LARA

Lightweight Agile Robotic Assistant

Datasheet

Ready to be used for your application right away.

Combining lightweight design and industrial performance with an intuitive user interface.

LARA, the Lightweight Agile Robotic Assistant, is a six-degree-of-freedom collaborative robot that combines the agility of lightweight design with industrial performance. With unmatched speed, precision and protection, LARA bridges the gap between the world of collaborative and industrial robots. This way, LARA allows you to automate any production process in a cost-efficient way. Its intuitive user interface enables anyone to create programs for LARA, easily automating simple and repetitive tasks in any production environment.

Specification	LARA 3	LARA 5	LARA 8	LARA 10
Payload	3 kg	5 kg	8 kg	10 kg
Reach	590 mm	800 mm	1300 mm	1000 mm
Degrees of Freedom	6 rotary joints	6 rotary joints	6 rotary joints	6 rotary joints
Weight	18 kg	26 kg	48 kg	45 kg
Robot mounting	any orientation	any orientation	any orientation	any orientation
IP classification	IP66	IP66	IP66	IP66
Ambient working temperature	0 °C – 40 °C	0 °C – 40 °C	0 °C – 40 °C	0 °C – 40 °C
Data & power cables	complete inner harness	complete inner harness	complete inner harness	complete inner harness
Footprint base	Ø 144 mm	Ø 156 mm	Ø 200 mm	Ø 200 mm
Bolt circle	Ø 126 mm	Ø 140 mm	Ø 180 mm	Ø 180 mm
Tool connector type	M12 12-pole	M12 12-pole	M12 12-pole	M12 12-pole
Status indicator	RGB LED on flange	RGB LED on flange	RGB LED on flange	RGB LED on flange
Tgt. Perf. Level	PLd Cat.3 / SIL2	PLd Cat.3 / SIL2	PLd Cat.3 / SIL2	PLd Cat.3 / SIL2
Repeatability	± 0.02 mm	± 0.02 mm	± 0.02 mm	± 0.02 mm

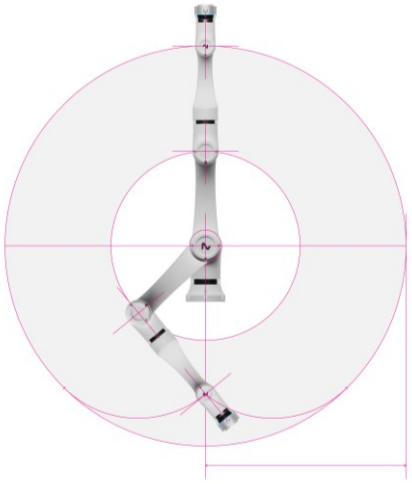
Movement

Axis	Working angle	Maximum Speed *		
	LARA 3/5/8/10	LARA 3	LARA 5	LARA 8/10
A1	± 180°	180 °/s	170°/s	130°/s
A2	± 180°	180 °/s	170°/s	130°/s
A3	± 150°	180 °/s	180 °/s	150°/s
A4	± 180°	180 °/s	180 °/s	150°/s
A5	± 180°	200°/s	200°/s	180°/s
A6	± 360° (opt.)	200°/s	200°/s	180°/s

* The factory speed setting for all axes is 90°/s. Activation of higher speeds is possible. The maximum speeds depend on the application, payload and reach.

TCP Connector at flange

Hole pattern	DIN ISO 9409-1-50-4-M6
GPIO	3x digital in, 3x digital out, 2x analog in
I/O port	M12 12-pin-A-M / IEC 61076-2-101
I/O power supply	24V, max. 1000mA
Electrical interfaces	GPIO, Modbus RTU, 24V PSU
Control functions	2 programmable buttons on flange



Reach 590 / 800 / 1300 / 1000 m

Software & Controller

Motion controller	Real-Time NR-Motion Master
Software interfaces	NeuraPy API
Safety architecture	Safe Master
Safety features	Safe position, speed, torque, limits, I/Os

Programming features

Smart GUI	Neura easy programming interface
Fast programming	2 programmable buttons on flange, ZeroG, path recording
Human-robot interaction	GUI, force-feedback, LED indicator on flange

