



Safety Controller for Autonomous Forklift

SRC-3000FS (Forklift)

Forklift-Specific Version of Safety Controller,
Comprehensive Upgrade



2 m/s Speed, Forklift-Specific

Higher efficiency of robot operation, speed up to 2 m/s. It integrates all kinds of special functions of forklift. Plenty of parts adaptations and free model selection, enabling rapidly building AMR and fast delivery, free selection and worry-free building AMR.



±2 mm High Accuracy, Accurate and Stable

Support natural feature navigation and laser reflector navigation with accuracy up to ±2 mm. Stable operation in highly dynamic environment. Optimized skidding detection and solving strategy to avoid navigation accuracy reduction.



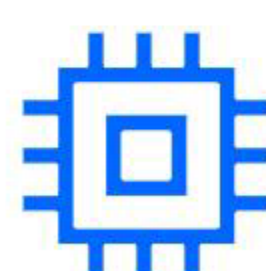
Automatic Route Optimization, Smooth and Efficient

Supports automatic batch optimization for routes, making robots movement more consistent and smooth.



New Calibration Technology, Intelligent and Easy to Use

The new calibration technology supports the calibration of all single steering-wheel forklifts, which can auto-check unqualified calibration results to improve the calibration efficiency. It also supports calibration for zero position of steering angle when forklift is working.



Double Computing Power, Comprehensive Upgrade

With upgraded RoboKit framework and hardware acceleration, it supports embedded APP development which enables stable and complex functionality and robust operation in various user cases.



Functional Safety Design, CE and UL Certified

The world's first AMR controller certified for functional safety by the rigorous standards of ISO 13849-1. Boasting an array of certifications, including CE-EMC, CE-LVD, CE-RED, and the global UL standard ETL certificate.

Parameter Specification

● Standard ○ Optional

Basic parameters

Product name	Safety Controller for Autonomous Forklift
Weight	1.8 kg
L x W x H	225 x 136 x 65.6 mm

Functional safety

Safety integrity level	IEC 61508 SIL2 / IEC 62601 SIL2
Safety performance level	ISO 13849-1 Cat.3 PLd

Digital input & output

Power DO	4-Way (single-loaded 24 V / 1 A; 4-Way total load capacity ≤4 A)
DO	12-Way (400 mA)
DI	24-Way (16-Way PNP+8-Way NPN / PNP optional)

Bus interface

CAN	2-Way
RS485	3-Way
Battery communication interfaces	1-Way (CAN / RS485 optional interface)
Sin / Cos encoder interfaces	2-Way

Internet interface

Ethernet	5-Way Gbps (TSN)
Wi-Fi	Wi-Fi 5: Dual-band 2.4G / 5G 802.11ac 2T2R

Other interfaces

USB2.0	1-Way
USB3.0	2-Way
Audio input / output	1-Way / 1-Way

Robot-specific functions

One-button power ON / OFF	1-Way
Battery switch	1-Way
Emergency stop input	1-Way
Emergency stop output	2-Way

Performance parameters

Navigation accuracy	±2 mm, ±1° (Reflector)
Driving speed	≤2 m/s
Map area (single frame)	≤400000 m ²

Function configurations

Basic functions	●
Advanced motion model	○
Advanced recognition function	○
Advanced location function	○
Codesys	-

Working environment parameters

Ambient temperature and humidity range	TEMP: -30°C to 55°C / RH: 10% to 90%, no compression, no condensation
Working voltage	24 V / 50 V
Power consumption	18 W (excluding DO output current)
IP rating	IP52 (IP65 need to customize shell)

Certifications

CE	Conform to EN 61010-1:2010, CE-EMC (IEC 61326-1), CE-RED Standards
ETL	UL 61010-1 UL 61010-2-201 CSA C22.2#61010-1-12 CSA C22.2#61010-2-201
FCC	47CFR Part 15(2020) ANSI C63.4(2014)

Dimension (mm)

