

# Robot arm specifications.

	UR3e		UR5e		UR10e		UR16e	
<b>Specification</b>								
Payload	3 kg (6.6 lbs)		5 kg (11 lbs)		12.5 kg (27.5 lbs)		16 kg (35.3 lbs)	
Reach	500 mm (19.7 in)		850 mm (33.5 in)		1300 mm (51.2 in)		900 mm (35.4 in)	
Degrees of freedom	6 rotating joints		6 rotating joints		6 rotating joints		6 rotating joints	
Programming	< 12 inch touchscreen with PolyScope graphical user interface >				< 12 inch touchscreen with PolyScope graphical user interface >			
<b>Performance</b>								
Power, Consumption, Maximum Average	300 W		570 W		615 W		585 W	
Power, Consumption, Typical with moderate settings (approximate)	100 W		200 W		350 W		350 W	
Safety	< 17 configurable safety functions >				< 17 configurable safety functions >			
Certifications	< EN ISO 13849-1, PLd Category 3, and EN ISO 10218-1 >				< EN ISO 13849-1, PLd Category 3, and EN ISO 10218-1 >			
Force Sensing, Tool Flange	Force, x-y-z	Torque, x-y-z	Force, x-y-z	Torque, x-y-z	Force, x-y-z	Torque, x-y-z	Force, x-y-z	Torque, x-y-z
- Range	30.0 N	10.0 Nm	50.0 N	10.0 Nm	100.0 N	10.0 Nm	160.0 N	10.0 Nm
- Precision	2.0 N	0.1 Nm	3.5 N	0.2 Nm	5.0 N	0.2 Nm	5.0 N	0.2 Nm
- Accuracy	3.5 N	0.1 Nm	4.0 N	0.3 Nm	5.5 N	0.5 Nm	5.5 N	0.5 Nm
<b>Movement</b>								
Pose Repeatability per ISO 9283	± 0.03 mm		± 0.03 mm		± 0.05 mm		± 0.05 mm	
Axis movement	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed	Working range	Maximum speed
- Base	± 360°	± 180°/s	± 360°	± 180°/s	± 360°	± 120°/s	± 360°	± 120°/s
- Shoulder	± 360°	± 180°/s	± 360°	± 180°/s	± 360°	± 120°/s	± 360°	± 120°/s
- Elbow	± 360°	± 180°/s	± 360°	± 180°/s	± 360°	± 180°/s	± 360°	± 180°/s
- Wrist 1	± 360°	± 360°/s	± 360°	± 180°/s	± 360°	± 180°/s	± 360°	± 180°/s
- Wrist 2	± 360°	± 360°/s	± 360°	± 180°/s	± 360°	± 180°/s	± 360°	± 180°/s
- Wrist 3	Infinite	± 360°/s	± 360°	± 180°/s	± 360°	± 180°/s	± 360°	± 180°/s
Typical TCP speed	1 m/s (39.4 in/s)		1 m/s (39.4 in/s)		1 m/s (39.4 in/s)		1 m/s (39.4 in/s)	
<b>Features</b>								
IP classification	IP54		IP54		IP54		IP54	
ISO 14644-1 Class Cleanroom	5		5		5		5	
Noise	Less than 60 dB(A)		Less than 65 dB(A)		Less than 65 dB(A)		Less than 65 dB(A)	
Robot mounting	Any Orientation		Any Orientation		Any Orientation		Any Orientation	
I/O ports								
- Digital in	2		2		2		2	
- Digital out	2		2		2		2	
- Analog in	2		2		2		2	
Tool I/O Power Supply Voltage	12/24 V		12/24 V		12/24 V		12/24 V	
Tool I/O Power Supply	600 mA		1.5 A (Dual pin) 1 A (Single pin)		2 A (Dual pin) 1 A (Single pin)		2 A (Dual pin) 1 A (Single pin)	
<b>Physical</b>								
Footprint	Ø 128 mm		Ø 149 mm		Ø 190 mm		Ø 190mm	
Materials	Aluminium, Plastic, Steel		Aluminium, Plastic, Steel		Aluminium, Plastic, Steel		Aluminium, Plastic, Steel	
Tool (end-effector) connector type	M8   M8 8-pin		M8   M8 8-pin		M8   M8 8-pin		M8   M8 8-pin	
Cable length robot arm	6 m (236 in)		6 m (236 in)		6 m (236 in)		6 m (236 in)	
Weight including cable	11.2 kg (24.7 lbs)		20.6 kg (45.4 lbs)		33.5 kg (73.9 lbs)		33.1 kg (73 lbs)	
Operating Temperature Range	0-50°C		0-50°C		0-50°C		0-50°C	
Humidity	90%RH (non-condensing)		90%RH (non-condensing)		90%RH (non-condensing)		90%RH (non-condensing)	



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# The power to automate is in your hands.



## e-Series 3PE Teach Pendant

All e-Series cobots include the standard e-Series Teach Pendant, offering an intuitive user interface for easy programming with UR's powerful PolyScope software. A 3-position enabling teach pendant is also available as a variant for all payloads of e-Series robots, and as a UR+ component. The 3PE device is mechanically and functionally integrated with the e-Series Teach Pendant – just Plug & Produce with any e-Series control box. Additionally, it is fully integrated into the PolyScope user interface to enable all robot motion, including Freedrive, in manual mode.

### Key Benefits

- Full mechanical 3PE device integration
- Full software integration - the 3PE Teach Pendant is natively supported in PolyScope
- Connects to the control box with the same connector as the standard e-Series teach pendant
- Can be mounted to any existing e-Series teach pendant brackets
- Includes two 3PE devices, allowing comfortable use with left or right hand
- Included in TÜV NORD certifications ISO 10218-1:2011 and ISO 13849-1:2015

### Hardware Specifications

Width	300 mm (11.81 in)
Height	231 mm (9.09 in)
Thickness	50 mm (1.97 in)
Weight, including 1 meter of cable	1.8 kg (3.961 lbs)
IP Classification	IP54

# Your solution with UR built in.



## e-Series OEM Control Box

Our standard control box complements the mobility and small footprint of our cobot arms. To meet the growing demand for cobots in sophisticated, purpose-built automation systems, we have developed a ready-to-integrate control box, designed to be embedded in another control panel. The minimal form factor of our OEM Control Box is powering complex automation systems, turnkey solutions, and OEM products, across many industries and applications.

**The compact OEM control box is available with all sizes of e-Series robot arms, in AC or DC versions.**

### Key Benefits

- Cost effective
- Compact and lightweight
- No teach pendant or metal cabinet enclosure
- Reduces unneeded components and waste
- Power connector with strain relief included makes wiring easy
- Convenient mounting features
- AC model, like our standard robots, can be powered by a standard single-phase wall outlet
- DC model is ideal for battery-operated systems such as mobile robots

### Hardware Specifications

OEM Control Box Size (W×H×D)	451 mm × 168 mm × 150 mm (17.8 in × 6.6 in × 5.9 in)
Weight	AC model: 4.7 kg (10.4 lbs) DC model: 4.3 kg (9.5 lbs)
Input Voltage	AC model: 100–240 VAC, 47–440Hz DC model: 24–48 VDC (typical)
Standby Power	AC model: <1.5 W DC model: <7 W