

High Accuracy Pressure Sensor



Features

- ➔ Available with Built in Electronic
- ➔ Large choice of connectors & threads
- ➔ All Stainless steel
- ➔ Large Bandwidth

Applications

- ➔ Railway
- ➔ Test benches
- ➔ Instrumentation
- ➔ Navy and shipbuilding applications

The PTA220 series is designed for absolute or gage pressure measurements from 50mbar up to 600bar. With all stainless steel wetted parts, it is compatible with most fluids used in the industry including corrosive ones. Manufactured with proven components ensuring accuracy and reliability, the PTA220 is compatible with most application thanks to a large choice of mechanical and electrical connections

Technical specifications

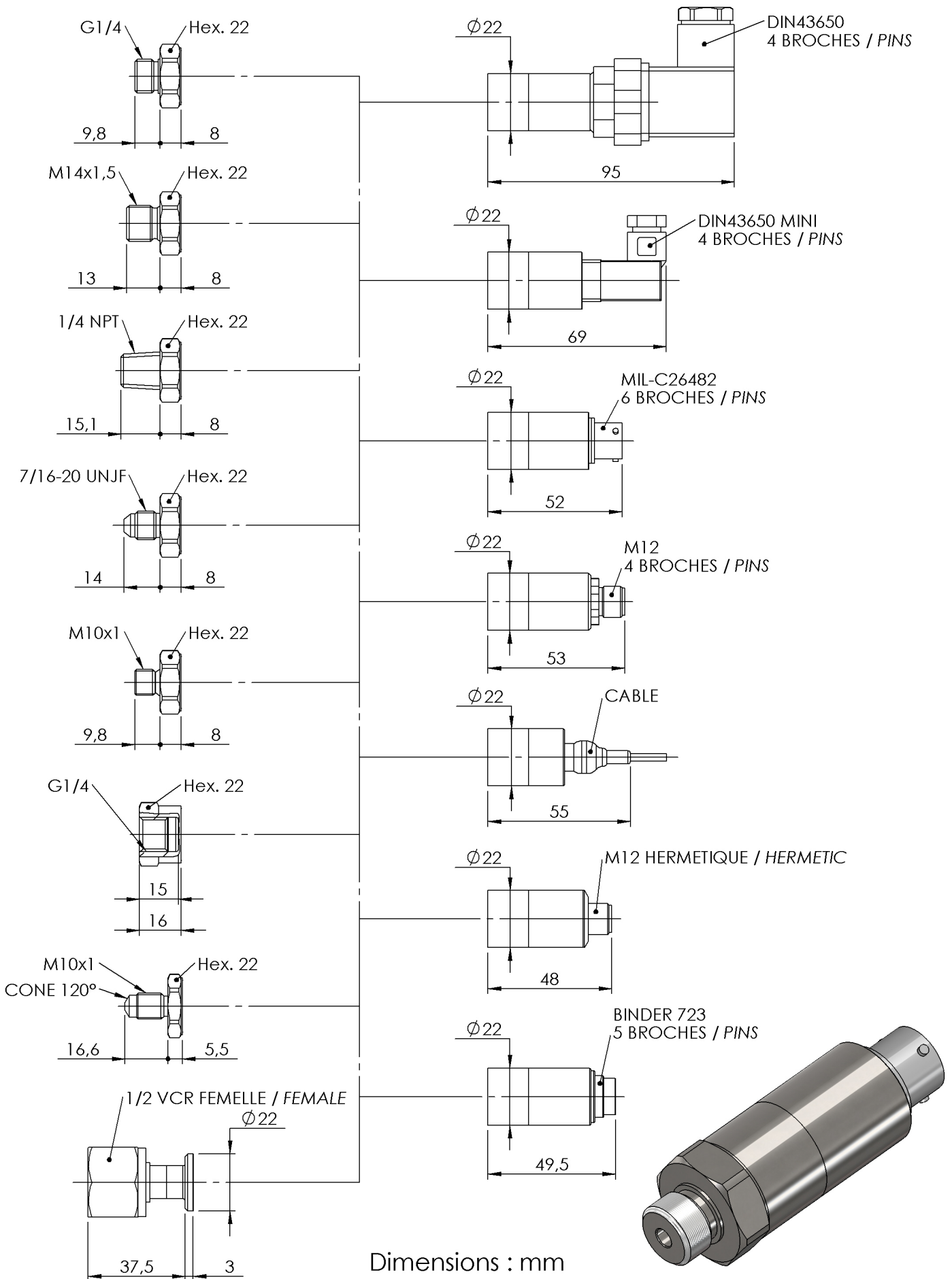
| | |
|----------------------------|--|
| Pressure ranges (FS) | ±100mbar ; ±250mbar ; ±500mbar ; 250mbar ; 700/1200mbar ; 500mbar ; ±1bar ; -1/+2bar ; -1/+3bar ; -1/+5bar ; -1/+10bar ; 1bar ; 2bar ; 3bar ; 5bar ; 10bar ; 20bar ; 40bar ; 100bar ; 250bar ; 400bar ; 600bar ; ±14.5PSI ; -14.5/+30PSI ; -14.5/+40PSI ; -14.5/+70PSI ; -14.5/+150PSI ; 8000PSI ; 3PSI ; 5PSI ; 10PSI ; 15PSI ; 30PSI ; 40PSI ; 70PSI ; 150PSI ; 300PSI ; 500PSI ; 1500PSI ; 3000PSI ; 10000PSI ; 5000PSI |
| Type | Absolute ; Gage |
| Type (for ranges > 40 bar) | Sealed Gage |
| Safe overload | 150% FS Option : Special overload |
| Burst pressure | 300% FS |
| Power supply | 8 to 30Vdc |
| Consumption | < 10mA |
| Insulation | > 1000 MOhms under 50Vdc at ambient temperature |

