



*flow & process solutions*







Potravinářský průmysl  
Farmaceutický průmysl  
Biotechnologie  
Petrochemie  
Chemický průmysl  
Energetika  
Úprava vody  
Papírenství a zpracování celulózy  
Plynárenský průmysl  
Keramický průmysl  
Zpracovatelský průmysl



Firma s tradicí od r. 1990 se při svém vzniku zaměřila na dodávky základních komponent, přístrojové a měřicí techniky a dodávky technologií pro farmaceutický a potravinářský průmysl. Cílem bylo zajistit kompletní dodavatelsko - inženýrské služby, včetně servisu. V roce 1998, který byl pro firmu velmi významným mezníkem, proběhla transformace společnosti do nynější formy. V dalších letech činnosti společnosti dochází k rozšíření portfolia a je navazována spolupráce s partnery v oblasti armatur, komponent, ventilů, procesní měřicí techniky a čerpadel.

Oblastí působnosti je potravinářský, farmaceutický průmysl, biotechnologie, chemický průmysl, petrochemie, úprava vody, papírenství a celulóza, energetika, keramický průmysl a zpracovatelský průmysl.

Firma REGOM INSTRUMENTS je díky širokému dodavatelskému portfoliu a bohatým zkušenostem schopna zajistit dodávky armatur, komponent, čerpadel, přístrojů a zařízení.

Cílem společnosti REGOM INSTRUMENTS je poskytování kvalitních služeb a spolehlivých dodávek pro co nejširší okruh zákazníků.

# TF - Series "Smart" Pressure Transmitter

## Introduction

The Anderson-Negele "TF" series pressure transmitter is a microprocessor-based sensor specifically designed for sanitary fluid process applications in the Food and Beverage industry. This product provides an extremely high level of performance combined with the flexibility of digital communication via the "HART" protocol. The "TF" series can be specified in several configurations including high temperature models that are available in direct or remote mount variations. The high temperature direct mount is also recommended for applications where a horizontal orientation is required for display viewing, such as tank tops and overhead lines. All models may be ordered with any of our wide variety of sanitary process fittings.

The "TF" series simultaneously outputs an analog 4-20 mA signal while communicating digitally with a hand-held communicator or other "HART" host device. This allows configuration of parameters such as range, engineering units, tagging info, and other device specific information, from any accessible point in the output loop. The analog output can even be "trimmed" or calibrated while in service, if required. Also retained are internal, non-interactive zero and span analog adjustments. This provides the user with the immediate performance enhancements of this new product, with future compatibility with the "HART" protocol.

As with all Anderson-Negele sensors, the "TF" series is designed to be cleaned and sterilized in place. The optional LCD display can be factory scaled to linear process engineering units, mA output, or 0-100%.

## Authorizations



## Features

- New options and mounting configurations for high temperature applications up to 400°F (204°C)
- Standard 4-20 mA output with "HART" protocol for digital communications
- Micro-based design provides best performance of any sanitary transmitter
- Widest choice of sanitary fittings
- Optional LCD display now available for vertical or horizontal viewing
- 3-A compliant; Third party verified in accordance with standard 74-03



## Specifications

|                              |                                                                                                                                       |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Ranges:                      | Defined by Upper Range Limit (URL)                                                                                                    |
| Rangeability (Turn-down):    | 10:1 via any HART Host Device                                                                                                         |
| Over Pressure Limit:         | 2X URL                                                                                                                                |
| Over Pressure Output:        | Sensor Style 1 & 2: Above 110% of calibrated range - 3.8 mA<br>Sensor Style 3 & 4: No specified over pressure output                  |
| Mechanical Trim Adjustments: | Internally adjustable<br>±5% of span (zero); ±20% of span (span)                                                                      |
| Output:                      | 4-20mA, Two-wire, Linear, Digital<br>Process variable superimposed on 4-20mA signal, available to any "HART" protocol conforming host |
| Power Supply:                | 13-40 Vdc<br>18-45 Vdc with display                                                                                                   |
| Indication:                  | Optional, cap-mounted, LCD<br>Indication accuracy ±1% F.S.                                                                            |

## TEMPERATURE LIMITS (PROCESS):

|                              |                                                                                                             |
|------------------------------|-------------------------------------------------------------------------------------------------------------|
| Standard/Direct Mount:       | 0 to 275°F (-18 to 135°C)                                                                                   |
| High Temp/Direct Mount:      | 0 to 350°F (-18 to 177°C)**                                                                                 |
| High Temp/Remote Mount:      | 0 to 400°F (-18 to 204°C)**                                                                                 |
| Temperature Limit (Ambient): | 0 to 120°F (-18 to 49°C)                                                                                    |
| Process Temperature Effect:  | Less than 0.2% of full scale output/10°F change                                                             |
| Standards:                   | Designed and manufactured to sound engineering practices in accordance with Article 3.3 of the PED 97/23/EC |

