Electronic Pressure Digest
Pressure and Temperature Transmitters

[Image of various pressure and temperature transmitters]

Electronic Pressure Measurement

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# General Purpose Pressure Transmitters

## S-20
These rugged pressure transmitters are designed for use in harsh environments where accuracy, reliability and repeatability are critical. Applications include hydraulics and pneumatics, and numerous other processing operations.

**Ranges**
10 psi to 20,000 psi vacuum, compound, absolute

**Output**
4-20 mA, 0-5 V, 0-10 V, others

**Accuracy**
≤0.5%, ≤0.25%, ≤0.125% B.F.S.L.

## S-10
These rugged pressure transmitters are designed for use in harsh environments where accuracy, reliability and repeatability are critical. Applications include hydraulics and pneumatics, and numerous other processing operations.

**Ranges**
50 InWC to 15,000 psi, vacuum, compound, absolute

**Output**
4-20 mA, 0-5 V, 0-10 V, others

**Accuracy**
≤0.25% B.F.S.L., ≤0.125% B.F.S.L.

## S-11
The S-11 non-clogging flat diaphragm pressure transmitter is designed for applications with sludge, slurry or high viscosity media.

**Ranges**
50 InWC to 8,000 psi, vacuum, compound, absolute

**Output**
4-20 mA, 0-5 V, 0-10 V, others

**Accuracy**
≤0.25% B.F.S.L., ≤0.125% B.F.S.L.

## F-20, F-21
The type F-20 and F-21 pressure transmitters feature an integral stainless steel junction box for installation in harsh environments. The F-21 non-clogging flush diaphragm version is designed to measure media containing sludge, slurry or particulates.

**Ranges**
30°-0 HgVac to 15,000 psi (F: 21:8000 psi)

**Output**
4-20 mA, 0-5 V, 0-10 V

**Accuracy**
≤0.25% B.F.S.L.

## Standard Industrial

## S-10
These rugged pressure transmitters are designed for use in harsh environments where accuracy, reliability and repeatability are critical. Applications include hydraulics and pneumatics, and numerous other processing operations.

**Ranges**
50 InWC to 15,000 psi, vacuum, compound, absolute

**Output**
4-20 mA, 0-5 V, 0-10 V, others

**Accuracy**
≤0.25% B.F.S.L., ≤0.125% B.F.S.L.

## Digital Pressure Gauge

### DG-10
The DG-10 digital display features a durable stainless steel housing and integral battery power supply. It is suitable for a wide range of applications and industries, and it is ideal for precise and fast pressure readings.

**Display**
DG-10-S: 4 digit, 7 segment LCD
DG-10-E: 4½ digit, 14 segment LCD (2nd display)

**Power**
2x 1.5 V type AA batteries

**Process connection**
¼” NPT male, ½” NPT male

## OEM

### A-10
The WIKA A-10 pressure transmitter is precision engineered and manufactured to fit many industrial and OEM applications. The rugged design provides resistance to vibration, shock, wide temperature variations, RFI and other extreme environmental conditions that are typical of industrial and OEM applications.

**Ranges**
15 psi to 10,000 psi, vacuum, compound, absolute

**Output**
4-20 mA, 0 - 10 V, 0 - 5 V, others

**Accuracy**
≤ ± 0.5% B.F.S.L., ≤0.25% B.F.S.L.

## Transmitter with Integral LED Display and Switch Options

### PSD-30 (Pressure)
The PSD-30 features an integral red LED display that provides three-way adjustability for a wide variety of installation requirements. It is available with PNP or NPN solid state switches for intelligent control applications and meets VDMA standards for ease of programming.

**Ranges**
Vacuum, compound and gauge ranges up to 8,000 psi

**Display**
Red 4-digit LED, .35” high, 14 segments

**Switch points**
Solid state user programmable, NPN or PNP, single or dual

### TSD-30 (Temperature)

### LSD-30 (Level)

For datasheets and additional information, please visit [www.wika.com](http://www.wika.com) or call 1-877-876-6425.
OEM Mobile Hydraulic Transmitters

MH-2, OT-1, MHC-1

The mobile hydraulic OEM pressure transmitters incorporate WIKA proprietary thin film sensors for exceptional performance, reliability and extended operating life. Custom designs are available for specific OEM requirements. Minimum order quantities may apply.

