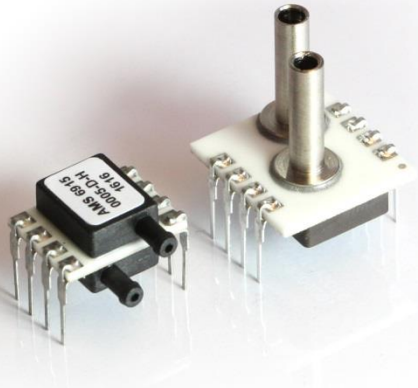


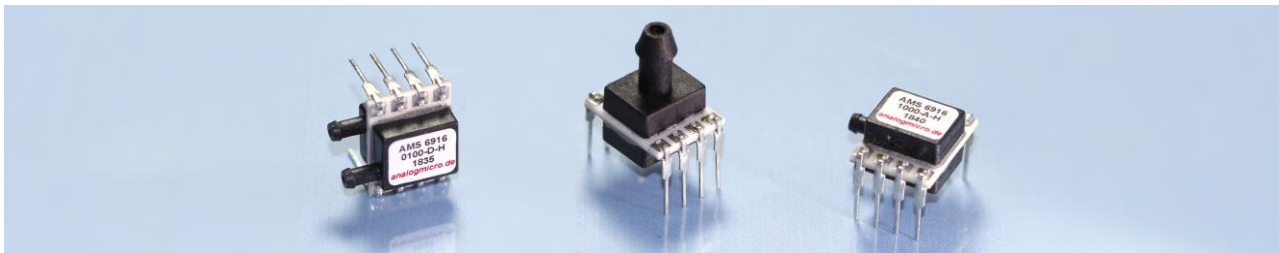
Pressure sensing solutions

Product Overview



| Series | Pressure ranges | | | | | Pressure types | | | | | Output | | | | | | | |
|-----------------|---|--|---|---|---|-----------------|--------------|----------------------------|----------|------------|----------------------------------|--|-------------------------|--------------------------|-------------------------|---------------|---------------|-----------------|
| | ultra low pressure ($p \leq 10$ mbar) | low pressure (10 mbar $< p \leq 100$ mbar) | medium pressure (100 mbar $< p \leq 2$ bar) | high pressure (2 bar $< p \leq 10$ bar) | pneumatic pressure (10 bar $< p \leq 16$ bar) | gage / relative | differential | bidirectional differential | absolute | barometric | analog voltage, mV, differential | analog voltage, 0.5 - 4.5 V, ratiometric | analog voltage, 0 - 5 V | analog voltage, 0 - 10 V | current-loop, 4 - 20 mA | digital (I2C) | digital (SPI) | logic switching |
| AMS 6916 | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | ♦ | | ♦ | | | | | | |
| AMS 6915 | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | | | | | | ♦ | | |
| AMS 5935 | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | ♦ | | | | | | ♦ | ♦ | |
| AMS 5915 | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | ♦ | | | | | | ♦ | | |
| AMS 5812 | ♦ | ♦ | ♦ | ♦ | | ♦ | ♦ | ♦ | ♦ | ♦ | | ♦ | | | | ♦ | | |
| AMS 5612 | | ♦ | ♦ | | | ♦ | ♦ | | ♦ | | ♦ | | | | | | | |
| AMS 5105 | ♦ | ♦ | ♦ | ♦ | | ♦ | ♦ | ♦ | ♦ | ♦ | | ♦ | | | | | | ♦ |
| AMS 2710 | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | ♦ | | | | ♦ | | | | |
| AMS 2712 | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | ♦ | | | | | ♦ | | | |
| AMS 3011 | | ♦ | ♦ | ♦ | | ♦ | ♦ | ♦ | ♦ | ♦ | | | ♦ | | | | | |
| AMS 3012 | | ♦ | ♦ | ♦ | | ♦ | ♦ | ♦ | ♦ | ♦ | | | | ♦ | | | | |
| AMS 4710 | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | ♦ | | | | ♦ | | | | |
| AMS 4711 | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | ♦ | | ♦ | | | | | | |
| AMS 4712 | ♦ | ♦ | ♦ | | | ♦ | ♦ | ♦ | ♦ | ♦ | | | | | ♦ | | | |

| Properties | | | | | | | | | | | Package | | | | | | | Page | | |
|------------------|-------------------------|-----------------------------|----------------------|----------------------|--------------------|---------------------|--------------------------|----------------------|----------------------|--------------------------------------|-----------------------|-----------------------|-------------------|------------------|----------------|-----------------------------|-----------------|-------------------------|------------------------|----|
| amplified signal | temperature compensated | digital signal conditioning | supply voltage 1.8 V | supply voltage 3.3 V | supply voltage 5 V | supply voltage 10 V | supply voltage 24 V (DC) | 14 bit A/D-converter | 18 bit A/D-converter | low current consumption / sleep mode | DIL package (530 mil) | DIL package (600 mil) | ceramic substrate | horizontal ports | vertical ports | manifold version (no tubes) | plastic package | metal package, M5 ports | customization possible | |
| ◆ | ◆ | ◆ | | | ◆ | | | ◆ | | | ◆ | | ◆ | ◆ | | | | | ◆ | 4 |
| ◆ | ◆ | ◆ | | ◆ | ◆ | | | ◆ | | | ◆ | | ◆ | ◆ | ◆ | | | | ◆ | 6 |
| ◆ | ◆ | ◆ | ◆ | ◆ | | | | | ◆ | ◆ | | ◆ | ◆ | | ◆ | ◆ | | | ◆ | 8 |
| ◆ | ◆ | ◆ | | ◆ | ◆ | | | ◆ | | | | ◆ | ◆ | | ◆ | ◆ | | | ◆ | 10 |
| ◆ | ◆ | ◆ | | | ◆ | | | ◆ | | | | ◆ | ◆ | | ◆ | ◆ | | | ◆ | 12 |
| | ◆ | | | | | ◆ | | | | | | ◆ | ◆ | | ◆ | | | | | 14 |
| ◆ | ◆ | ◆ | | | ◆ | | | ◆ | | | | ◆ | ◆ | | ◆ | | | | ◆ | 16 |
| ◆ | ◆ | ◆ | | | | | ◆ | ◆ | | | | | | | ◆ | | | | ◆ | 18 |
| ◆ | ◆ | ◆ | | | | ◆ | ◆ | ◆ | | | | | | ◆ | | | | | ◆ | 20 |
| ◆ | ◆ | ◆ | | | | ◆ | ◆ | ◆ | | | | | ◆ | ◆ | | | | ◆ | ◆ | 22 |
| ◆ | ◆ | ◆ | | | | ◆ | ◆ | ◆ | | | | | ◆ | ◆ | | | | ◆ | ◆ | 24 |
| ◆ | ◆ | ◆ | | | | ◆ | ◆ | ◆ | | | | | ◆ | | | | ◆ | | ◆ | 26 |
| ◆ | ◆ | ◆ | | | | ◆ | ◆ | ◆ | | | | | ◆ | | | ◆ | | | ◆ | 28 |
| ◆ | ◆ | ◆ | | | | ◆ | ◆ | ◆ | | | | | ◆ | | | ◆ | | | ◆ | 30 |



AMS 6916 – OEM Pressure Sensor with Analog Output

Übersicht

Die Drucksensoren der Serie AMS 6916 haben einen analogen ratiometrischen Spannungsausgang (0,5 ... 4,5 V). Sie sind für die Leiterplattenmontage konzipiert und eignen sich aufgrund ihres kompakten DIL-Gehäuses besonders für Anwendungen, die eine starke Miniaturisierung erfordern. Die AMS 6916 gibt es für alle Druckarten in zahlreichen Druckbereichen mit horizontalen oder vertikalen Druckanschlüssen.

Die hochwertigen Sensoren AMS 6916 mit digitaler Signalverarbeitung sind aufwändig kalibriert, linearisiert und temperaturkompensiert. Sie zeichnen sich durch eine hohe Genauigkeit bei Raumtemperatur und einen geringen Gesamtfehler (TEB) im Temperaturbereich von 0 bis 60 °C aus.

Verfügbare Druckbereiche

- Differentieller (relativer) Druck:
0 ... 5 mbar bis zu 0 ... 1 bar
- Bidirektional differentieller Druck:
-5 ... +5 mbar bis zu -1 ... +1 bar
- Absolutdruck:
0 ... 500 mbar und 0 ... 1 bar
- Barometrischer Druck:
700 ... 1200 mbar

Kundenspezifische Druckbereiche und Modifikationen sind auf Anfrage erhältlich.

Typische Anwendungen

- Industrielle Prozesskontrolle
- Medizinischer Apparatebau
- Heizung, Klima und Lüftung
- Barometrische Druckmessung
- Vakuumüberwachung
- Gasdurchflussmessung

Overview

The pressure sensors from the AMS 6916 series have an analog ratiometric voltage output (0.5 ... 4.5 V). They are designed for assembly on PCBs and due to their compact DIL package they are especially suitable for applications, where a high degree of miniaturization is required. The AMS 6916 is available for all pressure types in various pressure ranges with horizontal or vertical pressure ports.

The high quality sensors from the AMS 6916 series with digital signal-conditioning are extensively calibrated, linearized and temperature compensated. They feature high accuracy at room temperature and a small total error band (TEB) in a temperature range of 0 to 60 °C.

Available Pressure Ranges

- Differential (relative / gage) pressure:
0 ... 5 mbar up to 0 ... 1 bar
- Bidirectional differential pressure:
-5 ... +5 mbar up to -1 ... +1 bar
- Absolute pressure:
0 ... 500 mbar and 0 ... 1 bar
- Barometric pressure:
700 ... 1200 mbar

Custom specific pressure ranges or modifications are available on request.

Typical Applications

- Industrial process control
- Medical instrumentation
- HVAC (Heating, Ventilation, Air Conditioning)
- Barometric pressure measurement
- Vacuum monitoring
- Gas flow measurement

Short Specifications

Excerpt from AMS 6916's datasheet, all parameters apply to $V_S = 5.0\text{ V}$ and $T_{op} = 25\text{ °C}$

| Parameter | Minimum | Typical | Maximum | Units |
|---|--------------------------|------------------|---------|--------|
| Analog voltage output | | | | |
| @ specified minimum pressure | | 0.5 | | V |
| @ specified maximum pressure | | 4.5 | | V |
| Full span output (FSO) | | 4.0 | | V |
| without pressure (bidirectional differential) | | 2.5 | | V |
| Accuracy @ $T = 25\text{ °C}$ (acc. EN 61298) * | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | | ± 1.0 | %FSO |
| Standard and low pressure sensors | | | ± 0.5 | %FSO |
| Overall error (pressure meas.) @ $T = 0 \dots 60\text{ °C}$ | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | | ± 1.5 | %FSO |
| Standard and low pressure sensors | | | ± 1.0 | %FSO |
| Long term stability | | 0.2 | < 0.5 | %FSO/a |
| Resolution A/D converter | | 14 | | bits |
| Resolution analog output | | 1.2 | | mV |
| Supply voltage (V_S) | 4.75 | 5.0 | 5.25 | V |
| Current consumption | | | 3 | mA |
| Reaction time (10 % ... 90 % rise time) | | 1 | 2 | ms |
| Package | DIL 8 (width: 0.53 inch) | | | |
| Weight | | 1.5 | | g |
| Dimensions without tubes and pins ($L \times W \times H$) | | 9.9 x 12.9 x 7.4 | | mm |

* Accuracy is defined as the measurement value's maximum deviation from the ideal characteristic curve at room temperature (RT) in %FSO including the adjustment error (offset and span), nonlinearity, pressure hysteresis and repeatability.

