



OEM PRESSURE TRANSDUCER



/ DIVERSITY

As a global company with over 1,000 employees in 15 countries, we understand the value of diversity in our workforce and equally in society.

By bringing together talent from different educational backgrounds and life experiences, we benefit from an even broader range of knowledge, skills and perspectives.



This combination gives us the potential and flexibility to respond to changing client needs and market demand - shaping what sets us apart: The diversity of our high quality product offering.

MEASURE US BY THIS!

OEM PRESSURE TRANSDUCER

OEM PRESSURE TRANSDUCER



/ THIS IS ASHCROFT

DEVELOPMENT FROM TRADITION

When Edward Ashcroft founded our company in 1852, his mission was to protect the steam-powered industry and its workers by using more sophisticated and reliable instruments. Times have changed, but not our attitude. With a history of more than 165 years, of which more than 40 years with our own production in Europe, we have experienced and learned a lot. Together with our customers, we have mastered three industrial revolutions, survived global and regional conflicts and crisis's. We look forward to accompanying our customers with our products in the fourth industrial revolution as well.

GLOBAL - REGIONAL - LOCAL

Globally positioned - regionally represented and locally available for you. With local contacts who speak your language and are ready to solve your challenges.

OUR GREATEST STRENGTH

All of Ashcroft's products and services are the result of our exceptional people. We are all passionate about our common goal, the best customer satisfaction. Ashcroft is inspired of a common commitment to our work and to each other. Combining the talents of our diverse workforce makes us more competitive, resilient and better able to respond to the ever-changing needs of our customers and markets.

OUR MOTIVATION

As a customer and partner, you are the focus of our attention. We are passionate about designing and producing the most innovative, high quality pressure and temperature measuring instruments on our planet.

OUR VALUES

Our five corporate values are not abstract, but are lived by us, and every Ashcroft employee bases his or her daily actions on them.

OEM PRESSURE TRANSDUCER



THINK CUSTOMER FIRST

Every measure, every plan and every project is aimed first and foremost at you, our customer. We see the world through your eyes.

NEVER SETTLE / CHALLENGE THE STATUS QUO

What was true yesterday is not necessarily true today. At Ashcroft, we challenge each other to never be indifferent, to keep improving ourselves and the company.

RESPECT EACH OTHER

We celebrate our diversity, share our ideas and intensify our collective thinking. We act and discuss in mutual respect and thus find better solutions.

THINK BEYOND BORDERS

Across geographical borders. Beyond the factory. Beyond your own area of responsibility. Beyond the personal comfort zone.

WIN AS A TEAM

The common goal is more important to us than our own.

OEM PRESSURE TRANSDUCER

VERSATILE

COMPLETE

/ ASHCROFT OEM PRESSURE TRANSDUCER

APPLICATION-ORIENTED

SOLUTION-RELATED

OEM PRESSURE TRANSDUCER

/ ASHCROFT OEM PRESSURE TRANSDUCER

THE PRESSURE SENSOR TECHNOLOGY USED IN A PRESSURE TRANSDUCER CAN BE IMPORTANT DEPENDING ON THE APPLICATION'S USAGE PROFILE.

Ashcroft pressure transducers are available with:

■ Ceramic thick film sensors

■ Thin film sensors

■ Piezoresistive pressure sensors

CERAMIC THICK-FILM SENSORS

In ceramic thick-film sensors, a total of four resistors are arranged to form a Wheatstone bridge. The change in resistance due to deformation of the ceramic diaphragm as a result of pressure is measured to determine the pressure. While producing this type of sensor, the resistors are printed onto the ceramic sensor body and baked at high temperature.

THIN-FILM SENSORS

Thin-film sensors, like ceramic thick-film sensors, are also based on the Wheatstone bridge principle. Here, the resistors (in the thin-film process) are applied to a metallic sensor body.

PIEZORESISTIVE PRESSURE SENSORS

In piezoresistive pressure sensors, the pressure is measured by a semiconductor measuring diaphragm. By changing the shape, highlighted by compression or expansion due to the pressure acting on it, the pressure measurement is taken by the piezoresistive effect.

As a solution provider, we work with you to determine the optimal sensor technology for your application, taking into account a balanced coordination of technical, commercial and service-oriented issues.

