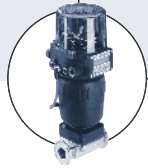




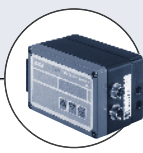
- Fully integrated in Burkert's process control systems
- Insensitive to coating fluids
- Wide range of applications: Fertiliser dosing, cooling water monitoring, concentration measurement

Type 8223 can be combined with...



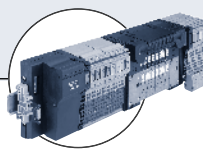
**Type 2031 (8630)**

Continuous  
TopControl



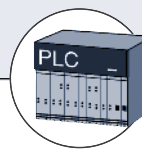
**Type 1067**

Continuous  
SideControl



**Type 8644-P AirLINE**

Valve Island with  
electronic I/O



**PLC**

The conductivity transmitter Type 8223 is available in a splash-proof plastic IP65 housing. The sensor component consists of a pair of magnetic coils in a PVDF or PEEK housing. In order to measure conductivity, an AC voltage source is connected to the primary magnetic coil. The magnetic field induced generates a current in the secondary magnetic coil.

The intensity of the induced current is a direct function of the conductivity of the solution. The integrated temperature sensor for automatic compensation is a standard feature in the sensor housing. The transducer Type 8223 functions in a 3-wire circuit and requires a power supply of 12-30 VDC.

4–20 mA standard signal is available as output signal, proportional to the conductivity or the temperature of the fluid. A wide range of stainless steel, brass and plastic fittings are available (see datasheet Type S020).

| Fitting and sensor data         |   |
|---------------------------------|---|
| <b>Pipe diameter</b>            | 1 1/4" to 8" (DN 32 to DN 200)  |
| <b>Measuring ranges</b>         |   |
| Conductivity                    | 10 µS/cm up to 1 mS/cm<br>100 µS/cm up to 10 mS/cm<br>1 mS/cm up to 100 mS/cm |
| Temperature                     | 10 mS/cm up to 1 S/cm<br>14°F to 176°F (-10°C to +80°C)                       |
| <b>Fitting</b>                  | S020 (see corresp. data sheet)  |
| <b>Materials wetted parts</b>   |   |
| Finger                          | PVDF or PEEK  |
| O-ring                          | FKM OR EPDM   |
| <b>Temperature compensation</b> | Automatic with integrated temperature sensor with reference temperature 77°F  |

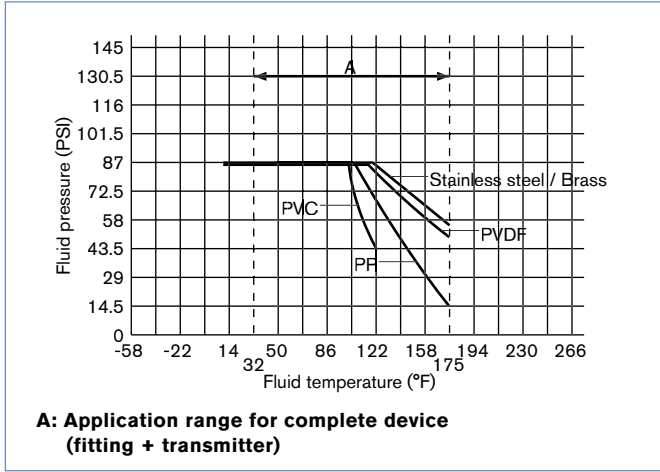
| Medium data               |   |
|---------------------------|---|
| <b>Medium temperature</b> | 14°F to 176°F (-10°C to +80°C) (depends on fitting)   |
| <b>Fluid pressure</b>     | max. 85 PSI (Depends on temperature and fitting material, see temperature-pressure diagram) |

| Electronic module data     |   |
|----------------------------|---|
| <b>Accuracy</b>            | ±2% of full scale (within 32°F up to 158°F)                           |
| <b>Voltage supply</b>      | 12 up to 30 VDC   |
| <b>Outputs</b>             |   |
| Analog signal              | 4–20 mA programmable, proportional to the conductivity or temperature |
| <b>Max. Load</b>           | 1000 W at 30 V<br>690 W at 24 V<br>300 W at 15 V<br>150 W at 12 V     |
| <b>Current consumption</b> | Max. 50 mA<br>+ 22 mA analog output                                   |
| <b>Materials</b>           |   |
| Housing                    | PEHD  |

| General data               |   |
|----------------------------|---|
| <b>Ambient temperature</b> |   |
| Operating and storage      | 32°F to 140°F (0°C to +60°C)                    |
| <b>Protection class</b>    | IP65, relative humidity max. 80%, non condensed |

**Pressure/temperature diaphragm**

Please be aware of the fluid pressure-temperature dependance according to the respective fitting+sensor material as shown in the diagram.



