e-Series FROM UNIVERSAL ROBOTS WORLD'S #1 COLLABORATIVE ROBOT

Presenting the e-Series

The e-Series UR5e is the medium-sized version of the ground-breaking collaborative robot technology from Universal Robots, market leader in cobots. The UR5e lets your business seamlessly integrate a cutting-edge robot into your existing production environment to fully explore and benefit from the opportunities that automation offers. Boost productivity, improve quality and increase job satisfaction – the possibilities are endless.

Next-generation automation

The UR5e is ideal for automating processing tasks with its 5 kg payload and 850 mm reach radius. Easy to program and fast to set up, the UR5e strikes the perfect balance between size and power. This versatility is supported by the Universal Robots+ ecosystem, an online showroom that provides cutting-edge products to customize a UR robot application that perfectly meets your requirements.

Limitless potential anyone can embrace

The UR5e lets anyone program in just minutes. Use the intuitive Teach Pendant to program by simply moving the cobot to the desired waypoints or select from pre-programmed functions on the touchscreen. The built-in Force Torque sensor delivers maximum precision and allows the UR5e to be programmed for highly sensitive applications.

The Universal Robots advantage

Universal Robots is setting new standards for how businesses use collaborative robot technology with fast set-up times, limitless flexibility, easy programming, safe and collaborative operation, and fast payback.

Fast set-up

Unpack, mount and program the first simple task with your UR5e in just 60 minutes.

Easy programming

Intuitive user interface dramatically reduces the time it takes to program. Inexperienced programmers can learn to program the UR5e in as little as 87 minutes, using the free training modules at Universal Robots Academy.

Limitless flexibility

Quickly and easily automate almost any task with virtually unlimited applications in your production and deploy the UR5e as often as required.

Collaborative

Our cobots are certified by TÜV NORD for ISO 10218-1 and safety functions are rated as Cat.3 PL d according to ISO 13849-1 and, subject to risk assessment, can typically work safely alongside operators on the production line, all thanks to built-in and customizable safety features. At Universal Robots, we make safety imperative so our users are free to explore and experiment with the unlimited applications of our cobots for greater productivity and product quality with peace of mind.

Explore more at universal-robots.com/e-series

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UR5e technical details

Performance

Power consumption	Approx. 200 W using a typical program
Safety System	All 17 advanced adjustable safety functions incl. elbow monitoring certified to Cat.3, PL d. Remote Control according to ISO 10218
Certifications by TUV Nord	EN ISO 13849-1, Cat.3, PL d, and **full** EN ISO 10218-1

F/T Sensor - Force, x-y-z

Range	50 N
Resolution	2.5 N
Accuracy	4.0 N

F/T Sensor - Torque, x-y-z

Range	10 Nm
Resolution	0.04 Nm
Accuracy	0.30 Nm

Specification

Payload	5 kg / 11 lbs
Reach	850 mm / 33.5 in
Degrees of freedom	6 rotating joints DOF
Programming	Polyscope graphical user interface on 12 inch touchscreen with mounting

Movement

Pose Repeatability	+/- 0.03 mm, with payload, per ISO 9283	
Axis movement robot arm	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
Typical TCP speed		1 m/s / 39.4 in/s

Features

IP classification	IP54	
ISO Class Cleanroom	6	
Noise	Less than 65 dB(A)	
Robot mounting	Any Orientation	
I/O ports	Digital in	2
	Digital out	2
	Analog in	2
	Tool communication	RS-485
I/O power supply in tool	12V/24V 600mA continuous, 2A peak	
Ambient temperature range	0-50°C*	
Humidity	90%RH (non-condensing)	

Physical

Footprint	Ø 149 mm
Materials	Aluminium, Plastic, Steel
Tool (end-effector) connector type	M8 | M8 8-pin
Cable length robot arm	6 m / 236 in
Weight including cable	20.6 kg / 45.4 lbs

* The robot can work in a temperature range of 0-50°C. At high continuous joint speeds the maximum allowed ambient temperature is reduced.

Control box

Features

IP classification	IP44	
ISO Class Cleanroom	6	
Ambient temperature range	0-50°	
I/O ports	Digital in	16
	Digital out	16
	Analog in	2
	Analog out	2
	500 Hz control, 4 separated high speed quadrature digital inputs	
I/O power supply	24V 2A	
Communication	Control frequency: 500 Hz ModbusTCP: 500 Hz signal frequency ProfiNet and EthernetIP: 500 Hz signal frequency USB ports: 1 USB 2.0, 1 USB 3.0	
Power source	100-240VAC, 47-440Hz	
Humidity	90%RH (non-condensing)	

Physical

Control box size (WxHxD)	475 mm x 423 mm x 268 mm 18.7 in x 16.7 in x 10.6 in
Weight	Max 13.6 kg / 30.0 lbs
Materials	Steel

Teach pendant

Features

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

Physical

Materials	Plastic
Weight including 1 m of TP cable	1.6 kg / 3.5 lbs
Cable length	4.5 m / 177.17 in

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