Weitere Informationen:

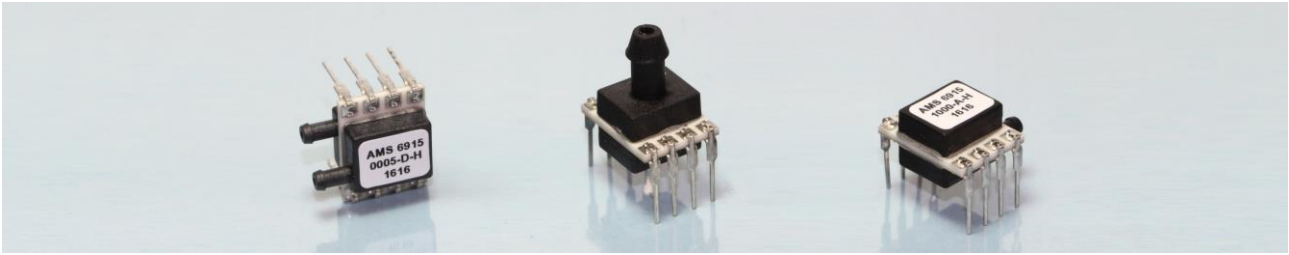
<https://www.analog-micro.com/de/produkte/drucksensoren/board-mount-drucksensoren/ams6916/> (Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/board-mount-pressure-sensors/ams6916/> (English)





AMS 6915 – OEM Pressure Sensor with I²C Interface

Übersicht

Die kompakten digitalen OEM-Drucksensoren der Serie AMS 6915 eignen sich besonders für Anwendungen, die eine starke Miniaturisierung erfordern. Die PCB-montierbaren AMS 6915 gibt es in zahlreichen Varianten mit horizontalen oder vertikalen Druckanschlüssen. Über die integrierte I²C Schnittstelle können Druck- und Temperaturmesswerte ausgelesen werden. Mit einer Versorgungsspannung von 3,3 V (optional 5 V) sind die Sensoren für Mikrokontrolleranwendungen ideal.

Die AMS 6915 können in einem Temperaturbereich von -25 ... 85 °C betrieben werden und zeichnen sich durch einen geringen Gesamtfehler im kompensierten Bereich von 0 ... 60 °C aus.

Die Sensoren der Serie AMS 6915 können Produkte aus der HSC Serie von Honeywell ersetzen.

Verfügbare Druckbereiche

- Differentieller (relativer) Druck:
0 ... 5 mbar bis zu 0 ... 16 bar
- Bidirektional differentieller Druck:
-2,5 ... +2,5 mbar bis zu -1 ... +1 bar
- Absolutdruck:
0 ... 500 mbar bis zu 0 ... 2 bar
- Barometrischer Druck:
700 ... 1200 mbar

Kundenspezifische Druckbereiche und Modifikationen sind auf Anfrage erhältlich.

Typische Anwendungen

- Industrielle Prozesskontrolle
- Medizinischer Apparatebau
- Heizung, Klima und Lüftung
- Barometrische Druckmessung
- Vakuumüberwachung
- Gasdurchflussmessung

Overview

The compact digital OEM pressure sensors from the AMS 6915 series are especially suitable for applications, where a consequent miniaturization is required. The PCB-mountable AMS 6915 are available in a multiple variants with horizontal and vertical pressure ports. Using the integrated I²C interface pressure and temperature data can be readout easily. With a supply voltage of 3.3 V (5 V optional) the sensors are ideal for microcontroller applications.

The AMS 6915 can be used in a temperature range from -25 ... 85 °C and feature a low total error band in the temperature compensated range of 0 ... 60 °C.

The pressure sensors AMS 6915 can substitute products from Honeywell's HSC sensor series.

Available Pressure Ranges

- Differential (relative) pressure:
0 ... 5 mbar up to 0 ... 16 bar
- Bidirectional differential pressure:
-2.5 ... +2.5 mbar up to -1 ... +1 bar
- Absolute pressure:
0 ... 500 mbar up to 0 ... 2 bar
- Barometric pressure:
700 ... 1200 mbar

Custom specific pressure ranges or modifications are available on request.

Typical Applications

- Industrial process control
- Medical instrumentation
- HVAC (Heating, Ventilation, Air Conditioning)
- Barometric pressure measurement
- Vacuum monitoring
- Gas flow measurement

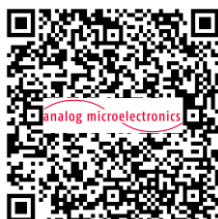
Short Specifications

Excerpt from AMS 6915's datasheet, all parameters apply to $V_S = 3.3\text{ V}$ and $T_{op} = 25\text{ °C}$

| Parameter | Minimum | Typical | Maximum | Units |
|---|--------------------------|------------------|-----------|--------|
| Digital output signal (pressure) | | | | |
| @ specified minimum pressure | | 1638 | | counts |
| @ specified maximum pressure | | 14745 | | counts |
| Full span output (FSO) | | 13107 | | counts |
| without pressure (bidirectional differential) | | 8192 | | counts |
| Digital output signal (temperature) | | | | |
| @ minimum temperature $T = -25\text{ °C}$ | | 256 | | counts |
| @ maximum temperature $T = 85\text{ °C}$ | | 1382 | | counts |
| Accuracy pressure measurement (acc. EN 61298) | | | | |
| Ultra low pressure sensors (2.5, 5, 10 mbar) | | | ± 1.5 | %FSO |
| Low pressure sensors (25, 50, 100 mbar) | | | ± 1.0 | %FSO |
| Standard pressure sensors ($\geq 200\text{ mbar}$) | | | ± 0.5 | %FSO |
| Overall error (pressure meas.) @ $T = 0 \dots 60\text{ °C}$ | | | | |
| Ultra low pressure sensors (2.5, 5, 10 mbar) | | | ± 2.0 | %FSO |
| Low pressure sensors (25, 50, 100 mbar) | | | ± 1.5 | %FSO |
| Standard pressure sensors ($\geq 200\text{ mbar}$) | | | ± 1.0 | %FSO |
| Long term stability | | | < 0.5 | %FSO/a |
| Resolution A/D converter | | 14 | | bits |
| Resolution pressure signal | 12 | | 14 | bits |
| Resolution temperature signal | | | 11 | bits |
| Supply voltage (V_S) | 3.0 | 3.3 | 3.6 | V |
| Current consumption | | | 4 | mA |
| Reaction time (10 % ... 90 % rise time) | | 0.5 | 1 | ms |
| Package | DIL 8 (width: 0.53 inch) | | | |
| Weight | | 1.5 | | g |
| Dimensions without tubes and pins ($L \times W \times H$) | | 13.5 x 9.9 x 7.4 | | mm |

Weitere Informationen:

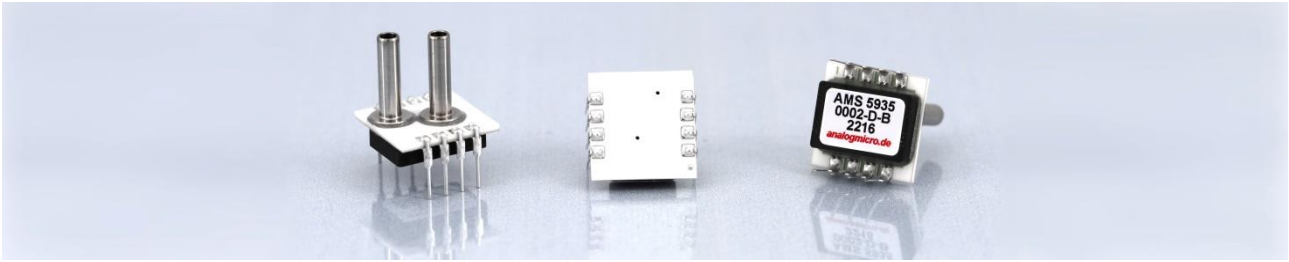
<https://www.analog-micro.com/de/produkte/drucksensoren/board-mount-drucksensoren/ams6915/> (Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/board-mount-pressure-sensors/ams6915/> (English)





AMS 5935 – Digital 18 bit Board Mount Pressure Sensor

Übersicht

Die digitalen 18 bit Drucksensoren der Serie AMS 5935 sind für Präzisionsdruckmessungen bei extrem niedriger Leistungsaufnahme konzipiert.

Die AMS 5935 haben ein robustes, keramisches DIL-8 Gehäuse für die PCB-Montage. Sie verfügen über eine integrierte I2C- / SPI-Schnittstelle, über die kalibrierte Druck- und Temperaturmesswerte ausgelesen werden können. Die Sensoren zeichnen sich durch extrem kleine Messfehler bei Raumtemperatur sowie einen sehr geringen Gesamtfehler im kompensierten Temperaturbereich von -25 ... 85 °C aus.

Mit einem Versorgungsspannungsbereich von 1,7 V bis 3,6 V und der extrem geringen Stromaufnahme im Sleep Mode eignen sich die AMS 5935 besonders für Mikrocontrolleranwendungen mit Batteriebetrieb.

Um den Design-In Prozess zu vereinfachen sind zwei Evaluierungsplattformen verfügbar: ein USB Starter-Kit/Data Logger sowie ein Arduino Uno Kit.

Verfügbare Druckbereiche

- Differentieller (relativer) Druck:
0 ... 2,5 mbar bis zu 0 ... 1 bar
- Bidirektional differentieller Druck:
-1,25 ... +1,25 mbar bis zu -1 ... +1 bar
- Absolutdruck:
0 ... 500 mbar bis zu 0 ... 2 bar
- Barometrischer Druck:
700 ... 1200 mbar

Kundenspezifische Druckbereiche und Modifikationen sind auf Anfrage erhältlich.

Typische Anwendungen

- Batteriebetriebene Anwendungen
- Medizinischer Apparatebau
- Heizung, Klima und Lüftung
- Gasdurchflussmessung
- Füllstandsmessung

Overview

The digital 18 bit pressure sensors in the AMS 5935 series are designed for precision measurements with extremely low power consumption.

The AMS 5935 are housed in a robust ceramic DIL-8 package for PCB assembly. They have an integrated I2C- / SPI-interface, which allows the readout of calibrated pressure and temperature data. The sensors feature an extremely low measurement error at room temperature as well as a very small total error band in the compensated temperature range of -25 ... 85 °C.