OEM PRESSURE TRANSDUCER



	THIN-FILM SENSORS	PIEZORESISTIVE PRESSURE SENSORS	CERAMIC THICK-FILM SENSORS
ACCURACY	✓✓✓	✓✓✓	✓✓
TEMPERATURE RESISTANCE	✓✓✓	✓✓	✓
HIGH PRESSURE RANGES	✓✓✓	✓	✓✓
LOW PRESSURE RANGES	✓	✓✓✓	✓✓
SHOCK AND VIBRATION RESISTANCE	✓✓✓	✓✓	✓✓
ABSOLUTE PRESSURE MEASUREMENT		✓✓✓	✓✓
CORROSION RESISTANCE	✓✓✓	✓✓	✓

OEM PRESSURE TRANSDUCER

FEATURES	IPS 1 & 2	IPS 3 & 4	IPS 5 & 6	E2 SERIE
				
TECHNOLOGY	/ Ceramic	/ Piezoresistive / thin-film	/ Piezoresistive / thin-film	/ Piezoresistive / thin-film
PRESSURE RANGES	/ 1 bar - 400 bar	/ 100 mbar - 600 bar	/ 100 mbar - 600 bar	/ 100 mbar - 1400 bar
PRESSURE TYPE	/ Gauge & Absolute	/ Gauge	/ Gauge	/ Gauge & Absolute
APPROVALS				
ACCURACY	/ 0,5% / 1%	/ 0,5% / 1%	/ 0,25% / 0,5%	/ 0,25% / 0,5% / 1%

OEM PRESSURE TRANSDUCER

/ IPS 1

PRESSURE TRANSDUCER FOR
STANDARD APPLICATIONS

FEATURES

- Ceramic thick-film sensor technology
- Pressure ranges from 1,6 bar to 250 bar
- Ingress Protection IP65 or IP67
- Accuracy 1%



/ TECHNICAL DATA

PRESSURE RANGES	/ 0...1.6 to 0...250 bar	ACCURACY	/ ±1.0% of span , Terminal Point Method (includes hysteresis, linearity, repeatability, offset and span)
LONG-TERM STABILITY	/ ≤0,30% of span / year at reference temperature	REFERENCE TEMPERATURE	/ 21°C ±2°C
RESPONSE TIME	/ ≤10 ms (2-wire) ; ≤3 ms (3-wire)	TEMPERATURE RANGES	/ Storage: -40°C to 85°C / Ambient: -25°C to 85°C / Media: -25°C to 125°C
SHOCK	/ 500 g, 1 ms, Haversine	VIBRATIONS	/ Random: 10 g RMS 25-2000 Hz
MATERIAL	/ Material sensor element: ceramic AL ₂ O ₃ 96% / Process connection: Stainless steel 304 (1.4301) / Housing: Stainless steel 304 (1.4301) / Seal FKM		
SUPPLY CURRENT	/ max. 25 mA (2-wire) / max. 7 mA (3-wire) / max. 1.5 mA (ratiometric)	OUTPUT SIGNAL	/ 4-20 mA (2-wire) / 0-10 VDC (3-wire) / 10-90% of the supply voltage (ratiometric)
HUMIDITY	/ 0-100% R.H. (non condensing)	PROCESS CONNECTION	/ G ¼ A (DIN 3852 Form E) / ¼ NPT male
ELECTRICAL CONNECTION	/ Hirschmann connector EN175301-803 form A or form C / M12x1 or cable connection (PVC, 2 m)		

OEM PRESSURE TRANSDUCER

OEM PRESSURE TRANSDUCER

/ TECHNICAL DATA

PRESSURE RANGES	/ 0...1 to 0...400 bar	ACCURACY	/ ±0.5% or ±1.0% of span, Terminal Point Method (includes hysteresis, linearity, repeatability, offset and span)
LONG-TERM STABILITY	/ ≤0,30% of span / year at reference temperature	REFERENCE TEMPERATURE	/ 21°C ±2°C
RESPONSE TIME	/ ≤10 ms (2-wire) ; ≤3 ms (3-wire)	TEMPERATURE RANGES	/ Storage: -40°C to 85°C / Ambient: -25°C to 85°C / Media: -25°C to 125°C
SHOCK	/ 500 g, 1 ms, Haversine	VIBRATIONS	/ Random: 10 g RMS 25-2000 Hz
MATERIAL	/ Material sensor element: ceramic AL ₂ O ₃ 96% / Process connection: Stainless steel 304 (1.4301) / Housing: stainless steel 304 (1.4301) / Seal: FKM, FKM Vi 567 (up to 25 bar / 150°C)	INGRESS PROTECTION	/ Standard IP65 (plug connection) ; IP67 (M12 or PVC cable connection)
SUPPLY CURRENT	/ max. 25 mA (2-wire) / max. 7 mA (3-wire) / max. 1.5 mA (ratiometric)	OUTPUT SIGNAL	/ 4-20 mA (2-wire) / 0-10 VDC (3-wire) / 10-90% of the supply voltage (ratiometric)
HUMIDITY	/ 0-100 % R.H. (non condensing)	PROCESS CONNECTION	/ G ¼ A (DIN 3852 Form E) or G ¼ B (EN 837) / G ½ B (EN 837) / ¼ NPT male
ELECTRICAL CONNECTION	/ Hirschmann connector EN175301-803 form A or form C / M12x1 or cable connection (PVC, 2 m)		

