

CONE-SEALED

ULTRA-HIGH-PRESSURE TRANSMITTER

Product Data Sheet

Reliable pressure measurement for ultra-high-pressure systems

Designed for high-pressure hydraulic equipment, high-pressure pumps, waterjetting systems, test benches, and other demanding applications exposed to pressure pulsation and mechanical shock.

The pressure-sensing element uses a special alloy and an integral construction. A cone-sealed process connection provides dependable metal-to-metal sealing in ultra-high-pressure systems.



Key Features

01 Cone-sealed connection

Improves sealing reliability in ultra-high-pressure service.

02 Stable measurement

High sensitivity with stable output and low long-term drift.

03 Media compatibility

Special alloy sensing structure for demanding liquid applications.

04 Shock resistance

Designed for pressure pulsation, impact, and vibration environments.

Typical Applications

- Ultra-high-pressure hydraulic systems and hydraulic presses
- High-pressure pumps and waterjetting equipment
- Pressure test benches and hydrostatic test systems
- Industrial cleaning, intensifier, and pressure-boosting systems

Technical Specifications

Parameter	Specification
Pressure range	Standard ranges: 0–150, 0–250, 0–300, 0–350, 0–400, 0–450 and 0–500 MPa; custom ranges available up to 0–1000 MPa.
Accuracy options	±0.25% FS, ±0.5% FS or ±1.0% FS
Output signal	4–20 mA, 2-wire; 0–5 V or 0–10 V, 3-wire
Power supply	24 VDC nominal; 9–36 VDC standard transmitter supply. 5 VDC or 9–30 VDC electronics are available depending on configuration.
Load resistance	Current output: maximum 800 Ω; voltage output: minimum 50 kΩ
Medium temperature	–20 to +85 °C
Ambient temperature	–20 to +85 °C
Long-term stability	≤0.1% FS per year
Insulation resistance	>2000 MΩ at 100 VDC (transmitter); minimum 50 MΩ at 250 VDC (sensor element)
Ingress protection	IP65
Vibration influence	Output change <0.1% FS within 20–1000 Hz mechanical vibration range
Electrical connection	4-pin aviation connector or DIN 43650 / Hirschmann connector; cable outlet available on request
Process connection	M20 × 1.5 or M22 × 1.5 cone-sealed male thread; other threads available by customization

Selection Notes

- For pulsating pump service, confirm the normal working pressure, maximum pressure peak, and expected pressure-cycle frequency.
- The mating female connection must use the correct cone-seat geometry and must be rated for the same or higher pressure.
- For continuous operation near full scale, a higher calibrated range may be considered to improve service life, subject to required measurement resolution.

Performance and Environmental Ratings

Parameter	Specification
Reference temperature	25 °C
Overload pressure	Minimum 2 × rated pressure
Burst pressure	Minimum 5 × rated pressure
Pressure-cycle life	10 million cycles, from zero to full scale
Compensated temperature	-20 to +85 °C
Operating temperature	-40 to +125 °C
Storage temperature	-40 to +125 °C
Vibration resistance	±20 g
Shock resistance	100 g, 11 ms

Construction and Interface Options

Pressure Connection

Cone-sealed process connection for reliable high-pressure metal-to-metal sealing.

Electrical Interface

Aviation plug, DIN 43650 / Hirschmann plug, or cable outlet depending on installation.

Mechanical Design

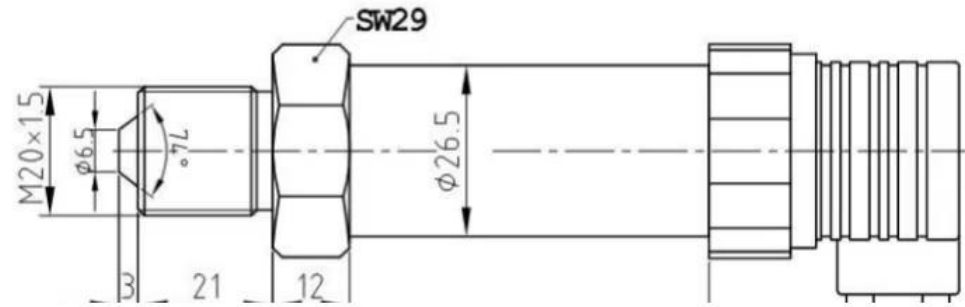
Integral sensing structure with special alloy pressure-bearing components.

Ordering Information

Parameter	Specification
Pressure range	Specify the calibrated range and pressure unit, e.g., 0–120 MPa / 0–1200 bar.
Output	4–20 mA, 0–5 V, or 0–10 V
Accuracy	0.25% FS, 0.5% FS, or 1.0% FS
Process connection	M20 × 1.5, M22 × 1.5, or custom thread; confirm cone-seat dimensions.
Electrical connection	Aviation connector, DIN 43650 / Hirschmann, or cable outlet
Application data	Medium, normal pressure, peak pressure, temperature, pulsation frequency, and installation drawing

Dimensional Drawings

M20 × 1.5 Cone-Sealed Process Connection



Electrical Connection Variants

