Liquid Level Traducers and Transmitters for Tank Applications

BCM liquid level transmitters are developed from BCM pressure sensors, and most of them are featured by their flush-diaphragm making cleaning easer for tank applications. Nevertheless, the LV35-series are designed of inner cavity with O-ring seal in its wetted parts. The wetted parts of the other series (LV36-, LV37-, LV38-, LV39-, and LV66-series) are made from 316L SS and the seal of wetted parts is guaranteed by fully-welded construction to prevent liquid leakage into the products.

The temperature compensation technique is used to compensate the thermal drift of the level transducers and transmitters. A dedicated seal technique is applied to the cable gland so as to guarantee no leakage of liquid into the liquid level transmitters.

- pressure types: gauge or absolute
- accuracy: 0.25 %fs, 0.5 %fs
- protection: IP68
- For transmitters:
  - output: 4~20 mA, or 1~5 Vdc, 0~5 Vdc, 10%~90%Vs ratiometric, I^2C, SPI
  - power supply: 12, ..., 36 Vdc, or 5 Vdc (for ratiometric or digital output)
- For transducers:
  - output sensitivity: ≥ 15 mV/V
  - excitation: 5, ..., 10 Vdc; or 0.5, ..., 2 mA

LV35 Submersible Liquid Level Traducers and Transmitters

for Tank Applications in Chemical Industry

liquid medium: corrosive chemical liquid
diaphragm: ceramic (97% Al_2O_3)
housing material: PTFE
measuring ranges: 0~1 mH_2O, ..., ~200 mH_2O
(for level transducers,
min range = 1 mH_2O, output sensitivity ≥ 15 mV/V)

LV36 Submersible Liquid Level Traducers and Transmitters

for Tank Applications

liquid medium: water, seawater, diesel, gasoline
measuring ranges: 0~1 mH_2O, ..., ~200 mH_2O
(for level transducers,
min range = 1 mH_2O, output sensitivity ≥ 15 mV/V)

LV39 Submersible Liquid Level Traducers and Transmitters

with Overvoltage Protection

measuring ranges: 0~1 mH_2O, ..., ~200 mH_2O
(for level transducers,
min range = 1 mH_2O, output sensitivity ≥ 15 mV/V)

LV37 Submersible Liquid Level Transmitters

with Display

measuring ranges:
0~1 mH_2O, ..., ~200 mH_2O
output option:
4~20 mA with HART protocol

Differential Pressure Transducers & Transmitters

BCM differential pressure transducers and transmitters (218D and 219D) are manufactured from differential pressure sensors (101B(a19D)) for smart valve application. The temperature compensation technique is used when these transmitters are compensated for their thermal drift.

The temperature specifications of BCM differential pressure transducers and transmitters are the same as the 131-series pressure transducers & transmitters.

218D Differential Pressure Transducers

for Smart Valve Application

diff. pressure ranges: 0~0.1 bar, ..., ~35 bar
static pressure: 10 x full scale (max. 100 bar)
output sensitivity: ≥ 4 mV/V
accuracy: 0.5 %fs
excitation: 5 Vdc or 1 mA
process connection: G1/4 male or female
electrical interface: PVC shielded cable, DIN43650

219D Differential Pressure Transmitters

for Smart Valve Application

diff. pressure ranges: 0~0.1, ..., 0~35 bar
static pressure: 10 x full scale (max. 100 bar)
output: 4~20 mA, 0~5 Vdc, 10%~90%Vs ratiometric, I^2C, SPI
accuracy: 0.5 %fs
supply: 12, ..., 36 Vdc, or 5Vdc (for ratiometric or digital output)
process connection: G1/4 male or female
electrical interface: DIN 43650

LV38 Liquid Level Transmitters

for Flange Mounting

measuring ranges:
0~1 mH_2O, ..., ~200 mH_2O
output option:
4~20 mA with HART protocol

LV66 Oil Level Transmitters

for Fuel Tank Applications

liquid medium: oil, fuels, or other non-conductive liquid
measuring ranges: 5~50 mm, ..., 5~1000 mm
output option: 4~20 mA, 0~5 Vdc, 0~10 Vdc
accuracy: 0.5 %fs, 1 %fs, ..., 5 %fs,

The listed specifications are subject to change without prior notice.

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BCM Pressure and Liquid Level Transducers and Transmitters

Product Overview

110S

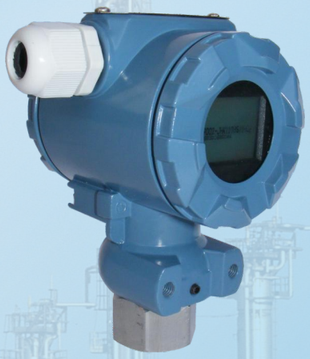
131S

219D

105C

102C

LV 36



225T

733F

BCM SENSOR

BCM SENSOR TECHNOLOGIES bvba

Pressure Transducers & Transmitters

BCM pressure transducers and transmitters are developed from BCM pressure sensors. Both the temperature compensation and nonlinearity compensation techniques are used to compensate the thermal drift and improve the accuracy of transducers and transmitters. The difference between BCM transducers and transmitters is the power source and output signal (see below for detailed specifications).

