

100 Series Linear Cylinder Position Sensor

The P100 sensor is an affordable, durable, high accuracy linear position sensor specifically designed for use in hydraulic and pneumatic cylinders where long life and cost are important. The P100 linear sensor is particularly suitable for OEM customers who require good performance in hard environments such as industrial machinery. Performance, repeatability and stability are outstanding over a large temperature range. This compact and particularly space efficient sensor is responsive along almost its entire length.



RANGE mm	SENSOR MOUNTING	TEMPERATURE °C	BODY DIAMETER mm	DEGREE OF PROTECTION	OUTPUT SIGNALS 5v input - other input options available	STANDARD SERIES	INTRINSICALLY SAFE VERSIONS					
							ATEX & IECEx (EX IA) APPROVED			ANZEx (Ex ia)	CSA APPROVED (EX IA) (AEX IA)	
							GAS	DUST	MINING	MINING	GAS	DUST
5 - 800	In- cylinder	Standard: -40° to +125 (for 5V input only) -20 to +85°C Submersible: -4°C to +50°C X100 to H100: -40°C to 80°C	35	Standard: IP65 (connector) / IP67 (cable) Submersible: IP68	Standard: 0.5 to 4.5 V DC ratiometric OTHER OPTIONS (with various input requirements): <ul style="list-style-type: none"> • 0.5 to 4.5 V DC • ± 5V DC • ± 10V DC • 0.5 to 9.5 V DC • 4 to 20mA (2 wire, 3 wire sink or 3 wire source) • Submersible: same as standard • X100 to H100: 0.5-9.5V or 4-20 mA 	P100	X100	E100	M100	A100	G100	H100

101 Stand Alone Linear Position Sensor

The P101 is a durable, affordable, high accuracy stand alone linear inductive position sensor designed for use in scientific and industrial applications.

Like all Positek sensors the P101 provides a linear output that is proportional to the displacement. Each unit is supplied calibrated to the exact travel required by the customer. The overall performance, repeat-ability and stability are outstanding over a wide temperature range.



RANGE mm	SENSOR MOUNTING	TEMPERATURE °C	BODY DIAMETER mm	DEGREE OF PROTECTION	OUTPUT SIGNALS 5v input - other input options available	STANDARD SERIES	INTRINSICALLY SAFE VERSIONS					
							ATEX & IECEx (EX IA) APPROVED			ANZEx (Ex ia)	CSA APPROVED (EX IA) (AEX IA)	
							GAS	DUST	MINING	MINING	GAS	DUST
5 - 800	M5 Rod Eyes, Body Clamps or M5 Threads	Standard: -40° to +125 (for 5V input only) -20 to +85°C Submersible: -4°C to +50°C X101 to H101: -40°C to 80°C	35	Standard: IP65 (connector) / IP67 (cable) Submersible: IP68	Standard: 0.5 to 4.5 V DC ratiometric OTHER OPTIONS (with various input requirements): <ul style="list-style-type: none"> • 0.5 to 4.5 V DC • ± 5V DC • ± 10V DC • 0.5 to 9.5 V DC • 4 to 20mA (2 wire, 3 wire sink or 3 wire source) • Submersible: same as standard • X101 to H101: 0.5-9.5V or 4-20 mA 	P101	X101	E101	M101	A101	G101	H101

103 Short Stroke Position Sensor

The P103 is a durable, affordable, high accuracy short stroke linear inductive position sensor designed for use in industrial and scientific applications. It is very compact and offers an excellent stroke to overall length ratio.

Each unit is supplied calibrated to the exact travel required by the customer, for example, if your application requires 1" (25 mm) measurement then Positek will manufacture the sensor specifically for this length. The mechanical length and calibration will be set up for 25mm.



RANGE mm	SENSOR MOUNTING	TEMPERATURE °C	BODY DIAMETER mm	DEGREE OF PROTECTION	OUTPUT SIGNALS 5v input - other input options available	STANDARD SERIES	INTRINSICALLY SAFE VERSIONS					
							ATEX & IECEx (EX IA) APPROVED			ANZEx (Ex ia)	CSA APPROVED (EX IA) (AEX IA)	
							GAS	DUST	MINING	MINING	GAS	DUST
2 - 50	Flange or Body Clamps	Standard: -40° to +125 (for 5V input only) -20 to +85°C X103 to H103: -40°C to 80°C	35	IP65 (connector) / IP67 (cable)	Standard: 0.5 to 4.5 V DC ratiometric OTHER OPTIONS (with various input requirements): <ul style="list-style-type: none"> • 0.5 to 4.5 V DC • ± 5V DC • ± 10V DC • 0.5 to 9.5 V DC • 4 to 20mA (2 wire, 3 wire sink or 3 wire source) • X103 to H103: 0.5-9.5V or 4-20 mA 	P103	X103	E103	M103	A103	G103	H103