Ranges
100 psi to 8,000 psi
MHC-1: 1,000 to 10,000 psi

Output
4-20 mA, 1-5 V, 0-10 V, 0.5-4.5 V ratiometric @ 5 V
MHC-1: CANopen or J1939

Accuracy
≤0.5% B.F.S.L.

Refrigeration and Air Conditioning

R-1, AC-1

The R-1 and AC-1 pressure transmitters are specifically designed for refrigeration and air conditioning pressure monitoring applications. The R-1 features stainless steel construction and a completely welded measuring cell. The economical AC-1 features a brass case and ceramic sensing element. Both provide condensation proof construction for long service life. Minimum order quantities may apply.

Ranges
100 psi - 850 psi, compound

Output
4-20 mA, 0-10 V, 0.5 - 4.5 V ratiometric

Accuracy
<1% B.F.S.L

P-30, P-31

The P-30 provides non-linearity of up to 0.04% of span (B.F.S.L.) for precise measurement in critical applications. Each instrument is provided with a test report at no additional cost. Other test certificates are available.

Ranges
30°-0 HgVac to 15,000 psi

Output
USB, 4-20 mA, 0-5 V, 0-10 V

Accuracy
Up to \( \leq 0.05\% \) (terminal based)

OEM Sensor

TTF-1

The WIKA OEM-designed pressure sensor incorporates the most recent advances in thin film technology. This sensor is designed for engineers who want to provide their own power supply and signal conditioning circuitry.

Ranges
10 bar to 1,000 bar

Output
2 mV per V

Accuracy
up to +0.06% of span

High Pressure

HP-2

The HP-2 is designed for ultra-high pressure monitoring and control applications up to 225,000 psi. It provides accurate, reliable and safe performance when exposed to rapid pressure changes.

Ranges
23,000 psi to 225,000 psi

Output
4-20 mA, 0-5 V, 0-10 V

Accuracy
≤0.25% B.F.S.L.

For datasheets and additional information, please visit www.wika.com or call 1-877-876-6425.
Special Purpose Pressure Transmitters, Meters & Displays, UHP

**Panel Mount Digital Indicator**

**DI-15**

The DI-15 features a .40” red LED display and is a compact size for installation in tight spaces. User-adjustable digital filtering improves readability during rapid pressure changes.

**Display**

4 digit, .40” red LED

**Power**

9-28 VDC

**Accuracy**

±0.5% of span ± 1 digit

**Attachable Loop Powered Indicator**

**A-AI-1**

The A-AI-1 is designed for use with the 4-pin DIN 43650 “L” plug supplied with electronic pressure industrial and A-10 4-20mA output pressure transmitters. User-adjustable digital filtering stabilizes the display during rapid pressure changes.

**Display**

-1999 to +9999 user-programmable

**Output**

4-20 mA

**Power**

Loop powered with 3 VDC drop

**Application**

For use with electronic pressure industrial S-10, S-11, S-20 and A-10 pressure transmitters with DIN plug.

**Low Pressure Differential**

**DP-10**

The WIKA DP-10 pressure transmitter is designed for the measurement of extremely low gauge and differential pressures of clean, dry, inert gaseous media. This transmitter uses a linear variable differential transformer (LVDT sensor) for exceptional sensitivity and performance at extremely low pressures.

**Ranges**

0.2 InWC - 200 InWC

**Output**

4-20 mA, 0-5 V

**Accuracy**

≤1.0% of span

**Universal Process Transmitter**

**UPT-20**

The UPT-20 has a turndown capability of up to 20:1 and is available with the HART communications protocol. The high readability LCD display rotates 330° to optimize the viewing angle after installation. The intuitive programming menu is user-friendly for easy setup.

**Ranges**

0…10 psi to 0…10,000 psi

**Output**

4-20 mA 2-wire, 4-20mA w/ HART

**Accuracy**

up to 0.10% of span

**CAN Interface**

**D-20-9**

This very compact CAN Interface series is based on the thin film and piezo sensors. Due to their specially adapted specifications in combination with CAN Interface, these pressure transmitters are the perfect instruments for applications in the mobile hydraulics sector, machine construction and automation systems industry. Contact factory for details.

**Ultra High Purity**

**WUD-20, WUD-25, WUD-26**

Ultra High Purity (UHP) transmitters are specifically designed for ultra pure media applications in semiconductor, flat panel display and microelectronic industries. They feature electropolished Elgiloy sensor assemblies and have long-term stability.

