

## Measuring Roll MUW

### Scope of Supply

Measuring roll with two force sensors , each with 5 m cable (PVC).

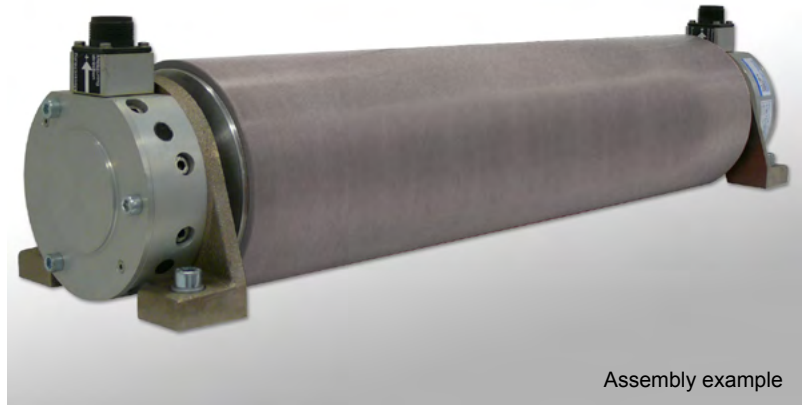
Cable connection variant depending on the sensor

### Additional Option

F: For use in explosive areas, incl. J-Box

### Additional Accessories

Bearing support blocks



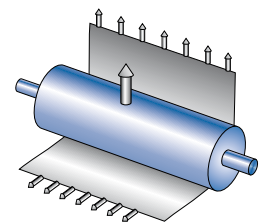
Assembly example

| Available models of the measuring roll |  |
|--|--|
| Dimensions                             | On customer request  |
| Other sensors                          | On request   |
| Material                               | Steel, stainless steel, aluminium                                      |
| Surface coatings                       |  |
|  | Chromium, nickel, teflon, rubber, plasma coated, hardcoated / anodized |
| Surface structure                      | Fluted, grooved, rhombic, belt ground etc.                             |
| Surface roughness                      | Standard: Rz 8 µm or on customer request                               |
| Balance quality                        | Q 6,3 ; Q 2,5 ; Q1 (According to German standard VDI 2060)             |

### Special Features

- Measuring roll with mounted web tension sensors
- Measuring range from 200 up to 30 000 N
- Separate or joint measurement of bearing forces
- Cost effective compact design, simple installation
- Roll diameter and surface treatment according to customer specification

The measuring roll MUW is used to measure web tension forces, e.g. in moving webs of paper, textile, plastics, metal. The compact design enables quick and cost effective integration into OEM machines or retrofitting into existing machines. The MUW consists of the roll with shafts and the radial force sensors BZA or BZN.



Bearing support blocks LBZR are supplied on request. The roll can be delivered

according to customer requirements with

regard to dimensions, type of material and surface treatment.

