Pressure Transmitters
for pure media

Model 891.24.510

TRONIC LINE

- **Pressure ranges from -1 ... +5 bar to 0 ... 400 bar**
- **Signal outputs 4 ... 20 mA; 0 ... 5 V; 0 ... 10 V**
- **Wiring with plug or flying lead**
- **Weather protection IP 65 to IP 67**
- **Wetted parts of stainless steel 1.4404 (316 L)**
- **Surface finish ≤ 0.3 µm**
- **VCR®-unions**
- **CE-conformity**

VCR®-Female nut

VCR®-Male nut

Application

The main areas of application are to be found in the semi-conductor and electronics industry, medical technology and in biological, gene and pharmaceutical technology.

General features

These pressure transmitters meet the high standards set in pure media technology.

The sensor element is a thin film sensor produced by most modern production methods. This technology assures excellent temperature behaviour and long term stability.

The wetted parts are made of CrNi steel 1.4404 (316 L). The thin film sensor is welded hermetically to the pressure connection. The robust case is also produced in CrNi steel 1.4301 and offers a minimum weather protection to IP 65.

Special polishing methods make peak-to-valley surface finishes to ≤ 0.3 µm possible for sensor and pressure connection. Special welding processes exclude undesirable dead spaces and tarnishing.

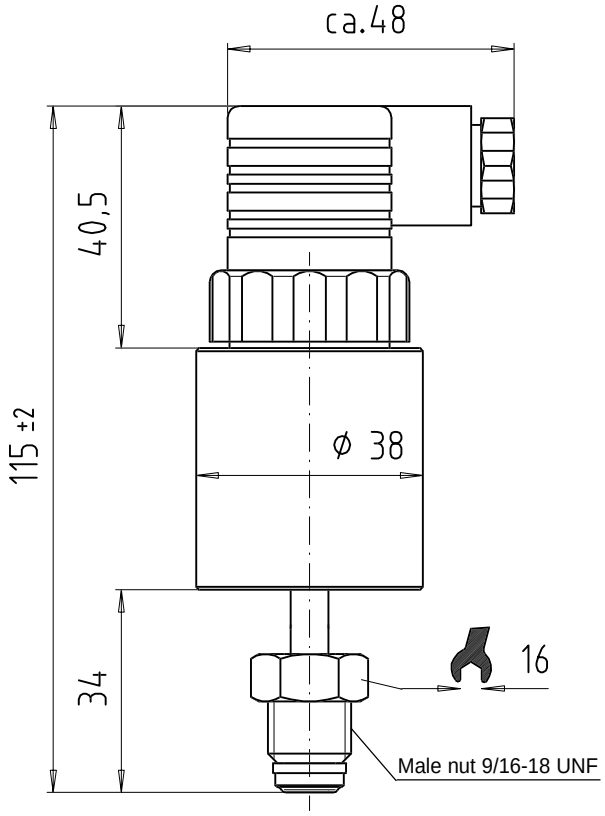
Supplementary data sheets:

- Standard-Pressure Transmitter (see data sheet PE 81.01) — **Model 89X.X3.5XX**
- ECO-TRONIC (see data sheet PE 81.14) — **ECO-TRONIC**

Specifications		**Model 891.24.510**												
Sensing principle		thin-film strain gauge												
Pressure ranges	bar	-1 ... +5	-1 ... +9	-1 ... +15	6	10	16	25	40	60	100	160	250	400
Overpressure safety	bar	8	13	21	8	13	21	33	52	78	130	210	325	520
Burst pressure of sensor	bar	20	40	64	24	40	64	100	160	240	350	450	800	1200
Pressure reference		relative pressure												
Pressure connection		SS-4-VCR-1 male nut 9/16-18 UNF or SS-4-VCR-4 female nut 9/16-18 UNF {other pressure connections on request}												
Material														
wetted parts		stainless steel 1.4404 (316L)												
case		stainless steel 1.4301												
Surface roughness R_a of wetted parts		$R_a \leq 0.3$												
Power supply U_B	DC V	$13 < U_B \leq 36$ (12...36 with signal output 0...5 V; 14...36 with signal output 0...10 V)												
Signal output and maximum load R_A		4 … 20 mA, 2-wire system $R_A \leq (U - 13\ V) / 0.02\ A$ mit R_A in Ohm und U_B in Volt {0 ... 5 V, 3-wire system} $R_A >$ 5 kOhm {0 … 10 V, 3-wire system} $R_A >$ 10 kOhm {other signal outputs on request}												
Adjustability zero/span	%	± 5												
Response time (10 … 90%)	ms	≤ 1												
Accuracy	% of span	≤ 1.0 {0.5 } (limit point calibration) calibrated in vertical mounting position												
	% of span	≤ 0.5 {0.25 } (BFSL) with pressure connection bottom												
Hysteresis	% of span	≤ 0.5												
Repeatability	% of span	≤ 0.1												
1-year stability	% of span	≤ 0.2 (with reference conditions)												
Permissible temperature of														
medium	°C (°F)	-30 … +110 (-22 ... +230)												
ambient	°C (°F)	-20 … +60 (-4 ... +140)												
storage	°C (°F)	-30 … +120 (-22 ... +248)												
Compensated temp. range	°C (°F)	0 … +80 (+32 ... +176)												
Temperature coefficient in compensated temp. range:														
mean TC of zero	% of span/10K	≤ 0.2												
mean TC of span	% of span/10K	≤ 0.2												
CE-conformity		Interference emission per EN 50 081-1 (March 93) and EN 50 081-2 (March 94), Interference immunity per EN 50 082-2 (March 95); declaration of conformity on request												
Electrical connection		4-pin L-plug perDIN 43 650 {cable: 1.5 m, vented; 6-pin MIL-plug}												
Wiring protection		protected against polarity crossing, overvoltage and short circuiting												
Weather protection per EN 60 529 / IEC 529		IP 65 {IP 67 with cable}												
Weight	kg	approx. 0.25												
Dimensions		see drawings												
Items in curved brackets { } are optional extras for additional price.														

