CURTISS-WRIGHT

Industrial Group

Pressure Sensors

For Industrial Applications
Product Overview

www.cw-industrialgroup.com

GS GLOBAL RESOURCES

Foremost in Machine Performance for Life

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Pressure Cell Technology

With a proud legacy spanning more than 85 years, Curtiss-Wright is a global innovative company that delivers highly engineered, critical function products and services to the commercial, industrial, defense and energy markets. Building on the heritage of Glenn Curtiss and the Wright brothers, we have a long tradition of providing reliable solutions through trusted customer relationships.

Curtiss-Wright have partnered with an established sensor company to provide a comprehensive range of pressure sensors addressing a wide span of industrial applications.

- Measurement ranges from -1.0 to 0 bar and 0 to 4000 bar
- Accuracy to 0.1%
- Pressure modes - absolute, relative, gauge and vacuum
- Compact design
- Large range of pressure connection options
- Large range of electrical supply and output options

Depending on sensor type, two different technologies – stainless steel and silicon – are used. Each technology is suited to particular applications and environments.

Stainless-Steel Technology

Thin-film, polysilicon resistors are applied to a stainless-steel diaphragm. The resistors change their property in response to the pressure of the measured media, giving rise to a varying voltage that can be converted into other electrical outputs.

Benefits:

- Long-term stability better than 0.1% per annum
- Good media compatibility

Material:

- Diaphragm – stainless steel – 17-4-PH / 630
- Housing – stainless steel – 304

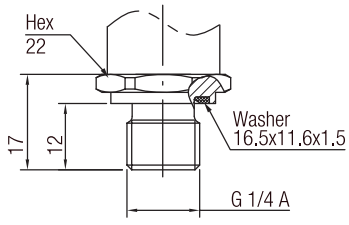
Standard Industrial

Model	PPS100	PPS10C	PPS10E	PPS110	PPS120
MEASUREMENT RANGE					
Pressure	0-4 bar 0-4000 bar	0-1 bar 0-2000 bar	0-600 mbar 0-2000 bar	-1 to 0 bar 0-1000 bar	0-10 bar 0-40 bar
ACCURACY					
Accuracy @ 20°C	0.5%	0.5%	0.5%	0.5%	1%
Option	0.25%	0.25%		0.25%	0.5%
MECHANICAL PARAMETER					
Parts in Contact with the Measured Media	Stainless Steel	Stainless Steel/Silicon	Stainless Steel	Stainless Steel	Silicon
Housing	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
IP Rating	IP65 (67)	IP65 (67)	IP67	IP65 (67)	IP65 (67)
Overall Length (approx.)	70 mm	75 mm	70 mm	85 mm	85 mm
ELECTRICAL PARAMETER					
Output Signal	4-20 mA 0-10 Vdc 1-5 Vdc 0.5-4.5 Vdc ratiometric	CANopen 2.0A	NPN/PNP NC/NO	4-20 mA 0-10 Vdc 0-5 Vdc 1-5 Vdc 0.5-4.5 Vdc ratiometric	4-20 mA 0-10 Vdc 1-5 Vdc 0.5-4.5 Vdc ratiometric
Supply Voltage	8-32 Vdc & 5 Vdc	10-32 Vdc	10-30 Vdc	8-32 Vdc & 5 Vdc	8-32 Vdc & 5 Vdc
OPERATING TEMPERATURE					
Measured Media	-40 to 125 °C	-40 to 125 °C	-40 to 125 °C	-40 to 125 °C	-40 to 85 °C
Ambient	-40 to 105 °C	-40 to 105 °C	-40 to 105 °C	-40 to 105 °C	-40 to 85 °C
STANDARDS / APPROVALS					
CE Marking: EMC Directive	2004/108/EC	2004/108/EC	2004/108/EC	2004/108/EC	2004/108/EC
ATEX					
Standard					
APPLICATIONS	Automotive Braking Systems Hydraulics Diesel Engine Natural Gas Engine	Automotive Air Conditioning Agricultural Automation	Hydraulics Pneumatics Refrigeration Heating Systems Automation	Hydraulics Pneumatics Plant Engineering Refrigeration	Hydraulics Pneumatics Plant Engineering

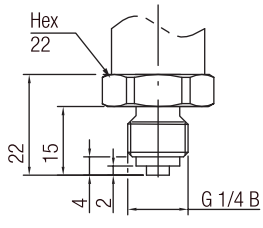
Pressure Connection Options

A choice of pressure connection options is available. Refer to the data sheet of the specific sensor for more details.