106 Internally Mounted Cylinder Sensor (external electronics)

The P106 Inductive Linear Position Sensor is an in cylinder with external electronics design. It is a highly accurate, durable and affordable position sensor designed for demanding hydraulic or pneumatic cylinder position feedback applications where environmental resistance, cost and service life are particularly important. The repeatability, stability and overall performance are outstanding over a large temperature range. The P106 LIPS is very compact and space efficient, being responsive along almost its entire length.



RANGE mm	SENSOR MOUNTING	TEMPERATURE °C	BODY DIAMETER mm	DEGREE OF PROTECTION	OUTPUT SIGNALS 5v input - other input options available	STANDARD SERIES	INTRINSICALLY SAFE VERSIONS					
							ATEX & IECEx (EX IA) APPROVED		ANZEx (Ex ia)		CSA APPROVED (EX IA) (AEX IA)	
							GAS	DUST	MINING	MINING	GAS	DUST
5 - 800	In- cylinder	Standard: -40° to +125 (for 5V input only) -20 to +85°C X106 and G106: -40°C to 80°C	20	IP65 (connector) / IP67 (cable)	Standard: 0.5 to 4.5 V DC ratiometric OTHER OPTIONS (with various input requirements): <ul style="list-style-type: none"> • 0.5 to 4.5 V DC • ± 5V DC • ± 10V DC • 0.5 to 9.5 V DC • 4 to 20mA (2 wire, 3 wire sink or 3 wire source) • X106 and G106: 0.5-9.5V or 4-20 mA 	P106	X106	-	-	-	G106	-

111 Stand Alone Rugged Linear Position Sensor

The P111 is a rugged, heavy duty version of the P101 with a significantly stonger 1/2" pushrod. The P111 is particularly well suited to applications where vibration is an issue or where the requirement is for a long travel sensor, horizontally mounted and supported by rod eyes. It remains an affordable, durable, high accuracy linear sensor designed for industrial and scientific feedback applications. The highly compact and space efficient unit is responsive along almost all of its length.

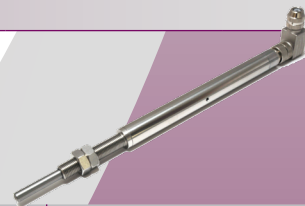


RANGE mm	SENSOR MOUNTING	TEMPERATURE °C	BODY DIAMETER mm	DEGREE OF PROTECTION	OUTPUT SIGNALS 5v input - other input options available	STANDARD SERIES	INTRINSICALLY SAFE VERSIONS					
							ATEX & IECEx (EX IA) APPROVED		ANZEx (Ex ia)		CSA APPROVED (EX IA) (AEX IA)	
							GAS	DUST	MINING	MINING	GAS	DUST
5 - 800	M8 Rod Eyes, Body Clamps or M8 Threads	Standard: -40° to +125 (for 5V input only) -20 to +85°C Submersible: -4°C to +50°C X111 to H111: -40°C to 80°C	35	Standard: IP65 (connector) / IP67 (cable) Submersible: IP68	Standard: 0.5 to 4.5 V DC ratiometric OTHER OPTIONS (with various input requirements): <ul style="list-style-type: none"> • 0.5 to 4.5 V DC • ± 5V DC • ± 10V DC • 0.5 to 9.5 V DC • 4 to 20mA (2 wire, 3 wire sink or 3 wire source) • Submersible: same as standard • X101 to H101: 0.5-9.5V or 4-20 mA 	P111	X111	E111	M111	A111	G111	H111

112 Gauge Head Linear Sensor

The P112 is a very compact, durable, affordable, high accuracy linear inductive position sensor with a good stroke to overall length ratio; designed for gauge head positioning in scientific and industrial applications.

The sensor is very robust, manufactured from stainless steel the P112 has a long service life and strong environmental resistance and is particularly suitable for applications that require good sensor performance in harsh environments such as industrial machinery where cost is important.