With a supply voltage range of 1.7 V up to 3.6 V and the extremely low current consumption in sleep mode, the AMS 5935 pressure sensors are particularly suitable for battery powered microcontroller applications.

To simplify the design-in process, two evaluation platforms are available: a USB starter kit/Data logger and an Arduino Uno kit.

Available Pressure Ranges

- Differential (relative) pressure:
0 ... 2.5 mbar up to 0 ... 1 bar
- Bidirectional differential pressure:
-1.25 ... +1.25 mbar up to -1 ... +1 bar
- Absolute pressure:
0 ... 500 mbar up to 0 ... 2 bar
- Barometric pressure:
700 ... 1200 mbar

Custom specific pressure ranges or modifications are available on request.

Typical Applications

- Battery powered applications
- Medical instrumentation
- HVAC (Heating, Ventilation, Air Conditioning)
- Gas and air flow measurement
- Fluid level monitoring

Short Specifications

Excerpt from AMS 5935's datasheet, all parameters apply to $V_S = 3.3\text{ V}$ and $T_{op} = 25\text{ °C}$

| Parameter | Minimum | Typical | Maximum | Units |
|---|-------------------------|---------------------|------------|--------|
| Digital output signal (pressure) | | | | |
| @ specified minimum pressure | | $0.1 \cdot 2^{24}$ | | counts |
| @ specified maximum pressure | | $0.9 \cdot 2^{24}$ | | counts |
| Full span output (FSO) | | $0.8 \cdot 2^{24}$ | | counts |
| without pressure (bidirectional differential) | | $0.5 \cdot 2^{24}$ | | counts |
| Digital output signal (temperature) | | | | |
| @ minimum temperature $T = -25\text{ °C}$ | | $0.09 \cdot 2^{24}$ | | counts |
| @ maximum temperature $T = 85\text{ °C}$ | | $0.75 \cdot 2^{24}$ | | counts |
| Accuracy pressure measurement (acc. EN 61298) | | | | |
| Pressure ranges: $\pm 1.25\text{ mbar}$, $0 \dots 2.5\text{ mbar}$ | | | ± 0.6 | %FSO |
| Pressure ranges: $\pm 2.5\text{ mbar}$, $0 \dots 5\text{ mbar}$ | | | ± 0.5 | %FSO |
| Pressure ranges: $\pm 5\text{ mbar}$ up to $\pm 100\text{ mbar}$, | | | ± 0.3 | %FSO |
| Pressure ranges: $0 \dots 200\text{ mbar}$ up to $0 \dots 2\text{ bar}$ | | | ± 0.1 | %FSO |
| TEB/Overall error (pressure meas.) @ $T = -25 \dots 85\text{ °C}$ | | | | |
| Pressure ranges: $\pm 1.25\text{ mbar}$, $0 \dots 2.5\text{ mbar}$ | | | ± 1.5 | %FSO |
| Pressure ranges: $\pm 2.5\text{ mbar}$, $0 \dots 5\text{ mbar}$ | | | ± 1.0 | %FSO |
| Pressure ranges: $\pm 5\text{ mbar}$ up to $\pm 100\text{ mbar}$, | | | ± 0.5 | %FSO |
| Pressure ranges: $0 \dots 200\text{ mbar}$ up to $0 \dots 2\text{ bar}$ | | | ± 0.25 | %FSO |
| Long term stability | | | < 0.5 | %FSO/a |
| Resolution A/D converter | | 18 | | bits |
| Resolution pressure signal | 17 | | 18 | bits |
| Resolution temperature signal | | | 16 | bits |
| Supply voltage (V_S) | 1.7 | 3.3 | 3.6 | V |
| Current consumption (in sleep mode) | | | 250 | nA |
| Current consumption (in active mode) | | | 2 | mA |
| Time for one measurement cycle (duration in active mode) | | 4 | | ms |
| Start-up time (ramp up to active mode) | | 2.5 | | ms |
| Package | DIL 8 (width: 0.6 inch) | | | |
| Weight | | 3 | | g |
| Dimensions without tubes and pins ($L \times W \times H$) | | 15.24 x 15.24 x 4.3 | | mm |

Weitere Informationen:

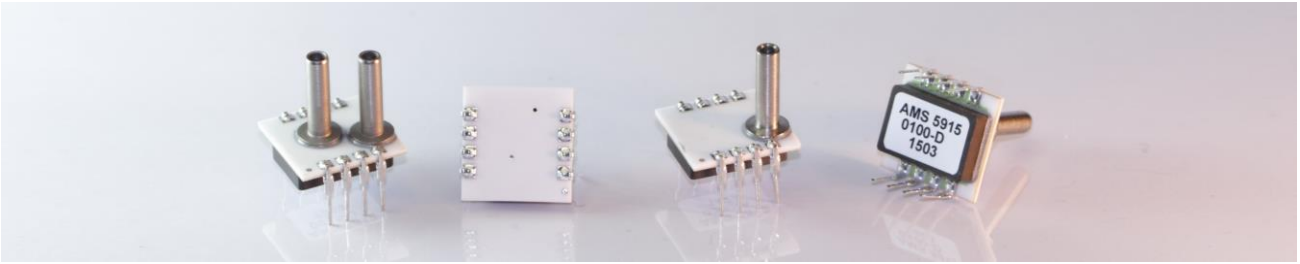
<https://www.analog-micro.com/de/produkte/drucksensoren/board-mount-drucksensoren/ams5935/> (Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/board-mount-pressure-sensors/ams5935/> (English)





AMS 5915 – OEM Pressure Sensor with I²C Interface

Übersicht

Die Sensoren aus der Serie AMS 5915 sind hochpräzise, digitale OEM Drucksensoren in einem keramischen DIL-8 Gehäuse für die PCB-Montage. Die Druck- und Temperaturmesswerte lassen sich einfach über die integrierte I²C Schnittstelle des Sensors auslesen. Mit einer Versorgungsspannung von 3,3 V (optional 5 V) sind die Sensoren für Mikrokontrolleranwendungen ideal.

Die Sensoren sind kalibriert und in einem weiten Temperaturbereich von -25 ... 85 °C temperaturkompensiert. Damit wird eine hohe Genauigkeit bei Raumtemperatur und ein geringer Gesamtfehler über den gesamten Temperaturbereich erreicht.

Verfügbare Druckbereiche

- Differentieller (relativer) Druck:
0 ... 5 mbar bis zu 0 ... 16 bar
- Bidirektional differentieller Druck:
-2,5 ... +2,5 mbar bis zu -1 ... +1 bar
- Absolutdruck:
0 ... 500 mbar bis zu 0 ... 2 bar
- Barometrischer Druck:
700 ... 1200 mbar

Kundenspezifische Druckbereiche und Modifikationen sind auf Anfrage erhältlich.

Typische Anwendungen

- Industrielle Prozesskontrolle
- Medizinischer Apparatebau
- Heizung, Klima und Lüftung
- Barometrische Druckmessung
- Vakuumüberwachung
- Gasdurchflussmessung
- Füllstandsmessung

Overview

AMS 5915 is a series of board-mountable, high-precision digital OEM pressure sensors housed in a ceramic DIL-8 package. The sensors provide pressure and temperature data, which can be easily readout using the integrated digital I²C interface. With their supply voltage of 3.3 V (5 V optional) the sensors are especially suitable for microcontroller applications.

The sensors are calibrated and temperature compensated in a wide temperature range of -25 ... 85 °C and feature high accuracy at room temperature as well as a low overall error throughout the entire compensated temperature range.

Available Pressure Ranges

- Differential (relative) pressure:
0 ... 5 mbar up to 0 ... 16 bar
- Bidirectional differential pressure:
-2.5 ... +2.5 mbar up to -1 ... +1 bar
- Absolute pressure:
0 ... 500 mbar up to 0 ... 2 bar
- Barometric pressure:
700 ... 1200 mbar

Custom specific pressure ranges or modifications are available on request.

Typical Applications

- Industrial process control
- Medical instrumentation
- HVAC (Heating, Ventilation, Air Conditioning)
- Barometric pressure measurement
- Vacuum monitoring
- Gas flow measurement
- Fluid level monitoring

Short Specifications

Excerpt from AMS 5915's datasheet, all parameters apply to $V_S = 3.3\text{ V}$ and $T_{op} = 25\text{ °C}$

| Parameter | Minimum | Typical | Maximum | Units |
|---|-------------------------|---------------------|-----------|--------|
| Digital output signal (pressure) | | | | |
| @ specified minimum pressure | | 1638 | | counts |
| @ specified maximum pressure | | 14745 | | counts |
| Full span output (FSO) | | 13107 | | counts |
| without pressure (bidirectional differential) | | 8192 | | counts |
| Digital output signal (temperature) | | | | |
| @ minimum temperature $T = -25\text{ °C}$ | | 256 | | counts |
| @ maximum temperature $T = 85\text{ °C}$ | | 1382 | | counts |
| Accuracy pressure measurement (acc. EN 61298) | | | | |
| Ultra low pressure sensors (2.5, 5, 10 mbar) | | | ± 1.5 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | | ± 1.0 | %FSO |
| Standard and pneumatic pressure sensors (≥ 200 mbar) | | | ± 0.5 | %FSO |
| Overall error (pressure meas.) @ $T = -25 \dots 85\text{ °C}$ | | | | |
| Ultra low pressure sensors (2.5, 5, 10 mbar) | | | ± 2.0 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | | ± 1.5 | %FSO |
| Standard and pneumatic pressure sensors (≥ 200 mbar) | | | ± 1.0 | %FSO |
| Long term stability | | | < 0.5 | %FSO/a |
| Resolution A/D converter | | 14 | | bits |
| Resolution pressure signal | 12 | | 14 | bits |
| Resolution temperature signal | | | 11 | bits |
| Supply voltage (V_S) | | 3.3 | | V |
| Current consumption | | | 4 | mA |
| Reaction time (10 % ... 90 % rise time) | | 0.5 | 1 | ms |
| Package | DIL 8 (width: 0.6 inch) | | | |
| Weight | | 3 | | g |
| Dimensions without tubes and pins ($L \times W \times H$) | | 15.24 x 15.24 x 4.3 | | mm |

AMS 5915 sensors are available in two package versions: with vertical metal pressure ports for hose connection or without metal pressure ports for o-ring sealing (manifold assembly)

Weitere Informationen:

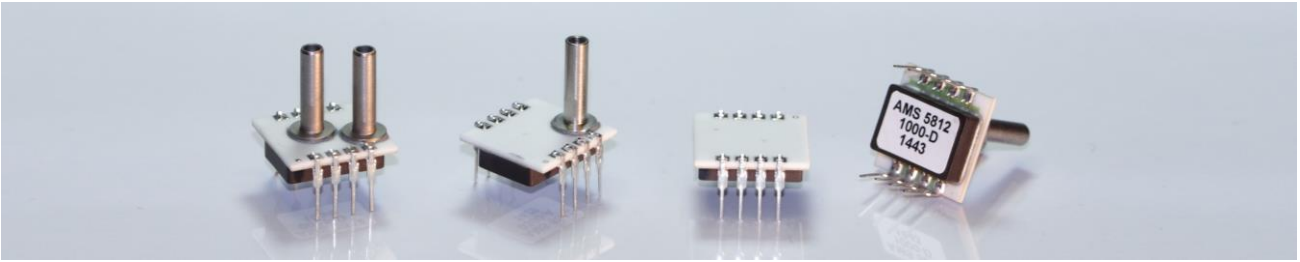
<https://www.analog-micro.com/de/produkte/drucksensoren/board-mount-drucksensoren/ams5915/> (Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/board-mount-pressure-sensors/ams5915/> (English)





AMS 5812 – Pressure Sensor with Analog and I²C Output

Übersicht

Die hochpräzisen OEM Drucksensoren aus der AMS 5812 Serie sind mit einem ratiometrischen analogen Spannungsausgang (0,5 ... 4,5 V) und einer digitalen I²C Schnittstelle ausgestattet. Mit ihrer I²C Schnittstelle sind die Sensoren auch für 5 V Mikrokontrolleranwendungen geeignet und liefern neben Druck- auch Temperaturdaten. Die für PCB-Montage konzipierten Sensoren sind in einem DIL-8-Gehäuse mit Schlauchanschlüssen oder für die Dichtung mit O-Ringen verfügbar.