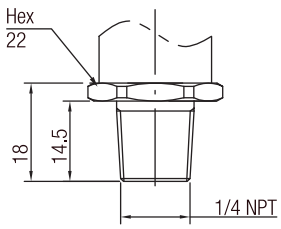
G 1/4 A Shape E



G 1/4 B

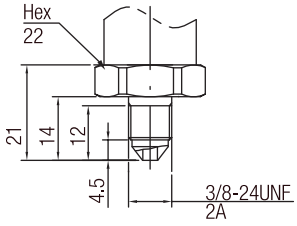


1/4 NPT

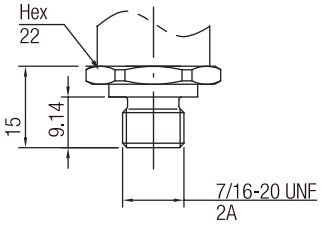


		Compact			Precision	High Temperat
PPS130	**PPS140**	**PPC100**	**PPC110**	**PPC120**	**PPP100**	**PPH100**
0-1000 bar 0-4000 bar	0-200 bar	0-4 bar 0-600 bar	0-1 bar 0-400 bar	0-600 mbar 0-40 bar	0-10 bar 0-2000 bar	0-1 bar 0-2000 bar
0.5% 0.25%	0.5% 0.25%	0.5% 0.25%	0.5% 0.25%	1% 0.5%	0.15% 0.1%	0.5.%
Stainless Steel Stainless Steel IP65 (67) 105 mm	Stainless Steel Stainless Steel IP65 (67) 100 mm	Stainless Steel Stainless Steel IP65 (67) 50 mm	Stainless Steel Stainless Steel IP67 50 mm	Stainless Steel/Silicon Stain. Steel (Brass, Al) IP65 (67) 55 mm	Stainless Steel/Silicon Stainless Steel IP65 (67) 117 mm	Stainless Steel Stainless Steel IP65 (67) 117 mm
4-20 mA 0-10 Vdc 1-5 Vdc 0.5-4.5 Vdc ratiometric 8-32 Vdc & 5 Vdc	4-20 mA 0-10 Vdc 1-5 Vdc 0.5-4.5 Vdc ratiometric 8-32 Vdc & 5 Vdc	4-20 mA 0-10 Vdc 0-5 Vdc 1-5 Vdc 0.5-4.5 Vdc ratiometric 8-32 Vdc & 5 Vdc	0-5 Vdc 0.5-4.5 Vdc ratiometric 8-32 Vdc & 5 Vdc	4-20 mA 0-10 Vdc 1-5 Vdc 0.5-4.5 Vdc ratiometric 8-32 Vdc & 5 Vdc	4-20 mA 0-10 Vdc 9-32 Vdc	4-20 mA 0-10 Vdc 0-5 Vdc 1-5 Vdc 0.5-4.5 Vdc ratiometric 8-32 Vdc & 5 Vdc
-40 to 125 °C -40 to 105 °C	-30 to 100 °C -30 to 100 °C	-40 to 125 °C -40 to 105 °C	-40 to 125 °C -40 to 85 °C	-40 to 105 °C -40 to 85 °C	-20 to 85 °C -20 to 85 °C	-40 to 160 °C (-40 to 180 °C) -40 to 105 °C
2004/108/EC	2004/108/EC	2004/108/EC	2004/108/EC	2004/108/EC	2004/108/EC	2004/108/EC
Hydraulics Pneumatics Test Equipment Hydro-Electric Diesel Engine	Food Processing Dosage Pumps Sanitary Engineering Chemical Processing	Automotive Hydraulics Pneumatics	Automotive Hydraulics Pneumatics Plant Engineering	Automotive Hydraulics Pneumatics Plant Engineering	Medical Hydraulics Pneumatics Test Equipment	Automotive Hydraulics Pneumatics Plant Engineering