RANGE mm	SENSOR MOUNTING	TEMPERATURE °C	BODY DIAMETER mm	DEGREE OF PROTECTION	OUTPUT SIGNALS 5v input - other input options available	STANDARD SERIES	INTRINSICALLY SAFE VERSIONS					
							ATEX & IECEx (EX IA) APPROVED		ANZEx (Ex ia)		CSA APPROVED (EX IA) (AEX IA)	
							GAS	DUST	MINING	MINING	GAS	DUST
2 - 50	1/2" UNF Thread	Standard: -40° to +125 (for 5V input only) -20 to +85°C X112 to H112: -40°C to 80°C	19	IP67	Standard: 0.5 to 4.5 V DC ratiometric OTHER OPTIONS (with various input requirements): <ul style="list-style-type: none"> • 0.5 to 4.5 V DC • ± 5V DC • ± 10V DC • 0.5 to 9.5 V DC • 4 to 20mA (2 wire, 3 wire sink or 3 wire source) • X112 to H112: 0.5-9.5V or 4-20 mA 	P112	X112	E112	M112	-	G112	H123

114 Submersible Stand Alone Linear Position Sensor

The S114 Linear Inductive Position Sensor is an affordable, durable, water resistant, high-accuracy position sensor. Derived from the P101, the S114 was designed for industrial and scientific feedback applications where the equipment is submerged in water up to a pressure of 10 bar.

The sensor is very robust, the body and push rod being made of stainless steel for long service life and environmental resistance and with full EMC protection built in.

This sensor is waterproof to 100m submersion.



RANGE mm	SENSOR MOUNTING	TEMPERATURE °C	BODY DIAMETER mm	DEGREE OF PROTECTION	OUTPUT SIGNALS 5v input - other input options available	SUBMERSIBLE VERSION	INTRINSICALLY SAFE VERSIONS					
							ATEX & IECEx (EX IA) APPROVED			ANZEx (Ex ia)	CSA APPROVED (EX IA) (AEX IA)	
							GAS	DUST	MINING	MINING	GAS	DUST
5 - 800	M5 Rod Eyes, Body Clamps or M5 Threads	Standard: -40° to +125 (for 5V input only) -20 to +85°C X114-H114: -40°C to 80°C	35	IP68	Standard: 0.5 to 4.5 V DC ratiometric OTHER OPTIONS (with various input requirements): <ul style="list-style-type: none"> • 0.5 to 4.5 V DC • ± 5V DC • ± 10V DC • 0.5 to 9.5 V DC • 4 to 20mA (2 wire, 3 wire sink or 3 wire source) 	S114	X114	E114	M114	-	G114	H114

115 Rugged Waterproof Submersible Stand Alone Linear Position Sensor

The S115 is a heavy-duty version of the water resistant S114 sensor with a stronger 12.7mm push rod, recommended for applications where vibration is an issue or there is a need for longer travel sensors are to be mounted horizontally between rod eyes. It is designed for applications where the sensor would be completely submerged during normal operation, up to a pressure of 10Bar with an environmental sealing to IP68.

This sensor is waterproof for submersion to 100 meters.




RANGE mm	SENSOR MOUNTING	TEMPERATURE °C	BODY DIAMETER mm	DEGREE OF PROTECTION	OUTPUT SIGNALS 5v input - other input options available	SUBMERSIBLE VERSION	INTRINSICALLY SAFE VERSIONS					
							ATEX & IECEx (EX IA) APPROVED			ANZEx (Ex ia)	CSA APPROVED (EX IA) (AEX IA)	
							GAS	DUST	MINING	MINING	GAS	DUST
5 - 800	M8 Rod Eyes, Body Clamps or M8 Threads	Standard: -40° to +125 (for 5V input only) -20 to +85°C X115 to H115: -40°C to 80°C	35	IP68	Standard: 0.5 to 4.5 V DC ratiometric OTHER OPTIONS (with various input requirements): <ul style="list-style-type: none"> • 0.5 to 4.5 V DC • ± 5V DC • ± 10V DC • 0.5 to 9.5 V DC • 4 to 20mA (2 wire, 3 wire sink or 3 wire source) • X115 to H115: 0.5-9.5V or 4-20 mA 	S115	X115	E115	M115		G115	H115

117 Slim-line Linear Sensor

The P117 is very space efficient and compact with its 19mm body diameter. Affordable, durable, high-accuracy position sensor designed for industrial and scientific feedback applications.

The repeatability, overall performance and stability are excellent over a large temperature range. The P117 is housed within a stainless steel body tube and has a 3/8" stainless steel push rod.



