

Level transmitter with Teflon® probe



Advantages / Benefits

- ▶ Accurate and reliable level measurement up to 3 meters
- ▶ Two-wire transmitter with isolated, 4-20 mA output
- ▶ Self grounding probe does not require any reference electrode in plastic tanks
- ▶ All plastic construction with FEP Teflon® probe
- ▶ Standard probes available in 500, 750, 1000, 1500, 2000, 2500 or 3000 millimeter lengths
- ▶ PP enclosure rated IP65 with PG13 cable gland
- ▶ G 3/4 mounting threads

Application

Level Measurement

Relatively clean, non-coating liquids including acids, chemicals, water or waste water.

Conductive liquids greater than 100 micro-Siemens.

Non-conductive liquids greater than 20 dielectric constant units.

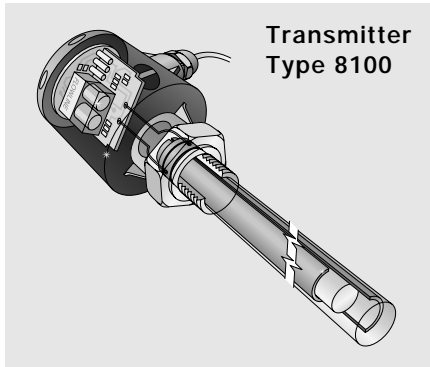
Output

The capacitance transmitter provides a two-wire, 4-20 mA output for level measurement.

Interface

Controller

Type 8620 continuous rail mount controller



Transmitter Type 8100

**Principle of Operation**

The capacitance transmitter measures the dielectric constant values which are present in all materials to determine exact changes in liquid level. The patented capacitance probe features two electrode plates and a guard wire which are completely encapsulated in FEP Teflon®. When liquid rises or falls against the probe, the dielectric material in the medium

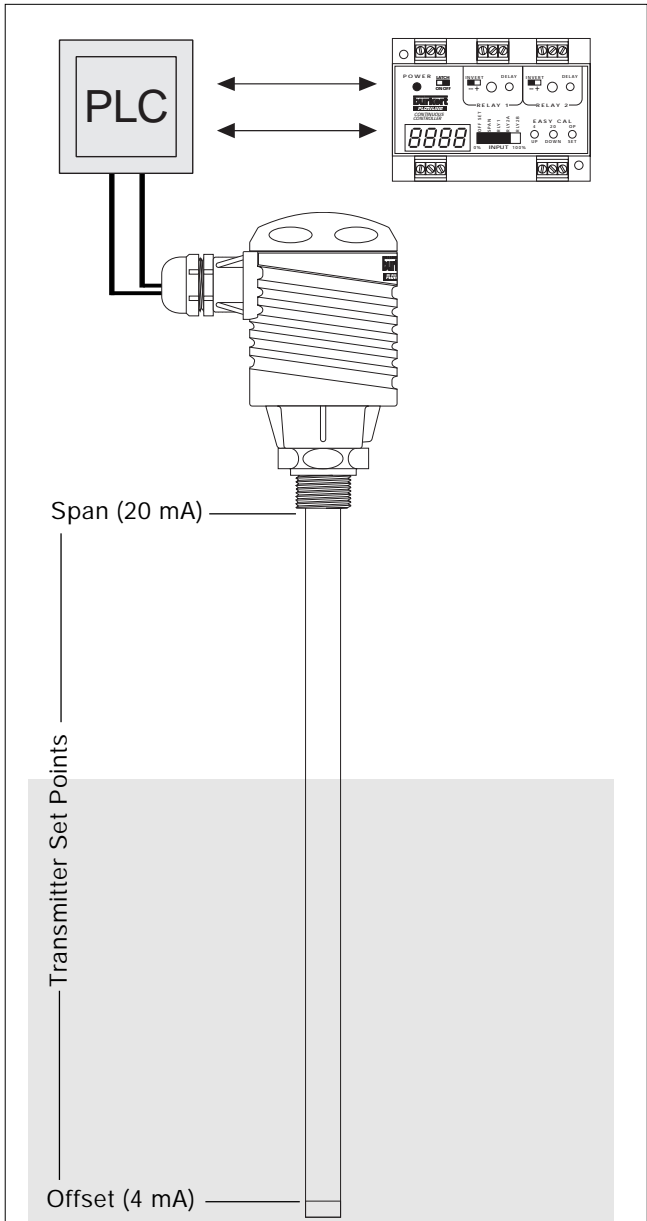
bridges the signal across the active and ground plates to complete the circuit. The change in capacitance value is converted by the processing electronics into a proportional, 4-20 mA signal output. The transmitter is best applied with conductive liquids greater than 100 micro-Siemens and/or non-conductive liquids greater than 20 dielectric constant units.

