



PTE7100 SERIES

- The pressure sensor detects the system pressure and converts it into an analog output signal.
- These operating instructions contain important information on handling the instrument.
- All safety instructions and work instructions should be observed to prevent injury or harm.
- Observe the relevant local accident prevention regulations and general safety regulations for the instrument's range of use.
- The operating instructions are part of the product and must be kept in the immediate vicinity of the instrument and readily accessible to skilled personnel at any time. Pass the operating instructions on to the next operator or owner of the instrument.
- The general terms and conditions contained in the sales documentation shall apply.
- Subject to technical modifications.



SAFETY INSTRUCTIONS

- Skilled personnel must have carefully read and understood the operating instructions prior to beginning any work.
- Please read this document prior to set-up of the unit. Ensure that the product is suitable for your application without any restrictions.
- If the operating instructions or the technical data are not adhered to, personal injury and/or damage to property can occur.
- Improper or non-intended use may lead to malfunctions of the unit or to unwanted effects in your application. That is why installation, electrical connection, set-up, operation and maintenance of the unit must only be carried out by qualified personnel authorized by the machine operator.
- In order to guarantee the correct condition of the device for the operating time, it is necessary to use the device only for media to which the wetted materials are sufficiently resistant.
- The responsibility whether the measurement devices are suitable for the respective application lies with the operator. The manufacturer assumes no liability for consequences of misuse by the operator. Improper installation and use of the devices results in a loss of the warranty claims.

Explanation of Symbols



WARNING!

...indicates a potentially dangerous situation that can result in serious injury or death, if not avoided.



CAUTION!

...indicates a potentially dangerous situation that can result in light injury or damage to property or the environment, if not avoided.



INFORMATION

...points out useful tips, recommendations and information for efficient and trouble-free operation.



FUNCTIONS AND FEATURES

Pressures

- The pressure transmitter is used for measuring pressure. The measured pressure is output as an electrical signal. Proper pressure range should be selected based on application requirement.

From 0 to ...	barG	50	100	200	250	350	400	600
Proof Pressure	barG	200	200	400	500	800	800	1200
Burst Pressure	barG	2000	2000	4000	4000	4000	4000	4000

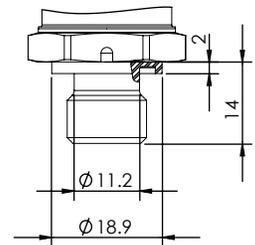
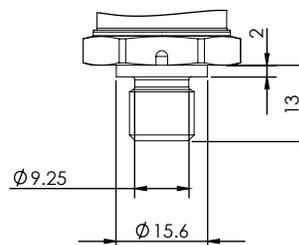


Avoid overload pressure exceeding the specified maximum permissible pressure by taking appropriate measures. The indicated bursting pressure must not be exceeded. Even if the bursting pressure is exceeded only for short time, the unit may be destroyed. ATTENTION: Risk of injury!

Pressure Port Connections

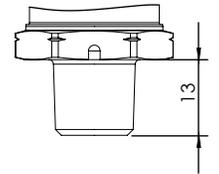
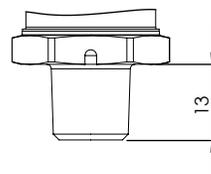
7/16-20 UNF-2A (MALE)

G1/4A DIN 3852-E



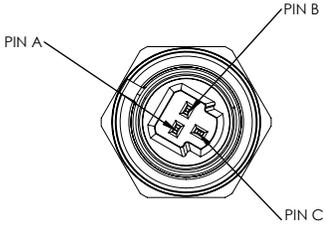
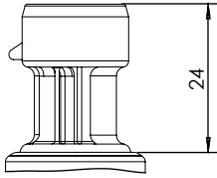
1/4-19 PT (R1/4)

1/4-18 NPTF



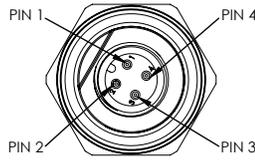
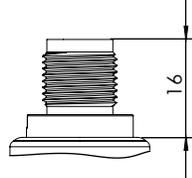
Electrical Connections

PACKARD METRI-PACK 150
IP67



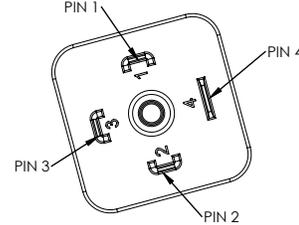
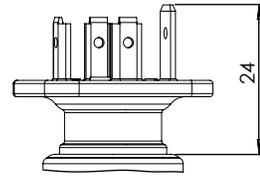
Output Type	PIN A	PIN B	PIN C
Voltage	V-	V+	Vout
Current	lout	V+	...

