# UR3e technical details

## Performance

| | |
|---|---|
| Power consumption | Approx. 100 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 | 30 N |
| Resolution | 1.0 N |
| Accuracy | 3.5 N |
| F/T Sensor - Torque, x-y-z | |
| Range | 10 Nm |
| Resolution | 0.02 Nm |
| Accuracy | 0.10 Nm |

## 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°/s |
| Shoulder | ± 360° | ± 180°/s |
| Elbow | ± 360° | ± 180°/s |
| Wrist 1 | ± 360° | ± 360°/s |
| Wrist 2 | ± 360° | ± 360°/s |
| Wrist 3 | Infinite | ± 360°/s |
| Typical TCP speed | | 1 m/s / 39.4 in/s |

## Features

| | |
|---|---|
| IP classification | IP54 |
| ISO Class Cleanroom | 5 |
| Noise | Less than 60 dB(A) |
| Robot mounting | Any Orientation |
| I/O ports | Digital in 2<br>Digital out 2<br>Analog in 2<br>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 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 high continuous joint speeds the maximum allowed ambient temperature is reduced.

# Control box

## Features

| | |
|---|---|
| IP classification | IP44 |
| ISO Class Cleanroom | 6 |
| Ambient temperature range | 0-50° |
| I/O ports | Digital in 16<br>Digital out 16<br>Analog in 2<br>Analog out 2<br>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 | 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 1 m of TP cable | 1.6 kg / 3.5 lbs |
| Cable length | 4.5 m / 177.17 in |

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