

# UR7e

## Technical specification

The UR7e brings ultimate flexibility to medium-duty applications with a payload of up to 7.5 kg and a reach of 850 mm.

Today, more than 100,000 UR collaborative industrial robots have been delivered to customers across industries and around the world. The e-Series of cobots brings incredible flexibility and unparalleled ease of use to your application.

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### Features

|                               |                                   |
|-------------------------------|-----------------------------------|
| IP classification             | IP54                              |
| Noise                         | < 65 dB(A)                        |
| Robot mounting                | Any orientation                   |
| <b>I/O Ports</b>              |                                   |
| Digital In                    | 2                                 |
| Digital Out                   | 2                                 |
| Analog In                     | 2                                 |
| Tool I/O power supply voltage | 12/24 V                           |
| Tool I/O power supply         | 1.5 A (Dual pin) 1 A (Single pin) |

### Physical

|                          |                                        |
|--------------------------|----------------------------------------|
| Footprint                | Ø151 mm                                |
| Materials                | Aluminum, plastic, steel               |
| Tool flange interface    | M8 8-pin female, EN ISO-9409-1-50-4-M6 |
| Connector type           | M8 8-pin female                        |
| Cable length (robot arm) | 6 m (236 in)                           |
| Weight including cable   | 20.6 kg (45.4 lbs)                     |
| Humidity                 | ≤ 90% RH (non-condensing)              |

### Contact

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## Teach Pendant

### Features

|                                |                                                          |
|--------------------------------|----------------------------------------------------------|
| IP classification              | IP54                                                     |
| Humidity                       | ≤ 90% RH (non-condensing)                                |
| Display resolution             | 1280 x 800 pixels                                        |
| <b>Physical</b>                |                                                          |
| Materials                      | Plastic                                                  |
| Teach Pendant size (W x H x D) | 300 mm x 231 mm x 50 mm<br>(11.8 in x 9.1 in x 1.97 in)  |
| Weight                         | 1.6 kg (3.5 lbs)<br>including 1 m of Teach Pendant cable |
| Cable length                   | 4.5 m (177.17 in)                                        |

## Control Box

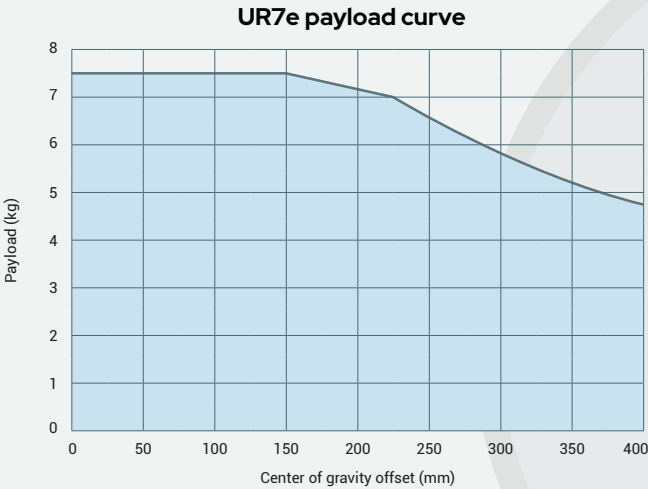
### Features

|                                                                                                                              |                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| IP Classification                                                                                                            | IP44                                                                                      |
| Operating temperature range*                                                                                                 | Ambient temperature:<br>0-50°C (32-122°F)                                                 |
| Humidity                                                                                                                     | ≤ 90% RH (non-condensing)                                                                 |
| <b>I/O Ports</b>                                                                                                             |                                                                                           |
| Digital In                                                                                                                   | 16                                                                                        |
| Digital Out                                                                                                                  | 16                                                                                        |
| Analog In                                                                                                                    | 2                                                                                         |
| Analog Out                                                                                                                   | 2                                                                                         |
| Quadrature Digital Inputs                                                                                                    | 4                                                                                         |
| I/O Power Supply                                                                                                             | 24V, 2A                                                                                   |
| Industrial Protocols                                                                                                         | Modbus-TCP (Client/Sever)<br>Ethernet/IP Adapter<br>PROFINET device/PROFIsafe<br>ROS/ROS2 |
| <b>Hardware Interfaces</b>                                                                                                   |                                                                                           |
| Ethernet 1 Gb/s<br>USB 2.0, USB 3.0<br>Mini DisplayPort<br>Injection Moulding Machine Interface<br>(SPI AN-146 & Euromap-67) |                                                                                           |
| Power Source                                                                                                                 | 100-240 VAC, 47-440 Hz                                                                    |