M12x1 4-POLE
IP67



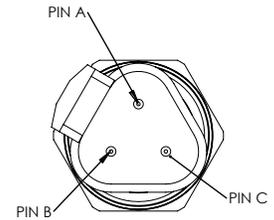
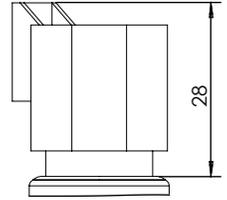
Output Type	PIN 1	PIN 2	PIN 3	PIN 4
Voltage	V+	...	V-	Vout
Current	V+	...	lout	...

A: DIN 175301-803 FORM A(18mm)
IP65



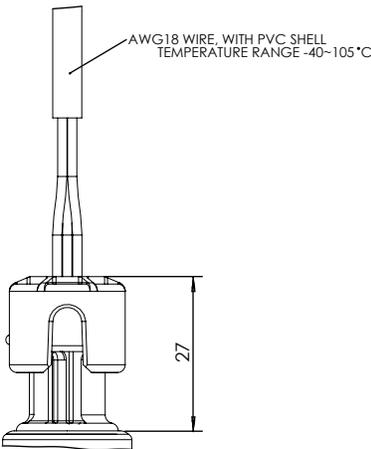
Output Type	PIN 1	PIN 2	PIN 3	PIN 4
Voltage	V+	V-	Vout	...
Current	V+	lout

DEUTSCH DT04-3P
IP67



Output Type	PIN A	PIN B	PIN C
Voltage	V+	V-	Vout
Current	V+	lout	...

FLY LEAD WITH HARNESS
IP67



Output Type	RED	BLACK	WHITE
Voltage	V+	V-	Vout
Current	V+	lout	...



INSTALLATION



Before installing and removing the unit: Make sure that no pressure is applied to the system.

Only use the pressure transmitter if it is in perfect condition with respect to safety. Prior to commissioning, the pressure transmitter must be subjected to a visual inspection. Leaking fluid is indicative of damage.

The mounting point must meet the following conditions:

- Sealing faces are clean and undamaged.
- Sufficient space for a safe electrical installation.
- Permissible ambient and medium temperatures remain within the performance limits. Consider possible restrictions on the ambient temperature range caused by mating connector used.

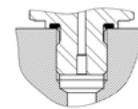
Tighten firmly. Recommended tightening torque:

Final value of the measuring range in bar	Tightening torque in Nm
10...400	25...35
600	30...50
Depends on lubrication, seal on pressure rating!	

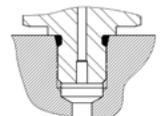
Sealing Variants

Parallel threads

Seal the sealing face  with gasket and O-ring sealing.



per SAE J1926-3



per DIN 3852-E

Tapered threads

Wrap threads with sealing material (e.g. PTFE tape).



NPT, R and PT



Electrical

Pressure Ranges	0-50 to 0-600 bar (0-725 to 0-8700 psi)
Pressure Reference	Gauge
Supply Voltage/Output	8-32VDC for 4-20mA output 5±0.25VDC for 0.5-4.5VDC output 8-32VDC for 0-5VDC output 12-32VDC for 0-10VDC output 8-32VDC for 1-5VDC output 8-32VDC for 0.5-4.5VDC output
Output Load	≥ 4.7 kΩ for voltage output ≤ (Vsup-8)/20mA for current supply
Output Response Time	<2 ms
Overvoltage Protection	36 VDC
Reverse Voltage Protection	Yes
Short Circuit Protection	Yes
Insulation Resistance	> 100 MΩ at 500V
EMC	IEC 61326-1 and EN 61326-2-3
Dielectric Strength	500 VAC
Enhanced Radiated Immunity	100V/m (80~200MHz) 200V/m (200~2700MHz)
Enhanced ESD	±8KV Contact; ±15KV Air

Physical

Random Vibration	IEC 60068-2-6, 30g (10...2000Hz)
Mechanical Shock	EN 60068-2-27, 500 g
Drop (any Axis)	1m
Ingress Protection	IP65 - IP67 (see Connector Options)
Media Compatibility	Fluids and Gases compatible with 17-4PH stainless steel

Performance

Accuracy (Best Fit Straight Line)⁽¹⁾	±0.25%FS @25°C
Accuracy (Total Error Band)⁽²⁾	+/-1.5%FS @-20° to 85°C
Operating Endurance	>10M cycles
Operating Ambient Temperature	-40° to +100°C
Operating Media Temperature	-40° to +125°C
Storage Temperature	-40° to +125°C ⁽³⁾

⁽¹⁾ Best fit straight line accuracy includes errors from non-linearity, non-repeatability, and hysteresis

⁽²⁾ Total error band accuracy includes errors from non-linearity, non-repeatability, hysteresis, zero offset, full span offset, and thermal effects

⁽³⁾ PVC flying leads are rated for storage of -40° to +105°C

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