



# UR3e

## Technical Specification

With a 3 kg payload capacity and 500 mm reach, the compact form factor of the UR3e makes it a fit for tight workspaces.

Today, more than 75,000 UR collaborative industrial robots have been delivered to customers across industries and around the world. UR3e 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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### UR3e

#### Specification

|                             |   |
|-----------------------------|---|
| Payload                     | 3 kg (6.6 lbs)  |
| Reach                       | 500 mm (19.7 in)  |
| Degrees of freedom          | 6 rotating joints   |
| Programming                 | 12 inch touchscreen with PolyScope graphical user interface |
| Power consumption (average) |   |
| Maximum power               | 300 W   |
| Moderate operating settings | 100 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                                    | 30.0 N       | 10.0 Nm       |
| Precision                                | 2.0 N        | 0.1 Nm        |
| Accuracy                                 | 3.5 N        | 0.1 Nm        |

#### Movement

|                                 |   |
|---------------------------------|---|
| Typical TCP speed               | 1 m/s                                     |
| Pose Repeatability per ISO 9283 | ± 0.03 mm                                 |
| <b>Axis movement</b>            | <b>Working range</b> <b>Maximum speed</b> |
| 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              |

#### Features

|   |   |
|---|---|
| IP classification   | IP54 water protection   |
| Cleanroom classification  | Class 6 at 20 at max. speed and payload, Class 7 at 40% and 80% at max. speed and payload |
| ISO 14644-1 classification of air cleanliness by particle concentration |   |
| Noise   | < 60 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   | 600 mA  |

#### Physical

|                          |  |
|--------------------------|--|
| Footprint                | Ø 128 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   | 11.2 kg (17.7 lbs)                             |
| Humidity                 | ≤ 90% RH (non-condensing)                      |

#### Contact

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## 3-Position Enabling Teach Pendant

#### Features

|                            |                                  |
|----------------------------|----------------------------------|
| IP classification          | IP54 water protection            |
| Included in certifications | EN ISO 10218-1<br>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

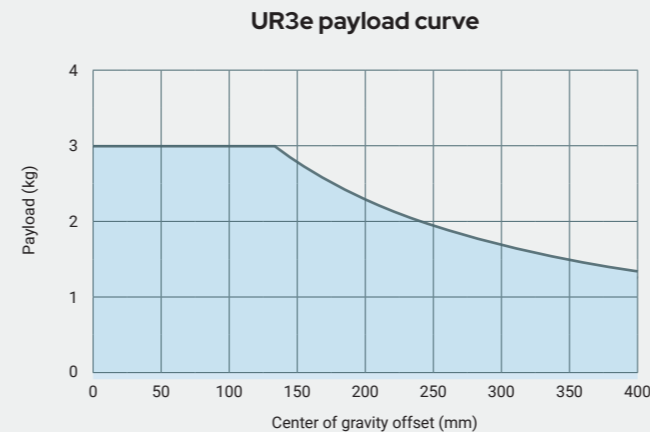
#### Features

|                              |   |
|------------------------------|---|
| IP Classification            | IP44 water protection   |
| 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<br>Modbus TCP<br>PROFINET, PROFIsafe (optional)<br>USB 2.0, USB 3.0<br>Ethernet/IP<br>ROS/ROS2 driver (optional, open source)<br>Euromap-67 (optional)<br>SPI AN-146 (optional)<br>Injection Moulding Machine Interface (IMMI, optional) |
| Power Source                 | 100-240 VAC, 47-440 Hz  |

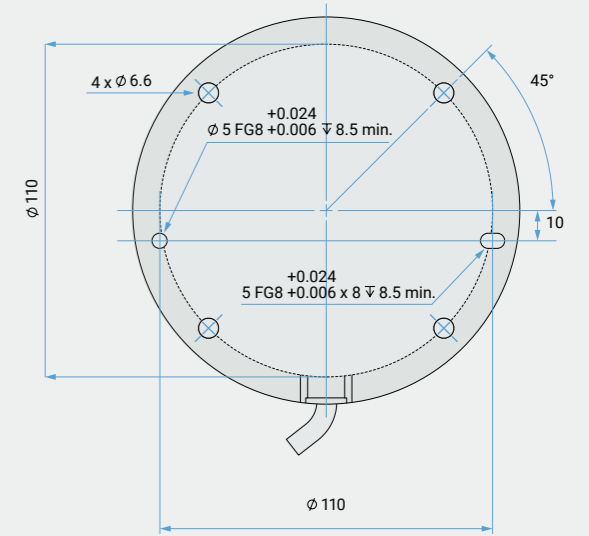
#### Physical

|                              |  |
|------------------------------|--|
| 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                                  |

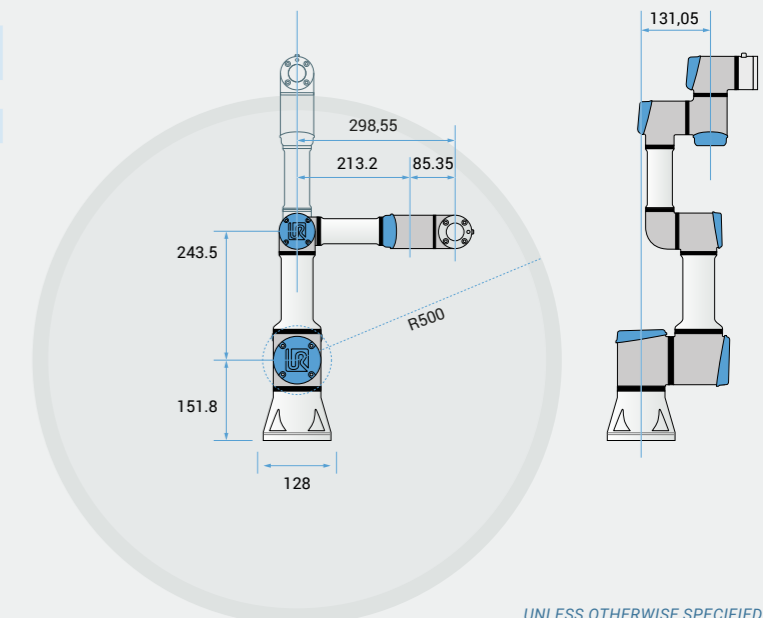
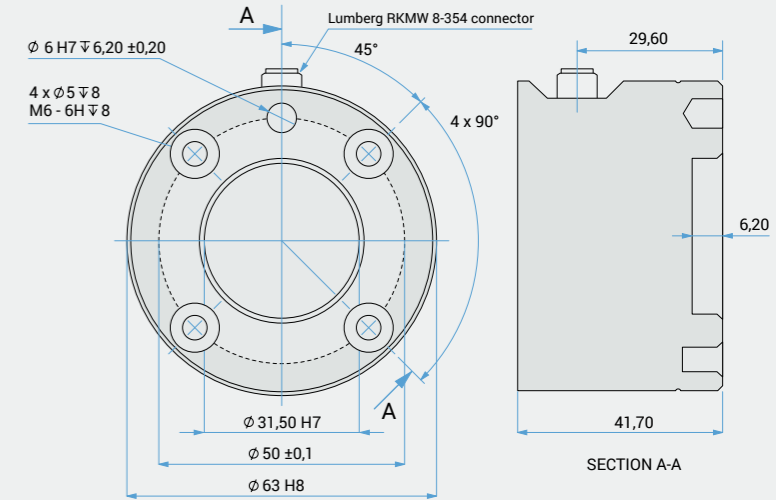
The control box is also available in an OEM version



#### Interface for UR3e base flange



#### Tool flange for UR3e, UR5e, UR10e and UR16e



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