RANGE mm	SENSOR MOUNTING	TEMPERATURE °C	BODY DIAMETER mm	DEGREE OF PROTECTION	OUTPUT SIGNALS 5v input - other input options (available)	STANDARD SERIES	SUBMERSIBLE VERSION	 INTRINSICALLY SAFE VERSIONS				
								ATEX & IECEX (EX IA) APPROVED			CSA APPROVED (EX IA) (AEX IA)	
								GAS	DUST	MINING	GAS	DUST
5 - 350	M5 Rod Eyes, Body Clamps or M5 Threads	Standard: -40° to +125 (for 5V input only) -20 to +85°C X117 to H117: -40°C to 80°C	19	IP67	Standard: 0.5 to 4.5 V DC ratiometric OTHER OPTIONS (with various input requirements): <ul style="list-style-type: none">• 0.5 to 4.5 V DC• ± 5V DC• ± 10V DC• 0.5 to 9.5 V DC• 4 to 20mA• X117 to H117: 0.5-9.5V or 4-20 mA	P117	-	X117	E117	M117	G117	H117

118 Slim-line Short Stroke Linear Sensor

The P118 with its compact 19 mm diameter stainless steel body is an affordable, durable, accurate position sensor designed for a wide range of industrial applications. It is particularly suitable for OEMs seeking good sensor performance in situations where a small diameter, short-bodied sensor is needed and cost is important.

The unit is compact and space-efficient, being responsive along almost its entire length, and like all Positek sensors provides a linear output proportional to displacement.




RANGE mm	SENSOR MOUNTING	TEMPERATURE °C	BODY DIAMETER mm	DEGREE OF PROTECTION	OUTPUT SIGNALS 5v input - other input options available	STANDARD SERIES	SUBMERSIBLE VERSION	INTRINSICALLY SAFE VERSIONS				
								ATEX & IECEx (EX IA) APPROVED			CSA APPROVED (EX IA) (AEX IA)	
								GAS	DUST	MINING	GAS	DUST
2 - 50	Flange or body clamps	Standard: -40° to +125 (for 5V input only) -20 to +85°C X118 to H118: -40°C to 80°C	19	IP65 (connector) / IP67 (cable)	Standard: 0.5 to 4.5 V DC ratiometric OTHER OPTIONS (with various input requirements): <ul style="list-style-type: none"> • 0.5 to 4.5 V DC • ± 5V DC • ± 10V DC • 0.5 to 9.5 V DC • 4 to 20mA • X118 to H118: 0.5-9.5V or 4-20 mA 	P118	-	X118	E118	M118	G118	H118

125 Rugged 350 Bar Waterproof Submersible Stand Alone Linear Position Sensor

The S125 is a higher pressure version of the S115 sensor with a larger electronics housing and wet mate high pressure connector. The S125 is sealed for continual submersion up to 3500m (350bar 5000psi). The unit is compact, space-efficient and responsive along almost its entire length. The sensor is very robust, the body and push rod being made of 316 stainless steel for long service life and environmental resistance.

This sensor is waterproof for submersion to 3500 meters.



RANGE mm	SENSOR MOUNTING	TEMPERATURE °C	BODY DIAMETER mm	DEGREE OF PROTECTION	OUTPUT SIGNALS 5v input - other input options available	SUBMERSIBLE VERSION	 INTRINSICALLY SAFE VERSIONS				
							ATEX & IECEX (EX IA) APPROVED			CSA APPROVED (EX IA) (AEX IA)	
							GAS	DUST	MINING	GAS	DUST
5 - 800	M5 Rod Eyes, Body Clamps or M5 Threads	Standard: -40° to +125 (for 5V input only) -20 to +85°C X125 to H125: -40°C to 80°C	35	IP68	Standard: 0.5 to 4.5 V DC ratiometric OTHER OPTIONS (with various input requirements): <ul style="list-style-type: none">• 0.5 to 4.5 V DC• ± 5V DC• ± 10V DC• 0.5 to 9.5 V DC• 4 to 20mA• X125 to H125: 0.5-9.5V or 4-20 mA	S125	X125	E125	-	G125	H125

133 Mid Stroke Position Sensor

The P133 is a durable, affordable, high accuracy short stroke linear inductive position sensor designed for use in industrial and scientific applications.