**Capacitance transmitter**



- Two-wire, capacitance transmitter with isolated 4-20 mA signal output
- Unique, self grounding probe does not require any external reference electrodes in plastic or fiberglass tanks
- FEP Teflon® probe is available in standard lengths from 500-3000 mm
- Custom probe lengths are also available for specific requirements
- Probe installs through any G 3/4 or NPT tank adapter
- PP enclosure rated IP65 with PG13 liquid tight cable gland
- LED light provides user with power status
- Potentiometers for offset and span adjustments
- Signal invert switch for selectable 4-20 mA or 20-4 mA signal output
- Removeable, two-wire connector ensures fast and simple installation

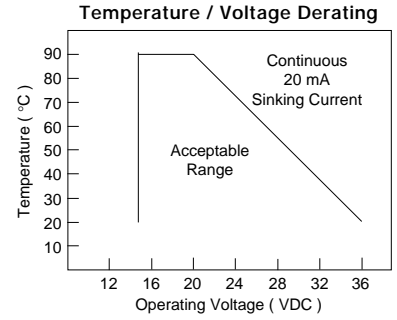
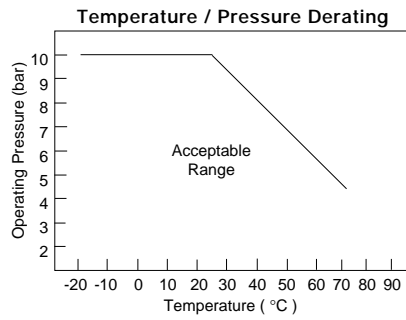
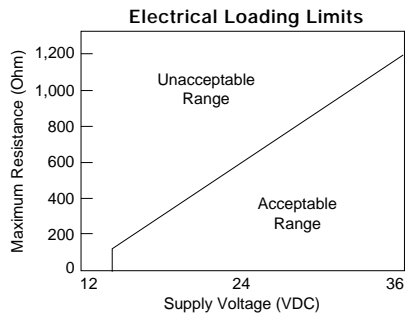
**4-20 mA signal output**



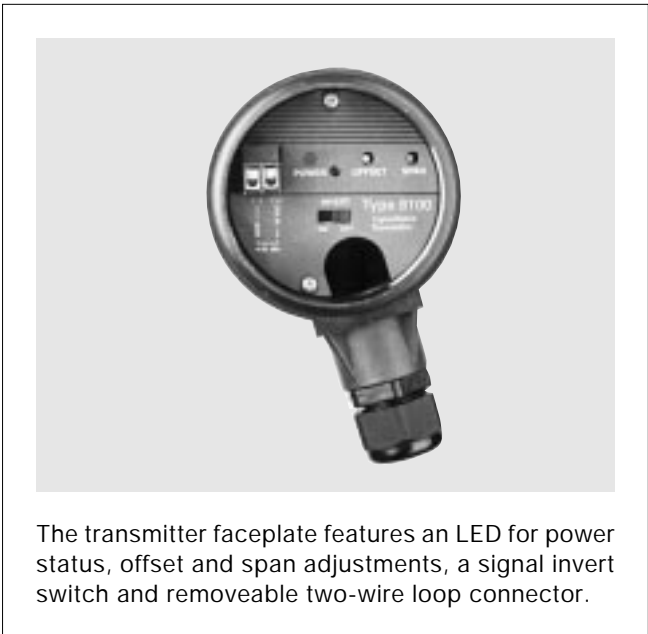
The transmitter is factory calibrated over the entire probe length. The two-wire configuration provides an isolated signal with PLCs, indicators or controllers.