Die Sensoren sind kalibriert und in einem weiten Temperaturbereich von -25 ... 85 °C temperaturkompensiert. Hierdurch wird eine hohe Genauigkeit bei Raumtemperatur und ein geringer Gesamtfehler über den gesamten Temperaturbereich erreicht.

Verfügbare Druckbereiche

- Differentieller (relativer) Druck:
0 ... 0,075 psi bis zu 0 ... 100 psi
- Bidirektional differentieller Druck:
-0,054 ... +0,054 psi bis zu -15 ... +15 psi
- Absolutdruck:
0 ... 5 psi bis zu 0 ... 30 psi
- Barometrischer Druck:
11,0 ... 17,5 psi

Kundenspezifische Druckbereiche und Modifikationen sind auf Anfrage erhältlich.

Typische Anwendungen

- Industrielle Prozesskontrolle
- Medizinischer Apparatebau
- Heizung, Klima und Lüftung
- Barometrische Druckmessung
- Vakuumüberwachung
- Gasdurchflussmessung

Overview

AMS 5812 is a series of high precision OEM pressure sensors combining a ratiometric analog voltage output (0.5 ... 4.5 V) with a digital I²C interface. Using the I²C interface the sensors are suitable for 5 V microcontroller applications and pressure as well as temperature data can be readout in parallel, while the analog output only provides pressure data. The PCB-mountable sensors are available in a ceramic DIL-8 package in variants with tube fittings or for o-ring sealing.

The sensors are calibrated and temperature compensated in a wide temperature range of -25 ... 85 °C and feature high accuracy at room temperature as well as a low overall error throughout the entire compensated temperature range.

Available Pressure Ranges

- Differential (relative) pressure:
0 ... 0.075 psi up to 0 ... 100 psi
- Bidirectional differential pressure:
-0.054 ... +0.054 psi up to -15 ... +15 psi
- Absolute pressure:
0 ... 5 psi up to 0 ... 30 psi
- Barometric pressure:
11.0 ... 17.5 psi

Custom specific pressure ranges or modifications are available on request.

Typical Applications

- Industrial process control
- Medical instrumentation
- HVAC (Heating, Ventilation, Air Conditioning)
- Barometric pressure measurement
- Vacuum monitoring
- Gas flow measurement

Short Specifications

Excerpt from AMS 5812's datasheet, all parameters apply to $V_S = 5.0\text{ V}$ and $T_{op} = 25\text{ °C}$

| Parameter | Minimum | Typical | Maximum | Units |
|---|-------------------------|---------------------|-----------|--------|
| Analog output signal (pressure) | | | | |
| @ specified minimum pressure | | 0.5 | | V |
| @ specified maximum pressure | | 4.5 | | V |
| Full span output (FSO) | | 4 | | V |
| without pressure (bidirectional differential) | | 2.5 | | V |
| Digital output signal (pressure) | | | | |
| @ specified minimum pressure | | 3277 | | counts |
| @ specified maximum pressure | | 29491 | | counts |
| Full span output (FSO) | | 26214 | | counts |
| without pressure (bidirectional differential) | | 16384 | | counts |
| Digital output signal (temperature) | | | | |
| @ temperature $T = -25 \dots 85\text{ °C}$ | | 3277 ... 29491 | | counts |
| Accuracy pressure measurement (acc. EN 61298) | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | | ± 1.5 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | | ± 1.0 | %FSO |
| Standard pressure sensors (≥ 200 mbar) | | | ± 0.5 | %FSO |
| Overall error (pressure meas.) @ $T = -25 \dots 85\text{ °C}$ | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | | ± 2.0 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | | ± 1.5 | %FSO |
| Standard pressure sensors (≥ 200 mbar) | | | ± 1.0 | %FSO |
| Long term stability | | | < 0.5 | %FSO/a |
| Resolution digital signal | 12 | | 14 | bits |
| Resolution analog pressure signal | | 0.05 | | %FSO |
| Supply voltage (V_S) | 4.75 | 5.00 | 5.25 | V |
| Current consumption | | | 5 | mA |
| Reaction time (10 % ... 90 % rise time) | | 1 | 2 | ms |
| Package | DIL 8 (width: 0.6 inch) | | | |
| Weight | | 3 | | g |
| Dimensions without tubes and pins ($L \times W \times H$) | | 15.24 x 15.24 x 4.3 | | mm |

Weitere Informationen:

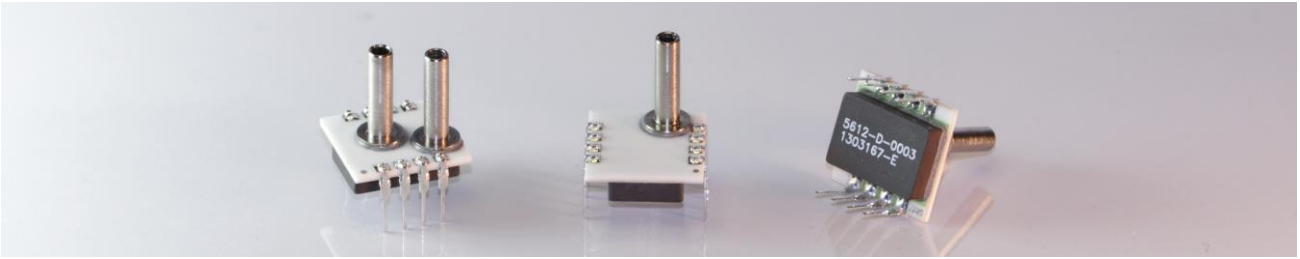
<https://www.analog-micro.com/de/produkte/drucksensoren/board-mount-drucksensoren/ams5812/> (Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/board-mount-pressure-sensors/ams5812/> (English)





AMS 5612 – Calibrated and Compensated Pressure Sensor

Übersicht

Die OEM Drucksensorserie AMS 5612 ist eine Familie von Laser getrimmten Drucksensoren mit differentiellem mV Spannungsausgang. Die unverstärkten Sensoren sind für Spannungsspeisung mit einer Versorgungsspannung von bis zu 20 V konzipiert. Alle AMS 5612 haben ein keramisches DIL-8-Gehäuse zur Leiterplattenmontage.

Alle Sensoren der Serie AMS 5612 sind kalibriert und in einem Bereich von 0 ... 60 °C temperaturkompensiert. Die Kalibration von Offset und Spanne sowie die Temperaturkompensation erfolgen individuell während des Herstellungsprozesses durch die Lasertrimmung von Dickfilmwiderständen. Die vollständig analoge Konstruktion ermöglicht schnelle und genaue Druckmessungen kombiniert mit einer exzellenten Langzeitstabilität.

Verfügbare Druckbereiche

- Differentieller Druck:
0 ... 0,3 psi bis zu 0 ... 15 psi
- Relativdruck:
0 ... 0,3 psi bis zu 0 ... 15 psi
- Absolutdruck:
0 ... 15 psi

Typische Anwendungen

- Industrielle Prozesskontrolle
- Medizinischer Apparatebau
- Heizung, Klima und Lüftung
- Filterüberwachung
- Vakuumüberwachung
- Gasdurchflussüberwachung
- Schnelle Druckmessung

Overview

AMS 5612 is a series of laser trimmed OEM pressure sensors with differential, ratiometric mV output. The unamplified sensors are designed for constant voltage excitation with a supply voltage of up to 20 V. All AMS 5612 come in a ceramic DIL-8 package for assembly on printed circuit boards (PCBs).

All sensors in the AMS 5612 series are calibrated and temperature compensated within a range of 0 ... 60 °C. The calibration of offset and span as well as the temperature compensation is done individually during the manufacturing process by laser trimming of thick film resistors. The fully analog construction of this series enables precision, high speed measurement combined with an excellent long-term stability.

Available Pressure Ranges

- Differential pressure:
0 ... 0.3 psi up to 0 ... 15 psi
- Relative pressure:
0 ... 0.3 psi up to 0 ... 15 psi
- Absolute pressure:
0 ... 15 psi

Typical Applications

- Industrial process control
- Medical instrumentation
- HVAC (Heating, Ventilation, Air Conditioning)
- Filter monitoring
- Vacuum monitoring
- Gas flow monitoring
- Fast pressure measurement

Short Specifications

Excerpt from AMS 5612's datasheet, all parameters apply to $V_S = 10.0\text{ V}$ and $T_{op} = 25\text{ °C}$

| Parameter | Minimum | Typical | Maximum | Units |
|--|-------------------------|---------------------|-----------|------------|
| Supply voltage | > 0 | 10 | 20 | V |
| Analog output signal (ratiometric) | | | | |
| @ specified minimum pressure (offset) | -2.0 | 0 | 2.0 | mV |
| Full span output (FSO) (0.3, 0.8, 1.5, 3 psi) | 24.5 | 25.0 | 25.5 | mV |
| Full span output (FSO) (≥ 5 psi) | 39.5 | 40.0 | 40.5 | mV |
| Performance @ $T = 25\text{ °C}$ | | | | |
| Nonlinearity | | | ± 0.3 | %FSO |
| Repeatability | | ± 0.05 | ± 0.2 | %FSO |
| Pressure hysteresis | | ± 0.05 | ± 0.2 | %FSO |
| Temperature Performance @ $T = 0 \dots 60\text{ °C}$ | | | | |
| Thermal effect on span | | | ± 1.0 | %FSO |
| Thermal effect on offset | | | ± 1.0 | %FSO |
| Temperature hysteresis | | | ± 0.3 | %FSO |
| Impedance | | | | |
| Input | 4.5 | 8.0 | 25.0 | k Ω |
| Output | 2.0 | 2.5 | 3.8 | k Ω |
| Long term stability | | | < 1.0 | %FSO/a |
| Package | DIL 8 (width: 0.6 inch) | | | |
| Weight | | 3 | | g |
| Dimensions without tubes and pins ($L \times W \times H$) | | 15.24 x 15.24 x 4.3 | | mm |

Weitere Informationen:

<https://www.analog-micro.com/de/produkte/drucksensoren/board-mount-drucksensoren/ams5612/> (Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/board-mount-pressure-sensors/ams5612/> (English)





AMS 5105 – Pressure Sensor and Switch

Übersicht

Die leiterplattenmontierbare OEM Drucksensore Serie AMS 5105 kombiniert einen hochpräzisen Drucksensor mit einem programmierbaren Druckschalter in einem keramischen DIL-8-Gehäuse. Die AMS 5105 besitzen einen zur Versorgungsspannung (5 V) ratiometrischen Spannungsausgang sowie zwei unabhängig programmierbare logische Schaltausgänge, die als Öffner, Schließer oder im Fenstermodus konfiguriert werden können. Dabei sind die Schaltschwelle und Hysterese jeweils individuell einstellbar.

