

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
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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	
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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
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ISO Class Cleanroom	6
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Noise	Less than 65 dB(A)
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Robot mounting	Any Orientation
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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
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Ambient temperature range	0-50°C*
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Humidity	90%RH (non-condensing)
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Physical

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

Features

IP classification	IP44
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ISO Class Cleanroom	6
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Ambient temperature range	0-50°
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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
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Communication	Control frequency: 500 Hz ModbusTCP: 500 Hz signal frequency ProfNet and EthernetIP: 500 Hz signal frequency USB ports: 1 USB 2.0, 1 USB 3.0
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Power source	100-240VAC, 47-440Hz
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Humidity	90%RH (non-condensing)
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Physical

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

Features

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

Materials	Plastic
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Weight including 1 m of TP cable	1.6 kg / 3.5 lbs
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Cable length	4.5 m / 177.17 in
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* The robot can work in a temperature range of 0-50°C. At high continuous joint speeds the maximum allowed ambient temperature is reduced.