



MPA

Position sensors for large cylinders

SICK
Sensor Intelligence.



Technical data overview

Output function	Analog / Analog / IO-Link (depends on variant)
Teach-in	No / yes (depends on variant)
Cylinder types with adapter	Round body cylinder Tie rod cylinder T-slot cylinders Festo cylinders DSBC SMC cylinders CP96
Measuring range	107 mm ... 1,007 mm (depends on variant)
Housing length	109 mm ... 1,009 mm (depends on variant)

Product description

MPA position sensors continuously detect the piston position of pneumatic actuators using a direct, non-contact method. The sensors in the MPA product family are ideal for large piston diameters and long strokes. The sensor settings can be adjusted during installation and during operation later on, using a teach field or – depending on the variant – using IO-Link. The sensors continuously supply data via analog outputs or IO-Link, enabling flexible machine concepts and making it possible to solve tasks in areas such as quality monitoring and process control in conjunction with pneumatic cylinders and drives. This continuous transfer of position data upgrades the functionality of the pneumatic cylinders by making them more intelligent – and, as a result, more versatile.

At a glance

- Position sensor for use on pneumatic cylinders
- Sensor variants with measuring ranges of 107 mm to 1,007 mm
- Analog outputs (for current or voltage), switching output, and IO-Link
- Mounting with adapters on a multitude of cylinder types (tie-rod cylinders, round body cylinders, profile cylinders)

Your benefits

- Straightforward installation as no position elements or additional mechanical components are required for coupling with the piston rod
- Can be integrated into the machine at any time, as the sensor is attached to the cylinder externally
- Easy adjustment of sensor settings and parameters during operation using a teach pad or IO-Link
- More flexibility compared to conventional cylinder sensors, as it is possible to define multiple switching points in the smallest of spaces
- Maximum reliability thanks to the rugged aluminum housing and non-contact measurement principle
- Advanced diagnostic options thanks to data transmission via IO-Link

Fields of application

- Continuous position detection in pneumatic cylinders

Ordering information

Other models and accessories → www.sick.com/MPA

- **Electrical wiring:** DC 4-wire

Measuring range	Connection type	Switching out-put / output function / en-closure rating	Smart Sensor	Communica-tion interface	Type	Part no.
107 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communi-cation, diagnosis	IO-Link	MPA-107THNP0	1122501
					MPA-107THTP0	1059442
					MPA-107THTP0B01	1067049
	Cable, 4-wire, stripped, 2 m	Analog, IP65 IO-Link, IP67 IP68	IO-Link	MPA-107THTU0	1059443	
		Analog, IP65		-	-	MPA-107THNU0S01

Measuring range	Connection type	Switching output / output function / enclosure rating	Smart Sensor	Communication interface	Type	Part no.
		IP67 IP68				
143 mm	Cable with M8 male connector, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communication, diagnosis	IO-Link	MPA-143THTP0	1059444
	Cable, 4-wire, stripped, 2 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-143THTU0	1059445
179 mm	Cable with M8 male connector, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communication, diagnosis	IO-Link	MPA-179THTP0	1059446
		Analog, IP65 IP67 IP68		-	MPA-179THNP0S04	1147505
	Cable, 4-wire, stripped, 2 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communication, diagnosis	IO-Link	MPA-179THTU0	1059447
215 mm	Cable with M8 male connector, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communication, diagnosis	IO-Link	MPA-215THTP0	1059448
		Analog, IP65 IP67 IP68		-	MPA-215THNP0S01	1149405
	Cable, 4-wire, stripped, 2 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communication, diagnosis	IO-Link	MPA-215THTU0	1059449
251 mm	Cable with M8 male connector, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communication, diagnosis	IO-Link	MPA-251THTP0	1059450
	Cable, 4-wire, stripped, 2 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-251THTU0	1059451
287 mm	Cable with M8 male connector, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communication, diagnosis	IO-Link	MPA-287THTP0	1059452
	Cable, 4-wire, stripped, 2 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-287THTU0	1059453
323 mm	Cable with M8 male connector, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communication, diagnosis	IO-Link	MPA-323THTP0	1059454
	Cable, 4-wire, stripped, 2 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-323THTU0	1059455
359 mm	Cable with M8 male connector, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communication, diagnosis	IO-Link	MPA-359THTP0	1059456
	Cable, 4-wire, stripped, 2 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-359THTU0	1059457

Measuring range	Connection type	Switching out-put / output function / en-closure rating	Smart Sensor	Communica-tion interface	Type	Part no.
395 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communi-cation, diagnosis	IO-Link	MPA-395THTP0	1059458
	Cable, 4-wire, stripped, 2 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-395THTU0	1059459
431 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communi-cation, diagnosis	IO-Link	MPA-431THTP0	1059460
	Cable, 4-wire, stripped, 2 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-431THTU0	1059461
467 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communi-cation, diagnosis	IO-Link	MPA-467THTP0	1059462
	Cable, 4-wire, stripped, 2 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-467THTU0	1059463
503 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communi-cation, diagnosis	IO-Link	MPA-503THNP0	1122502
					MPA-503THTP0	1059464
	Cable, 4-wire, stripped, 2 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-503THTU0	1059465
539 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68	Enhanced Sensing, efficient communi-cation, diagnosis	IO-Link	MPA-539THTP0	1059466
575 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-575THTP0	1059467
					MPA-575THTP0B01	1062570
611 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-611THTP0	1059468
647 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-647THTP0	1059469
683 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-683THTP0	1059470
719 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-719THTP0	1059471
755 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-755THTP0	1059472
791 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-791THTP0	1059473
827 mm	Cable with M8 male connec-tor, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-827THTP0	1059474

Measuring range	Connection type	Switching output / output function / enclosure rating	Smart Sensor	Communication interface	Type	Part no.
863 mm	Cable with M8 male connector, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-863THTP0	1059475
899 mm	Cable with M8 male connector, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-899THTP0	1059476
935 mm	Cable with M8 male connector, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-935THTP0	1059477
971 mm	Cable with M8 male connector, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-971THTP0	1059478
1,007 mm	Cable with M8 male connector, 4-pin, 0.3 m	Analog, IP65 IO-Link, IP67 IP68		IO-Link	MPA-1007THTP0	1059479

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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