GEFRAN

# TPSADA

*DIGITAL AUTOZERO & SPAN OPTION*




### *Main Features*

- *Coarse Magnetic Autozero*
- *Fine Magnetic Autozero*
- *Calibration Signal 80% FS*
- *Magnetic Autospan*
- *Partial reset function*
- *Total reset function*

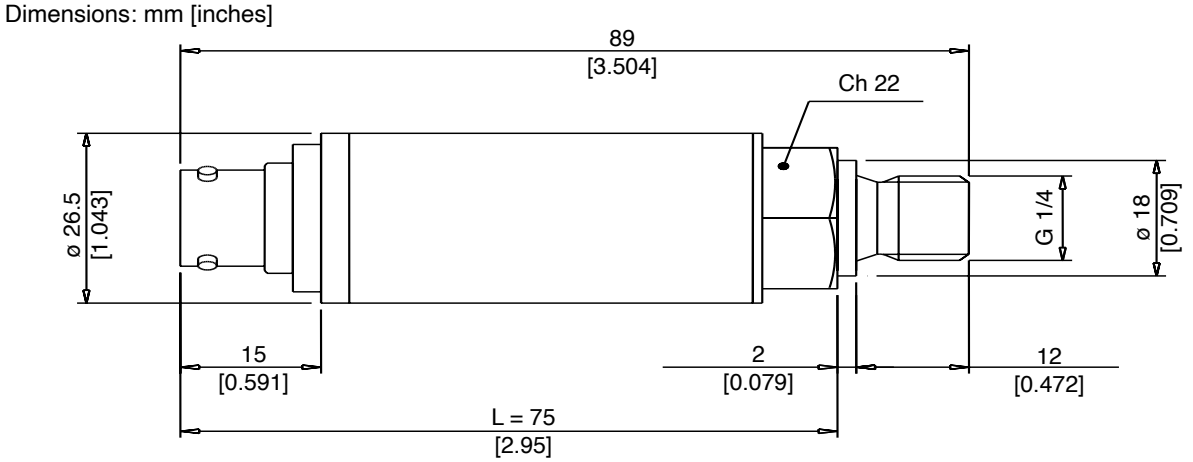
Digital “Autozero & Span” option makes the pressure transmitter **TPSA Series** a product extremely innovative and versatile.
Designed thanks to the advanced electronics used by TPSA, this function allows zero and span adjustment in a simple, fast and reliable way, avoiding to use analogue trimmer, potential weak point and source of possible drifts or failures.
The starting is user friendly, simply touching the specific target marked on the sensor body with a pen with magnetic head (included as standard).
Within few seconds the operation is concluded, without the need to dismantle or to open the instrument.

## TECHNICAL DATA

| | |
|---|---|
| Autozero | ±10%FS max with zero setting within the sensor accuracy class, @ °T Amb. |
| Autozero Setting Time | 1…10 seconds |
| Fine Autozero Adjustment | Resolution 6 mV (voltage output); 12 $\mu$A (current output) |
| Fine Autozero Adjustment Amplitude | ±100 mV (voltage output), ±0.16 mA (current output) by successive steps with maximum setting time 5 sec. per step |
| Calibration Function | Signal output generation of 80% FS @ °T Amb. |
| Calibration Function Setting Time | >1 sec. (by contacts closed in CAL position) |
| Autospan | ±5%FS max with span setting within the sensor accuracy class, @ °T Amb. |
| Autospan Setting Time | 1…10 sec. (by contacts closed in CAL position) |
| Partial Reset | Restore of zero factory setting |
| Partial Reset Setting Time | 30…60 sec |
| Total Reset | Restore of complete factory setting |
| Total Reset Setting Time | >60 sec |
| Function Activation | By pen with magnetic head (PKIT 312) |

## INSTALLATION DRAWINGS

Dimensions: mm [inches]




Recommended tightening torque: 30 Nm
Maximum tightening torque: 40 Nm

**Dimensions:** TPSADA, due to the autozero & span board, is 5 mm (0.197 in) longer, so dimension “L” on TK data sheet becames 75 mm (2.95 in).