/ IPS 2

PRESSURE TRANSDUCER FOR
STANDARD APPLICATIONS

FEATURES

- Ceramic thick-film sensor technology
- Pressure ranges from 1 bar to 400 bar
- Available as absolute pressure version
- Ingress Protection IP65 or IP67
- Accuracy 0,5% or 1%



/ IPS 3

PRESSURE TRANSDUCER FOR
LOW PRESSURE APPLICATIONS

FEATURES

- Piezoresistive sensor technology
- Pressure ranges from 0,1 bar to 6 bar
- Ingress Protection IP65 or IP67
- Accuracy 0,5% or 1%



/ TECHNICAL DATA

PRESSURE RANGES	/ 0...0,1 to 0...6 bar	ACCURACY	/ ±0.5% span ≥ 160 mbar ; ±1.0% of span ≤ 160 mbar, Terminal Point Method (includes hysteresis, linearity, repeatability, offset and span)
LONG-TERM STABILITY	/ ≤0,30% of span / year at reference temperature	REFERENCE TEMPERATURE	/ 21°C ±2°C
RESPONSE TIME	/ ≤10 ms (2-wire) ; ≤3 ms (3-wire)	TEMPERATURE RANGES	/ Storage: -40°C to 85°C / Ambient: -25°C to 85°C / Media: -25°C to 125°C
SHOCK	/ 100 g, 1 ms, Haversine	VIBRATIONS	/ Random: 10 g mit 25-2000 Hz
MATERIAL	/ Material sensor element: stainless steel 316 L (1.4435) / Process connection: Stainless steel 304 (1.4301) / Housing: Stainless steel 304 (1.4301) / Seal FKM	INGRESS PROTECTION	/ Standard IP65 (plug connection) ; IP67 (M12 or PVC cable connection)
SUPPLY CURRENT	/ max. 25 mA (2-wire) / max. 7 mA (3-wire) / max. 1.5 mA (ratiometric)	OUTPUT SIGNAL	/ 4-20 mA (2-wire) / 0-10 VDC (3-wire) / 10-90% of the supply voltage (ratiometric)
HUMIDITY	/ 0-100% R.H. (non condensing)	PROCESS CONNECTION	/ G ¼ A (DIN 3852 Form E) or G ¼ B (EN 837) / G ½ B (EN 837) / ¼ NPT male
ELECTRICAL CONNECTION	/ Hirschmann connector EN175301-803 form A / M12x1 or cable connection (PVC, 2 m)		

OEM PRESSURE TRANSDUCER

OEM PRESSURE TRANSDUCER

/ TECHNICAL DATA

PRESSURE RANGES	/ 0...6 to 0...600 bar	ACCURACY	/ ±0.5% of span, Terminal Point Method (includes hysteresis, linearity, repeatability, offset and span)
LONG-TERM STABILITY	/ ≤0,30% of span / year at reference temperaturer	REFERENCE TEMPERATURE	/ 21°C ±2°C
RESPONSE TIME	/ ≤10 ms (2-wire) ; ≤3 ms (3-wire)	TEMPERATURE RANGES	/ Storage: -40°C to 85°C / Ambient: -40°C to 85°C / Media: -40°C to 125°C
SHOCK	/ 500 g, 1 ms, Haversine	VIBRATIONS	/ Random: 20 g RMS 25-2000 Hz
MATERIAL	/ Material sensor element: stainless steel 630 (1.4542) / Process connection: Stainless steel 316Ti (1.4571) / Housing: stainless steel 304 (1.4301) / Seal FKM, for G ¼ A connector (DIN 3852 part 11 form E) Sensor with welded process connection, no seal required	INGRESS PROTECTION	/ Standard IP65 (plug connection) ; IP67 (M12 or PVC cable connection)
SUPPLY CURRENT	/ max. 25 mA (2-wire) / max. 7 mA (3-wire) / max. 3 mA (ratiometric)	OUTPUT SIGNAL	/ 4-20 mA (2-wire) / 0-10 VDC (3-wire) / 10-90% of the supply voltage (ratiometric)
HUMIDITY	/ 0-100% R.H. (non condensing)	PROCESS CONNECTION	/ G ¼ A (DIN 3852 Form E) or G ¼ B (EN 837) / G ½ B (EN 837) / ¼ NPT male
ELECTRICAL CONNECTION	/ Hirschmann connector EN175301-803 form A or form C / M12x1 or cable connection (PVC, 2 m)		