Dimensions in mm

VCR® -Male nut SS-4-VCR-4



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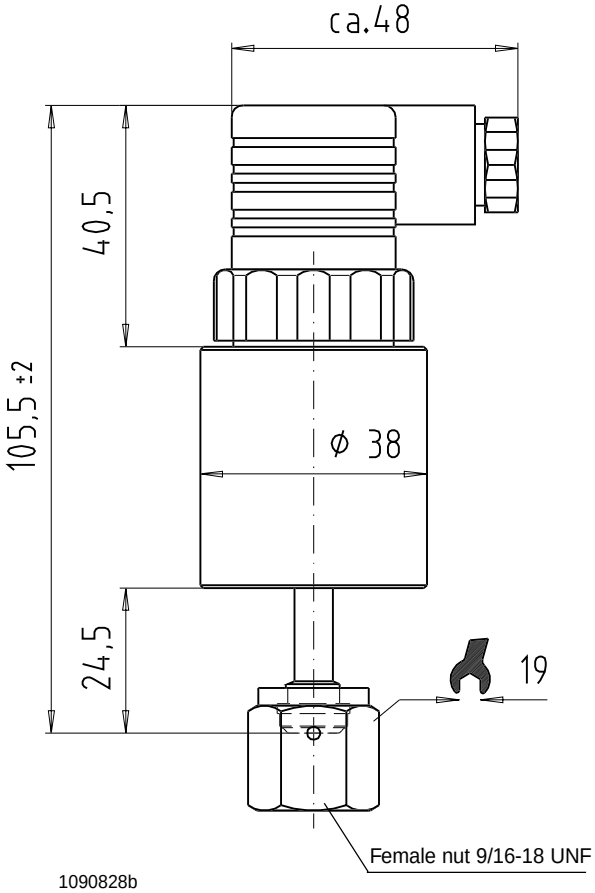
VCR® -Female nut SS-4-VCR-1



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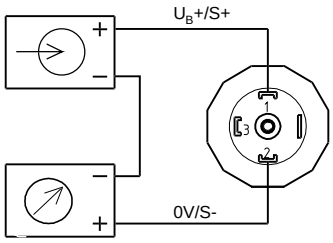
Wiring details

2-wire system

DIN 43 650 plug



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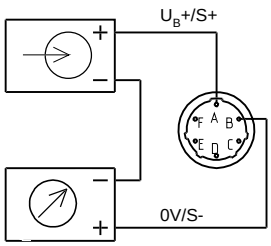
MIL-plug PT 02 E-10-6P



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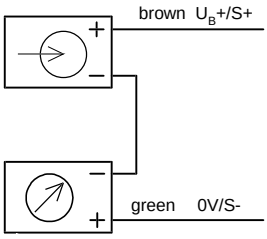
flying lead



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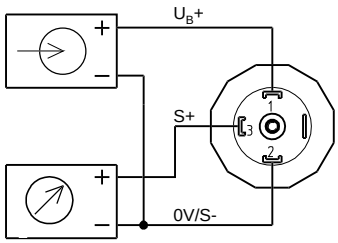
3-wire system



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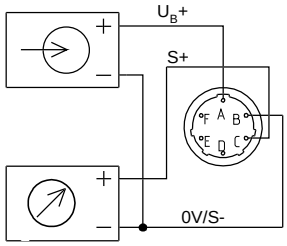

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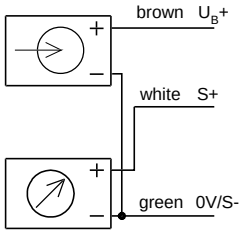

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Ordering information

Model / Pressure range / Signal output / Pressure connection / Optional extras

Ordering examples:

891.24.510 / 0 ... 100 bar / 4 ... 20 mA / VCR® -screwing with male nut 9/16-18 UNF
891.24.510 / 0 … -1/+15 bar / 0 … 10 V / VCR® -screwing with female nut 9/16-18 UNF

Specifications and dimensions given in this leafet 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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