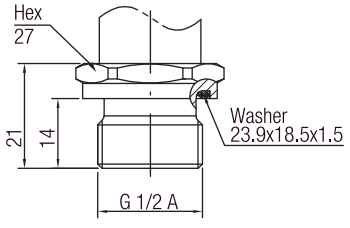
3/8-24 UNF-2A



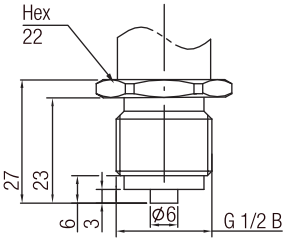
7/16-20 UNF-2A



G 1/2 A Shape E

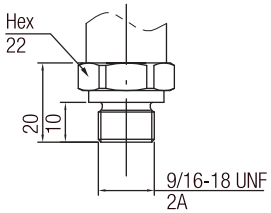


G 1/2 B

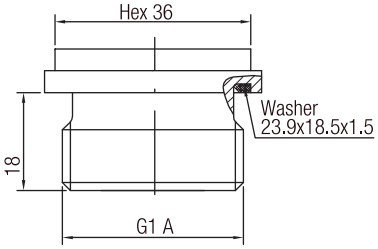


ure	Pressure & Temperature		Level Sensing	Differential Pressure		Ex Versions
PPH150	**PPT100**	**PPT150**	**PLS100**	**PPD100**	**PPD110**	**PPX100**
0-1 bar 0-2000 bar	0-4 bar 0-1000 bar	0-4 bar 0-600 bar	0-1 mWG 0-250 mWG	0-1 mbar 0-50 mbar	0-5 bar 0-1000 bar	0-1 bar 0-2000 bar
1%	0.5% 0.25%	0.5% 0.25%	0.5% 0.25%	1%	1%	0.5% 0.25%
Stainless Steel Stainless Steel IP65 (67) 120 mm	Stainless Steel Stainless Steel IP67 70 mm	Stainless Steel Stainless Steel IP67 87 mm + overall length	Stainless Steel/Silicon Stainless Steel IP68 135 mm	Stainless Steel PVC IP65 100 mm	Stainless Steel PVC IP55 (65) 100 mm	Stainless Steel Stainless Steel IP65 (67) 102 mm
4-20 mA 0-10 Vdc 0-5 Vdc 1-5 Vdc 0.5-4.5 Vdc ratiometric 8-32 Vdc & 5 Vdc	0-10 Vdc 0.5-4.5 Vdc ratiometric 0.25-4.75 Vdc ratiometric 12-32 Vdc & 5 Vdc	4-20 mA 0-10 Vdc 9-32 Vdc	4-20 mA 0-10 Vdc 1-5 Vdc 8-32 Vdc	4-20 mA 0-10 Vdc 14-30 Vdc	4-20 mA 0-10 Vdc 14-30 Vdc	4-20 mA 9-27 Vdc
-40 to 180 °C (-40 to 200 °C) -40 to 105 °C	-40 to 125 °C -40 to 105 °C	-40 to 125 °C -40 to 105 °C	-40 to 85 °C -40 to 85 °C	0 to 50 °C 0 to 50 °C	0 to 50 °C 0 to 50 °C	-20 to 85 °C -20 to 85 °C
2004/108/EC	2004/108/EC	2004/108/EC	2004/108/EC	2004/108/EC	2004/108/EC	94/9/EC Zone 1 EN 50014 EN 50020
Automotive Hydraulics Pneumatics Plant Engineering	Hydraulics Pneumatics Refrigeration Heating Systems Automation	Hydraulics Pneumatics Refrigeration Heating Systems Automation	Tanks and Vessels Water Systems Rivers, Lakes Weirs	Pneumatics Process Control HVAC	Pneumatics Process Control HVAC	Chemical Processing Oil and Gas Food Processing Plant Engineering Automation

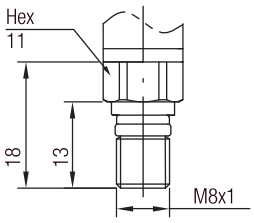
9/16-18 UNF-2A



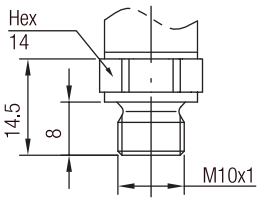
G1 A Shape E



M8x1



M10x1



PPX110	PLX100	PSX100	PSX110
0-10 bar 0-2000 bar	0-1 mWG 0-250 mWG	0-5 mbar 0-2000 bar	0-5 mbar 0-2000 bar
0.5% 0.25%	0.5% 0.25%	0.5% 0.25%	0.50% 0.25%
Stainless Steel/Silicon Stainless Steel IP65 (67) 100 mm	Stainless Steel/Silicon Stainless Steel IP68 180 mm	Stainless Steel/Silicon Stainless Steel IP67 80 mm (66 mm)	Stainless Steel/Silicon Stainless Steel IP67 80 mm (66 mm)
4-20 mA 20-27 Vdc	4-20 mA 20-27 Vdc	0-10 Vdc 14-32 Vdc	0-10 Vdc 14-32 Vdc
-20 to 60 °C (-40 to 100 °C) -20 to 60 °C (-40 to 85 °C)	-20 to 60 °C (-40 to 100 °C) -20 to 60 °C (-40 to 85 °C)	-40 to 100 °C -40 to 85 °C (-40 to 70 °C)	-40 to 100 °C -40 to 85 °C (-40 to 70 °C)
94/9/EC Zone 0 and 1 EN 60079-0 EN 60079-11 EN 60079-26	94/9/EC Zone 0 and 1 EN 60079-0 EN 60079-11 EN 60079-26	94/9/EC Zone 0 and 1 EN 60079-0 EN 60079-11	94/9/EC Zone 0 and 1 EN 60079-0 EN 60079-11
Chemical Processing Oil and Gas Food Processing Plant Engineering Automation	Tanks and Vessels Water Systems	Automotive Environmental Refrigeration Automation	Automotive Environmental Refrigeration Automation

Electrical Connection Options

A choice of electrical connection options is available. Refer to the data sheet of the specific sensor for more details.