Except for the 102C-, 105C-, 131C- and 132C-series as listed below, the wetted parts of BCM pressure transducers/transmitters are made from either 17-4PH stainless steel (SS) mono-block or 316L pressure diaphragm welded to 17-4PH SS fittings. The pressure diaphragm of the 102C-, 105C-, 131C- and 132C-series is made from 97% Al2O3 ceramics assembled in the fittings made from 304 SS (102C-, 105C-, 131C-series) or in the fittings made from PVDF material (132C-series).

131-series
Inner Cavity Pressure Transmitters
for General Purpose

- pressure medium: air, gas, water, diesel, gasoline or other liquid
- output: 4~20 mA, 0~5 Vdc, 1~5 Vdc, 10%~90%Vs ratiometric, I²C, SPI
- supply: 12, ..., 36 Vdc, or 5 Vdc (for ratiometric or digital output)
- compensated temp. range: -20 ~ +85 °C
- operating temp. range: -40 ~ +125 °C
- process connection: G1/4 male, M12 x 1.5 male (other threads on request)
- electrical connection: DIN43650 or cable

131S Pressure Transmitters

piezoresistive technology
wetted parts: 316L SS (fully welded, no O-ring)
pressure ranges: 0~0.35 bar, …, ~600 bar
pressure types: gauge, absolute, sealed gauge
accuracy: 0.25 %fs, 0.5 %fs

131C Pressure Transmitters

thick-film technology
wetted parts:
316L SS (ceramic diaphragm, sealed by O-ring)
option: - PVDF (ceramic diaphragm, sealed by O-ring)
- mono-block 17-4PH (min range = 0~20 bar)
pressure ranges: 0~2 bar, …, ~400 bar
pressure types: gauge
accuracy: 0.5 %fs, 1 %fs

131F Pressure Transmitters

metal foil strain gauge technology
17-4PH SS diaphragm
pressure ranges: 0~16 bar, …, ~400 bar
pressure types: gauge
accuracy: 0.05 %fs, 0.1 %fs, 0.25 %fs, 0.5 %fs

131G Pressure Transmitters

glass bonding semiconductor strain gauge technology
wetted parts: mono-block 17-4PH SS
pressure ranges: 0~5 bar, …, ~600 bar
pressure types: gauge
accuracy: 0.5 %fs, 1 %fs

136S/136F/136C Pressure Transmitters
with Display for Field Applications

accuracy: 0.5 %fs, 1 %fs
display: 4-digit LCD
other specifications:
refer to 131-series and 132-series

110S-series
Precision Pressure Transducers
Integrated with Temperature Measuring Function
for Metering Applications

piezoresistive technology
wetted parts: 316L SS (fully welded, no O-ring)
pressure medium: gas (e.g., methane), diesel, gasoline
pressure ranges: 0~2 bar, ~5 bar, ~10 bar, ~20 bar, ~30 bar, ~60 bar, ~80 bar
proof pressure: 300 %fs
pressure types: absolute, gauge
output sensitivity: ≥ 10 mV/V
accuracy: 0.2 %rdg, 0.3 %rdg, or 0.1 %fs, 0.2 %fs
input resistance: 8±5 kΩ
output resistance: 4±2 kΩ
excitation: 1.5 Vdc, …, 5 Vdc
compensated temp. range: -30 ~ +75 °C
operating temp. range: -40 ~ +125 °C
temperature sensor sensitivity: 2 mV/°C
process connection: G1/4 male, M12 x 1.5 male
electrical connection: silicone, PUR, or PVC cable

132-series
Flush-Diaphragm Pressure Transmitters
for Viscous or Paste/Melt Medium Applications

- pressure medium: paste, lubricate agent, crude oil, medium with grains, or melt medium
- output: 4~20 mA, 0~5 Vdc, 1~5 Vdc, 10%~90%Vs ratiometric, I²C, SPI
- supply: 12, ..., 36 Vdc, or 5 Vdc (for ratiometric or digital output)
- compensated temp. range: -20 ~ +85 °C
- operating temp. range: -40 ~ +125 °C
- process connection: G1/2 male or M20 x 1.5 male
- electrical connection: DIN43650 or cable

132S Pressure Transmitters

piezoresistive technology
wetted parts: 316L SS (fully welded)
pressure ranges: 0~1 bar, …, ~160 bar
pressure types: gauge, absolute, sealed gauge
accuracy: 0.5 %fs

132S(t) Pressure Transmitters with Tri-Clamp for Hygienic Applications

specifications: refer to 132S

132C Pressure Transmitters

thick-film technology
wetted parts:
316L SS (ceramic diaphragm, sealed by O-ring)
option: PVDF (ceramic diaphragm, sealed by O-ring)
pressure ranges: 0~1 bar, …, ~100 bar
pressure types: gauge
accuracy: 0.5 %fs

132F Pressure Transmitters

metal foil strain gauge technology
17-4PH SS diaphragm
pressure ranges: 0~16 bar, …, ~400 bar
pressure types: gauge
accuracy: 0.25 %fs, 0.5 %fs