Die Sensoren/Schalter sind kalibriert und in einem weiten Bereich von -25 ... 85 °C temperaturkompensiert, womit eine hohe Genauigkeit bei Raumtemperatur und ein geringer Gesamtfehler über den gesamten Temperaturbereich erreicht wird.

Verfügbare Druckbereiche

- Differentieller (relativer) Druck:
0 ... 5 mbar bis zu 0 ... 7 bar
- Bidirektional differentieller Druck:
-5 ... +5 mbar bis zu -1 ... +1 bar
- Absolutdruck:
0 ... 1 bar und 0 ... 2 bar
- Barometrischer Druck:
750 ... 1200 mbar

Kundenspezifische Druckbereiche und Modifikationen sind auf Anfrage erhältlich.

Typische Anwendungen

- Industrielle Prozesskontrolle
- Medizinischer Apparatebau
- Heizung, Klima und Lüftung
- Filterüberwachung
- Vakuumüberwachung
- Gasdurchflussüberwachung

Overview

AMS 5105 is a series of PCB-mountable OEM pressure sensors combining a high-precision pressure sensor with a programmable pressure switch in a ceramic DIL-8 package. AMS 5105 has one analog voltage output and two independent logic switching outputs. The analog voltage output is ratiometric to the supply voltage (5 V). The switching outputs are software configurable as normally open, normally closed or in window mode; thresholds and hysteresis can be set individually.

The sensors/switches are calibrated and temperature compensated in a wide temperature range of -25 ... 85 °C leading to a high accuracy at room temperature and a low overall error throughout the entire compensated temperature range.

Available Pressure Ranges

- Differential (relative) pressure:
0 ... 5 mbar up to 0 ... 7 bar
- Bidirectional differential pressure:
-5 ... +5 mbar up to -1 ... +1 bar
- Absolute pressure:
0 ... 1 bar and 0 ... 2 bar
- Barometric pressure:
750 ... 1200 mbar

Custom specific pressure ranges or modifications are available on request.

Typical Applications

- Industrial process control
- Medical instrumentation
- HVAC (Heating, Ventilation, Air Conditioning)
- Filter monitoring
- Vacuum monitoring
- Gas flow monitoring

Short Specifications

Excerpt from AMS 5105's datasheet, all parameters apply to $V_S = 5.0\text{ V}$ and $T_{op} = 25\text{ °C}$

| Parameter | Minimum | Typical | Maximum | Units |
|--|-------------------------|---------------------|----------|--------|
| Analog output signal (ratiometric) | | | | |
| @ specified minimum pressure | | 0.5 | | V |
| @ specified maximum pressure | | 4.5 | | V |
| Full span output (FSO) | | 4 | | V |
| without pressure (bidirectional differential) | | 2.5 | | V |
| Logic switching outputs | | | | |
| Adjustable threshold (p_{th}) | 0 | | 100 | %p |
| Adjustable hysteresis (p_{hys}) | 0 | | p_{th} | %p |
| Adjustable switching delay | 1 | | 500 | ms |
| Max. output current (switching output) | 4 | | | mA |
| Output-Low-Level | 0 | | 0.5 | V |
| Output-High-Level | 4.5 | | 5 | V |
| Accuracy pressure and switching output (EN 61298) | | | | |
| Ultra low pressure types (5, 10 mbar) | | | ± 1.5 | %FSO |
| Low pressure types (20, 50, 100 mbar) | | | ± 1.0 | %FSO |
| Standard pressure types (≥ 200 mbar) | | | ± 0.5 | %FSO |
| Overall error @ $T = -25 \dots 85\text{ °C}$ | | | | |
| Ultra low pressure types (5, 10 mbar) | | | ± 2.0 | %FSO |
| Low pressure types (20, 50, 100 mbar) | | | ± 1.5 | %FSO |
| Standard pressure types (≥ 200 mbar) | | | ± 1.0 | %FSO |
| Long term stability | | | < 0.5 | %FSO/a |
| Resolution analog output signal | | 0.05 | | %FSO |
| Supply voltage (V_S) | 4.75 | 5.00 | 5.25 | V |
| Current consumption (switching outputs open) | | | 5 | mA |
| Reaction time (10 % ... 90 % rise time) | | 1 | 2 | ms |
| Package | DIL 8 (width: 0.6 inch) | | | |
| Weight | | 3 | | g |
| Dimensions without tubes and pins ($L \times W \times H$) | | 15.24 x 15.24 x 4.3 | | mm |

Weitere Informationen:

<https://www.analog-micro.com/de/produkte/drucksensoren/board-mount-drucksensoren/ams5105/> (Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/board-mount-pressure-sensors/ams5105/> (English)





AMS 2710 – Pressure Sensor Module with 0 ... 10 V Output

Übersicht

Die Serie AMS 2710 umfasst einbaufertige OEM Drucksensormodule mit 0 ... 10 V Spannungsausgang in verschiedenen Druckbereichen und Anschlusskonfigurationen. Mit dem großen Versorgungsspannungsbereich von 12 ... 36 V eignen sich die Drucksensormodule besonders für industrielle Anwendungen.

Aufgrund ihrer aufwändigen Kalibration und Temperaturkompensation erlauben die AMS 2710 präzise Druckmessungen in einem weiten Temperaturbereich von -25 bis 85 °C.

Die kompakten PCB Drucksensormodule der Serie AMS 2710 können in andere Baugruppen integriert oder auch „stand alone“ in einem geeigneten Gehäuse betrieben werden.

Verfügbare Druckbereiche

- Differentieller (relativer) Druck:
0 ... 5 mbar bis zu 0 ... 2 bar
- Bidirektional differentieller Druck:
-5 ... +5 mbar bis zu -1 ... +1 bar
- Absolutdruck:
0 ... 1 bar und 0 ... 2 bar
- Barometrischer Druck:
700 ... 1200 mbar

Kundenspezifische Druckbereiche und Modifikationen sind auf Anfrage erhältlich.

Typische Anwendungen

- Industrielle Prozesskontrolle
- Medizinischer Apparatebau
- Heizung, Klima und Lüftung
- Vakuumüberwachung
- Gasdurchflussmessung
- Prüfstände

Overview

AMS 2710 is a series of universal, ready-to-mount OEM pressure sensor modules with 0 ... 10 V voltage output in various pressure ranges and configurations for the electrical connection. With the large supply voltage range of 12 ... 36 V the pressure sensor modules are especially suitable for industrial applications.

Due to the extensive calibration and temperature compensation AMS 2710 allows precise pressure measurements in a wide temperature range of -25 ... 85 °C.

The compact PCB pressure sensor modules from the AMS 2710 series can be easily integrated in other assemblies or used stand alone in a suitable package.

Available Pressure Ranges

- Differential (relative) pressure:
0 ... 5 mbar up to 0 ... 2 bar
- Bidirectional differential pressure:
-5 ... +5 mbar up to -1 ... +1 bar
- Absolute pressure:
0 ... 1 bar and 0 ... 2 bar
- Barometric pressure:
700 ... 1200 mbar

Custom specific pressure ranges or modifications are available on request.

Typical Applications

- Industrial process control
- Medical instrumentation
- HVAC (Heating, Ventilation, Air Conditioning)
- Vacuum monitoring
- Gas flow measurement
- Test benches

Short Specifications

Excerpt from AMS 2710's datasheet, all parameters apply to $V_S = 24.0\text{ V}$, $R_L = 10\text{ k}\Omega$ and $T_{op} = 25\text{ }^\circ\text{C}$

| Parameter | Minimum | Typical | Maximum | Units |
|---|---------|------------------|-----------|--------|
| Analog output signal | | | | |
| @ specified minimum pressure | | 0 | | V |
| @ specified maximum pressure | | 10 | | V |
| Full span output (FSO) | | 10 | | V |
| without pressure (bidirectional differential) | | 5 | | V |
| Accuracy @ $T = 25\text{ }^\circ\text{C}$ (acc. EN 61298) | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | ± 1.0 | ± 1.5 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | ± 0.5 | ± 1.0 | %FSO |
| Standard pressure sensors (≥ 200 mbar) | | ± 0.5 | ± 1.0 | %FSO |
| Overall error (pressure meas.) @ $T = -25 \dots 85\text{ }^\circ\text{C}$ | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | ± 1.5 | ± 2.5 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | ± 1.0 | ± 2.0 | %FSO |
| Standard pressure sensors (≥ 200 mbar) | | ± 0.7 | ± 1.5 | %FSO |
| Long term stability | | | < 0.5 | %FSO/a |
| Resolution A/D converter | | 14 | | bits |
| Resolution analog output signal | | | 0.05 | %FSO |
| Nonlinearity (included in accuracy) | -0.3 | < 0.1 | 0.3 | %FSO |
| Supply voltage | 12 | 24 | 36 | V |
| Current consumption | | | 10 | mA |
| Reaction time (10 % ... 90 % rise time) | | 1 | 2 | ms |
| Weight (standard version) | | 6.7 | | g |
| Dimensions without tubes and connector ($L \times W \times H$) | | 30 x 27.5 x 14.3 | | mm |

Weitere Informationen:

<https://www.analog-micro.com/de/produkte/drucksensoren/drucksensormodule/ams2710/>
(Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/pressure-sensor-modules/ams2710/>
(English)





AMS 2712 – Pressure Sensor Module with 4 ... 20 mA Output

Übersicht

Die Serie AMS 2712 umfasst einbaufertige OEM Drucksensormodule mit Stromausgang in zwei-Leitertechnik (4 ... 20 mA Stromschleife) in verschiedenen Druckbereichen und Anschlusskonfigurationen. Mit einem Versorgungsspannungsbereich von 8 ... 36 V und dem robusten, verpolgeschützten, kurzschlussfesten Stromausgang eignen sich die AMS 2712 besonders für Anwendungen in rauen Industrieumgebungen.

Aufgrund ihrer aufwändigen Kalibration und Temperaturkompensation erlauben die AMS 2712 präzise Druckmessungen in einem weiten Temperaturbereich von -25 bis 85 °C.

