



MPA

Position sensors for large cylinders

SICK
Sensor Intelligence.



Technical data overview

Output function	Analog / Analog / IO-Link (depending on type)
Teach-in	No / yes (depending on type)
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 (depending on type)
Housing length	109 mm ... 1,009 mm (depending on type)

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

- **Communication interface:** -
- **Output function:** Analog
- **Electrical wiring:** DC 4-wire
- **Cable material:** PUR

Measuring range	Connection type	Type	Part no.
107 mm	Cable, 4-wire, stripped, 2 m	MPA-107THNU0S01	1112567
179 mm	Cable with M8 male connector, 4-pin, 0.3 m	MPA-179THNPOS04	1147505
215 mm		MPA-215THNPOS01	1149405

- **Communication interface:** IO-Link
- **Smart Sensor:** Enhanced Sensing, efficient communication, diagnosis
- **Output function:** Analog, IO-Link
- **Electrical wiring:** DC 4-wire
- **Cable material:** PUR

Measuring range	IO-Link advanced functions	Connection type	Type	Part no.
107 mm	-	Cable with M8 male connector, 4-pin, 0.3 m	MPA-107THNPO	1122501
		Cable, 4-wire, stripped, 2 m	MPA-107THTPO	1059442
			MPA-107THTU0	1059443
143 mm	Timers, timestamp	Cable with M8 male connector, 4-pin, 0.3 m	MPA-107THTPOB01	1067049
		Cable, 4-wire, stripped, 2 m	MPA-143THTPO	1059444
179 mm	-	Cable with M8 male connector, 4-pin, 0.3 m	MPA-143THTU0	1059445
		Cable, 4-wire, stripped, 2 m	MPA-179THTPO	1059446
215 mm	-	Cable with M8 male connector, 4-pin, 0.3 m	MPA-179THTU0	1059447
		Cable, 4-wire, stripped, 2 m	MPA-215THTPO	1059448
251 mm	-	Cable with M8 male connector, 4-pin, 0.3 m	MPA-215THTU0	1059449
		Cable, 4-wire, stripped, 2 m	MPA-251THTPO	1059450
287 mm	-	Cable with M8 male connector, 4-pin, 0.3 m	MPA-251THTU0	1059451
		Cable, 4-wire, stripped, 2 m	MPA-287THTPO	1059452
323 mm	-	Cable with M8 male connector, 4-pin, 0.3 m	MPA-287THTU0	1059453
		Cable, 4-wire, stripped, 2 m	MPA-323THTPO	1059454
359 mm	-	Cable with M8 male connector, 4-pin, 0.3 m	MPA-323THTU0	1059455
		Cable, 4-wire, stripped, 2 m	MPA-359THTPO	1059456
395 mm	-	Cable with M8 male connector, 4-pin, 0.3 m	MPA-359THTU0	1059457
		Cable, 4-wire, stripped, 2 m	MPA-395THTPO	1059458
			MPA-395THTU0	1059459

Measuring range	IO-Link advanced functions	Connection type	Type	Part no.	
431 mm	–	Cable with M8 male connector, 4-pin, 0.3 m	MPA-431THTPO	1059460	
		Cable, 4-wire, stripped, 2 m	MPA-431THTUO	1059461	
467 mm	–	Cable with M8 male connector, 4-pin, 0.3 m	MPA-467THTPO	1059462	
		Cable, 4-wire, stripped, 2 m	MPA-467THTUO	1059463	
503 mm	–	Cable with M8 male connector, 4-pin, 0.3 m	MPA-503THNPO	1122502	
		Cable, 4-wire, stripped, 2 m	MPA-503THTPO	1059464	
		Cable, 4-wire, stripped, 2 m	MPA-503THTUO	1059465	
539 mm	–	Cable with M8 male connector, 4-pin, 0.3 m	MPA-539THTPO	1059466	
575 mm	–		MPA-575THTPO	1059467	
Timers, timestamp			MPA-575THTPOB01	1062570	
611 mm	–		MPA-611THTPO	1059468	
647 mm	–		MPA-647THTPO	1059469	
683 mm	–		MPA-683THTPO	1059470	
719 mm	–		MPA-719THTPO	1059471	
755 mm	–		MPA-755THTPO	1059472	
791 mm	–		MPA-791THTPO	1059473	
827 mm	–		MPA-827THTPO	1059474	
863 mm	–		MPA-863THTPO	1059475	
899 mm	–		MPA-899THTPO	1059476	
935 mm	–		MPA-935THTPO	1059477	
971 mm	–		MPA-971THTPO	1059478	
1,007 mm	–		MPA-1007THTPO	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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