

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 75,000 UR collaborative industrial robots have been delivered to customers across industries and around the world. UR5e is one of four e-Series cobots, each with a different payload and reach combination. e-Series 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 sensing, tool flange/torque sensor	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

Typical TCP speed	1 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 water protection
Cleanroom classification	Class 4 at 20 at max. speed and payload, Class 5 at 40 and 80% at max. speed and payload
ISO 14644-1 classification of air cleanliness by particle concentration	
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	EN ISO-9409-1-50-4-M6
Connector type	M8 M8 8-pin
Cable length (robot arm)	6 m (236 in)
	12 m (472 in) and high-flex options available.
Weight including cable	20.6 kg (45.4 lbs)
Humidity	≤ 90% RH (non-condensing)

Contact

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3-Position Enabling Teach Pendant

Features

IP classification	IP54
Included in certifications	EN ISO 10218-1 EN ISO 13849-1
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)

Control Box

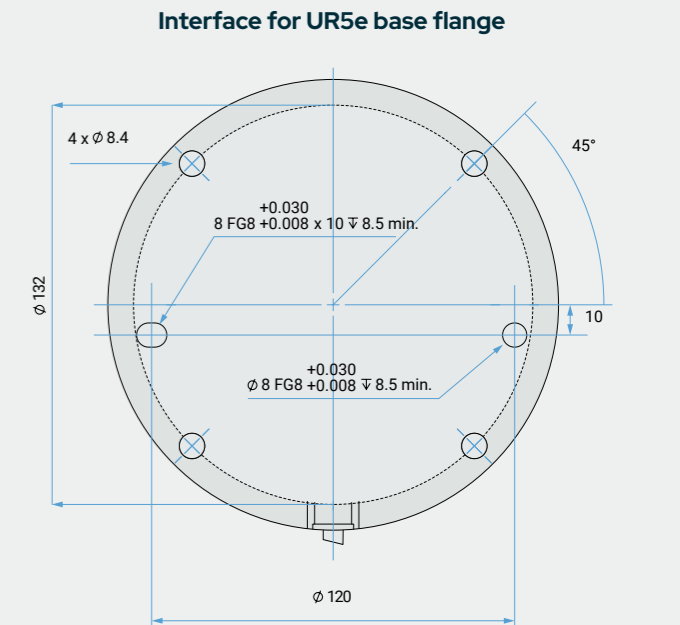
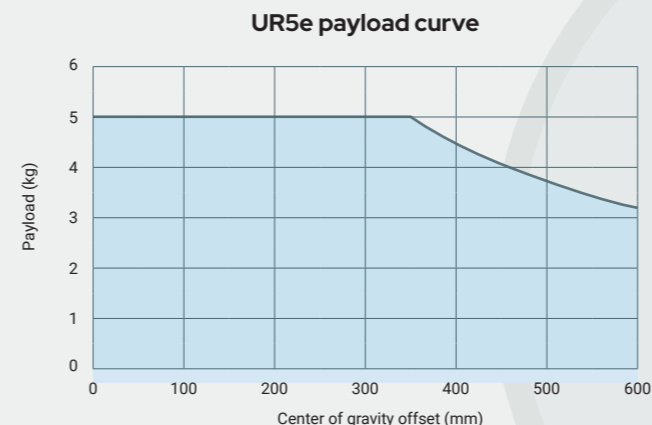
Features

IP Classification	IP44
ISO 14644-1 class cleanroom	6
Operating temperature range*	0-50°C (32-122°F)
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
Communication	500 Hz Control frequency Modbus PROFINET, PROFIsafe (optional) TCP USB 2.0, USB 3.0 Ethernet/IP USB 2.0, USB 3.0 PROFINET ROS/ROS2 driver (optional, open source) Euromap-67 (optional) SPI AN-146 (optional) Injection Moulding Machine Interface (IMMI, optional)
Power Source	100-240 VAC, 47-440 Hz

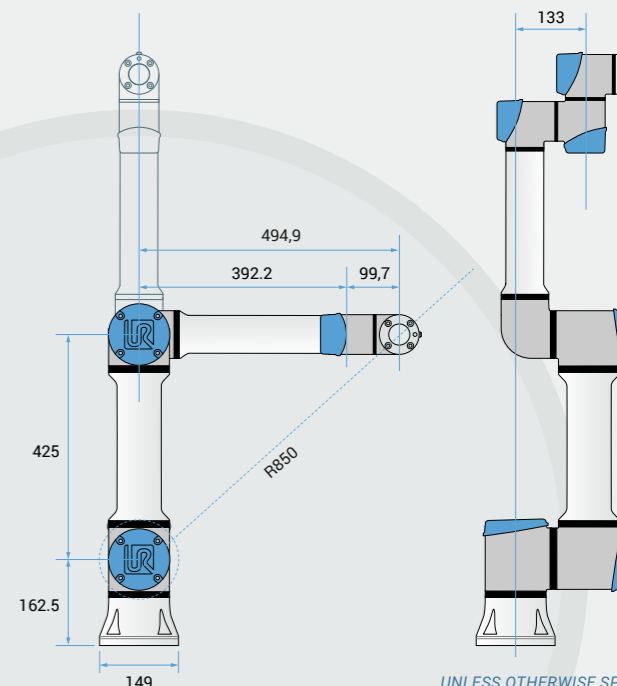
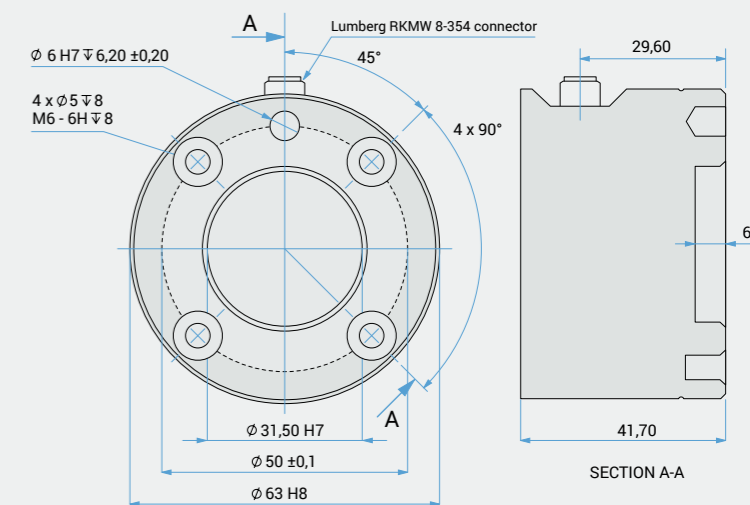
Physical

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



Tool flange for UR3e, UR5e, UR10e and UR16e



UNLESS OTHERWISE SPECIFIED:
 Dimensions are in millimeters. Tolerance ± 0,1 mm ± 0,5°