/ IPS 4

PRESSURE TRANSDUCER FOR
HEAVY DUTY APPLICATION

FEATURES

- Thin film sensor technology
- Pressure ranges from 6 bar to 600 bar
- Ingress protection IP65 or IP67
- Accuracy 0,5 %



/ IPS 5

PRESSURE TRANSDUCER FOR
LOW PRESSURE APPLICATIONS

FEATURES

- Piezoresistive sensor technology
- Pressure ranges from 100 mbar to 60 bar
- Available with absolute pressure
- Ingress Protection IP65, IP67 or IP68
- Accuracy 0,25% and 0,5%



/ TECHNICAL DATA

PRESSURE RANGES	/ -1...60 bar gauge and absolute pressure	ACCURACY	/ ±0.25% span ≥400 mbar ; ±0.5% of span ≤ 400 mbar, Terminal Point Method (includes hysteresis, linearity, repeatability, offset and span)
LONG-TERM STABILITY	/ ≤0,1% of span / year at reference temperature	REFERENCE TEMPERATURE	/ 21°C ±2°C
RESPONSE TIME	/ ≤10 ms (2-wire) ; ≤3 ms (3-wire)	TEMPERATURE RANGES	/ Storage: -40°C to 100°C / Ambient: -40°C to 85°C / Media: -40°C to 125°C
SHOCK	/ 500 g, 1 ms, Haversine	VIBRATIONS	/ Random: 10 g RMS 25-2000 Hz
MATERIAL	/ Material sensor element: stainless steel 316L (1.4435) / Process connection: Stainless steel 316L (1.4404) / Housing: Stainless steel 316L (1.4435) / Seal FKM, EPDM	INGRESS PROTECTION	/ Standard IP65 (plug connection) ; IP67 (M12 or PVC cable connection) ; IP 68 (PVC vented cable)
SUPPLY CURRENT	/ max. 25 mA (2-wire) / max. 7 mA (3-wire)	OUTPUT SIGNAL	/ 4-20 mA (2-wire) / 0-10 VDC (3-wire) / 0-20 mA (3-wire)
HUMIDITY	/ 0-100% R.H. (non condensing)	PROCESS CONNECTION	/ G ½ A or G ¼ A (DIN 3852 Form E) / G ½ B or G ¼ B (EN 837) / ½ NPT male or ¼ NPT male
ELECTRICAL CONNECTION	/ Hirschmann connector EN175301-803 form A / M12x1 / Cable connection (PVC, 2 m); optionally ventilated cable / Binder Series 723 / MIL DTL26482 10 6-PIN		

OEM PRESSURE TRANSDUCER

OEM PRESSURE TRANSDUCER

/ TECHNICAL DATA

PRESSURE RANGES	/ 0...6 bar to 0...600 bar	ACCURACY	/ ±0.5% of span, Terminal Point Method (includes hysteresis, linearity, repeatability, offset and span)
LONG-TERM STABILITY	/ ≤0,2% of span / year at reference temperature	REFERENCE TEMPERATURE	/ 21°C ±2°C
RESPONSE TIME	/ ≤10 ms (2-wire) ; ≤3 ms (3-wire)	TEMPERATURE RANGES	/ Storage: -40°C to 100°C / Ambient: -40°C to 85°C / Media: -40°C to 125°C
SHOCK	/ 500 g, 1 ms, Haversine	VIBRATIONS	/ Random: 20 g RMS 25-2000 Hz
MATERIAL	/ Material sensor element: stainless steel 17-4PH (1.4542) / Process connection: Stainless steel 316Ti (1.4571) / Housing: Stainless steel 316L (1.4404)	INGRESS PROTECTION	/ Standard IP65 (plug connection) ; IP67 (M12 or PVC cable connection ; IP 68 (PVC vented cable)
SUPPLY CURRENT	/ max. 25 mA (2-wire) / max. 7 mA (3-wire)	OUTPUT SIGNAL	/ 4-20 mA (2-wire) / 0-10 VDC (3-wire)
HUMIDITY	/ 0-100% R.H. (non condensing)	PROCESS CONNECTION	/ G ½ B or G ¼ B (EN 837) / ¼ NPT male
ELECTRICAL CONNECTION	/ Hirschmann connector EN175301-803 Form A / M12x1 / Cable connection (PVC, 2 m) ; optionally ventilated cable / Binder Series 723		

