



# **Absolute Pressure Transmitter**

with Diaphragm, for Smallest Absolute Pressure Ranges

Standard • Model 891.34.2082 -Version • Model 892.34.2082

## **TRONIC LINE**

• Pressure ranges from 0 ... 10 mbar to 0 ... 600 mbar absolute pressure

- All welded pressure chamber, wetted parts made of stainless steel or NiCrCo alloy (Duratherm)
- Pressure connection G 1/2 B male
- For gaseous, liquid and aggressive media, and in aggressive environments
- High overload capacity: at least 1 bar absolute pressure (atmospheric pressure), beyond that 10 x measuring range
- Transmitter with Hall sensor and amplifier
- Industrial standard signals 4 ... 20 mA or 0 ... 20 mA
- Electrical connection via cable box
- Ingress protection IP 65

#### **General features**

These pressure gauges with mounted transmitter have been carefully designed to cover low absolute pressure ranges and to enable pressure measurement irrespective of fluctuations in atmospheric pressure.

Their principle features are their highly corrosion-resistant stainless steel design with all welded sealing of the pressure chamber providing for an increased pressure tightness in the long term.

The absolute pressure transmitter consists mainly of a mechanical measuring system with elastic pressure element of Model 532.5X, magnetic-field-dependent sensor (Hall sensor) with amplifier and case with the connecting parts for the electronics. A permanent magnet rigidly coupled to the pressure element influences the flow field of a sensor. The resulting voltage is amplified to a standard current signal.

Standard output signals of 4 ... 20 mA (2 wire system) or 0 ... 20 mA (3 wire system) can be provided from a non-stabilized DC supply of 10 ... 30 V.

Upon request, the transmitters may also be supplied in intrinsically safe ex-approved design with the output signal 4 ... 20 mA.

For recalibration, zero and span can be adjusted by means of easily accessible potentiometers.

The use of high-quality stainless steel material is intended for the use in the chemical industry for gaseous, liquid and aggressive media.

Electrical connection is made by means of a cable box with screwed cable gland M 20 x 1.5.

#### Supplementary data sheets

- Differential pressure transmitter Pressure rating PN 2.5/25/40 bar (see data sheet PE 81.70)
- Differential pressure transmitter Pressure rating PN 40/100/250 bar (see data sheet PE 81.72)
- Pressure transmitter high overpressure safety (see data sheet PE 81.74)
- Transmitter to combine with pressure gauges **Model 89X.34** (see data sheet AE 08.02)

Model 89X.34.1998

Model 89X.34.1884

Model 89X.34.2166





Technical data		Model 891.34.2082 and Model 892.34.2082 (@ - version)
Power supply U <sub>B</sub>		
for non - 🕲 -class Models	DCV	_10 < U <sub>b</sub> ≤ 30
for 🕼 -class Models		see under section 🕼 -class protection
Supply voltage effect	% of span/10 V	≤0:1
Permissible residual ripple	% ss	<u>  ≤ 10</u>
Output signal		tor non 😧 -class version, Model 891.34.2082:
and permissible max. load $R_{\rm A}$		$4 \dots 20 \text{ mA}$ , 2-wire system $R_A \le (U_B - 10 \text{ V}) / 0.02 \text{ A}$ with $R_A$ in Ohm and $U_B$ in Volt
		$0 \dots 20$ mA, 5-wire system $R \le (U_B - 10 V) / 0.02 A$ with $R$ in Ohm and $U_B$ in Volt
		for $\square$ -class version. Model 892 34 2082
		4 20 mA 2-wire system $R_{\rm s} < (U_{\rm s} - 12.5 \text{V}) / 0.02 \text{A}$ with $R_{\rm s}$ in Ohm and $U_{\rm s}$ in Volt
Effect of load	% of span	
Response time	ms	addrox. 50
Output signal adjustment		
Zero point, electrical	% of span	± 15
Span, electrical	% of span	± 30
Linearity	% of span	± 1.2 {0.8} (limit point calibration)
Hysteresis	% of span	≤ 0.8 {0.5}
Permissible		
Medium temperature 1)	°C	-25+100 {+130}
Ambient temperature <sup>1)</sup>	°C	-20+60
Compensated temperat, range	°C	-25+60
compensated temperat. Tange	% of span/10 K	< 0.3
average T <sub>c</sub> on span	% of span/10 K	<03
-class protection		according to EC-Type Examination Certificate DMT 01 ATEX E 021 for Model 892.34
Output signal		420 mA, 2-wire
Ex certification		🚱 II 2G EEx ia IIC T6 and I M2 EEx ia I
Conformity specifications		
Power supply	DCV	12.528
Short circuit rating	mA	100
Rating	mW	1000
Internal capacitance	nF	C,≤ 24
	mH ∞	L <sub>i</sub> ≤ 0,2 200
Ambient temperature	°⊂	-720+00 20+60
	_ <b>_</b>	Interference emission and immunity per EN 61 326
Wiring		Terminal box (screw terminals up to 2.5 mm <sup>2</sup> )
Wiring protection		Protected against reserve polarity and overvoltage
Ingress protection		
per EN 60 529 / IEC 529		IP 65
Weight		
non 🚱 -class Models	kg	approx. 12.5 (mbar pressure range) or approx. 3.6 (bar pressure range), respectively
🕼 -class Models	kg	approx. 12.6 (mbar pressure range) or approx. 3.9 (bar pressure range), respectively
	mm a antional autres	see arawings
items in curved {} brackets are optional extras for additional price.		

1) for maximum values of Ex-class versions: see 🙆 -class protection

# Power supply devices for Pressure Transmitter Model 891.34.2082 under non- log-operation

For non- @ -operation the following power supply devices are available for DC-supply of transmitter Model 891.34.2082:

Model A-VA-1 (old Model 903.30.400) - Power supply, line voltage AC 230 V, output voltage DC 24 V, 70 mA max. Model KFA6-STR-1.24.500 - Power supply, line voltage AC 90 ... 253 V, 48 ... 63 Hz, output voltage DC 24 V, 500 mA max.

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For log-operation the following log-line transformers are available for galvanical separation and transfer of power supply for transmitter Model 892.34.2082:

Model KFD2-STC4-Ex1 - 🚱 -line transformer, line voltage: DC 20 ... 32 V, output voltage: DC 25.4 V maximum, 88.2 mA max.

**Model SI 815-52** - -line transformer with power supply transfer for 2-wire system 4 ... 20 mA. The line transformer is usable with power supply or electronic indicating instrument with integrated power supply for transmitter. When calculating the permissible max. load  $R_A$  a voltage drop of 7.7 V at the line transformer has to be considered.





Dimensions in ( ): pressure ranges  $\geq$  400 mbar absolute

#### Position of the potentiometers in the electronics case

The potentiometers are accessible after unscrewing the screw plugs in the top of the casing.



potentiometer for span potentiometer for zero point

1592 750.01

#### **Connection details**

The terminals 1 and 5 are bridged internally in the terminal box providing two terminals for the 0V/S- connection.

#### 4...20 mA 2-wire system



#### 0...20 mA 3-wire system





## Ordering information

Model / Pressure range / Size of connection / Output signal / Optional extras required

Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing. Modifications may take place and materials specified may be replaced by others without prior notice.



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