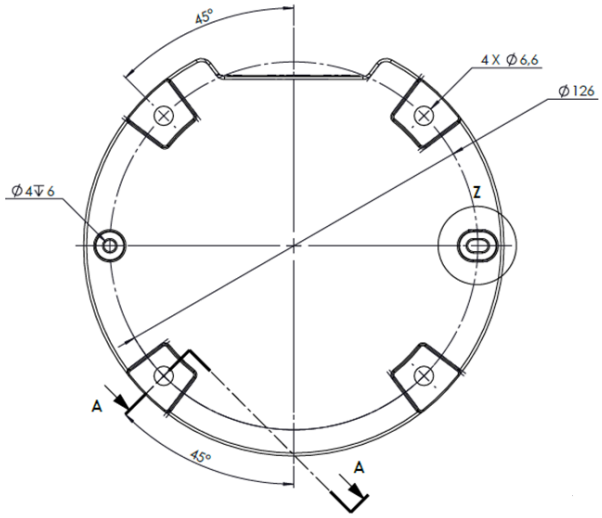
Control box (NRLCC)

Dimensions	493 mm x 470 mm x 243 mm
Weight	20 kg
Power supply	100-240 VAC, 50/60 Hz, max.1200W
Interfaces	8x GPIO, Modbus TCP, Ethernet IP, USB 3.0, Safe I/Os

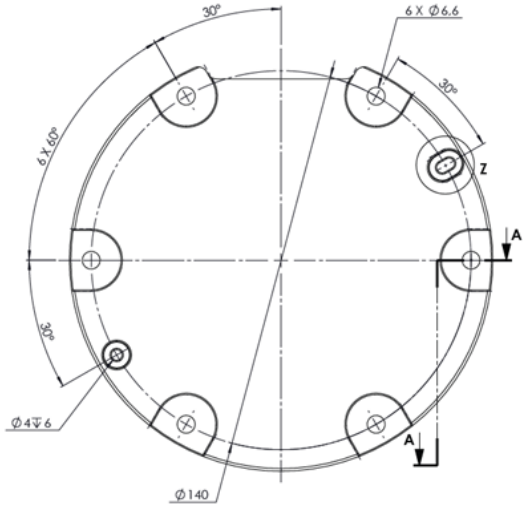
Tech pendant (NRLTP)

Dimensions (var.)	300 mm x 245 mm x 133 mm
Resolution	2560 x 1600 px
Weight	1.5 kg (without cable) 2.5 kg (incl. 5 m cable)
Cable length	5 m

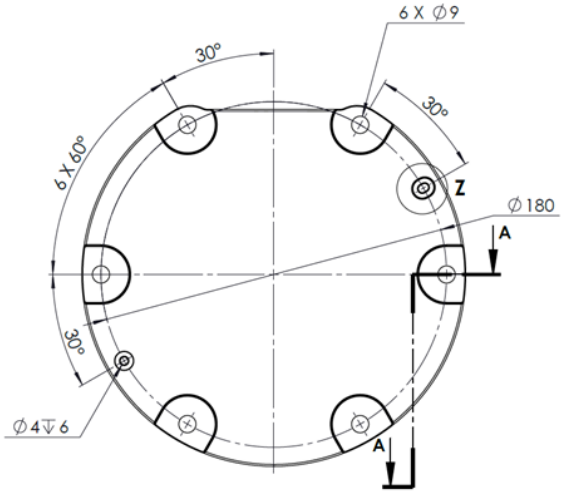
Hole pattern of robot base LARA 3



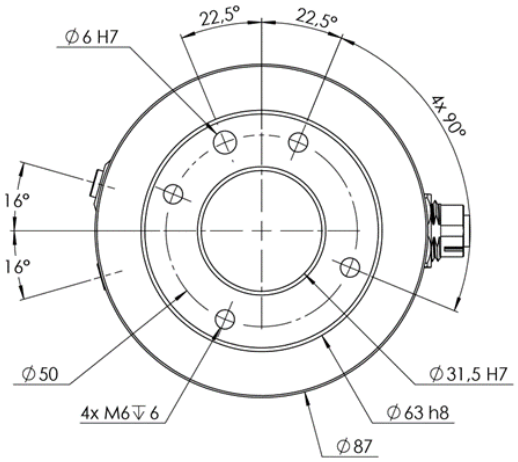
Hole pattern of robot base LARA 5



Hole pattern of robot base LARA 8 & 10



Hole pattern of TCP flange



Contact us to learn more about MAV+

Mobile manipulator solution *MAV+*

Combination with MAiRA or LARA

Flexible rotating axis

Pallet-sized shelf

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