Die kompakten PCB Drucksensormodule der Serie AMS 2712 können in andere Baugruppen integriert oder auch „stand alone“ in einem geeigneten Gehäuse betrieben werden.

Verfügbare Druckbereiche

- Differentieller (relativer) Druck:
0 ... 5 mbar bis zu 0 ... 2 bar
- Bidirektional differentieller Druck:
-5 ... +5 mbar bis zu -1 ... +1 bar
- Absolutdruck:
0 ... 1 bar und 0 ... 2 bar
- Barometrischer Druck:
700 ... 1200 mbar

Kundenspezifische Druckbereiche und Modifikationen sind auf Anfrage erhältlich.

Typische Anwendungen

- Industrielle Prozesskontrolle
- Medizinischer Apparatebau
- Heizung, Klima und Lüftung
- Vakuumüberwachung
- Gasdurchflussmessung
- Prüfstände

Overview

AMS 2712 is a series of universal, ready-to-mount OEM pressure sensor modules with two-wire current-loop output (4 ... 20 mA) in various pressure ranges and configurations for the electrical connection. With AMS 2712's large supply voltage range of 8 ... 36 V and its rugged, reverse polarity and short circuit protected current output the pressure sensor modules are especially suitable for industrial applications.

Due to the extensive calibration and temperature compensation AMS 2712 allows precise pressure measurements in a wide temperature range of -25 ... 85 °C.

The compact PCB pressure sensor modules from the AMS 2712 series can be easily integrated in other assemblies or used stand alone in a suitable package.

Available Pressure Ranges

- Differential (relative) pressure:
0 ... 5 mbar up to 0 ... 2 bar
- Bidirectional differential pressure:
-5 ... +5 mbar up to -1 ... +1 bar
- Absolute pressure:
0 ... 1 bar and 0 ... 2 bar
- Barometric pressure:
700 ... 1200 mbar

Custom specific pressure ranges or modifications are available on request.

Typical Applications

- Industrial process control
- Medical instrumentation
- HVAC (Heating, Ventilation, Air Conditioning)
- Vacuum monitoring
- Gas flow measurement
- Test benches

Short Specifications

Excerpt from AMS 2712's datasheet, all parameters apply to $V_S = 24.0\text{ V}$, $R_L = 100\ \Omega$ and $T_{op} = 25\text{ °C}$

| Parameter | Minimum | Typical | Maximum | Units |
|---|---------|------------------|-----------|----------|
| Analog output signal | | | | |
| @ specified minimum pressure | | 4 | | mA |
| @ specified maximum pressure | | 20 | | mA |
| Full span output (FSO) | | 16 | | mA |
| without pressure (bidirectional differential) | | 12 | | mA |
| Accuracy @ $T = 25\text{ °C}$ (acc. EN 61298) | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | ± 1.0 | ± 1.5 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | ± 0.5 | ± 1.0 | %FSO |
| Standard pressure sensors (≥ 200 mbar) | | ± 0.3 | ± 0.5 | %FSO |
| Overall error (pressure meas.) @ $T = -25 \dots 85\text{ °C}$ | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | ± 1.5 | ± 2.5 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | ± 1.0 | ± 2.0 | %FSO |
| Standard pressure sensors (≥ 200 mbar) | | ± 0.5 | ± 1.5 | %FSO |
| Long term stability | | | < 0.5 | %FSO/a |
| Resolution A/D converter | | 14 | | bits |
| Resolution analog output signal | | | 0.05 | %FSO |
| Nonlinearity (included in accuracy) | -0.3 | < 0.1 | 0.3 | %FSO |
| Supply voltage ($V_{S,min}$ @ $R_L = 100\ \Omega$) | 10 | 24 | 36 | V |
| Current limitation | | | 22.5 | mA |
| Protection against reverse polarity | | | 40 | V |
| Load resistor (R_L) | | | 600 | Ω |
| Reaction time (10 % ... 90 % rise time) | | 2.5 | 4 | ms |
| Weight (standard version) | | 6.5 | | g |
| Dimensions without tubes and connector ($L \times W \times H$) | | 30 x 27.5 x 14.3 | | mm |

Weitere Informationen:

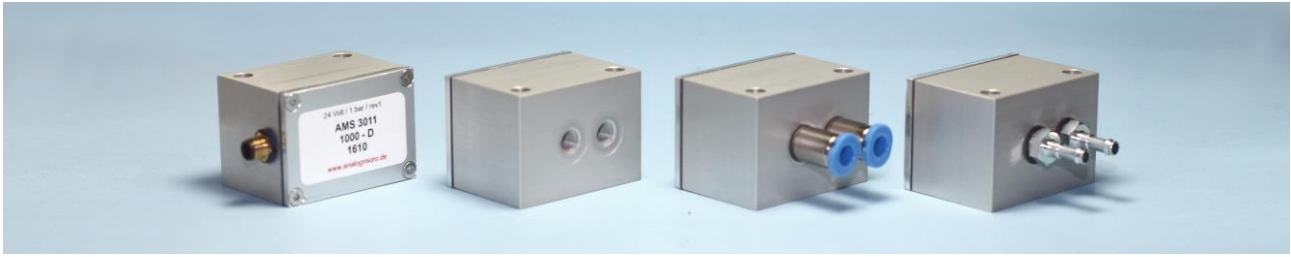
<https://www.analog-micro.com/de/produkte/drucksensoren/drucksensormodule/ams2712/>
(Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/pressure-sensor-modules/ams2712/>
(English)





AMS 3011 – Mini Pressure Transmitter with 0 ... 5 V Output

Übersicht

Die streichholzschachtelgroßen Drucktransmitter der Serie AMS 3011 mit 0 ... 5 V Spannungsausgang haben ein robustes, staub- und wasserdichtes (IP67) Metallgehäuse. Die Druckanschlüsse der AMS 3011 sind als M5 Innengewinde ausgeführt und der elektrische Anschluss als M5 Einbaustecker. Die Mini-Transmitter eignen sich besonders für differentielle Druckmessungen mit hohem Systemdruck im Innen- und Außenbereich. Die AMS 3011 können mit einer Versorgungsspannung von 8 ... 36 V betrieben werden.

Alle AMS 3011 sind kalibriert und in einem Temperaturbereich von -25 ... 85 °C temperaturkompensiert. Damit wird eine hohe Genauigkeit bei Raumtemperatur und ein geringer Gesamtfehler über den gesamten Temperaturbereich erreicht.

Verfügbare Druckbereiche

- Differentieller (relativer) Druck:
0 ... 50 mbar bis zu 0 ... 10 bar
- Bidirektional differentieller Druck:
-25 ... +25 mbar bis zu -1 ... +1 bar
- Absolutdruck:
0 ... 1 bar und 0 ... 2 bar
- Barometrischer Druck:
700 ... 1200 mbar

Kundenspezifische Druckbereiche und Modifikationen sind auf Anfrage erhältlich.

Typische Anwendungen

- Industrielle Prozesskontrolle
- Medizinischer Apparatebau
- Vakuumüberwachung
- Füllstandsmessung
- Pneumatische Systemüberwachung
- Prüfstände

Overview

AMS 3011 is a series of matchbox sized pressure transmitters with 0 ... 5 V voltage output in a robust dust- and water-tight (IP67) metal package. AMS 3011's pressure ports are realized by two M5 female threads and the electrical connection by M5 circular sensor connector. The mini transmitters are especially suitable for differential pressure measurement with large common-mode pressure in indoor and outdoor applications. The AMS 3011 can be powered within a wide supply voltage range of 8 ... 36 V.

All AMS 3011 are calibrated and temperature compensated in a range of -25 ... 85 °C and feature high accuracy at room temperature as well as a low overall error throughout the entire compensated temperature range.

Available Pressure Ranges

- Differential (relative) pressure:
0 ... 50 mbar up to 0 ... 10 bar
- Bidirectional differential pressure:
-25 ... +25 mbar up to -1 ... +1 bar
- Absolute pressure:
0 ... 1 bar and 0 ... 2 bar
- Barometric pressure:
700 ... 1200 mbar

Custom specific pressure ranges or modifications are available on request.

Typical Applications

- Industrial process control
- Medical instrumentation
- Vacuum monitoring
- Level measurement
- Pneumatic system monitoring
- Test benches

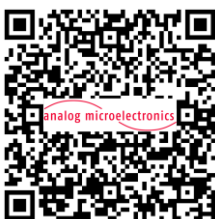
Short Specifications

Excerpt from AMS 3011's datasheet, all parameters apply to $V_S = 24.0\text{ V}$ and $T_{op} = 25\text{ °C}$

| Parameter | Minimum | Typical | Maximum | Units |
|---|----------------------|--------------|-----------|--------|
| Analog output signal (non-ratiometric) | | | | |
| @ specified minimum pressure | 0 | < 0.025 | 0.05 | V |
| @ specified maximum pressure | | 5 | | V |
| Full span output (FSO) | | 5 | | V |
| without pressure (bidirectional differential) | | 2.5 | | V |
| Accuracy @ $T = 25\text{ °C}$ (acc. EN 61298) | | | | |
| Low pressure sensors (50, 100 mbar) | | ± 0.5 | ± 1.0 | %FSO |
| Standard and medium pressure sensors (≥ 200 mbar) | | ± 0.5 | ± 1.0 | %FSO |
| Overall error (pressure meas.) @ $T = -25 \dots 85\text{ °C}$ | | | | |
| Low pressure sensors (50, 100 mbar) | | ± 1.0 | ± 2.0 | %FSO |
| Standard pressure sensors (≥ 200 mbar) | | ± 0.7 | ± 1.5 | %FSO |
| Long term stability | | | < 0.5 | %FSO/a |
| Resolution A/D converter | | 14 | | Bits |
| Resolution analog output signal | | | 0.05 | %FSO |
| Nonlinearity (included in accuracy) | -0.3 | < 0.1 | 0.3 | %FSO |
| Supply voltage (V_S) | 8 | 24 | 36 | V |
| Current consumption | | | 5 | mA |
| Reaction time (10 % ... 90 % rise time) | | 1 | 2 | ms |
| Common mode pressure | | | 16 | bar |
| Package material | Hard-eloxyd aluminum | | | |
| Weight | | 45 | | g |
| Dimensions without connector ($L \times W \times H$) | | 35 x 25 x 25 | | mm |

Weitere Informationen:

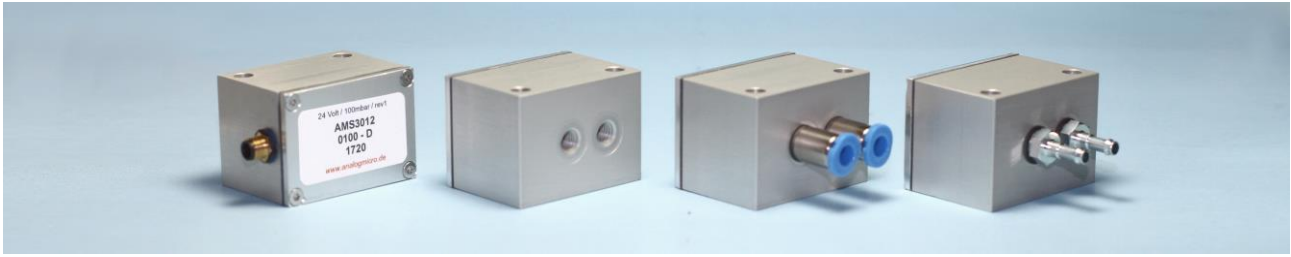
<https://www.analog-micro.com/de/produkte/drucksensoren/drucktransmitter/ams3011/>
(Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/pressure-transmitter/ams3011/>
(English)





AMS 3012 - Mini Pressure Transmitter with 4 ... 20 mA Output

Übersicht

Die streichholzschachtelgroßen Drucktransmitter der Serie AMS 3012 mit 2-Draht Stromausgang (4 ... 20 mA Stromschleife) haben ein robustes, staub- und wasserdichtes (IP67) Metallgehäuse. Die Druckanschlüsse sind als M5 Innengewinde ausgeführt, der elektrische Anschluss als M5 Einbaustecker. Die AMS 3012 eignen sich besonders für differentielle Druckmessungen mit hohem Systemdruck. Die kurzschlussfesten und verpolgeschützten Transmitter können mit einer Versorgungsspannung von 8 ... 36 V betrieben werden.