Please consult factory for technical specifications, ranges and available configurations.
**Explosion-proof**

**E-10, E-11**

The E series transmitters are CSA, FM-approved explosion-proof for Class I, Division I hazardous environments.

**Ranges**

5 psi to 15,000 psi, vacuum, compound, absolute

**Output**

4-20 mA or 1-5V low power

**Accuracy**

≤0.25% B.F.S.L.

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**Submersible Level**

**LS-10, LH-10, LH-20**

Submersible level transmitters have a watertight construction suitable for applications in tank level measurement, water/wastewater treatment, and reservoir or well depth measurement. They are submersible up to 1,000 feet. The LH-20 is sub 1" diameter and available in titanium.

**Ranges**

50 InWC to 400 psi

**Output**

4-20 mA, 2-wire

**Accuracy**

≤0.25% (LS-10) - 0.125% (LH-10) B.F.S.L. 0.1% (LH-20)

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**Non-incendive**

**N-10, N-11**

Type N-10/N-11 pressure transmitters are specifically designed for gas compressor systems. These transmitters are engineered to meet Class I, Division 2 non-incendive protection in hazardous environments.

**Ranges**

50 InWC to 15,000 psi, vacuum, compound, absolute

**Output**

4-20 mA or 1-5V low power

**Accuracy**

≤0.25% B.F.S.L.

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**Anti-clog Attachment for Liquid Level Transmitters**

**LevelGuard**

The LevelGuard is compatible with the LS-10, LH-10 and IL-10 submersible liquid level transmitters. It is designed for use in wet wells, lift stations and other applications where sludge, slurry or turbulence may be present.

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**Intrinsically Safe**

**IS-20, IS-21, IS-20F**

WIKA’s intrinsically safe transmitters are FM, ATEX and CSA-approved. They are designed for installation in Class I, Division 1 hazardous locations.

The IS-21 features a flat, non-clogging diaphragm designed to measure media containing sludge, slurry or particulates.

The IS-20-F has an all stainless steel integral junction box for installation in harsh environments.

**Ranges**

50 InWC to 15,000 psi, vacuum, compound, absolute

**Output**

4-20 mA

**Accuracy**

≤0.25% B.F.S.L.

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**Intrinsically Safe**

**IL-10**

WIKA IL-10 intrinsically safe submersible liquid level transmitters are engineered for a wide variety of industrial and municipal liquid level measurement applications installed in hazardous areas. Each transmitter undergoes extensive quality control testing and calibration to achieve high accuracy and reliability.

**Ranges**

50 InWC to 400 psi

**Output**

4-20 mA, 2-wire

**Accuracy**

≤0.125% B.F.S.L.
### 3A Sanitary Transmitters

#### S-10-3A

S-10-3A pressure transmitters meet 3A sanitary criteria for pressure and level measurement in the food, pharmaceutical, cosmetic and beverage industries. They feature 0.25% accuracy, rugged stainless steel construction and a wide operating temperature range.

**Ranges**
15 psi to 1,000 psi vacuum, compound

**Output**
4-20 mA, 0-5 V, 0-10 V

**Accuracy**
≤ 0.50% B.F.S.L.

#### SA-11

WIKA SA-11 pressure transmitters meet 3A and EHEDG sanitary criteria for pressure and level measurement in the food, pharmaceutical, cosmetic and beverage industries. They feature 0.25% accuracy, rugged stainless steel construction and a wide operating temperature range to 300°F.

**Ranges**
100 inWC to 300 psi, vacuum, compound, absolute

**Output**
4-20 mA, 0-5 V

**Accuracy**
≤ 0.25% B.F.S.L.

#### F-20-3A

WIKA F-20-3A pressure transmitters are in compliance with 3A criteria for pressure and level measurement in all sanitary applications. The process wetted surfaces of 316L SS are electropolished to reduce cleaning time. This transmitter features 0.25% output linearity (B.F.S.L.) over a wide operating temperature range.

**Ranges**
50 inWC to 1500 psi vacuum, compound, absolute

**Output**
4-20 mA, 2-wire

**Accuracy**
0.25% B.F.S.L.

### PROFIBUS DP-Interface

#### D-10-7, D-11-7

The D-10-7 and D-11-7 transmitters with accuracies of 0.1 % (or 0.05%) have been designed to enable direct communication to a PC, which is required in the field of test, calibration and service technology.

