

# UR3e technical details

## Performance

Power consumption	Approx. 100 W using a typical program		
Collaboration operation	17 advanced adjustable safety functions incl. elbow monitoring. Remote Control according to ISO 10218		
Certifications	EN ISO 13849-1, Cat.3, PL d, and EN ISO 10218-1		
F/T Sensor - Force, x-y-z	F/T Sensor - Torque, x-y-z		
Range	30 N	Range	10 Nm
Resolution	1.0 N	Resolution	0.02 Nm
Accuracy	3.5 N	Accuracy	0.10 Nm
Ambient temperature range	0-50°C*		
Humidity	90% RH (non-condensing)		

## Specification

Payload	3 kg / 6.6 lbs		
Reach	500 mm / 19.7 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°/Sec.
Shoulder	± 360°	±180°/Sec.
Elbow	± 360°	±180°/Sec.
Wrist 1	± 360°	±360°/Sec.
Wrist 2	± 360°	±360°/Sec.
Wrist 3	Infinite	±360°/Sec.
Typical TCP speed	1 m/Sec./ 39.4 in/Sec.	

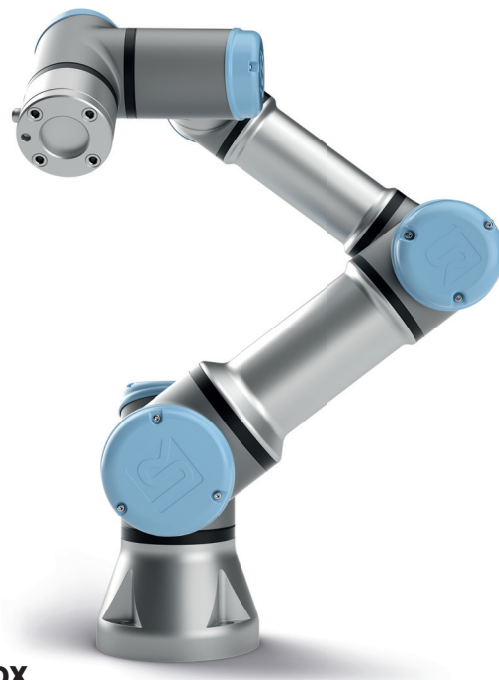
## Features

IP classification	IP54		
ISO Class Cleanroom	5		
Noise	Less than 60 dB(A)		
Robot mounting	Any Orientation		
I/O Ports	Digital in	2	UART interface (9.6k-5Mbps)
	Digital out	2	
	Analog in	2	
	Analog out	0	
I/O power supply in tool	12V/24V 600mA continuous, 2A for shorter periods		

## Physical

Footprint	Ø 128 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	11.2 kg / 24.7 lbs		

\* The robot can work in a temperature range of 0-50°C  
at a high continuous joint speed, ambient temperature is reduced



## Control box

### Features

IP classification	IP44		
ISO Class Cleanroom	6		
Ambient temperature range	0-50°C		
I/O Ports	Digital in	16	500 Hz control, 4 separated high speed quadrature digital inputs
	Digital out	16	
	Analog in	2	
	Analog out	2	
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	100-240 VAC, 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 kg / 28.7 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 1m of TP cable	1.6 kg / 3.5 lbs		
Cable length	4.5 m / 177.17 in		

# UR5e technical details

## Performance

Power consumption	Approx. 200 W using a typical program		
Collaboration operation	17 advanced adjustable safety functions incl. elbow monitoring. Remote Control according to ISO 10218		
Certifications	EN ISO 13849-1, Cat.3, PL d, and EN ISO 10218-1		
F/T Sensor - Force, x-y-z	F/T Sensor - Torque, x-y-z		
Range	50 N	Range	10 Nm
Resolution	2.5 N	Resolution	0.04 Nm
Accuracy	4.0 N	Accuracy	0.30 Nm
Ambient temperature range	0-50°C		
Humidity	90% RH (non-condensing)		

## 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

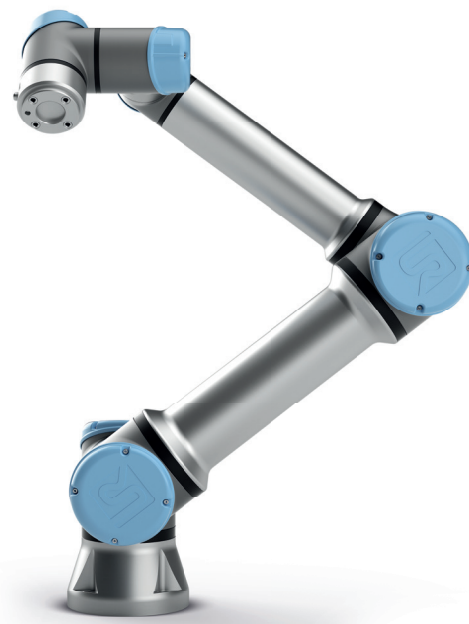
Pose Repeatability	+/- 0.03 mm, with payload, per ISO 9283	
Axis movement robot arm	Working range	Maximum speed
Base	± 360°	±180°/Sec.
Shoulder	± 360°	±180°/Sec.
Elbow	± 360°	±180°/Sec.
Wrist 1	± 360°	±180°/Sec.
Wrist 2	± 360°	±180°/Sec.
Wrist 3	± 360°	±180°/Sec.
Typical TCP speed	1 m/Sec./ 39.4 in/Sec.	

