SENSEL MEASUREMENT
CAPTEURS, ELECTRONIQUES & ACQUISITION DE DONNEES

SM-TP38 | **PRESSURE TRANSDUCER**

*Pressure transmitters belonging to TP38 series distinguish themselves for high long-term reliability of mechanical and electrical features and for their **low price**, obtained by minimising production costs with the use of new technologies, robotized stations and a diffuse use of LASER.*
Among the sectors where these transmitters are employed, some are worth being underlined: pneumatic, hydraulic, refrigerating and level plants. They are also used in test benches and in materials testing machines.
The sensitive part, in contact with pressure, is entirely made of 17-4 PH corrosion-proof stainless steel.
High vacuum thermal treatments which stainless steel is subjected to, ensure the correct functioning even when highly dynamic stresses are involved. Monolithic execution of measuring element, without any assembling via tight rings or gaskets, guarantees a high long-term stability, with negligible hysteresis and zero drift.
Pressure is internally detected by a full bridge strain gauge, which assures the maintenance of performances even in presence of peaks.
Electronic section, realised via SMD technology, consists of a high precision instrumental amplifier and a stable supplier, protected against short circuits and polarity inversion.
Every pressure transmitter is entirely LASER welded and completely resin-encapsulated, to ensure insensitivity and a high degree of hermetic tight.
During production cycle, pressure transmitters are thermally compensated, tested and individually calibrated with the use of completely automated stations that analyse and record data.

LOW COST

≤±1.0% Linearity - Hysteresis

CE RoHS

≤±0.50% Linearity - Hysteresis

INOX

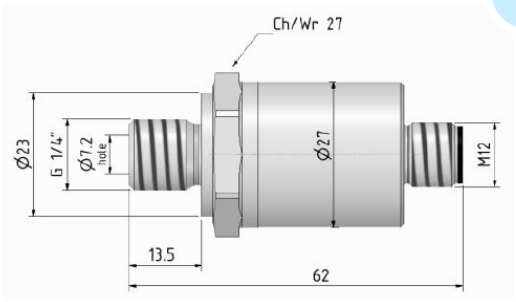
≤±0.25% Linearity - Hysteresis

High Reliability

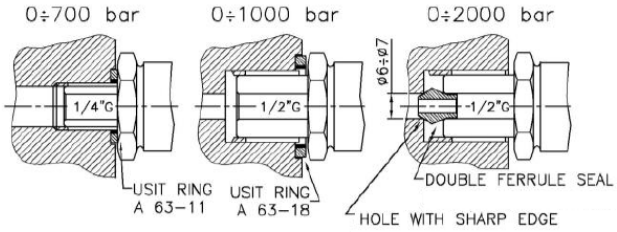
DYNAMIC STRESSES

15 Long term high stability

Dimensions [mm]



Typical installation



SENSEL MEASUREMENT
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S.A.R.L au capital de 7500 Euros - SIRET 502 277 908 00013 - APE 7490 - N° TVA : FR40502277908

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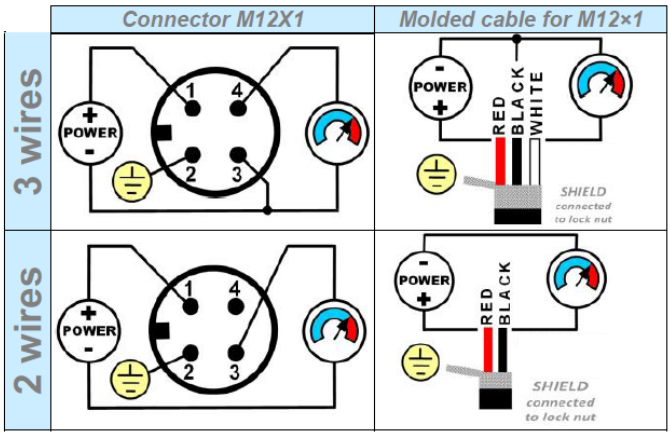
Technical Data

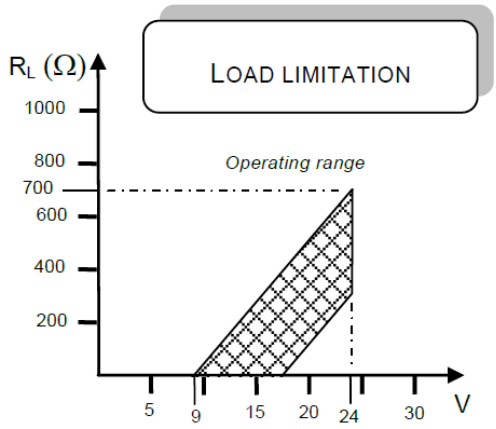
RELATIVE PRESSURE (R) *Zero at atmospheric pressure*	0.5 - 1 - 2.5 - 5 - 10 - 20 bar
ABSOLUTE PRESSURE (A) *Zero at pressure to absolute vacuum*	50 - 100 - 250 - 350 - 500 - 700 bar *1000 - *1500 - *2000 bar
LINEARITY and HYSTERESIS	≤ ± **1.0 %** (see options)
TEMPERATURE EFFECT (1°C) *a) on zero* *b) on sensitivity*	 ≤ ± 0.02% ≤ ± 0.02%
NOMINAL SENSITIVITY	4-20mA (*2 or 3 wires*) 0.5 – 5.5 V *or* 0.5 - 10.5 V
NOMINAL POWER SUPPLY	4-20mA *and* 0.5 - 5.5V ➡ 12-24Vdc 0.5 - 10.5V ➡ 15-24Vdc
MAX. POWER SUPPLY *MAX. ABSORPTION 3 wires* *MAX. ABSORPTION 2 wires* *LOADING RESISTANCE IN TENSION* *LOADING RESISTANCE IN CURRENT* *INSULATION RESISTANCE* *ZERO BALANCE* *RESPONSE FREQUENCY*	28Vdc 30mA 20mA min. 3KΩ *from 0 to 470Ω* >2 GΩ ± 1% 1 kHz
LIMIT MECHANICAL VALUES REFERRED TO NOMINAL PRESSURE : *a) service pressure* *b) max. permissible pressure* *c) breaking pressure* *d) highly dynamic pressure*	 100% 150% >300% 75%
REFERENCE TEMPERATURE *WORKING TEMPERATURE* *STORAGE TEMPERATURE*	+23°C -25/+70°C -25/+80°C
PROCESS COUPLING *TIGHTENING WRENCH* *TIGHTENING TORQUE*	1/4"Gas (*1/2"Gas) *Male* 27 mm 28 N•m
PROTECTION CLASS (EN 60529) *CASE EXECUTION MATERIAL* *SENSOR EXECUTION MATERIAL* *ELECTRICAL CONNECTION*	IP67 INOX AISI 304 INOX 17-4 PH M12x1 4 poles male connector

Options:

- *LINEARITY and HYSTERESIS ≤ ± 0.50 %*
- *LINEARITY and HYSTERESIS ≤ ± 0.25 %*
- *RESPONSE FREQUENCY UPPER 1 kHz*
- *Female 4 poles straight M12x1 CONNECTOR complete PVC molded CABLE, shielded, length 3m.*

Electrical connections





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