102C-series
Pressure Transmitters
for HVAC and Refrigerator Applications

thick-film technology
wetted parts: copper tube (ceramic diaphragm, sealed by O-ring)
pressure medium: air, water, refrigerants
pressure ranges: 0~2.5 bar, …, ~100 bar
pressure types: gauge, sealed gauge
output: 4~20 mA, 0~5 Vdc, 10%~90%Vs ratiometric, I²C, SPI
accuracy: 1 %fs, 2 %fs
supply: 12, ..., 36 Vdc, or 5 Vdc
compensated temp. range: -30 ~ +80 °C
operating temp. range: -40 ~ +135 °C
process connection: copper tube
electrical connection: Packard 12065287, PVC shielded cable

105C-series
Pressure Transmitters
for Automotive Industry and Household Appliances

thick-film technology
wetted parts: 316L SS (ceramic diaphragm, sealed by O-ring)
pressure medium: air, water, automotive oil
pressure ranges: 0~1 bar, …, ~400 bar
pressure types: gauge
output: 4~20 mA, 0~5 Vdc, 10%~90%Vs ratiometric, CAN open, SPI
accuracy: 0.5 %fs, 1 %fs
supply: 12, ..., 36 Vdc, or 5 Vdc
compensated temp. range: -20 ~ +85 °C
operating temp. range: -40 ~ +135 °C
process connection: 3/8 UNF male or female
electrical connection: Packard 12065287

430-series
Low-Pressure Transmitters of Inner Cavity

- pressure medium: air, gas, water, or other liquid
- output: 4~20 mA, 0~5 Vdc, 1~5 Vdc, 10%~90%Vs ratiometric, I²C, SPI
- supply: 12, ..., 36 Vdc, or 5 Vdc (for ratiometric or digital output)
- compensated temp. range: -20 ~ +85 °C
- operating temp. range: -40 ~ +125 °C
- process connection: G1/4 male or female (other thread on request)
- electrical connection: DIN43650 (other connection on request)

430S Gauge Pressure Transmitters

piezoresistive technology
wetted parts: 316L SS (fully welded)
pressure ranges: -30 ~ +30 mbar, -70 ~ +70 mbar, …, -600 ~ +600 mbar
pressure types: gauge
accuracy: 0.5 %fs

433S Vacuum (Absolute Pressure) Transmitters

piezoresistive technology
wetted parts: 316L SS (fully welded)
pressure ranges: 0~130 mbar, ~170mbar, ~200 mbar, ~300 mbar, ~400 mbar, ~500 mbar, ~600 mbar, ~800 mbar
pressure types: absolute
accuracy: 0.5 %fs

700-series
High-Pressure Transducers and Transmitters
for Water Jet or Oil Well Applications

- pressure medium: water, engineering oil, or other liquid
- compensated temp. range: -20 ~ +85 °C
- operating temp. range: -40 ~ +125 °C
- process connection: M22 x 1.5 male (other threads on request), 2" 1502 Wing Union fittings for 733F
- electrical connection: DIN43650 (other connection on request)

720G High-Pressure Transducers and Transmitters

glass-bonding semiconductor strain gauge technology
wetted parts: mono-block 17-4PH SS
pressure ranges: 0~200 bar, …, ~8000 bar
pressure types: gauge
output sensitivity (for transducer): ≥ 5 mV/V
output (for transmitter):
4~20 mA, 0~5 Vdc, 1~5 Vdc, 10%~90%Vs ratiometric, I²C, SPI
accuracy: 0.5 %fs, 1 %fs
bridge resistance (for transducer): 2.5±0.5 kΩ

722F High-Pressure Transducers and Transmitters

metal foil strain gauge technology
wetted parts: mono-block 17-4PH SS
pressure ranges: 0~200 bar, …, ~5000 bar
pressure types: gauge
output sensitivity (for transducer): ≥ 1.5 mV/V
output (for transmitter):
4~20 mA, 0~5 Vdc, 1~5 Vdc, 10%~90%Vs ratiometric, I²C, SPI
accuracy: 0.5 %fs, 1 %fs
bridge resistance (for transducer): 700 Ω, 1 kΩ, 2 kΩ

733F Pressure Transducers and Transmitters with Wing Union Fittings for Oil Well Applicators

metal foil strain gauge technology
wetted parts: 17-4PH SS
pressure ranges: 0~400 bar, …, ~1200 bar
pressure types: gauge
output sensitivity (for transducer): ≥ 1 mV/V
output (for transmitter):
4~20 mA, 0~5 Vdc, 1~5 Vdc, 10%~90%Vs ratiometric, I²C, SPI
accuracy: 0.3 %fs, 0.5 %fs
bridge resistance (for transducer): 3 kΩ

225T-series
Heavy-Duty Pressure Transmitters with Display

wetted parts: 316L SS
pressure ranges: 0~0.015 bar, …, ~8000 bar
pressure types: gauge, absolute
output: 4~20 mA (option: with HART protocol)
accuracy: 0.2 %fs, 0.5 %fs
power supply: 12, ..., 36 Vdc
process connection: M20 x 1.5 male
electrical interface: via M20 x 1.5
explosion proof: Exd II CT6