## Features

IP classification	IP54		
ISO Class Cleanroom	6		
Noise	Less than 65 dB(A)		
Robot mounting	Any Orientation		
I/O Ports	Digital in	2	UART interface (9.6k-5Mbps)
	Digital out	2	
	Analog in	2	
	Analog out	0	
I/O power supply in tool	12V/24V 600mA continuous, 2A for shorter periods		

## 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		



## Control box

### Features

IP classification	IP44		
ISO Class Cleanroom	6		
Ambient temperature range	0-50°C		
I/O Ports	Digital in	16	500 Hz control, 4 separated high speed quadrature digital inputs
	Digital out	16	
	Analog in	2	
	Analog out	2	
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	100-240 VAC, 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 1m of TP cable	1.6 kg / 3.5 lbs		
Cable length	4.5 m / 177.17 in		

# UR10e

## technical details

### Performance

Power consumption	Approx. 350 W using a typical program		
Collaboration operation	17 advanced adjustable safety functions incl. elbow monitoring. Remote Control according to ISO 10218		
Certifications	EN ISO 13849-1, Cat.3, PL d, and EN ISO 10218-1		
F/T Sensor - Force, x-y-z	F/T Sensor - Torque, x-y-z		
Range	100 N	Range	10 Nm
Resolution	2.0 N	Resolution	0.02 Nm
Accuracy	5.5 N	Accuracy	0.60 Nm
Ambient temperature range	0-50°C		
Humidity	90% RH (non-condensing)		

### Specification

Payload	10 kg / 22 lbs		
Reach	1300 mm / 51.2 in		
Degrees of freedom	6 rotating joints DOF		
Programming	Polyscope graphical user interface on 12 inch touchscreen with mounting		

### Movement

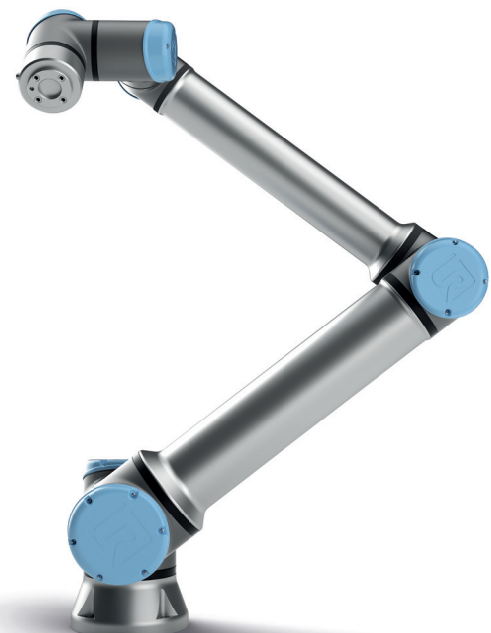
Pose Repeatability	+/- 0.05 mm, with payload, per ISO 9283	
Axis movement robot arm	Working range	Maximum speed
Base	± 360°	±120°/Sec.
Shoulder	± 360°	±120°/Sec.
Elbow	± 360°	±180°/Sec.
Wrist 1	± 360°	±180°/Sec.
Wrist 2	± 360°	±180°/Sec.
Wrist 3	± 360°	±180°/Sec.
Typical TCP speed	1 m/Sec./ 39.4 in/Sec.	

### Features

IP classification	IP54		
ISO Class Cleanroom	5		
Noise	Less than 65 dB(A)		
Robot mounting	Any Orientation		
I/O Ports	Digital in	2	UART interface (9.6k-5Mbps)
	Digital out	2	
	Analog in	2	
	Analog out	0	
I/O power supply in tool	12V/24V 600mA continuous, 2A for shorter periods		

### Physical

Footprint	Ø 190 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	33.5 kg / 73.9 lbs		



## Control box

### Performance

IP classification	IP44		
ISO Class Cleanroom	6		
Ambient temperature range	0-50°C		
I/O Ports	Digital in	16	500 Hz control, 4 separated high speed quadrature digital inputs
	Digital out	16	
	Analog in	2	
	Analog out	2	
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	100-240 VAC, 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 1m of TP cable	1.6 kg / 3.5 lbs		
Cable length	4.5 m / 177.17 in		