

SCORA-ER 14Pro

SPECIFICATIONS Mechanical structure

Horizontally articulated (SCARA), enclosed frame, 3 rotational axes and 1 translational axis

Payload capacity

2 kg (4.4 lb) at high speeds
3 kg (6.6 lb) at low speeds

Reach

Min. 230 mm (9.06"); Max. 500 mm (19.69")

Axis Movement

Range Effective Speed Maximum Speed
Axis 1: Rotation 288° 117°/sec 158°/sec
Axis 2: Rotation 218° 114°/sec 157°/sec
Axis 3: Translation 182 mm 211 mm/sec 333 mm/sec
Axis 4: Roll ±527° 370°/sec 475°/sec

Speed

2.8 m/sec (horizontal); 0.33 m/sec (vertical)

Operating radius

Minimum 230 mm (9.06"); Maximum 500 mm (19.69")

Repeatability

±0.05 mm (±0.002")

Position feedback

Incremental optical encoder with index pulse on each axis

Homing

Optical switch plus encoder index pulse on each axis

Actuators

24Vdc servo motor on all axes

Transmission

Harmonic drives

Weight

30 kg (66 lb)
Controller-USB PRO

Type of control

Real-time; PID; PWM

Servo axis drivers

8 axes for robot and peripherals Path control

Joint; Linear; Circular

Speed control

10 speed settings; Travel time definitions

Control parameters

160 parameters, many are user-accessible; Servo control; PID; speed; velocity profile; axis position error; gripper operation; impact; limit protection; homing; Cartesian calculations.

Power requirements

110-220 VAC ±10%, 50/60Hz, 1000 W

Internal power supplies

Servo: 48V
Digital: 5V/12V/24V
Microcontroller

Microcontroller ARM7TDMI Processor: 32-bit RISC Architecture with 256 Kbytes of Internal High-speed

Flash

Communication

USB type A cable connection to PC;
Plug and play without rebooting;
Integrated RS232 for teach pendant;

Inputs

16 digital inputs: 24V max., high/low configurable;

4 analog inputs: input voltage 0-10V

Outputs

16 digital outputs: 24V max.; 4 relays; 12 open collector, sink/source configurable; 2 analog outputs:

output voltage 0-10V

User power supply

12 VDC (1A) and 24 VDC (2A) terminals, for connection of remote switches, sensors, etc

Programming

SCORBASE for Controller-USB PRO software, with Multi tasking – Up to 100 concurrent programs, in-program parameter manipulation, built in Scripting, ON line Graph With PWM and position error; Teach pendant for Controller-USB PRO (optional); Programming Interface

Position definition

XYZ coordinates; Joint coordinates (degrees); Encoder counts; Absolute and relative positions; In

program position manipulation

LED indicators

Main power, power on, communicating with PC; Motor on; Digital Inputs / Digital Outputs; Emergency

Weight

7.5 kg (16.5 lb)

Dimensions

460x140x245 mm (18.1"x5.5"x9.6")

Operating temperature

2° - 40°C (36° - 104°F)

Safety features

Certified for CE safety compliance
Input/Output short-circuit protection;
Over-current protection;
Communication error; impact; thermic overload