MVS/A

MVS/C

M5 (S707), M9 (S712), M12 (S763)
M16 (S723) & M18 (S714)

Superseal

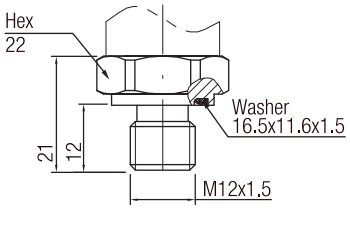
Deutsch

Junior Timer

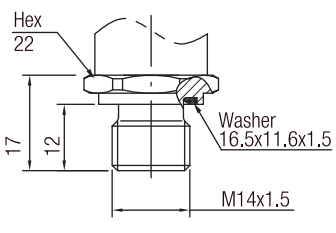
Flying Lead

Packard

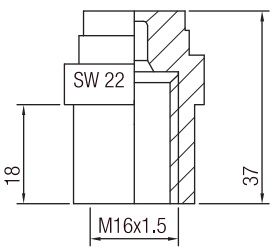
M12x1.5



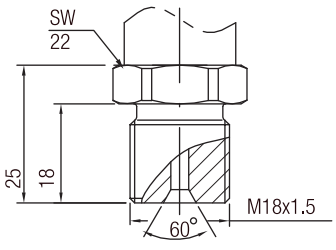
M14x1.5



M16x1.5 female



M18x1.5



Silicon Technology

The pressure-sensitive element is a silicon diaphragm into which pressure-dependent resistors have been diffused.

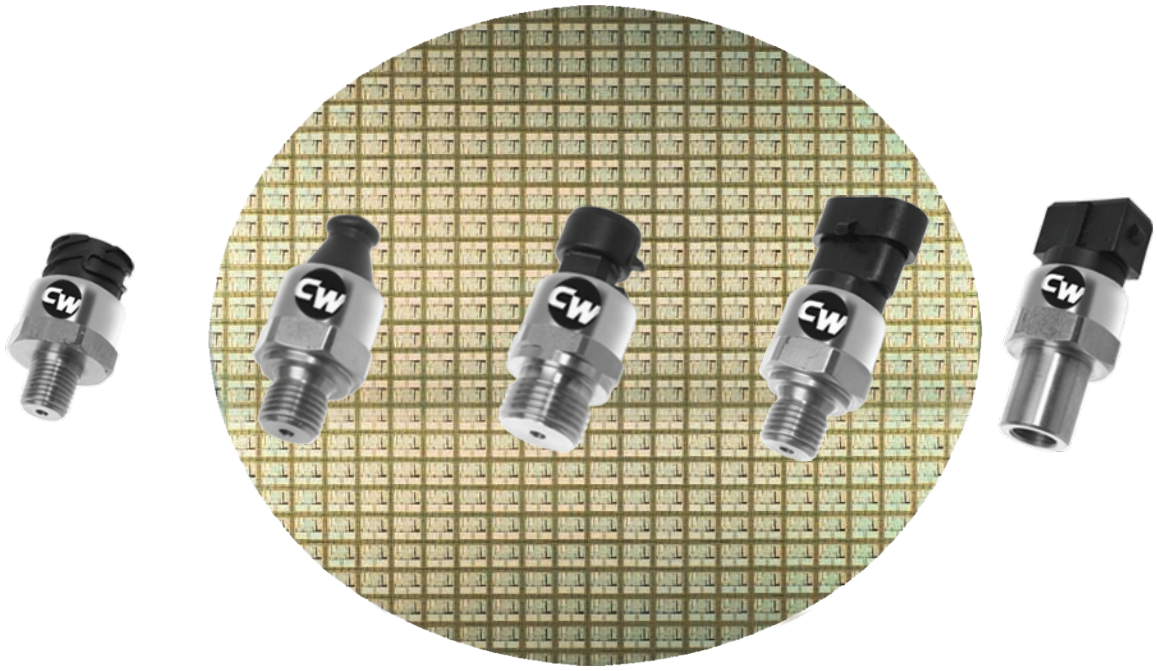
This type of design is particularly suited to high-volume, cost-effective manufacturing.

Benefits:

- Large-batch production

Material:

- Diaphragm – silicon
- Housing – stainless steel – 304



In addition to an extensive range of standard products, sensors can be designed to meet customer-specific requirements.

Typical Applications

- **Automotive**
- **Braking Systems**
- **Hydraulics**
- **Agriculture**
- **Automation**
- **Process Control**
- **Refrigeration**
- **Plant Engineering**
- **Hydro-Electric**
- **Water Systems**
- **Heating Systems**
- **Pnuematics**

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Printed in U.K.
CWIG-PSB 06/16

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