

# Model 136F Pressure Transmitters with Integrated Display

## Description

Based on BCM metal-foil strain gauge technology, 136F strain gauge pressure transmitter is developed for general purpose of pressure measurements in various industrial applications. The transmitters provide analogue 4~20 mA output signal with integrated 3 ½ digit display, so the measured pressure can be displayed on field.

The model 136F pressure transmitter is available with a variety of options for process connections: inner cavity type with protrude port (type Ia), inner cavity type with flat port (type Ib), female thread type (type Ic) and flush diaphragm type (type IIa). Process connections of type I(a, b, c) are used to measure gases or dilute liquids, while the connection of type IIa is specially used to measure paste or fluids with grains.

The measuring ranges of model 136F span from 0~16bar to 0~2000bar. The output signal is 4~20mA. The measuring accuracy is 0.5%fs (fs = full scale). The integrated display provided can be either LCD for display purpose only, or smart LED which allows the user to set parameters such as zero, span, damping time and alarms.

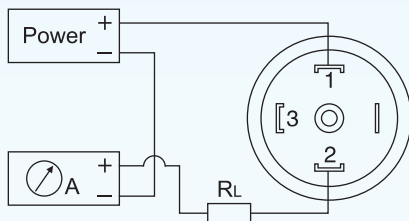
## Features

- pressure ranges: 0~16bar, ..., 0~2000bar
- output signal: 4~20mA, with integrated 3 ½ digits display
- display accuracy: 0.5%fs
- compensated temperature ranges: -10 ~ +60°C
- materials: 17-4PH SS (pressure diaphragm)  
316 SS (wetted parts), 304 SS (housing)
- housing protection: IP65 (connector)  
IP66 (direct cable)



## Electrical connection

(sketch of an example of 4~20 mA output signal configured to a DIN 43650 connector)



136F (type Ia):  
inner cavity  
with protrude port



136F (type Ib):  
inner cavity  
with flat port

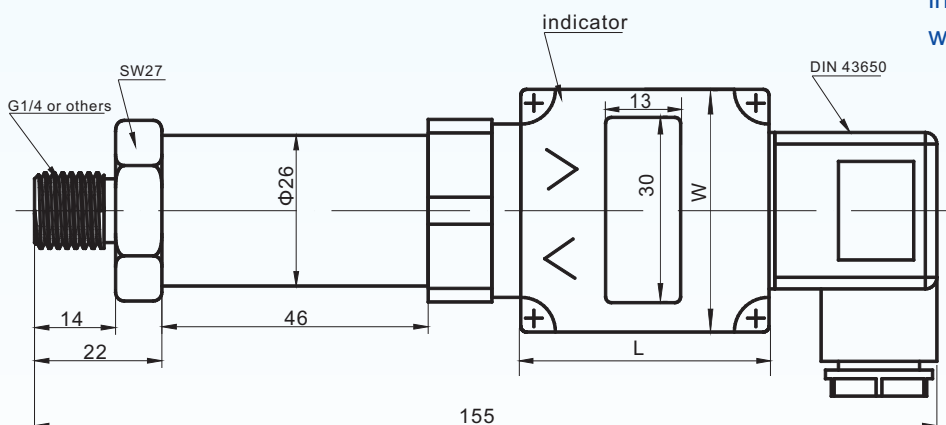


136F (type Ic):  
inner cavity  
with internal thread



136F (type IIa):  
flush diaphragm

## Dimensions



dimensions of the display:

| display   | LxWxH* (mm)  |
|-----------|--------------|
| smart LED | 42.5x42.5x46 |
| LCD       | 45x45x46     |

\*: H is the thickness of the display.