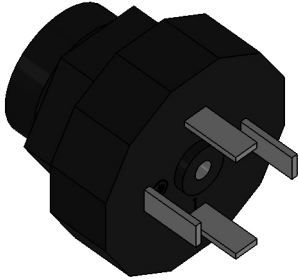
Technical Specifications

| | |
|--|--|
| Output at -100%FS (only for \pm range) | 0.5Vdc |
| Output at 0%FS (except ranges \pm) | 0.5Vdc |
| Output at 100%FS | 4.5Vdc |
| Zero and sensitivity settings tolerances | $\pm 50\text{mV}$ |
| Non linearity and hysteresis combined | $\pm 0.1\%$ FS Option : $\pm 0.05\%$ FS |
| Non repeatability | $\pm 0.02\%$ FS typ. |
| Signal bandwidth | 1000Hz @ -3dB |
| Compensated temperature range | 0 to $+60^{\circ}\text{C}$ Option : -25 to $+85^{\circ}\text{C}$; -25 to $+125^{\circ}\text{C}$ (Except M12, 723 Receptacles and PVC Cable) |
| Operating temperature range | -25 to $+125^{\circ}\text{C}$ (-25 to $+90^{\circ}\text{C}$ with M12, 723 Receptacles and PVC Cable) |
| Combined thermal zero & sensitivity shifts | $\pm 0.02\%$ FS/ $^{\circ}\text{C}$ |
| Constant acceleration in linear vibrations | $\pm 0.02\%$ FS/g (frequency 20-2000Hz, 50g max.) |
| Mechanical shock | 100g $\frac{1}{2}$ sinus 1ms |
| Electrical protection | Protected against polarity inversion |
| EMC protection | Compliant to EN61000 |
| Electrical connection | DIN 43650 Receptacle - 4 pins Option : Miniature DIN 43650 mPm Receptacle - 4 pins ; Receptacle M12 - 4 pins ; Hermetic MIL-C-26482 - 6 pins Receptacle ; AWG26, Viton Jacketed Shielded Cable $\varnothing 3\text{mm}$, 4 wires ; AWG24 double Shield PVC Cable, 4 wires ; Hermetic M12 4 pins Receptacle ; Binder 723 Receptacle, 5 pins |
| Mechanical connection | 1/4 Gaz A male ; 1/4 NPT male Option : 1/2 Gaz A male (Gauge) ; 1/4 Gaz female ; 7/16-20 UNJF-3A male - MS33656-4 ; M10x1-4h male with 80° internal cone ; M10x1-4h male 120° cone ; M14x1.5-4h male |
| Material(s) of wetted parts | Stainless Steel 316L ; Stainless Steel 17-4PH ; Stainless steel 15-5PH |
| Weight | < 100g without cable |
| Enclosure protection | IP65 for absolute & sealed gage version |