**Ranges**
5 psi to 15,000 psi

**Output**
PROFIBUS DP (EN 50170)

**Accuracy**
≤0.1% B.F.S.L.

### Digital

#### D-10

The D-10 transmitters with accuracies of 0.1% (or 0.05%) have been designed to enable direct communication to a PC, which is required in the field of test, calibration and service technology. The pressure transmitter’s power supply is taken directly from the RS 232-interface of the PC.

**Ranges**
30°-0 HgVac to 15,000 psi

**Output**
4-20 mA

**Accuracy**
≤0.25% B.F.S.L.

### CANopen

#### D-20-9, D-21-9

The D-20-9 is a precision transmitter with CANopen interface. Because the shock and vibration resistance values comply with the industrial standards, it is ideal for fieldbus applications in mechanical engineering, automation and test benches.

**Ranges**
5 psi to 15,000 psi

**Output**
CAN (DIN / ISO 11898)

**Accuracy**
≤0.25% B.F.S.L.
**Analog**

**T19**

Analog transmitters offer an economical solution to most transmitter applications. A choice of inputs are available for 100 Ohm platinum RTD or any one of eight thermocouple types. The T19 has user selectable ranges and potentiometers for adjustment.

**Inputs**
RTD: 100 Ohm platinum, alpha 0.00385

**Accuracy**
±0.1% of measurement range

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**Analog**

**T24**

With the configurable flexibility of a Windows PC, the T24 is suited for applications in the machine industry and plant construction.

**Inputs**
RTD: 100 Ohm platinum

**Basic configuration**
3 wire 0 ... 150°C

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**DIN Rail**

**T12.30, T19.30, T32.3S**

These transmitters have all the features of the complete head mounted transmitter in a convenient DIN rail package. Typically mounted in electrical enclosures, the DIN rail transmitters provide signal conditioning for PLC and data acquisition applications.

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**Digital**

**T12, T32.1S**

Digital transmitters feature the flexibility of input and range programming combined with high accuracy. The input is programmable for 100 Ohm platinum RTD or any one of 11 thermocouple types. The 4-20 mA output is isolated and linearized to the temperature input. The T32 has HART® protocol for programming and communications.

**Inputs**
RTD: 100 Ohm platinum, alpha 0.00385
Thermocouple: 11 types
Millivolt: 800 mvdc
Resistance: 5K Ohm

**Accuracy**
RTD: (per DIN IEC 770, 23°C, ±5°C) ±0.2°C
Thermocouple: (per DIN IEC 770, 23°C, ±5°C)
Types J, K, T, E, N, L, U: ±1.0°C; Types R, S, B: W5: ±2.0°C

**Isolation**
1500 VAC

**Dimensions**
1.95” dia. (49.5mm), 1.12” ht. (28.5mm)

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**Fieldbus and PROFIBUS PA**

**T53**

T53 has PROFIBUS PA and foundation capabilities and is compatible with RTDs, thermocouples, resistance sensors and millivolt sensors. The T53 is also intrinsically safe and CE approved.

**Inputs**
RTD: platinum or nickel, 100 Ohm
Thermocouple: 10 types
Millivolt: -800 to 800mV
Resistance: 0 to 10K Ohm

**Accuracy**
RTD: (per DIN IEC 700, 23°C, ±5°C) ±0.8°C
Thermocouple: (per DIN IEC 700, 23°C, ±5°C)
Types J, K, T, E, N, L, U: ±1.0°C; Types R, S, B: 2.0°C

**Isolation**
1500 VAC

**Dimensions**
1.95” dia. (49.5mm), 1.12” ht. (28.5mm)
With almost 70 years of experience, WIKA Instrument, LP is the leading global manufacturer of pressure and temperature measurement instrumentation, producing more than 43 million pressure gauges, diaphragm seals, pressure transmitters, thermometers and other instruments annually. WIKA's extensive product line, including mechanical and electronic instruments, provides measurement solutions for any application in a large variety of industries. A global leader in lean manufacturing and instrumentation experience, WIKA also offers a broad selection of stock and custom instrumentation as well as dedicated services to provide customers with the right solutions, at the right time, wherever they need us.