mm, cross gaps up to 15 mm, and climb slopes with gradients of up to 5°. The system interfaces seamlessly with external devices such as elevators, automatic doors, and conveyor lines. It is compatible with a wide range of material handling solutions, including pallets, material frames, cage carts, and racks.

Communication

Supports dual-band high-power Wi-Fi 6 (802.11ax) for doubled signal coverage, with optional expansion to industrial-grade Ethernet. Compatible with 802.11b/g/n/ac/ax Wi-Fi protocols.

Endurance

Supports both manual and automatic charging. Equipped with lithium iron phosphate ($LiFePO_4$) batteries, the system ensures high safety and durability, with a lifespan of up to 2,000 charge-discharge cycles. The battery supports fast charging, delivering 6–8 hours of runtime under rated conditions and a full charge time of less than 1 hour.

AI Recognition

The system employs AI-powered perception for high-precision, adaptive detection of pallets, racks, and cages across multiple specifications, colors, and angles, ensuring stable pickup and placement operations.

Human-Machine Interaction

Equipped with a human-machine interface (HMI) display for real-time monitoring of system status and operational parameters.

Quality Assurance

Each AMR undergoes rigorous testing (e.g., load testing, durability testing) and full-process inspection before delivery, ensuring compliance with 48-hour fault-free operation standards.

Technical Data

Features	1	Product Model			EMP10S
	2	Drive Type			Electric
	3	Operation Mode			Laser Guidance
	4	Pay Load	Q	kg	1000
	5	Load Center	C	mm	600
	6	Wheelbase	Y	mm	830
Wheels	1	Tire			Polyurethane Wheels
	2	Drive Wheel Size		mm	80
	3	Load Wheel Size		mm	60
	4	Track Width (Drive Side)	b11	mm	390
	5	Track width (Stabilizer Wheel Side)	b10	mm	575
Motor	1	Drive Motor Power		kw	0.6
	2	Lifting Motor Power		kw	0.8
	3	Battery Voltage/Capacity		V/ah	48/25 Lithium Battery
Other	1	Curb Weight		kg	200
	2	Steering Type			Differential Drive
	3	Vehicle Noise Level		dB(a)	<70

Dimensions	1	Total Height(Forks at Full Elevation)	H1	mm	1855
	2	Vehicle Top Cover Ground Clearance	H2	mm	485
	2	Lifting Height	H3	mm	156
	4	Fork Height	H5	mm	86
	5	Laser Scanning Plane Ground Cleareance	H6	mm	1820
	6	Obstacle Avoidance Scanning Plane Groud Clearance	H7	mm	145
	5	Total Length	L1	mm	1520
	6	Total Width	b1	mm	950
	8	Fork dimensions	s/e/l	mm	186/60/1150
	9	Fork Spread	b3	mm	560
	10	Min Ground Clearence	m	mm	20
	11	Right-angle Stacking Aisle Width	Ast	mm	1920
	12	Turning Radius	Wa	mm	1037
Performance	1	Travel Speed (loaded/unloaded)		m/s	0.7/0.6
	2	Lifting Speed (loaded/unloaded)		mm/s	60/50
	3	Lowering Speed (loaded/unloaded)		mm/s	50/60
	4	Maximum Gradeability (loaded/unloaded)		%	4/1
	5	Brake Type			Electromagnetic Brake

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