Alle AMS 3012 sind kalibriert und in einem Temperaturbereich von -25 ... 85 °C temperaturkompensiert. Damit wird eine hohe Genauigkeit bei Raumtemperatur und ein geringer Gesamtfehler über den gesamten Temperaturbereich erreicht.

Verfügbare Druckbereiche

- Differentieller (relativer) Druck:
0 ... 50 mbar bis zu 0 ... 10 bar
- Bidirektional differentieller Druck:
-25 ... +25 mbar bis zu -1 ... +1 bar
- Absolutdruck:
0 ... 1 bar und 0 ... 2 bar
- Barometrischer Druck:
700 ... 1200 mbar

Kundenspezifische Druckbereiche und Modifikationen sind auf Anfrage erhältlich.

Typische Anwendungen

- Industrielle Prozesskontrolle
- Medizinischer Apparatebau
- Heizung, Klima und Lüftung
- Vakuumüberwachung
- Pneumatische Systemüberwachung
- Prüfstände

Overview

AMS 3012 is a series of matchbox sized pressure transmitters with a 4 ... 20 mA current-loop output in a robust dust- and water-tight (IP67) metal package. The pressure ports are realized by two M5 female threads and the electrical connection by M5 circular sensor connector. The AMS 3012 are especially suitable for differential pressure measurement with large common-mode pressure. The transmitters with short circuit and reverse polarity protected output can be powered within a wide supply voltage range of 8 ... 36 V.

All AMS 3012 are calibrated and temperature compensated in a range of -25 ... 85 °C and feature high accuracy at room temperature as well as a low overall error throughout the entire compensated temperature range.

Available Pressure Ranges

- Differential (relative) pressure:
0 ... 50 mbar up to 0 ... 10 bar
- Bidirectional differential pressure:
-25 ... +25 mbar up to -1 ... +1 bar
- Absolute pressure:
0 ... 1 bar and 0 ... 2 bar
- Barometric pressure:
700 ... 1200 mbar

Custom specific pressure ranges or modifications are available on request.

Typical Applications

- Industrial process control
- Medical instrumentation
- HVAC (Heating, Ventilation, Air Conditioning)
- Vacuum monitoring
- Pneumatic system monitoring
- Test benches

Short Specifications

Excerpt from AMS 3012's datasheet, all parameters apply to $V_S = 24.0\text{ V}$, $R_L = 100\ \Omega$ and $T_{op} = 25\text{ °C}$

| Parameter | Minimum | Typical | Maximum | Units |
|---|-----------------------|--------------|-----------|----------|
| Analog output signal | | | | |
| @ specified minimum pressure | | 4 | | mA |
| @ specified maximum pressure | | 20 | | mA |
| Full span output (FSO) | | 16 | | mA |
| without pressure (bidirectional differential) | | 12 | | mA |
| Accuracy @ $T = 25\text{ °C}$ (acc. EN 61298) | | | | |
| Low pressure sensors (50, 100 mbar) | | ± 0.5 | ± 1.0 | %FSO |
| Standard pressure sensors ($\geq 200\text{ mbar}$) | | ± 0.3 | ± 0.5 | %FSO |
| Overall error (pressure meas.) @ $T = -25 \dots 85\text{ °C}$ | | | | |
| Low pressure sensors (50, 100 mbar) | | ± 1.0 | ± 2.0 | %FSO |
| Standard pressure sensors ($\geq 200\text{ mbar}$) | | ± 0.5 | ± 1.0 | %FSO |
| Long term stability | | | < 0.5 | %FSO/a |
| Resolution A/D converter | | 14 | | bits |
| Resolution analog output signal | | | 0.05 | %FSO |
| Nonlinearity (included in accuracy) | -0.3 | < 0.1 | 0.3 | %FSO |
| Supply voltage ($V_{S,min}$ @ $R_L = 100\ \Omega$) | 10 | 24 | 36 | V |
| Current limitation | | | 22.5 | mA |
| Protection against reverse polarity | | | 40 | V |
| Load resistor (R_L) | | | 600 | Ω |
| Reaction time (10 % ... 90 % rise time) | | 2.5 | 4 | ms |
| Common mode pressure | | | 16 | bar |
| Package material | Hard-eloxyd aluminium | | | |
| Weight | | 45 | | g |
| Dimensions without tubes and connector ($L \times W \times H$) | | 35 x 25 x 25 | | mm |

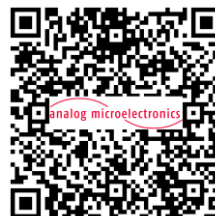
Weitere Informationen:

<https://www.analog-micro.com/de/produkte/drucksensoren/drucktransmitter/ams3012/>
(Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/pressure-transmitter/ams3012/>
(English)





AMS 4710 – Mini Pressure Transmitter with 0 ... 10 V Output

Übersicht

Die Drucktransmitter aus der Serie AMS 4710 mit 0 ... 10 V Spannungsausgang zeichnen sich durch ihre miniaturisierte Bauform und ihre Genauigkeit im Temperaturbereich von -25 ... 85 °C aus. Sie haben ein robustes, staub- und wasserdichtes Kunststoffgehäuse (Schutzklasse IP67) mit integrierten Druckanschlüssen und einem M5 Einbaustecker für den elektrischen Anschluss.

Die Serie AMS 4710 umfasst Absolut-, Relativ- und Differenzdrucktransmitter mit einer Vielzahl von Druckbereichen von 5 mbar bis hin zu 2 bar. Mit den kompakten Abmessungen, dem Versorgungsspannungsbereich von 12 ... 36 V und der aufwändigen Temperaturkompensation sind die AMS 4710 vielseitig einsetzbar und besonders für den Geräte- und Apparatebau geeignet.

Verfügbare Druckbereiche

- Differentieller (relativer) Druck:
0 ... 5 mbar bis zu 0 ... 2 bar
- Bidirektional differentieller Druck:
-5 ... +5 mbar bis zu -1 ... +1 bar
- Absolutdruck:
0 ... 1 bar und 0 ... 2 bar
- Barometrischer Druck:
700 ... 1200 mbar

Kundenspezifische Druckbereiche und Modifikationen sind auf Anfrage erhältlich.

Typische Anwendungen

- Industrielle Prozesskontrolle
- Medizinischer Apparatebau
- Heizung, Klima und Lüftung
- Vakuumüberwachung
- Gasdurchflussmessung
- Prüfstände

Overview

The pressure transmitters from the AMS 4710 series feature a 0 ... 10 V voltage output, a miniaturized design and high accuracy in a temperature range from 25 to 85 °C. They come in a robust dust- and water-tight plastic package (protection class IP67) with barbed side ports for pressure connection and a M5 circular sensor connector for electrical connection.

The series AMS 4710 comprises absolute, relative and differential pressure transmitters in a multitude of pressure ranges from 5 mbar up to 2 bar. With their compact dimensions, the supply voltage range of 12 ... 36 V and the extensive temperature compensation AMS 4710 are versatile and especially suitable for the machine and instrument producing industry.

Available Pressure Ranges

- Differential (relative) pressure:
0 ... 5 mbar up to 0 ... 2 bar
- Bidirectional differential pressure:
-5 ... +5 mbar up to -1 ... +1 bar
- Absolute pressure:
0 ... 1 bar and 0 ... 2 bar
- Barometric pressure:
700 ... 1200 mbar

Custom specific pressure ranges or modifications are available on request.

Typical Applications

- Industrial process control
- Medical instrumentation
- HVAC (Heating, Ventilation, Air Conditioning)
- Vacuum monitoring
- Gas flow measurement
- Test benches

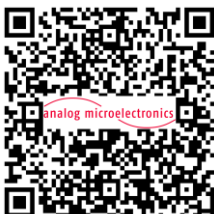
Short Specifications

Excerpt from AMS 4710's datasheet, all parameters apply to $V_S = 24.0\text{ V}$ and $T_{op} = 25\text{ °C}$

| Parameter | Minimum | Typical | Maximum | Units |
|---|---------|----------------|-----------|--------|
| Analog output signal (non-ratiometric) | | | | |
| @ specified minimum pressure | 0 | < 0.025 | 0.05 | V |
| @ specified maximum pressure | | 10 | | V |
| Full span output (FSO) | | 10 | | V |
| without pressure (bidirectional differential) | | 5.0 | | V |
| Accuracy @ $T = 25\text{ °C}$ (acc. EN 61298) | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | ± 1.0 | ± 1.5 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | ± 0.5 | ± 1.0 | %FSO |
| Standard pressure sensors (≥ 200 mbar) | | ± 0.5 | ± 1.0 | %FSO |
| Overall error (pressure meas.) @ $T = -25 \dots 85\text{ °C}$ | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | ± 1.5 | ± 2.5 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | ± 1.0 | ± 2.0 | %FSO |
| Standard pressure sensors (≥ 200 mbar) | | ± 0.7 | ± 1.5 | %FSO |
| Long term stability | | | < 0.5 | %FSO/a |
| Resolution A/D converter | | 14 | | bits |
| Resolution analog output signal | | | 0.05 | %FSO |
| Nonlinearity (included in accuracy) | -0.3 | < 0.1 | 0.3 | %FSO |
| Supply voltage (V_S) | 12 | 24 | 36 | V |
| Current consumption | | | 10 | mA |
| Reaction time (10 % ... 90 % rise time) | | 1 | 2 | ms |
| Weight | | 20 | | g |
| Dimensions without tubes and connector ($L \times W \times H$) | | 35 x 25 x 13.5 | | mm |

Weitere Informationen:

<https://www.analog-micro.com/de/produkte/drucksensoren/drucktransmitter/ams4710/>
(Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/pressure-transmitter/ams4710/>
(English)





AMS 4711 – Mini Pressure Transmitter with 0 ... 5 V Output

Übersicht

Die miniaturisierten Drucktransmitter der Serie AMS 4711 mit 0 ... 5 V Spannungsausgang sind besonders geeignet für Niederdruckanwendungen. Sie haben ein robustes, staub- und wasserdichtes (IP67) Plastikgehäuse mit integrierten Schlauchanschlüssen und einem M5 Einbaustecker für den elektrischen Anschluss. Alle AMS 4711 können in einem Versorgungsspannungsbereich von 8 ... 36 V betrieben werden.