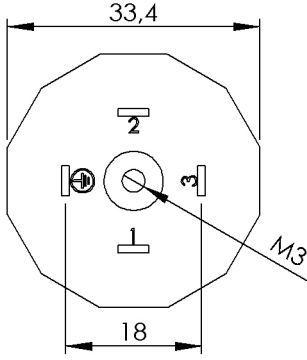
Codification

| | | | | | | | | | | | |
|---|-------|---|---|-------|----|----|-------|---|---|---|---|
| High Accuracy Pressure Sensor | PTA22 | 7 | S | 10bar | A | 01 | 01 | A | 2 | 1 | L |
| Output Signal | | | | | | | | | | | |
| 0.5-4.5Vdc unregulated power supply | | 7 | | | | | | | | | |
| Material | | | | | | | | | | | |
| Stainless Steels | | | S | | | | | | | | |
| Range | | | | | | | | | | | |
| Example | | | | 10bar | | | | | | | |
| Type | | | | | | | | | | | |
| Absolute | | | | | A | | | | | | |
| Gage | | | | | G | | | | | | |
| Sealed Gage | | | | | SG | | | | | | |
| Mechanical connection | | | | | | | | | | | |
| M14x1.5-4h male | | | | | | 01 | | | | | |
| 1/2 Gaz A male (Gauge) | | | | | | 06 | | | | | |
| 1/4 Gaz A male | | | | | | 07 | | | | | |
| 1/4 Gaz female | | | | | | 08 | | | | | |
| 7/16-20 UNJF-3A male - MS33656-4 | | | | | | 10 | | | | | |
| 1/4 NPT male | | | | | | 13 | | | | | |
| M10x1-4h male with 80° internal cone | | | | | | 19 | | | | | |
| M10x1-4h male 120° cone | | | | | | 21 | | | | | |
| Electrical connection | | | | | | | | | | | |
| DIN 43650 Receptacle - 4 pins | | | | | | | 01 | | | | |
| Miniature DIN 43650 mPm Receptacle - 4 pins | | | | | | | 02 | | | | |
| Hermetic MIL-C-26482 - 6 pins Receptacle | | | | | | | 03 | | | | |
| Receptacle M12 - 4 pins | | | | | | | 07 | | | | |
| AWG26, Viton Jacketed Shielded Cable Ø3mm, 4 wires | | | | | | | 08/1m | | | | |
| AWG24 double Shield PVC Cable, 4 wires | | | | | | | 10/1m | | | | |
| Hermetic M12 4 pins Receptacle | | | | | | | 15 | | | | |
| Binder 723 Receptacle, 5 pins | | | | | | | 23 | | | | |
| Compensated temperature range | | | | | | | | | | | |
| 0 to +60°C | | | | | | | | A | | | |
| -25 to +85°C | | | | | | | | B | | | |
| -25 to +125°C (Except M12, 723 Receptacles and PVC Cable) | | | | | | | | C | | | |
| Non linearity and hysteresis combined | | | | | | | | | | | |
| ±0.1% FS | | | | | | | | | 2 | | |
| ±0.05% FS | | | | | | | | | 4 | | |
| Combined thermal zero & sensitivity shifts | | | | | | | | | | | |
| ±0.02% FS/°C | | | | | | | | | | 1 | |
| Options | | | | | | | | | | | |
| Special overload | | | | | | | | | | | L |






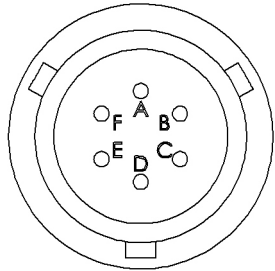

| DIN 43650 - 4 PINS | |
|--------------------|-------|
| VOLTAGE OUTPUT | PIN |
| + EXCITATION | PIN 1 |
| + SIGNAL | PIN 2 |
| 0 VOLT | PIN 3 |
| SENSOR HOUSING | PIN T |



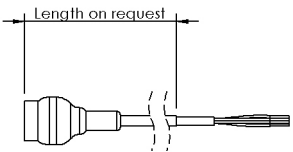
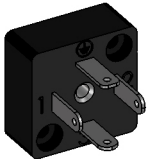
Dimensions : mm



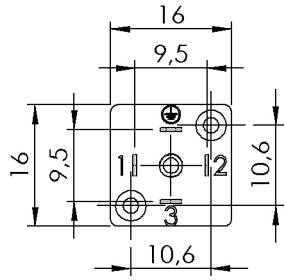
| MIL-C26482 - 6 PINS | |
|---------------------|------------|
| VOLTAGE OUTPUT | PIN |
| + EXCITATION | PIN A |
| + SIGNAL | PIN B |
| 0 VOLT | PIN C |
| 0 VOLT | PIN D |
| SENSOR HOUSING | PINS E & F |

