

# UR10e technical details

## Performance

|                            |                                                                                                                                    |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Power consumption          | Approx. 350 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      | 100 N |
| Resolution | 2.0 N |
| Accuracy   | 5.5 N |

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

|            |         |
|------------|---------|
| Range      | 10 Nm   |
| Resolution | 0.02 Nm |
| Accuracy   | 0.60 Nm |

## 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°/s |
| Shoulder                | ± 360°                                  | ± 120°/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 | 5                  |        |
| 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 |

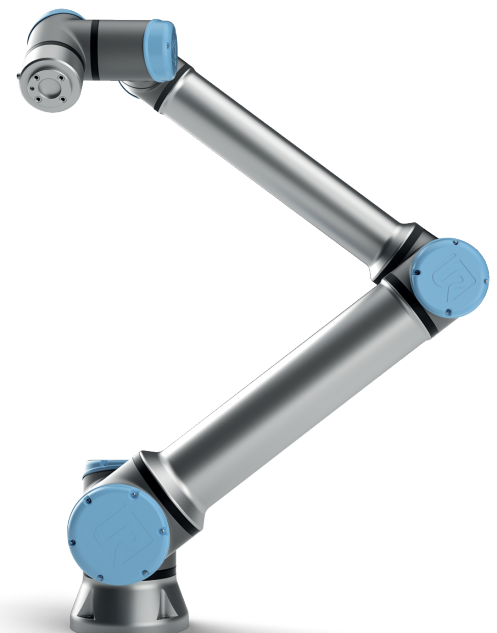
I/O power supply in tool 12V/24V 600mA continuous, 2A peak

Ambient temperature range 0-50°C\*

Humidity 90%RH (non-condensing)

## Physical

|                                    |                           |
|------------------------------------|---------------------------|
| Footprint                          | Ø 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

### 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<br>ModbusTCP: 500 Hz signal frequency<br>ProfiNet and EthernetIP: 500 Hz signal frequency<br>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<br>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 |