



MAiRA

Multi-Sensing Intelligent
Robotic Assistant

Data sheet

**World's smartest, safest, fastest,
and most accurate robot.**

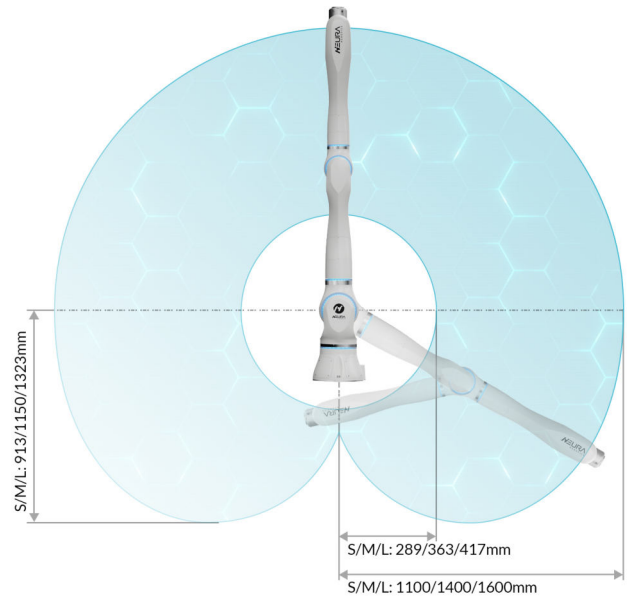
MAiRA is the world's first commercially available cognitive robot. With its integrated AI and novel touchless safe human detection sensor technology, MAiRA can perceive its surroundings and is able to easily adapt to all kinds of industrial environments. MAiRA opens a new era of robots and offers endless possibilities for interaction, for beginners and experts alike. Enabling true collaboration of human and machine.

General specs	MAiRA Basic/Pro S	MAiRA Basic/Pro M	MAiRA Basic/Pro L	MAiRA Jr.
Payload	15-18 kg	12-15 kg	9-12 kg	6-8 kg
Reach	1100 mm	1400 mm	1600 mm	900 mm
Degrees of Freedom	6 or 7 rotary joints	6 or 7 rotary joints	6 or 7 rotary joints	6 or 7 rotary joints
Weight	51 kg	53 kg	56 kg	33 kg
Robot mounting	Any orientation	Any orientation	Any orientation	Any orientation
IP classification	IP65	IP65	IP65	IP65
Ambient working temperature	0 °C – 50 °C	0 °C – 50 °C	0 °C – 50 °C	0 °C – 50 °C
Data & power cables	Complete inner harness and ducts	Complete inner harness and ducts	Complete inner harness and ducts	Complete inner harness
Footprint base	Ø 252 mm	Ø 252 mm	Ø 252 mm	Ø 200 mm
Tool connector type	ISO 9409-1-50-7-M6	ISO 9409-1-50-7-M6	ISO 9409-1-50-7-M6	ISO 9409-1-50-7-M6
Status illumination	RGB LED on each axis	RGB LED on each axis	RGB LED on each axis	RGB LED on each axis
Performance level	PLe Cat.3 / SIL3	PLe Cat.3 / SIL3	PLe Cat.3 / SIL3	PLe Cat.3 / SIL3
Repeatability	≥ ± 0.01 mm	≥ ± 0.01 mm	≥ ± 0.01 mm	± 0.02 mm

Movement MAiRA Basic/Pro

Movement MAiRA Jr.

	Working range	Maximum speed	Working range	Maximum speed
A1	± 360°	120°/s	± 180°	180°/s
A2	± 120°	120°/s	± 110°	180°/s
A3	± 270°	150°/s	± 180°	180°/s
A4	± 150°	150°/s	± 140°	200°/s
A5	± 270°	200°/s	± 180°	200°/s
A6	± 160°	200°/s	± 150°	360°/s
A7	± 360° / endless opt.	360°/s	± 180°	360°/s



TCP connector flange

Hole pattern	DIN ISO 9409-1-50-7-M6
Compressed air (optional)	3x push-pull-plug – 3 mm OD
I/O power supply	24V 600mA
Interfaces	EtherCAT, GPIO, Modbus via M8 8-pin-A-M IEC 61076-2-104

Software & Controller

Motion controller	Real-Time NR-Motion Master
Machine Learning (ML) kernel	Smart applications, performance enhancement
Open architecture	3 rd party apps, access to low level controllers and sensor data
Software interfaces	Robot, sensor, and NEURA AI SDKs
Safety architecture	Safe master & FSoE communication

Sensors

Vision	3D Vision Sensor (Head), only in Pro version
Force/torque (optional)	6-DoF F/T-sensor in flange
Guidance	Zero gravity mode
Safety	Touchless Safe Human Detection technology (optional)
Interaction	3D voice recognition sensor and on-board speaker

Programming features

Smart GUI	NR easy programming interface
Fast programming	Shortcut buttons, voice control, gesture control (optional), dynamic path and force recording
Human-robot-interaction	Visual, audio, force-feedback, face recognition, motion tracking
Environment visualization	3D CAD data, sensor data



Control box

Dimensions	592 mm x 567 mm x 253 mm
Weight	35 kg
Power supply	90-250 VAC, 50/60 Hz, 1,5 kW
Interfaces	TCP/IP, GPIO, Modbus TCP, OPC UA



Tech pendant

Dimensions	285 mm x 228 mm x 95 mm
Resolution	2560 x 1600
Cable length	5 m / 197 in
User interface	Intuitive, drag-and-drop

Standard and optional feature set		MAiRA Basic S	MAiRA Basic M	MAiRA Basic L	MAiRA Pro S	MAiRA Pro M	MAiRA Pro L	MAiRA Jr.
Artificial Intelligence	NEURA AI API	-	-	-	●	●	●	●
Connector flange	Compressed air	○	○	○	○	○	○	-
Main options	6-DoF F/T-sensor in flange	○	○	○	○	○	○	○
	Touchless Safe Human Detection technology	○	○	○	○	○	○	○
	Custom color	○	○	○	○	○	○	○
Vision	3D Vision Sensor (Head)	-	-	-	●	●	●	-
	3D Vision Sensor (Flange)	-	-	-	○ Replaces serial 3D Vision Sensor	○ Replaces serial 3D Vision Sensor	○ Replaces serial 3D Vision Sensor	●
	3D Vision Sensor Gesture Control	-	-	-	●	●	●	-
Interaction	3D voice recognition sensor & on-board speaker	-	-	-	●	●	●	●

● = Standard feature ○ = Optional feature - = Not available

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