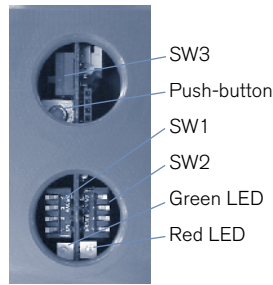
**Programming**

Configuration is done by DIP switches.

- SW1:** Selection of
- ▶ measuring range (switches 1 and 2)
  - ▶ filtering level of conductivity (switches 3 and 4)

- SW2:** Selection of
- ▶ temperature compensation or
  - ▶ transmission of temperature on 4...20 mA output

- SW3:** Selection of
- ▶ current output mode, sinking or sourcing



Push-button allows calibration of sensor "zero conductivity" point.

**Ordering chart for Type 8223 - for fitting S020**

(To be sold separately)

| Output  | Sensor material | Item no.  |
|---------|-----------------|-----------|
| 4-20 mA | PVDF            | 440 440 L |
|         | PEEK            | 550 335 C |

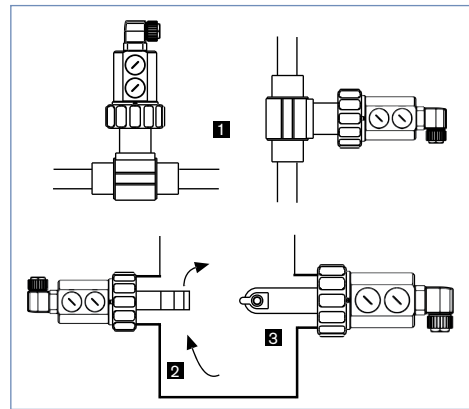
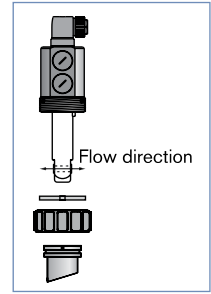
**Installation**

**A-** The inductive conductivity transmitter 8223 can be easily installed into pipes using our specially designed S020 fitting system.

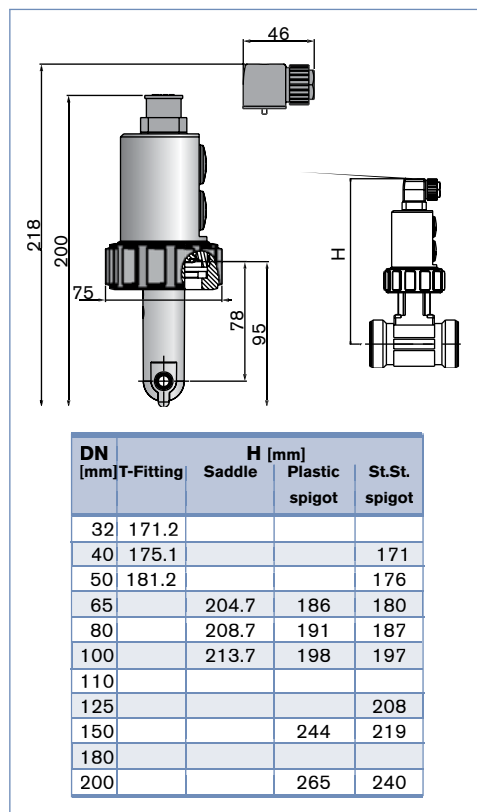
**B-** The device must be protected against constant heat radiation and other environmental influences, such as magnetic fields or direct exposure to sunlight.

**C-** The device can be mounted in following positions:

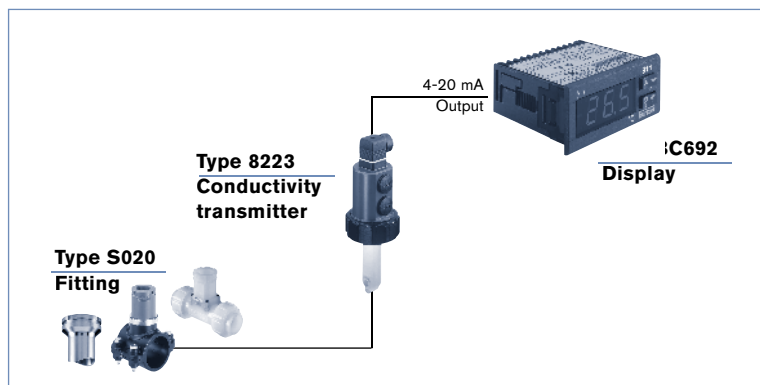
- 1 Horizontal or vertical pipes
- 2 Mounting in tank without mixer
- 3 Mounting in tank with mixer



## Dimensions [mm]



## Interconnection possibilities with Type 8223



**Industrial Dynamics Co**

**1-800-940-0453**

In case of special application conditions,  
please consult for advice.

We reserve the right to make technical  
changes without notice.

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