**CAL function pin:** The activation of CAL function (Calibration and Autospan) is made by closing the contact between the following pin:
- 6 pole connector version (V) pin E-F
- 7 pole connector version (P) pin 5-6

**Please refer to the standard data sheet for all the remaining mechanical and electrical specifications**.

## ORDERING INFORMATION

Pressure transmitter **TPSADA** ☐ ☐ ☐ ☐☐☐☐ ☐ ☐ ☐

| OUTPUT SIGNAL | |
|---|---|
| **Standard** | |
| 0.1 ... 10.1 Vdc | **C** |
| 4...20 mA | **E** |
| 0...10 Vdc | **N** |
| **On request** | |
| 0.1 ... 5.1 Vdc | **B** |
| 0 ... 5 Vdc | **M** |
| 1 ... 5 Vdc | **P** |
| 1 ... 10 Vdc | **Q** |
| 1 ... 6 Vdc | **R** |

| PRESSURE CONNECTION | |
|---|---|
| **Standard** | |
| G 1/4 gas male (DIN 3852-A) | **1** |
| **On request** | |
| 7/16-20 UNF-2A male (SAE 4 per AS4395-E) | **2** |
| G 1/2A (DIN 16288) | **3** |
| G 1/4 gas female | **4** |
| 1/8-27 NPT female | **5** |
| 1/4 - 18 NPT female | **6** |
| 1/4 - 18 NPT male | **7** |
| M14 x 1.5 male | **8** |
| 1/8 - 27 NPT male | **9** |
| G 1/4 gas male (DIN 3852-E) | **E** |
| M12 x 1.5 male | **R** |
| 7/16-20 UNF-2A male (SAE 4for J1926-2) (*) | **K** |
| 7/16-20 UNF-2A female (SAE 4) | **F** |

(*) Max. working pressure: 630 bar (9137 psi)

| ELECTRICAL CONNECTION | |
|---|---|
| EN 175301-803 type A (P 18 mm) | **E (*)** |
| Shielded cable | **F (*)** |
| 4-pole connector M12 x 1 | **Z (*)** |
| EN 175301-803 type C (P 9.5 mm) | **M (*)** |
| 7 pole connector M16x0.75 | **P** |
| 6 pole bayonet connector | **V** |
| **(*)** With this kind of connector is available the "Autozero" function only. For special request contact Gefran. | |

Mechanical and/or electrical characteristics differing from standard may be arranged on request.

| RESPONSE TIME | |
|---|---|
| **V** | Fast (< 1 msec) |

| ACCURACY | |
|---|---|
| **T** | ± 0.1% FS typical ≥100bar/1500psi<br>±0.15% FS typical <100bar/1500psi |

| MEASUREMENT RANGE | | | |
|---|---|---|---|
| | **bar** | | **psi** |
| **B04U** | 0..4 | **P06D** | 0..60 |
| **B05U** | 0..5 | **P75U** | 0..75 |
| **B06U** | 0..6 | **P01C** | 0..100 |
| **B07U** | 0..7 | **P15D** | 0..150 |
| **B01D** | 0..10 | **P25D** | 0..250 |
| **B16U** | 0..16 | **P03C** | 0..300 |
| **B02D** | 0..20 | **P05C** | 0..500 |
| **B25U** | 0..25 | **P75D** | 0..750 |
| **B03D** | 0..30 | **P15C** | 0..1500 |
| **B04D** | 0..40 | **P02M** | 0..2000 |
| **B05D** | 0..50 | **P25C** | 0..2500 |
| **B01C** | 0..100 | **P03M** | 0..3000 |
| **B16D** | 0..160 | **P04M** | 0..4000 |
| **B02C** | 0..200 | **P75D** | 0..750 |
| **B25D** | 0..250 | **P15C** | 0..1500 |
| **B35D** | 0..350 | **P20C** | 0..2000 |
| **B04C** | 0..400 | **P25C** | 0..2500 |
| **B05C** | 0..500 | **P03M** | 0..3000 |
| **B06C** | 0..600 | **P05M** | 0..5000 |
| **B07C** | 0..700 | **P75C** | 0..7500 |
| **B01M** | 0..1000 | **P10M** | 0..10000 |
| | | **P15M** | 0..15000 |

**CALIBRATION STANDARDS**
Instruments manufactured by Gefran are calibrated against precision pressure calibration equipment wich is traceable to International Standards.

Ex.: **TPSADA - N - 1 - P - B35D - T - V**
Pressure transmitter TPSADA digital autozero & span, 0...10Vdc output signal, G 1/4 male pressure connection, 7 pole connector, 0...350 bar measurement range, ± 0.1% FS accuracy, 1msec response time.

Sensors are manufactured in compliance with:
- EMC 2014/30/EU compatibility directive
- RoHS 2011/65/EU directive

Electrical installation requirements and Conformity certificate are available on our web site: www.gefran.com

**GEFRAN spa** reserves the right to make any kind of design or functional modification at any moment without prior notice

**GEFRAN spa**
via Sebina, 74
25050 PROVAGLIO D'ISEO (BS) - ITALIA
tel. 0309888.1 - fax. 0309839063
Internet: http://www.gefran.com