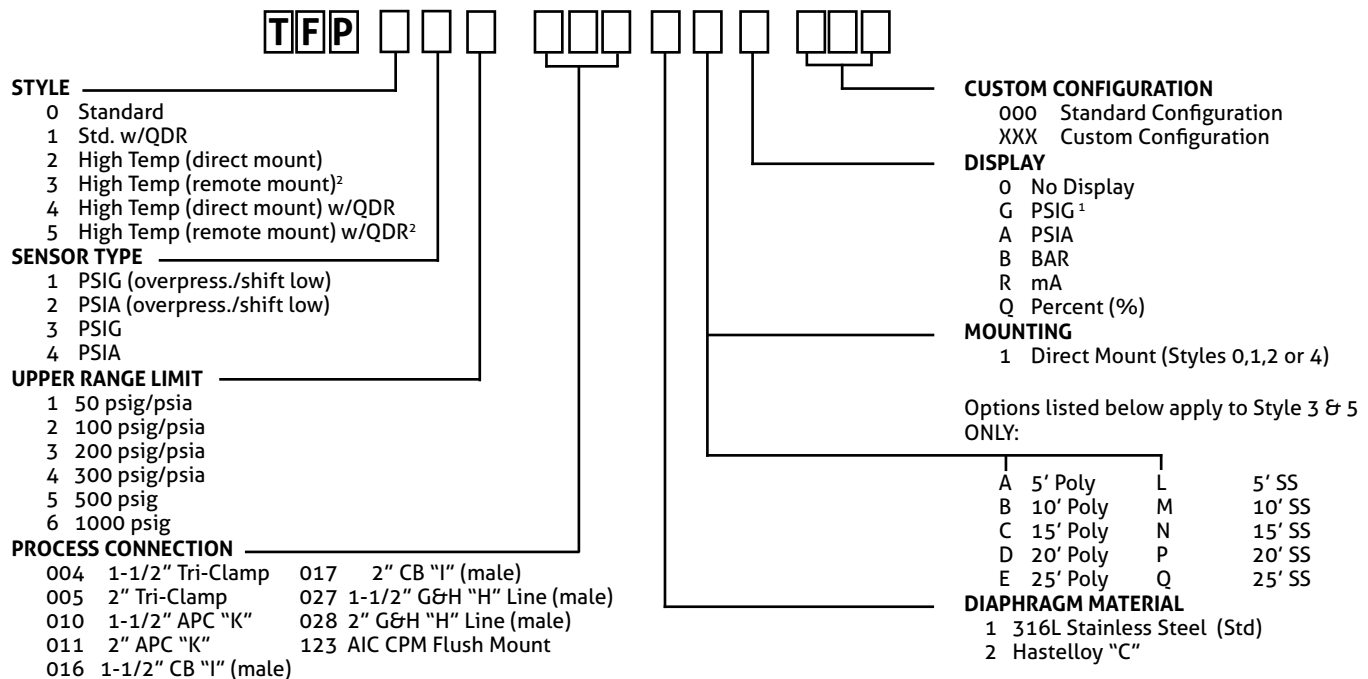
## PERFORMANCE SPECIFICATIONS:

|                                                            |                                                                        |
|------------------------------------------------------------|------------------------------------------------------------------------|
| Accuracy* (psig ranges):                                   | ±0.2% of URL                                                           |
| (psia, compound vacuum):                                   | ±0.2% URL (above atmospheric zero); ±1.0% URL (below atmospheric zero) |
| *Accuracy includes repeatability, hysteresis and linearity |                                                                        |
| Repeatability:                                             | ±0.06%                                                                 |
| Hysteresis:                                                | ±0.07%                                                                 |
| Linearity (BFSL):                                          | ±0.07%<br>(±0.17% for psia, compound & vacuum ranges)                  |
| Stability:                                                 | ±0.3% of URL/6 months                                                  |

## PHYSICAL SPECIFICATIONS:

|                                                                                                             |                                                                                   |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Wetted Material:                                                                                            | 316L Stainless Steel, Hastelloy "C" optional                                      |
| Wetted Material Surface Finish:                                                                             | Ramax = 25 microinches (.6 microns)                                               |
| Housing Material:                                                                                           | 304 Stainless Steel                                                               |
| Actuating Fill:                                                                                             | 100% mineral oil. Meets FDA requirements<br>(21 CFR, 172.878 and 178.3620(a))     |
| Housing Ratings:                                                                                            | NEMA 4X, IP-66                                                                    |
| Electrical Connections:                                                                                     | 1/2-14NPT conduit with screw terminals and integral test loops for HART interface |
| ** Process vacuum in excess of 24" Hg may require slight de-rating of maximum temperature (consult factory) |                                                                                   |

## Order Information

<sup>1</sup> Vacuum shown as (-) PSIG for compound ranges<sup>2</sup> Pipe/Wall mount bracket included with remote mount option (Style 3 & 5)

Compound Range Ordering Examples:

For 30"-0-50 psig, select 50 psig URL

For 30"-0-60 psig, select 100 psig URL





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