**BCM SENSOR TECHNOLOGIES BVBA**

# Model 136F

## Pressure Transmitters with Integrated Display



### Technical Data

| parameter                       | units              | specifications  |
|---------------------------------|--------------------|---|
| pressure media                  | type Ia, Ib, Ic    | gases or dilute liquids (compatible with the wetted parts' materials)     |
|                                 | type IIa           | paste or fluids with grains (compatible with the wetted parts' materials) |
| pressure ranges and types       | bar, gauge (G)     | 0~16, ~25, ~40, ~60, ~100, ~160, ~250, ~400, ~600, ~1000, ~2000           |
|                                 | bar, absolute (A)  | NA  |
|                                 | bar, sealed G (SG) | NA  |
| overload pressure               | %fs                | 150   |
| output signal                   |                    | 4~20mA (standard), other output available on request                      |
| display accuracy                | %fs                | ±0.5  |
| long-term stability of zero     | %fs/year           | ±0.15   |
| power supply                    | Vdc                | 12, ..., 30 (depending on the load resistance)                            |
| load resistance                 | Ω                  | 250, ..., 1100  |
| storage temperature range       | °C                 | -40 ~ +125  |
| operating temperature range     | °C                 | -40 ~ +125  |
| compensated temperature range   | °C                 | -10 ~ +60   |
| temperature coefficient of span | %fso/°C            | ± 0.03  |
| temperature coefficient of zero | %fso/°C            | ± 0.03  |
| response time                   | ms                 | <2  |
| process interface               | type Ia, Ib, Ic    | G1/4 (standard), 1/4 NPT, M14x1.5, others are available on request        |
|                                 | type IIa           | G1/2 (standard), M20x1.5  |
| electrical interface            | connector/cable    | DIN 43650 connector (standard), circular plug-in connector                |
|                                 |                    | shielded PVC cable (2m length, 2-wire, Φ4.7mm)                            |
| materials                       | diaphragm          | 17-4PH  |
|                                 | wetted part        | 316 SS  |
|                                 | housing            | 304 SS  |
| environment protection          | IP rating          | Ip65 (DIN 43650 connector, or plug-in connector) , IP67 (direct cable)    |
| integrated display              |                    | 3 ½ digits LCD with zero & span adjustment function.                      |
|                                 |                    | 3 ½ digits smart LED with zero & span adjustment, alarm functions         |
| weight                          | g                  | ~180  |

The listed specifications are subject to change without prior notice.

**BCM SENSOR TECHNOLOGIES BVBA**

# Model 136F

## Pressure Transmitters with Integrated Display



### Ordering Information

| position (pos.) 1: model  |               |               |                       |         |         |                   |        |        |
|---|---------------|---------------|-----------------------|---------|---------|-------------------|--------|--------|
| 136F(type Ia)   | 136F(type Ib) | 136F(type Ic) | 136F(type IIa)        |         |         |                   |        |        |
| pos. 2: pressure ranges and references  |               |               |                       |         |         |                   |        |        |
| 16bar   | G             | 160bar        | G                     | 1600bar | G       | G: gauge pressure |        |        |
| 25bar   | G             | 250bar        | G                     | 2000bar | G       |                   |        |        |
| 40bar   | G             | 400bar        | G                     |         |         |                   |        |        |
| 60bar   | G             | 600bar        | G                     |         |         |                   |        |        |
| 100bar  | G             | 1000bar       | G                     |         |         |                   |        |        |
| pos. 3: output signal   |               |               |                       |         |         |                   |        |        |
| 4/20mA (standard)   |               |               |                       |         |         |                   |        |        |
| pos. 4: accuracy  |               |               |                       |         |         |                   |        |        |
| 0.5%fs  |               |               |                       |         |         |                   |        |        |
| pos. 5: mechanical interface  |               |               |                       |         |         |                   |        |        |
| for type Ia, Ib, Ic: G1/4 (standard)  |               |               | 1/4 NPT               |         | M14x1.5 |                   |        |        |
| for type IIa: G1/2 (standard)   |               |               | M20x1.5               |         |         |                   |        |        |
| pos. 6: electrical interface  |               |               |                       |         |         |                   |        |        |
| DIN43650 = DIN 43650 connector (standard)   |               |               |                       |         |         |                   |        |        |
| plug-in = circular plug-in connector  |               |               |                       |         |         |                   |        |        |
| (Φ4.7,2-core,shielded,blkPVC,2m) = Φ4.7mm diameter, 2-core, shielded black PVC cable with length of 2m. |               |               |                       |         |         |                   |        |        |
| pos. 7: environment protection  |               |               |                       |         |         |                   |        |        |
| IP65 (standard)   |               |               | IP67 (only for cable) |         |         |                   |        |        |
| pos. 8: integrated display  |               |               |                       |         |         |                   |        |        |
| (3½ LCD,Z&S) = 3 ½ digits LCD with zero & span adjustment function                                      |               |               |                       |         |         |                   |        |        |
| (3½ LCD,Z&S,alarm) = 3 ½ digits LCD with zero & span adjustment function, alarm function                |               |               |                       |         |         |                   |        |        |
| pos. 9: customized specifications   |               |               |                       |         |         |                   |        |        |
| “(*)” is necessary only if any customized parameter is required, otherwise it is neglectable.           |               |               |                       |         |         |                   |        |        |
| pos.1   | pos. 2        | pos. 3        | pos. 4                | pos. 5  | pos. 6  | pos. 7            | pos. 8 | pos. 9 |

### Examples of Ordering Code

- standard transmitter:

136F(type Ia)-60barG-4/20mA-0.5%fs-G1/4-DIN43650-IP65-(3½ LCD,Z&S)

- customized transmitter:

136F(type IIa)-200barG-4/20mA-0.5%fs-G1/2-DIN43650-IP65-(\*)

(\*): Customized pressure range = 0~200barG.



**BCM SENSOR TECHNOLOGIES BVBA**