The P133 is very compact and offers an excellent stroke to overall length ratio. Each unit is supplied calibrated to the exact travel required by the customer, for example, if your application requires 3" (76 mm) measurement then Positek will manufacture the sensor specifically for this length. The mechanical length and calibration will be set up for 76mm. The P133 is available with any travel from 0-51mm to 0-100mm.



RANGE mm	SENSOR MOUNTING	TEMPERATURE °C	BODY DIAMETER mm	DEGREE OF PROTECTION	OUTPUT SIGNALS 5v input - other input options available	STANDARD SERIES	SUBMERSIBLE VERSION	INTRINSICALLY SAFE VERSIONS				
								ATEX & IECEx (EX IA) APPROVED			CSA APPROVED (EX IA) (AEX IA)	
								GAS	DUST	MINING	GAS	DUST
51 - 100	Flange or body clamps	Standard: -40° to +125 (for 5V input only) -20 to +85°C X133 to H133: -40°C to 80°C	35	IP65 (connector) / IP67 (cable)	Standard: 0.5 to 4.5 V DC ratiometric OTHER OPTIONS (with various input requirements): <ul style="list-style-type: none"> • 0.5 to 4.5 V DC • ± 5V DC • ± 10V DC • 0.5 to 9.5 V DC • 4 to 20mA (2 wire, 3 wire sink or 3 wire source) • X133 to H133: 0.5-9.5V or 4-20 mA 	P133	-	X133	E133	M133	G133	H133

138 Slim-line Mid Stroke Linear Sensor

P138 is an affordable, durable, accurate position sensor designed for a wide range of industrial applications. It is particularly suitable for OEMs seeking good sensor performance in situations where a small diameter, short-bodied sensor is needed and cost is important. The unit is compact and space-efficient, being responsive along almost its entire length, and like all Positek sensors provides a linear output proportional to displacement.

Each unit is supplied with the output calibrated to the travel required by the customer, from 0-51mm to 0-100mm and with full EMC protection built in.



RANGE mm	SENSOR MOUNTING	TEMPERATURE °C	BODY DIAMETER mm	DEGREE OF PROTECTION	OUTPUT SIGNALS 5V input - other input options available	STANDARD SERIES	SUBMERSIBLE VERSION	INTRINSICALLY SAFE VERSIONS					
								ATEX & IECEx (EX IA) APPROVED			CSA APPROVED (EX IA) (AEX IA)		
								GAS	DUST	MINING	GAS	DUST	
51 - 100	Flange or body clamps	Standard: -40° to +125 (for 5V input only) -20 to +85°C X138 to H138: -40°C to 80°C	19	IP67	<ul style="list-style-type: none"> Standard: 0.5 to 4.5 V DC ratiometric OTHER OPTIONS (with various input requirements): <ul style="list-style-type: none"> 0.5 to 4.5 V DC ± 5V DC ± 10V DC 0.5 to 9.5 V DC 4 to 20mA X138 to H138: 0.5-9.5V or 4-20 mA 	P138	-	X138	E138	M138	G138	H138	

005 Galvanic Isolation Amplifier

For use with Positek intrinsically safe sensors, the X005 Galvanic Isolation Amplifier is ATEX and IECEx approved for use with Positek Intrinsically Safe Position Sensors. The sensors are ratiometric i.e. the output signal scales with the supply voltage, to ensure the safe area signal accurately corresponds with sensor displacement it is important that the sensor supply is correct.

The X005 Galvanic Isolation Amplifier provides a regulated and resistively limited +5V dc power supply required by the sensors, it can be connected in three or five wire modes. Used in five wire mode positive and negative sense inputs enable the X005 to dynamically adjust the sensor supply thus ensuring the correct voltage across the sensor. Connected in this way the X005 can compensate for 15Ω conductor resistance. The sense terminals are linked internally so the end user can use the X005 in three wire or five wire mode without the need to fit or remove external links.



SENSOR INPUT RESISTANCE MΩ	MOUNTING	TEMPERATURE °C	DEGREE OF PROTECTION	OUTPUT SIGNALS 24 V DC input (nom 12V-30V)	INTRINSICALLY SAFE VERSIONS					
					ATEX & IECEx (EX IA) APPROVED			ANZEx (ex ia)	CSA APPROVED (EX IA) (AEX IA)	
					GAS	DUST	MINING	MINING	GAS	DUST
>5	35 x 7.5mm top-hat DIN rail	-20 to +60°C	n/a	0.5-9.5V or 4-20 mA	X005	X005	X005	A005	G005	G005