Die AMS 4711 Drucktransmitter sind kalibriert und in einem weiten Temperaturbereich von -25 ... 85 °C temperaturkompensiert. Damit wird eine hohe Genauigkeit bei Raumtemperatur und ein geringer Gesamtfehler über den gesamten Temperaturbereich erreicht.

Verfügbare Druckbereiche

- Differentieller (relativer) Druck:
0 ... 5 mbar bis zu 0 ... 2 bar
- Bidirektional differentieller Druck:
-5 ... +5 mbar bis zu -1 ... +1 bar
- Absolutdruck:
0 ... 1 bar und 0 ... 2 bar
- Barometrischer Druck:
700 ... 1200 mbar

Kundenspezifische Druckbereiche und Modifikationen sind auf Anfrage erhältlich.

Typische Anwendungen

- Industrielle Prozesskontrolle
- Medizinischer Apparatebau
- Heizung, Klima und Lüftung
- Vakuumüberwachung
- Gasdurchflussmessung
- Prüfstände

Overview

AMS 4711 is a series of miniaturized pressure transmitters with a non-ratiometric 0 ... 5 V output especially suitable for low-pressure applications. They come in a robust dust- and water-tight plastic package (IP67) with barbed side ports for pressure connection and a M5 circular sensor connector for electrical connection. All AMS 4711 can be powered within a wide supply voltage range of 8 ... 36 V.

The AMS 4711 pressure transmitters are calibrated and temperature compensated in a wide temperature range of -25 ... 85 °C and feature high accuracy at room temperature as well as a low overall error throughout the entire compensated temperature range.

Available Pressure Ranges

- Differential (relative) pressure:
0 ... 5 mbar up to 0 ... 2 bar
- Bidirectional differential pressure:
-5 ... +5 mbar up to -1 ... +1 bar
- Absolute pressure:
0 ... 1 bar and 0 ... 2 bar
- Barometric pressure:
700 ... 1200 mbar

Custom specific pressure ranges or modifications are available on request.

Typical Applications

- Industrial process control
- Medical instrumentation
- HVAC (Heating, Ventilation, Air Conditioning)
- Vacuum monitoring
- Gas flow measurement
- Test benches

Short Specifications

Excerpt from AMS 4711's datasheet, all parameters apply to $V_S = 24.0\text{ V}$ and $T_{op} = 25\text{ °C}$

| Parameter | Minimum | Typical | Maximum | Units |
|---|---------|----------------|-----------|--------|
| Analog output signal (non-ratiometric) | | | | |
| @ specified minimum pressure | 0 | < 0.025 | 0.05 | V |
| @ specified maximum pressure | | 5 | | V |
| Full span output (FSO) | | 5 | | V |
| without pressure (bidirectional differential) | | 2.5 | | V |
| Accuracy @ $T = 25\text{ °C}$ (acc. EN 61298) | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | ± 1.0 | ± 1.5 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | ± 0.5 | ± 1.0 | %FSO |
| Standard pressure sensors (≥ 200 mbar) | | ± 0.5 | ± 1.0 | %FSO |
| Overall error (pressure meas.) @ $T = -25 \dots 85\text{ °C}$ | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | ± 1.5 | ± 2.5 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | ± 1.0 | ± 2.0 | %FSO |
| Standard pressure sensors (≥ 200 mbar) | | ± 0.7 | ± 1.5 | %FSO |
| Long term stability | | | < 0.5 | %FSO/a |
| Resolution A/D converter | | 14 | | bits |
| Resolution analog output signal | | | 0.05 | %FSO |
| Nonlinearity (included in accuracy) | -0.3 | < 0.1 | 0.3 | %FSO |
| Supply voltage (V_S) | 8 | 24 | 36 | V |
| Current consumption | | | 5 | mA |
| Reaction time (10 % ... 90 % rise time) | | 1 | 2 | ms |
| Weight | | 20 | | g |
| Dimensions without tubes and connector ($L \times W \times H$) | | 35 x 25 x 13.5 | | mm |

Weitere Informationen:

<https://www.analog-micro.com/de/produkte/drucksensoren/drucktransmitter/ams4711/>
(Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/pressure-transmitter/ams4711/>
(English)





AMS 4712 - Mini Pressure Transmitter with 4 ... 20 mA Output

Übersicht

Die miniaturisierten Drucktransmitter der Serie AMS 4712 mit 2-Draht Stromausgang (4 ... 20 mA Stromschleife) sind besonders geeignet für Niederdruckanwendungen. Sie haben ein robustes, staub- und wasserdichtes (IP67) Plastikgehäuse mit integrierten Schlauchanschlüssen und M5 Einbaustecker für den elektrischen Anschluss. Die Transmitter AMS 4712 sind kurzschlussfest und verpolgeschützt und können mit Versorgungsspannungen von 8 ... 36 V betrieben werden.

Alle AMS 4712 sind kalibriert und in einem Temperaturbereich von -25 ... 85 °C temperaturkompensiert. Damit wird eine hohe Genauigkeit bei Raumtemperatur und ein geringer Gesamtfehler über den gesamten Temperaturbereich erreicht.

Verfügbare Druckbereiche

- Differentieller (relativer) Druck:
0 ... 5 mbar bis zu 0 ... 2 bar
- Bidirektional differentieller Druck:
-5 ... +5 mbar bis zu -1 ... +1 bar
- Absolutdruck:
0 ... 1 bar und 0 ... 2 bar
- Barometrischer Druck:
700 ... 1200 mbar

Kundenspezifische Druckbereiche und Modifikationen sind auf Anfrage erhältlich.

Typische Anwendungen

- Industrielle Prozesskontrolle
- Medizinischer Apparatebau
- Heizung, Klima und Lüftung
- Vakuumüberwachung
- Gasdurchflussmessung
- Prüfstände

Overview

AMS 4712 is a series of miniaturized pressure transmitters with a 4 ... 20 mA current-loop output especially suitable for low-pressure applications. They come in a robust dust- and water-tight plastic package (IP67) with barbed side ports for pressure connection and a M5 circular sensor connector for electrical connection. The transmitters AMS 4712 are short circuit and reverse polarity protected and can be powered within a wide supply voltage range of 8 ... 36 V.

All AMS 4712 are calibrated and temperature compensated in a range of -25 ... 85 °C and feature high accuracy at room temperature as well as a low overall error throughout the entire compensated temperature range.

Available Pressure Ranges

- Differential (relative) pressure:
0 ... 5 mbar up to 0 ... 2 bar
- Bidirectional differential pressure:
-5 ... +5 mbar up to -1 ... +1 bar
- Absolute pressure:
0 ... 1 bar and 0 ... 2 bar
- Barometric pressure:
700 ... 1200 mbar

Custom specific pressure ranges or modifications are available on request.

Typical Applications

- Industrial process control
- Medical instrumentation
- HVAC (Heating, Ventilation, Air Conditioning)
- Vacuum monitoring
- Gas flow measurement
- Test benches

Short Specifications

Excerpt from AMS 4712's datasheet, all parameters apply to $V_S = 24.0\text{ V}$, $R_L = 100\ \Omega$ and $T_{op} = 25\text{ °C}$

| Parameter | Minimum | Typical | Maximum | Units |
|---|---------|----------------|-----------|----------|
| Analog output signal | | | | |
| @ specified minimum pressure | | 4 | | mA |
| @ specified maximum pressure | | 20 | | mA |
| Full span output (FSO) | | 16 | | mA |
| without pressure (bidirectional differential) | | 12 | | mA |
| Accuracy @ $T = 25\text{ °C}$ (acc. EN 61298) | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | ± 1.0 | ± 1.5 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | ± 0.5 | ± 1.0 | %FSO |
| Standard pressure sensors (≥ 200 mbar) | | ± 0.3 | ± 0.5 | %FSO |
| Overall error (pressure meas.) @ $T = -25 \dots 85\text{ °C}$ | | | | |
| Ultra low pressure sensors (5, 10 mbar) | | ± 1.5 | ± 2.5 | %FSO |
| Low pressure sensors (20, 50, 100 mbar) | | ± 1.0 | ± 2.0 | %FSO |
| Standard pressure sensors (≥ 200 mbar) | | ± 0.5 | ± 1.0 | %FSO |
| Long term stability | | | < 0.5 | %FSO/a |
| Resolution A/D converter | | 14 | | bits |
| Resolution analog output signal | | | 0.05 | %FSO |
| Nonlinearity (included in accuracy) | -0.3 | < 0.1 | 0.3 | %FSO |
| Supply voltage ($V_{S,min}$ @ $R_L = 100\ \Omega$) | 10 | 24 | 36 | V |
| Current limitation | | | 22.5 | mA |
| Protection against reverse polarity | | | 40 | V |
| Load resistor (R_L) | | | 600 | Ω |
| Reaction time (10 % ... 90 % rise time) | | 2.5 | 4 | ms |
| Weight | | 20 | | g |
| Dimensions without tubes and connector ($L \times W \times H$) | | 35 x 25 x 13.5 | | mm |

Weitere Informationen:

<https://www.analog-micro.com/de/produkte/drucksensoren/drucktransmitter/ams4712/>
(Deutsch)



Further information:

<https://www.analog-micro.com/en/products/pressure-sensors/pressure-transmitter/ams4712/>
(English)





Custom Specific Products

Kundenspezifische Produkte

Analog Microelectronics realisiert *Ihre* individuelle Sensorlösung.

Basierend auf mehr als zwanzig Jahren Erfahrung im Gebiet der Sensor- und Systementwicklung bietet Analog Microelectronics Sensorlösungen an, die speziell auf Ihre spezifischen Bedürfnisse zugeschnitten werden.

Unsere Dienstleistungen reichen von kundenspezifischen Kalibrationen und einfachen Modifikationen unserer Standarddrucksensoren bis hin zu vollständig kundenspezifischen Neuentwicklungen, die von uns produziert werden. Auch bei kleinen Mengen kann sich eine kundenspezifische Lösung rechnen. Sprechen Sie uns an.

Kontaktieren Sie bitte sales@analogmicro.de für weitere Informationen.

Customized Products

At Analog Microelectronics we realize *your* unique sensor solution.

Based on more than twenty years of experience in the field of sensor and system development Analog Microelectronics offers sensor solutions tailored to your specific requirements.

Our services reach from custom specific calibrations and simple modifications of our standard pressure sensors up to complete custom specific sensor system design and manufacturing. Even for small quantities a custom specific solution can be feasible. Just tell us, what you need.

For further information please contact: sales@analogmicro.de.