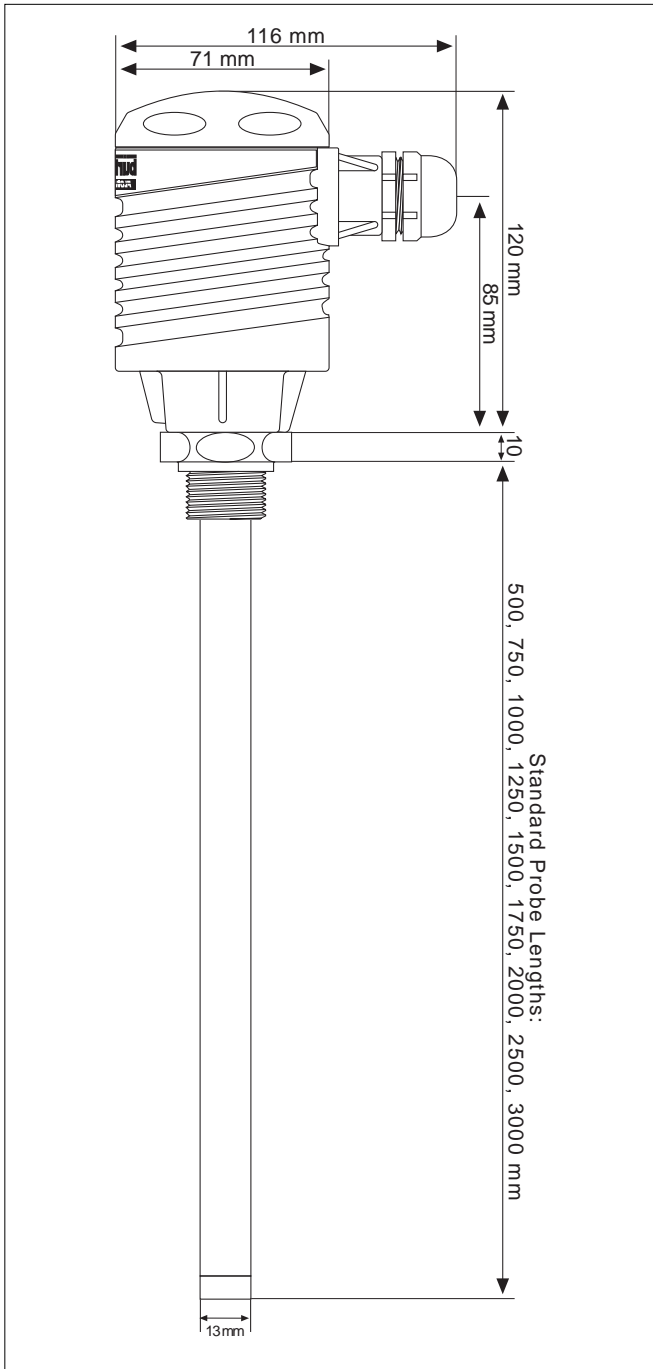
## Derating Graphs



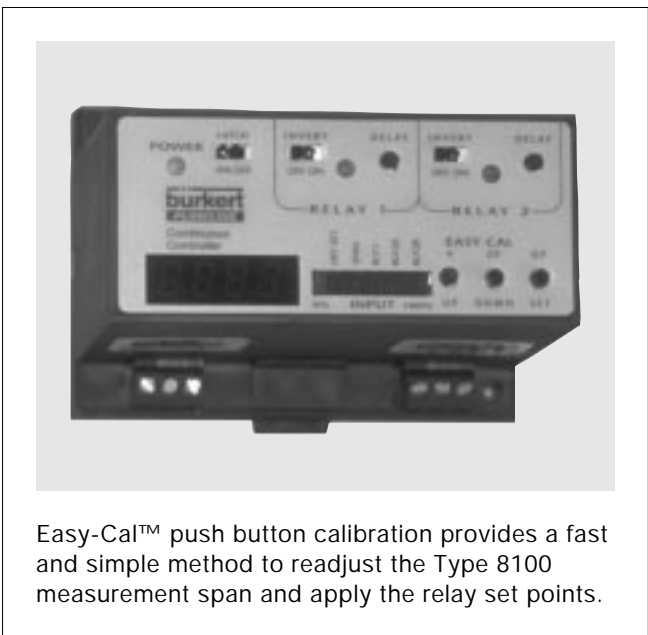
## Transmitter Faceplate



## Dimensions



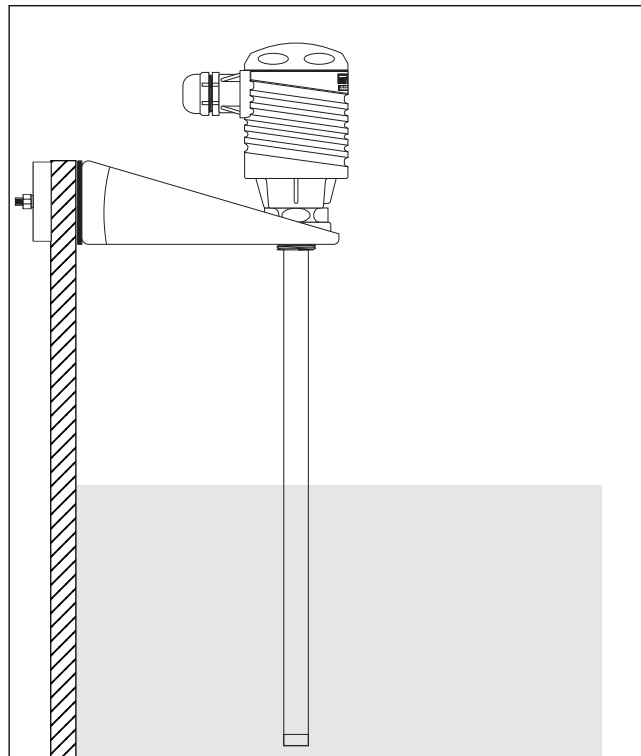
## Type 8620 Continuous Controller



## Technical Data

Accuracy:	± 1% of full scale
Repeatability:	± 3 mm
Dielectric range:	20 to 80 at 1 MHz
Blocking distance:	2 cm from mounting threads
Probe pF range:	100 to 1000 pF
Supply voltage:	2 wire interface, 15 - 36 VDC
Signal output:	4 - 20 mA, 15 - 26 VDC
Signal invert:	Selectable, 4-20 mA or 20-4 mA
Offset adjustment:	Potentiometer ( 4 mA )
Span adjustment:	Potentiometer ( 20 mA )
Indication:	LED for power status
Temperature rating:	-20 to 70 °C.
Max. pressure rating:	10 bar at 25 °C.
Probe lengths:	500, 750, 1000, 1250, 1500, 2000, 3000 mm
Probe material:	FEP (Teflon®)
Enclosure rating:	IP65 (NEMA 4X)
Enclosure material:	PP flame retardant ( U.L. 94 VO )
Cable gland:	PG13 liquid tight gland
Mounting threads:	G 3/4 (Optional: NPT)
Gasket seal:	Viton (Accessory)

## Side Mount Bracket



The side mount bracket provides a fast and simple method of attaching the capacitance transmitter to the side wall or lip of an open vessel.

## Ordering Chart for RF Capacitance Level Transmitter Type 8100 with G 3/4 mounting threads

Probe Length [mm]	Order-No.
500	417 388 Z
750	417 389 S
1000	417 390 X
1250	417 391 L
1500	417 392 M
2000	417 393 N
2500	417 394 P
3000	417 395 Q

## Ordering Chart for Accesories

Description	Order-No.
Viton Gasket	417 014 D
Side Mount Bracket	417 075 J