

# S5-90 Eco

S Series robot redefines programming mode, establishing a shared safety space between humans and robots. Through seamless integration with AI, it delivers flexible manufacturing solutions for enterprises, embodying unparalleled intelligence, efficiency, safety and reliability.

**5kg**

Payload

**919mm**

Reach

**22kg**

Weight

**±0.03mm**

Repeatability

## ✓ TRUSTED SAFETY

- Emergency stop, incl. STO, SBC, conforms to EN ISO 10218-1, EN ISO 13849-1 Pld.Cat.3.
- Sensitive to collisions.
- Brakes built into all axes.

## 📶 ADVANCED MOTION CONTROL

- Paired with the speed of traditional industrial robot.
- Precision upgraded to industrial robot level through accurate calibration and compensation.
- Identification and compensation of high precision kinematic models ensure both accurate trajectory and smooth movement.

## 🔗 FLEXIBLE USABILITY

- Built-in torque sensor, supporting by wizard force control kit.
- Easy handling with enhanced precision for point-to-point and trajectory programming.
- Mastering the robot in 60 minutes via graphical UI and intuitive hand guiding.
- Integrated vision system, capable of running in unstructured and dynamic automation.

## 🔒 QUALITY SYSTEM

- Comprehensive manufacturing quality management system.
- Rigorous manufacturing quality control & inspection.
- Kinematic calibration before shipment to ensure absolute accuracy.
- 100+ design type tests, 20+ delivery inspections, 120 hours continuous no failure operating before shipment.



# S5-90 Eco

## Technical specification



### Control Cabinet



|                              |  |
|------------------------------|--|
| Model                        | S5-90 Eco                                  |
| DOF                          | 6  |
| Payload (kg)                 | 5  |
| Reach (mm)                   | 919  |
| Repeatability (mm)           | ±0.03                                      |
| Weight (kg)                  | 22   |
| Safety                       | Hand guide, adjustable collision detection |
| Certification                | EN ISO 13849-1 PLd Cat.3 & EN ISO 10218-1  |
| IP Classification            | IP54 (Default), IP67 (Option)              |
| Max. Speed at Tool End (m/s) | 2.5  |
| Working Range                | Axis 1/2/4/5/6: ±360° Axis 3: ±160°        |
| Max. Speed                   | Axis 1/2/3: 150 °/s Axis 4/5/6: 180 °/s    |
| Mounting                     | Any orientation                            |
| Operating Temp.              | 0 – 50 °C                                  |
| Operating Humidity           | 70% RH                                     |
| Flange Connector             | ISO 9409-1-50-4-M6                         |
| Flange Communication         | 2 DI, 2DO, 24VDC, RS485                    |

|                         |                  |   |
|-------------------------|------------------|---|
| Power supply            | AC               | 100~240V 50/60Hz  |
|                         | DC               | 48V (-15%~+0%)  |
| IP classification       |                  | IP20  |
| Working condition       |                  | Temperature: 0~50°C<br>Humidity: 10~90%RH, Non-condensing   |
| Communication interface | Default          | MODBUS TCP, RS485, TCP-IP   |
|                         | Option           | ProfiNET (Slave), EtherNet/IP (Slave)   |
|                         | Power supply     | 24V, 2A   |
| IO interface            | Digital          | DI: PNP/NPN, 16 channels, DO: PNP, 16 channels  |
|                         | Analog           | 4 channels, AI: Current mode/voltage mode<br>AO: Current mode/voltage mode  |
|                         | Safety interface | Safety emergency stop input, 4 channels<br>Safety emergency stop output, 1 channel                                      |
| Redevelopment           |                  | Remote Script, API  |
| Cabinet dimension       |                  | 370*230*190mm   |
| Cable length            |                  | Robot-Cabinet: 3m, Cabinet power cable: 3m, Handle: 5m<br>Heavy-duty Line: 6/12/20m, Flexible Line: 3/6/15/20m (Option) |
| Wi-Fi                   |                  | Option  |

### End Effectors

Various end effectors can be quickly switched to match multiple industry applications



Handling



Screw fastening



Polishing



Welding



Spraying

### Teach Pendant optional

|                         |           |
|-------------------------|-----------|
| Weight (Without cables) | 1.24kg    |
| Display Size            | 10.1 inch |
| Cable                   | 5m        |



## Technical Drawings

