Position Sensors

Clippard stainless steel cylinders that are equipped with a magnetic piston can be used with a **Reed Switch** or **GMR Sensor**. This is an excellent choice for position sensing in pneumatic system control—by accurately sensing the magnetic field of the piston when it passes beneath the sensor, the position of the rod piston is determined, and a feedback signal is created. Some of the benefits of Clippard's position sensors include: small size, high durability, high sensitivity, high response time, low power consumption and low cost.

To determine which sensor is best suited for your application, refer to the selection chart on the next page.



REED SWITCH

Clippard's **Reed Switch** is a Single Pole, Single Throw (SPST) Normally-Open electronic switch. When the cylinder's magnet-equipped piston moves to a location where the magnet is positioned below the Reed Switch, the switch sends a feedback signal to indicate the location of the piston.

A 1/2" minimum stroke is required when multiple sensors are used.

Sourcing Switch with Wire Leads	RPS-P3
Sourcing Switch with Quick-Connect	RPS-P8Q
Sinking Switch with Wire Leads	RPS-N3
Sinking Switch with Quick-Connect	RPS-N8Q
Simple Switch with Wire Leads	RPS-S3
Simple Switch with Quick-Connect	RPS-S8Q

ACCESSORIES

Clippard's **Universal Mounting Bracket** is designed for use with a Reed Switch or GMR Sensor, on any Clippard Stainless Steel cylinder equipped with a magnetic piston. Hex wrench included.

Universal Mounting Bracket	UC-0848
Mating Cable	CPS-C8Q5

GMR SENSOR

Clippard's **GMR Sensor** is a solid-state device made up of alternating layers of conductive magnetic and non-magnetic materials. When a magnetic field is applied, there is a large drop in resistance. This decrease produces a signal that can be used to determine the location of the piston.

Sourcing Switch with Wire Leads	GPS-P3
Sourcing Switch with Quick-Connect	GPS-P8Q
Sinking Switch with Wire Leads	GPS-N3
Sinking Switch with Quick-Connect	GPS-N8Q

DIMENSIONS

All RPS- and GPS- Position Sensors



ACCESSORIES

POSITION SENSORS

Part No.	RPS-S3	RPS-S8Q	RPS-N3	RPS-N8Q	RPS-P3	RPS-P8Q	GPS-N3	GPS-N38Q	GPS-P3	GPS-P8	
mp. Range					14 to	158°F					
bration					9	G					
closure Class.		IP 67 (NEMA 6)									
nnection	3 mm wire leads	8 mm male QC*, 6" pigtail	3 mm wire leads	8 mm male QC*, 6" pigtail	3 mm wire leads	8 mm male QC*, 6" pigtail	3 mm wire leads	8 mm male QC*, 6″ pigtail	3 mm wire leads	8 mm male Q0 6″ pigta	
nsor	Simple sw	Simple switch (2-wire) NPN current, sinking PNP current, so			nt, sourcing	3 NPN current, sinking PNP current, sourcin					
licator	Red	Red LED		Red LED		Green LED		Red LED		Green LED	
rcuit Diagram	Blue	n Load Power	Bla	rown ack Load Power lue		rown ack Power ue Load	Black Load Power Black B			own ack ue Load	
-Resistant C Cable	2.8	§, 2C	2.8 §, 3C			2.8 §, 3C					
x. Switching Freq.	20	200 Hz 1,000 Hz				5,000 Hz					
erating Voltage	5 to 120 VAC	5 to 60 VAC/VDC		5 to 30 VDC				5 to 28 VDC			
x. Current	100	100 mA		250 mA			200 mA				
rrent Consumption		_		10 mA max. @ 24 V (switch active)			7.5 mA max. @ 24 V (switch active)				
x. Voltage Drop	2.5 V @	2.5 V @ 40 mA DC			0.5 V @ 550 mA (resistive load)			0.5 V @ 200 mA (resistive load)			
gic		Single Pole, Single Throw, Normally-Open					Solid-State, Normally-Open				
De		Reed Switch					GMR Sensor				
ox. Rating		10 W					6 W				
nsitivity		60 G					40 ~ 750 G				
x. Leakage Current		_					0.01 mA				
ock		30 G					50 G				
otection Circuit		_					Power source reverse polarity; surge suppressio				
More Info	clippard.com/link/reed-switch						clippard.com/link/gmr-sensor				

QUICK-CONNECT WIRING DIAGRAMS