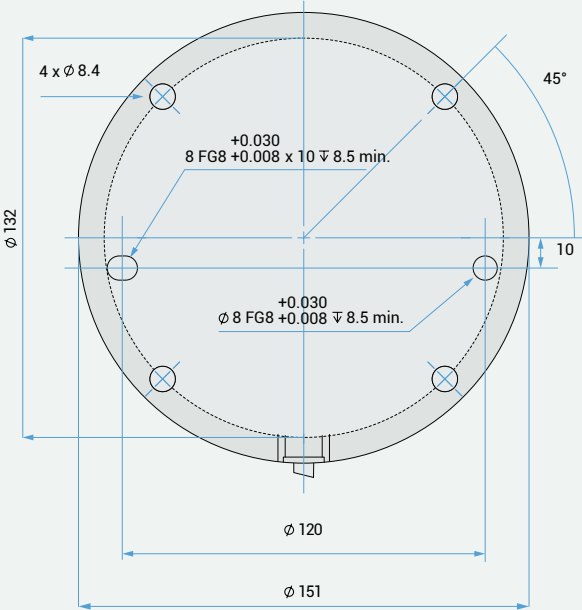
### Physical

|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Control Box Size (W x H x D) | 460 mm x 449 mm x 254 mm<br>(18.2 in x 17.6 in x 10 in) |
| Weight                       | 12 kg (26.5 lbs)                                        |
| Materials                    | Powder coated steel                                     |

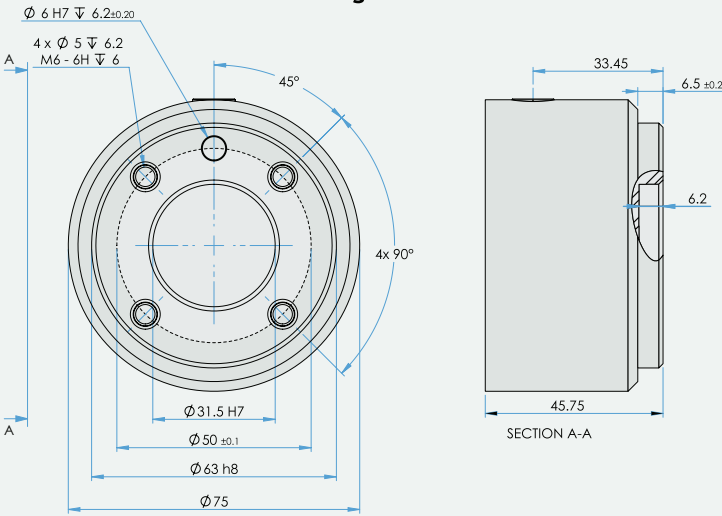
The control box is also available in an OEM version



Interface for UR7e base flange



Tool flange for UR7e



## UR7e

### Specification

|                                    |                                                                                           |
|------------------------------------|-------------------------------------------------------------------------------------------|
| Payload                            | 7.5 kg (16 lbs)                                                                           |
| Reach                              | 850 mm (33.5 in)                                                                          |
| Degrees of freedom                 | 6 rotating joints                                                                         |
| Programming                        | 12-inch touchscreen with PolyScope graphical user interface                               |
| <b>Power consumption (average)</b> |                                                                                           |
| Maximum power                      | 570 W                                                                                     |
| Moderate operating settings        | 250 W                                                                                     |
| Operating temperature range        | Ambient temperature:<br>0-50°C (32-122°F)                                                 |
| <b>Safety functions</b>            |                                                                                           |
| In compliance with                 | 17 configurable safety functions<br>EN ISO 13849-1 (PLd Category 3)<br>and EN ISO 10218-1 |

### Performance

| Force sensing, tool flange/torque sensor | Force, x-y-z | Torque, x-y-z |
|------------------------------------------|--------------|---------------|
| Range                                    | ± 50.0 N     | ± 10.0 Nm     |
| Precision                                | ± 3.5 N      | ± 0.2 Nm      |
| Accuracy                                 | ± 4.0 N      | ± 0.3 Nm      |

### Movement

|                                 |                      |                      |
|---------------------------------|----------------------|----------------------|
| Max TCP speed                   | 4 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°               | ± 180°/s             |
| Wrist 2                         | ± 360°               | ± 180°/s             |
| Wrist 3                         | ± 360°               | ± 180°/s             |