OEM PRESSURE TRANSDUCER

/ IPS 6

STAINLESS STEEL PRESSURE
TRANSDUCER, FULLY WELDED

FEATURES

- Thin film sensor technology
- Pressure ranges from 6 bar to 600 bar
- Ingress protection IP65, IP67 or IP68
- Fully welded pressure sensor
- High overload and pressure peak resistance
- Accuracy 0,5%



OEM PRESSURE TRANSDUCER



**MADE TO FIT.
DISCOVER THE POSSIBILITIES AND
CHALLENGE US!**

E2G PRESSURE TRANSDUCERS: AVAILABLE WITH DIFFERENT
PROCESS AND ELECTRICAL CONNECTIONS



OEM PRESSURE TRANSDUCER

**MAGNETIC CALIBRATION.
SO PRECISE. SO SIMPLE.
EXACTLY!**

EXTERNAL MAGNETIC ZERO
AND SPAN ADJUSTMENT



WATCH VIDEO
 YouTube

OEM PRESSURE TRANSDUCER

/ E2

PRESSURE TRANSDUCER

FEATURES

- Pressure ranges from 100 mbar to 1400 bar
- E2S - FM, ATEX and IECEx intrinsically safe approvals
- E2X - FM, ATEX and IECEx double approval flameproof / intrinsically safe
- E2F - FM, ATEX and IECEx flameproof approval
- Highly configurable
- Field adjustable
- Wide range of process and electrical connections
- Customisable
- External magnetic adjustment for zero and span



OEM PRESSURE TRANSDUCER

/ TECHNICAL DATA

GAUGE AND VACUUM RANGES	/ -1...1400 bar	ABSOLUTE PRESSURE RANGES	/ 0...1 to 0...20 bar (abs)
ACCURACY	/ ±0.25%, ±0.5% or ±1.0% of span, Terminal Point Method (includes hysteresis, linearity, repeatability, offset and span)	LONG-TERM STABILITY	/ ≤0,25% of span /year at reference temperature
REFERENCE TEMPERATURE	/ 21°C ±2°C	RESPONSE TIME	/ 4 ms
OVERLOAD	/ 1,2x to 2x	BURST	/ 3x to 8x
TEMPERATURE RANGES	/ Storage: -50°C to 125°C / Ambient: -40°C to 125°C / Media: -40°C to 125°C	SHOCK	/ 80 g, 6 ms, Haversine
VIBRATIONS	/ Random: 10 g RMS 20-2000 Hz	MATERIAL	/ Material sensor element: stainless steel 17-4 PH / stainless steel 316L (1.4404) / stainless steel (1.4404) insulated / A286 / process connection: stainless steel 316L (1.4404) / housing: stainless steel 316L (1.4404)
INGRESS PROTECTION	/ Standard IP66; IP67 and optional IP69K	SUPPLY CURRENT	/ max. 8 mA (VDC-Output signal)
OUTPUT SIGNAL	/ 4-20 mA (2-wire) / 20-4 mA (2-wire) / 1-5/6 VDC (3-wire) / 0-5/10 VDC (3-wire) / 1-11 VDC (3-wire) / 0,1-5/10 VDC (3-wire) / 0,5-4,5 VDC (3-wire)	HUMIDITY	/ 0-100% R.H. (non condensing)

OEM PRESSURE TRANSDUCER

ASHCROFT CUSTOM / ASHCROFT CES ENGINEERED SOLUTION

OEM PRESSURE TRANSDUCER

/ ASHCROFT CES

CUSTOMER-SPECIFIC SOLUTIONS AS CORE COMPETENCE

Each plant is individual, each challenge specific. We know that.

That's why we also know that meeting special problems with off-the-peg products alone is often not enough - and therefore does not meet our own standards:

We consider perfect product implementation and the realisation of smooth process flows - for example in the form of stocking concepts - to be elementary.

With our Custom Engineered Solutions (CESSM) we offer our customers tailor-made solution concepts.

In close coordination between you, our product experts and our development engineers, we work out customised product solutions for the most individual applications.

This flexibility distinguishes us and enables us to offer our customers the best possible concepts.

We identify ourselves with your results and are aware of our responsibility. This is our understanding of partnership.

MEASURE US BY IT!

OEM PRESSURE TRANSDUCER



A close-up photograph of a person's hands, wearing orange and brown work gloves, using a silver wrench to tighten a nut on a mechanical component. The component has several black hoses attached to it. The background is dark and out of focus. A white diagonal line separates this image from the green background on the right.

 www.ashcroft.eu

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