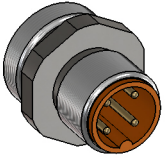
| #26 AWG, 4 CONDUCTOR SHIELDED VITON CABLE | |
|---|----------------|
| VOLTAGE OUTPUT | CONDUCTOR |
| + EXCITATION | RED |
| + SIGNAL | GREEN / YELLOW |
| NC | WHITE |
| 0 VOLT | BLUE / BLACK |
| SENSOR HOUSING | SHIELD |

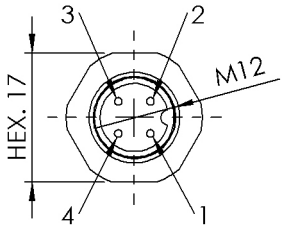
| DIN MINIATURE 43650 - 4 PINS | |
|------------------------------|-------|
| VOLTAGE OUTPUT | PIN |
| + EXCITATION | PIN 1 |
| + SIGNAL | PIN 2 |
| 0 VOLT | PIN 3 |
| SENSOR HOUSING | PIN T |



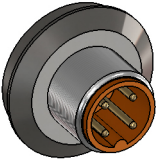
Dimensions : mm



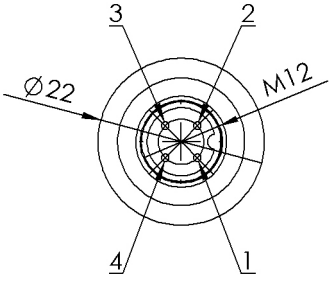
| M12 - 4 PINS | |
|---------------------|-------------------|
| VOLTAGE OUTPUT | PIN |
| + EXCITATION | PIN 1 |
| + SIGNAL | PIN 4 |
| NC | PIN 2 |
| 0 VOLT | PIN 3 |
| SENSOR HOUSING | CONNECTOR HOUSING |




Dimensions : mm



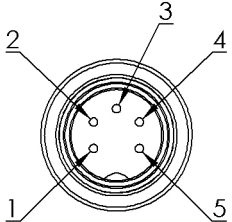
| HERMETIC M12 - 4 PINS | |
|------------------------------|-------------------|
| VOLTAGE OUTPUT | PIN |
| + EXCITATION | PIN 1 |
| + SIGNAL | PIN 4 |
| NC | PIN 2 |
| 0 VOLT | PIN 3 |
| SENSOR HOUSING | CONNECTOR HOUSING |

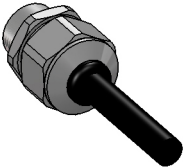


Dimensions : mm

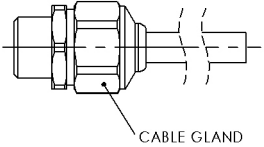


| BINDER 723 - 5 PINS | |
|----------------------------|-------------------|
| VOLTAGE OUTPUT | PIN |
| + EXCITATION | PIN 3 |
| + SIGNAL | PIN 2 |
| NC | PIN 4 |
| 0 VOLT | PIN 1 |
| NC | PIN 5 |
| SENSOR HOUSING | CONNECTOR HOUSING |





| #24 AWG, 4 CONDUCTOR, DOUBLE SHIELD PVC CABLE | |
|--|-----------|
| VOLTAGE OUTPUT | CONDUCTOR |
| + EXCITATION | RED |
| + SIGNAL | GREEN |
| 0 VOLT | WHITE |
| NC | BLACK |
| SENSOR HOUSING | SHIELD |



CABLE GLAND



E.F.E.

L'ESSOR FRANCAIS ELECTRONIQUE

16 Rue Porte a Bateaux - 27540 Ivry-la-Bataille - FRANCE

Tel : 33 (0)2 32 22 35 05 - Fax : 33 (0)2 32 36 93 08

www.efe-sensor.com - infos@efe-sensor.com

Agent :



Questi prodotti sono distribuiti e supportati in Italia da:



Instrumentation Devices Srl

Via Acquanera 29 - 22100 COMO (Italy)

ph +39 031 525 391- fax +39 031 507 984

info@instrumentation.it - www.instrumentation.it