

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 to implement. Parker's CPS (Continuous Position Sensor) enables quick, precise and contactless continuous position sensing of a magnetic piston.

CPS sensors continuously supply data via analog outputs or IO-Link. Analog position sensors have a voltage output of 0 V ... 10 V as well as a current output of 4 mA ... 20 mA. CPS enables flexible machine concepts, making it possible to solve tasks in areas such as quality monitoring and process control in conjunction with pneumatic cylinders. This continuous transfer of position data upgrades the functionality of the pneumatic cylinders by making them more intelligent, and as a result, more versatile. CPS settings can be adjusted during or after installation using a teach button or using IO-Link.

CPS can be mounted directly in standard T-slots without the need for additional accessories. Mounting on other cylinder types, (round, tie rod) is possible with adapters.



Contact Information: Product Features:

Parker Hannifin Corporation
Pneumatic Division
Richland, MI 49083
269-629-5575

www.parker.com/pdn/cps

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

- 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:

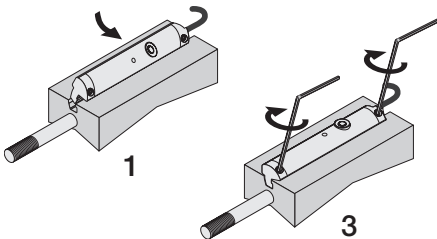
The CPS product detects the position of an actuator via the magnet on the piston. The sensor settings can easily be adjusted during installation using the yellow teach button or during operation over the IO-Link communication. This upgrades the functionality of the pneumatic actuator by making it more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

How it Installs:

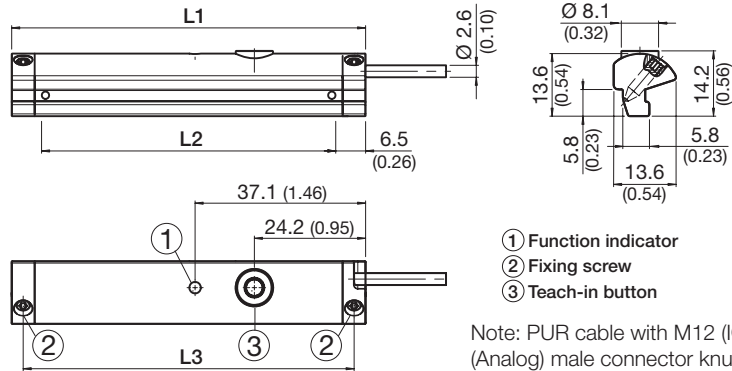
The Parker CPS requires the use of a magnetic piston. The product will fit T-slot cylinders without any additional mounting hardware. Use on a round body or tie-rod cylinder is possible with the appropriate bracket.

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

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.

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

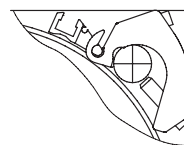
+ Use "1" for bore size under 1-1/8" (32mm)
 Use "2" for 1-1/8" (32mm) to 2-1/2" (63mm)
 Use "3" for 3" (80mm) to 4" (100mm)

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

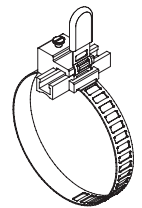
How it Connects:

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-TMAOX:
35mm length



P8S-TMAC0+:
35mm length