

UR5e

Technical Specification

The UR5e brings ultimate flexibility to medium-duty applications with a payload of up to 5 kg and a reach of 850 mm.

Today, more than 90,000 UR collaborative industrial robots have been delivered to customers across industries and around the world. The e-Series of cobots brings incredible flexibility and unparalleled ease of use to your application.

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UR5e

Specification

Payload	5 kg (11 lbs)
Reach	850 mm (33.5 in)
Degrees of freedom	6 rotating joints
Programming	12 inch touchscreen with PolyScope graphical user interface
Power consumption (average)	
Maximum power	570 W
Moderate operating settings	200 W
Operating temperature range	Ambient temperature: 0-50°C (32-122°F)
Safety functions	17 configurable safety functions
In compliance with	EN ISO 13849-1 (PLd Category 3) and EN ISO 10218-1

Performance

	Force, x-y-z	Torque, x-y-z
Range	± 50.0 N	± 10.0 Nm
Precision	± 3.5 N	± 0.2 Nm
Accuracy	± 4.0 N	± 0.3 Nm

Movement

Max TCP speed	4 m/s
Pose Repeatability per ISO 9283	± 0.03 mm
Axis movement	Working range Maximum speed
Base	± 360° ± 180°/s
Shoulder	± 360° ± 180°/s
Elbow	± 360° ± 180°/s
Wrist 1	± 360° ± 180°/s
Wrist 2	± 360° ± 180°/s
Wrist 3	± 360° ± 180°/s

Features

IP classification	IP54
Cleanroom classification	Class 4 at 20%* ISO 14644-1 *velocity and payload
Noise	< 65 dB(A)
Robot mounting	Any orientation
I/O Ports	
Digital In	2
Digital Out	2
Analog In	2
Tool I/O power supply voltage	12/24 V
Tool I/O power supply	1.5 A (Dual pin) 1 A (Single pin)

Physical

Footprint	Ø 149 mm
Materials	Aluminum, plastic, steel
Tool flange interface	M8 8-pin female, EN ISO-9409-1-50-4-M6
Connector type	M8 8-pin female
Cable length (robot arm)	6 m (236 in)
Weight including cable	20.6 kg (45.4 lbs)
Humidity	≤ 90% RH (non-condensing)

Contact

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Teach Pendant

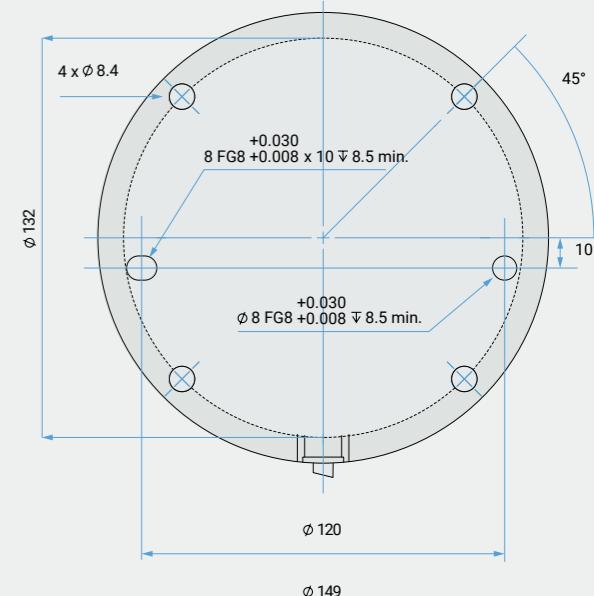
Features

IP classification	IP54
Humidity	≤ 90% RH (non-condensing)
Display resolution	1280 x 800 pixels

Physical

Materials	Plastic
Teach Pendant size (W x H x D)	300 mm x 231 mm x 50 mm (11.8 in x 9.1 in x 1.97 in)
Weight	1.8 kg (3.961 lbs) including 1 m of teach pendant cable
Cable length	4.5 m (177.17 in)

Interface for UR5e base flange



Control Box

Features

IP Classification	IP44
Operating temperature range*	Ambient temperature: 0-50°C (32-122°F) ≤ 90% RH (non-condensing)
Humidity	≤ 90% RH (non-condensing)

I/O Ports

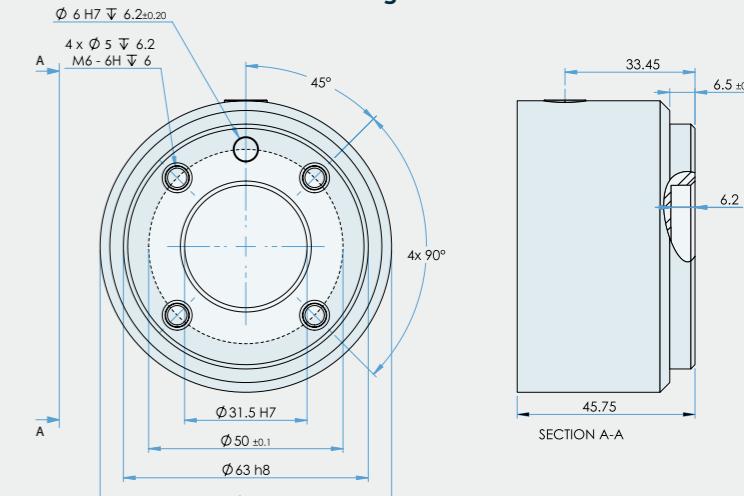
Digital In	16
Digital Out	16
Analog In	2
Analog Out	2
Quadrature Digital Inputs	4

I/O Power Supply	24V, 2A
Industrial Protocols	Modbus-TCP (Client/Server) Ethernet/IP Adapter PROFINET device/PROFIsafe ROS/ROS2

Hardware Interfaces

Ethernet 1 Gb/s	
USB 2.0, USB 3.0	
Mini DisplayPort	
Injection Moulding Machine Interface (SPI AN-146 & Euromap-67)	
Power Source	100-240 VAC, 47-440 Hz

Tool flange for UR5e



Physical

Control Box Size (W x H x D)	460 mm x 449 mm x 254 mm (18.2 in x 17.6 in x 10 in)
Weight	12 kg (26.5 lbs)
Materials	Powder coated steel

The control box is also available in an OEM version

UR5e payload curve