Rolls can be ordered in steel, stainless

steel or aluminium, also with coating. The measuring sensors

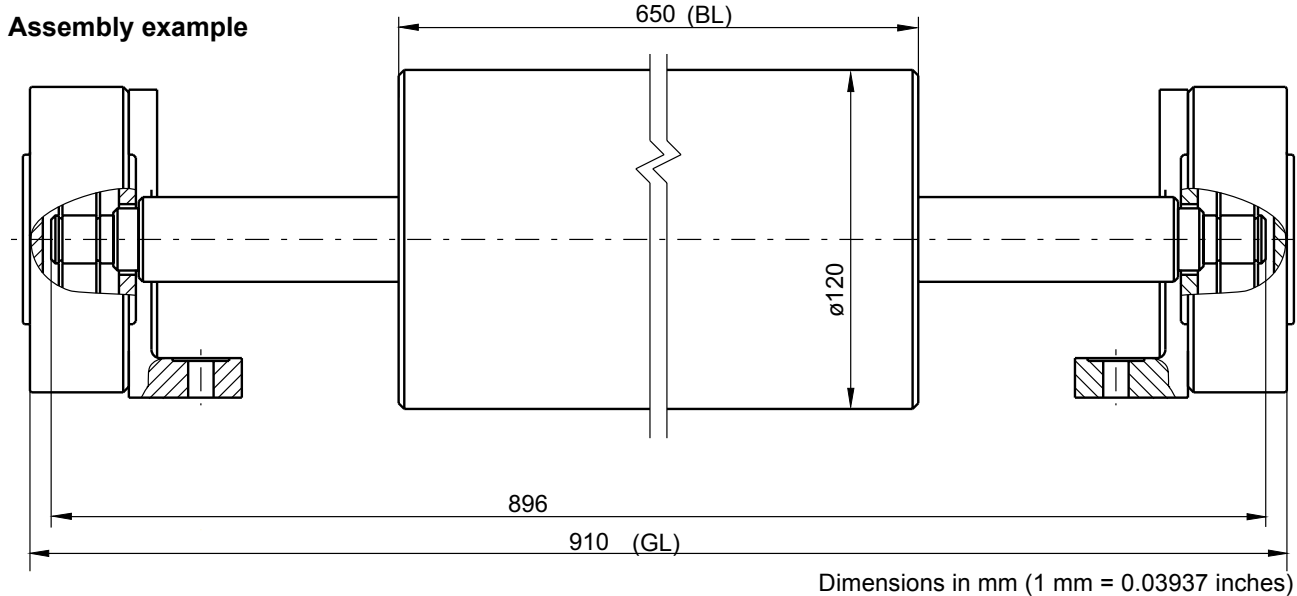
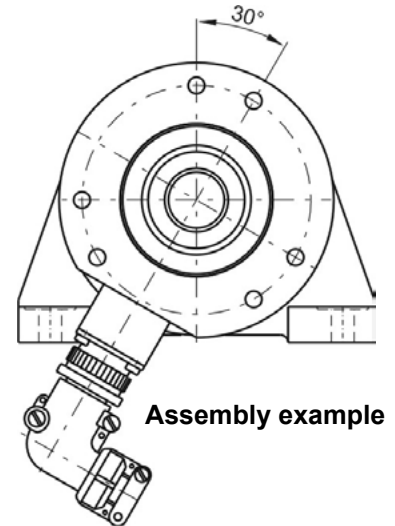
can be mounted directly onto the machine frame or with mounting brackets.

### Ordering Example

**MUW120-650-910-F**

|                     |  |
|---------------------|--|
| Type                |  |
| Roll diameter       |  |
| Roll length (BL)    |  |
| Overall length (GL) |  |
| Variants / Options  |  |

| Technical Data  | Values (%) based on nominal force |
|---|-----------------------------------|
| Gradation of measuring range (see Sensor Product Description) |                                   |
| Max. operating force  | 160 %                             |
| Nominal rating<br>(with Option F: J-Box necessary)            | 1,5 mV / V                        |
| Combined error  | 0,5 %                             |
| Nominal ambient temperature                                   | +10 ... + 60 °C / 32... 140 °F    |
| Operational temperature range                                 | - 10 ... + 70°C / 14... 158 °F    |
| Nominal resistance of the strain gauge bridge                 | 700 Ω                             |
| Bridge supply voltage   | 10 VDC                            |
| Enclosure protection  | IP50                              |
| Special enclosure protection                                  | On request                        |



**Maintenance**

The system does not require any maintenance under normal operating conditions. In case of overload, however, review the zero force value. The devices may not be opened. No wear and spare parts result.



**Use of explosion-proof sensors in measuring rolls**

**in hazardous areas of category II 2 G EEX ia IIC T4**

Before mounting and commissioning the supplied documentation must be read carefully and understand.

The described instructions must be followed. The installation and commissioning has to be carried out only by qualified persons. Before starting up, ensure that

- the compliance of velocity of the measuring roll is >1m/s
- a bleeder resistance of <10<sup>6</sup> Ω obtain from the measuring roll to the machine ground

In operation, the bearings should be checked regularly on running noise to detect early faults. During a plant shut-down the smooth-running of the bearings must be checked regularly. The bearings are maintenance-free, but must be replaced by the manufacturer after three years cause of the aging process of the bearing fat.