CPS Smart Sensing

Continuous **P**osition **S**ensing Using Analog Signal or IO-Link Communication for Linear Cylinders

Customer Value Proposition:

Many applications require more than just end of stroke sensing of an actuator, but traditional methods of continuous sensing are expensive and difficult to implement.

Parker's CPS series of the P8S sensor family enables quick, easy, precise, and contactless position sensing of a piston. This can be installed on a standard linear actuator and offers an outstanding price to performance ratio.

Contact Information:

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269-629-5575

www.parker.com/pdn/cps

- Instruction sheets
- IODD file
- Function blocks
- CAD
- Catalog pages

Product Features:

- Continuous position sensing
- No modification to the actuator
- 5 sizes with sensing ranges from 32mm to 256mm
- Yellow teach button for easy set-up
- IO-Link communication with M12 connector
- Analog version with M8 connector
- IP67 design suitable for any industrial application

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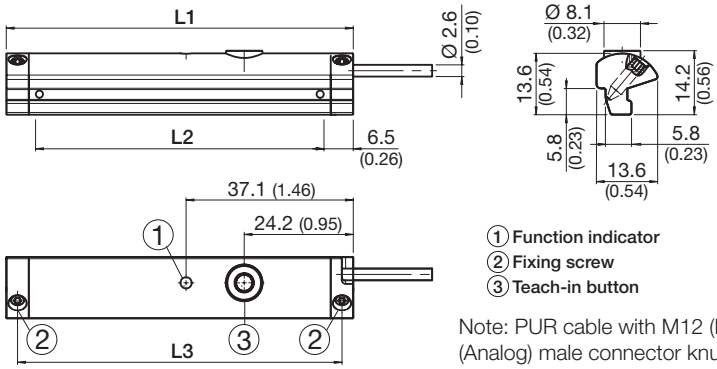
How it Works:

The CPS product detects the position of an actuator via the magnet on the piston. The sensor settings can easily be adjusted during installation using the yellow teach button or during operation over the IO-Link communication. This upgrades the functionality of the pneumatic actuator by making it more intelligent and versatile in support of the Industry 4.0 initiative.

- 1ms sampling rate
- 0.03% full scale resolution
- 0.06% full scale repeatability
- 0.3mm Linearity error

Measuring Range (mm)	Order Code		L1 (mm)	L2 (mm)	L3 (mm)
	Analog	IO-Link			
32	P8SAGACHA	P8SAGHMHA	45	32	40
64	P8SAGACHB	P8SAGHMHB	77	64	72
128	P8SAGACHD	P8SAGHMHD	141	128	136
192	P8SAGACHF	P8SAGHMHF	205	192	200
256	P8SAGACHH	P8SAGHMHH	269	256	264



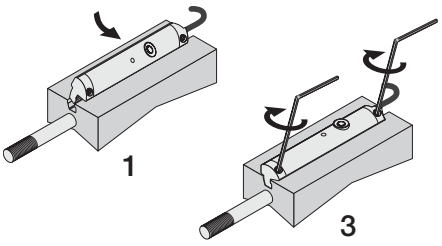
① Function indicator
② Fixing screw
③ Teach-in button

Note: PUR cable with M12 (IO-Link) or M8 (Analog) male connector knurled nut, 4-pin, 0,3 meter length.

How it Installs:

The Parker CPS requires the use of a magnetic piston. The product will fit T-slot cylinders without any additional mounting hardware. Use on a round body, tie-rod, or S-slot cylinder is possible with the appropriate bracket.

1. Pivot the sensor into the slot
2. Teach the CPS unit the desired measuring range*
3. Tighten set screws



* See Installation instructions for Step 2
www.parker.com/pdn/cps

Parker Cylinder Series	Mounting Bracket
P1A (ISO 6432)	P8S-TMC0+
P1D (ISO 6431)	None
P1D (Tie-Rod)	P8S-TMA0X
OSP (Rodless)	P8S-TMA0W
P1P (Compact)	None
P5T (Thrust)	None
4MA (NFPA)	None
4MA (6"-8" bore)	P8S-TMA0X
SRM (Round)	P8S-TMC0+

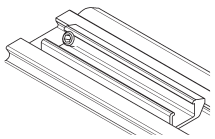
+ Use “1” for bore size under 1-1/8" (32mm)
Use “2” for 1-1/8" (32mm) to 2-1/2" (63mm)
Use “3” for 3" (80mm) to 4" (100mm)

** Parker recommends to use 2 mounting brackets for CPS 64mm and longer

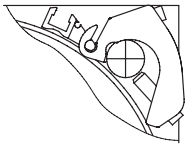
How it Connects:

Analog version has a M8 connector and a voltage output of 0-10V as well as a current output of 4-20mA.

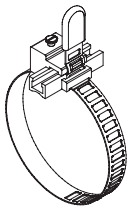
IO-Link version has a M12 connector and transmits position via 2 bytes of process input data and also allows for parameter control of measuring range and locking of the teach button. It can be controlled by Class A or Class B IO-Link Masters.



P8S-TMA0W:
38mm length



P8S-TMA0X:
35mm length



P8S-TMAC0+:
35mm length

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