UR3e

Technical Specification

The UR3e is the smallest and most compact of any UR robot. Boasting a 3 kg payload and a 500 mm reach, the small form factor of the UR3e makes it a perfect fit to navigate tight workspaces.

Today, more than 90,000 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.

Updated December 2024.

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

Max TCP speed	3 m/s
Pose Repeatability per ISO 9283	± 0.03 mm

Axis movement	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

Features

IP classification	IP54
Cleanroom classification ISO 14644-1 *velocity and payload	Class 6 at 20%* Class 7 at ≥ 40%*
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 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	11,2 kg (17.7 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

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
Operating temperature range	Ambient temperature: 0-50°C (32-122°F)
Humidity	≤ 90% RH (non-condensing)

I/O Ports

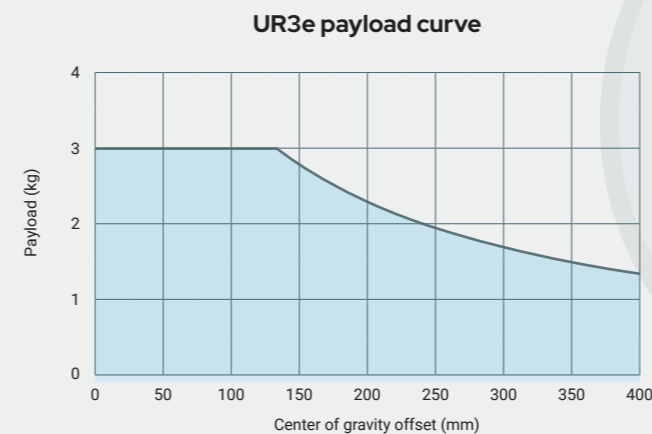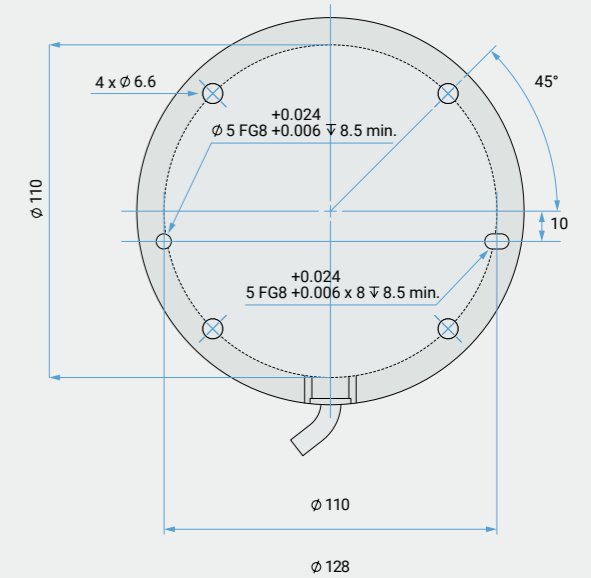|	
Digital In	16
Digital Out	16
Analog In	2
Analog Out	2
Quadrature Digital Inputs	4
I/O Power Supply	24V, 2A
Industrial Protocols	Modbus-TCP (Client/Sever) Ethernet/IP Adapter PROFINET device/PROFIsafe ROS/ROS2
Hardware Interfaces	Ethernet 1 Gb/s USB 2.0, USB 3.0 Mini DisplayPort Injection Moulding Machine Interface (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 (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

UR3e payload curve