# LEVEL TRANSMITTER WITH KYNAR DIAPHRAGM

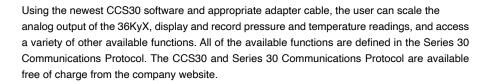
FOR SEWAGE AND DIRTY LIQUIDS APPLICATIONS



Specifically designed for extended service in sewage lift station environments, the 36KyX by our features a relatively wide sensing diaphragm yet small overall size. The 36KyX incorporates a monolithic diaphragm formed from Kynar®, which combines the non-stick quality of Teflon with superior toughness and abrasion resistance that simplify installation and eliminate the need for bulky and expensive protective cages.

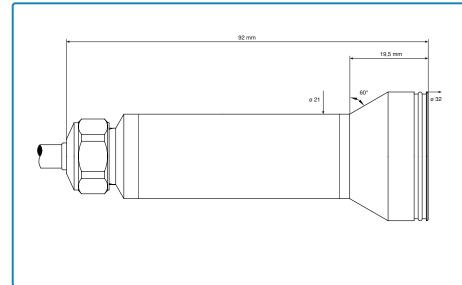
The 36KyX utilizes proven piezoresistive silicon measurement technology combined with our's state-of-the-art, microprocessor-based signal conditioning circuitry to provide outstanding accuracy and reliability over a wide compensated temperature range.

It is perfectly suited for pump control applications that require standard 2-wire (4...20 mA current loop) or 3-wire (0...10 V) output transmitters. The RS485 interface allows users to scale the analog output to any desired range within the standard pressure range. The 36KyX is typically suspended into the liquid by a standard Hytrel®-jacketed cable that is both self-supporting and vented. Optional: Our's enhanced lightning protection makes this transmitter ideal for installation in areas prone to chronic damage due to transients caused by lightning.



### **Product Benefits:**

- Non-fouling diaphragm design
- Housing resist chemical attack (AISI 316L)
- Serial interface RS485
- Rangeable analog output
- Mathematically compensated



### **Electrical Connections**

| Output           | Function | Cable  |
|------------------|----------|--------|
| 2-wire<br>420 mA | OUT/GND  | White  |
|                  | +Vcc     | Black  |
| 3-wire 010 V     | GND      | White  |
|                  | OUT      | Red    |
|                  | +Vcc     | Black  |
| Digital          | RS485A   | Blue   |
|                  | RS485B   | Yellow |
| Transmitte       | Shield   |        |

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## **Specifications**

| STANDARD PRESSURE RANGES (FS) |   |   |   |    |     |  |  |  |
|-------------------------------|---|---|---|----|-----|--|--|--|
| PR-36KyX                      | 1 |   | 3 | 10 | bar |  |  |  |
| Overpressure                  | 2 | 2 | 5 | 20 | bar |  |  |  |

All intermidiate ranges for the analog output are realized by downscaling from the next higher standard range. The accuracy is calculated from the standard range. Ranges below 1 bar are realized with the 1 bar range. Accuracy for these ranges is +/- 5 mbar (0 .. 50 °C).

| Туре                           | RS485       | 420 mA<br>(2-wire)   | 010 V<br>(3-wire) | 05 V<br>(3-wire) | 02,5 V<br>(3-wire) | 02,5 V<br>(3-wire) |
|--------------------------------|-------------|----------------------|-------------------|------------------|--------------------|--------------------|
| Digital Interface              | RS485       | RS485 <sup>(1)</sup> | RS485             | RS485            | RS485              | RS485              |
| Supply (VDC)                   | 832 V       | 832 V                | 1332 V            | 832 V            | 632 V              | 3,232 V            |
| Current Consumption (2)        | < 8 mA      | 3,222 mA             | < 8 mA            | < 8 mA           | < 8 mA             | < 3 mA             |
| Accuracy @ RT (3)              | +/- 0,3 %FS | +/- 0,3 %FS          | +/- 0,3 %FS       | +/- 0,3 %FS      | +/- 0,3 %FS        | +/- 0,3 %FS        |
| Total Error Band (4)<br>050 °C | +/- 0,5 %FS | +/- 0,5 %FS          | +/- 0,5 %FS       | +/- 0,5 %FS      | +/- 0,5 %FS        | +/- 0,5 %FS        |

<sup>1)</sup> During RS485 communication the analog signal will be influenced.

Load Resistance < (U-8 V) / 25 mA (2-wire) > 5 k $\Omega$  (3-wire)

Resolution 0,002 %FS

Electrical Connection Cable: Hytrel®-jacketed, integrated capillary tube (optional: Polyethylene jacket)

Protection IP68

Compensated Temperature Range 0...50 °C

Storage Temperature Range -10...80 °C

Linearity (BFSL) +/- 0,2 %FS

Start-up Time (Supply ON) 600 ms

Insulation (CASE–GND)  $> 10 \text{ M}\Omega$  / 300 V

Lightning Protection in EN 61000-4-5 Line-Line: 50 A @ 8/20  $\mu$ s Line-Case: 200 A @ 8/20  $\mu$ s CE-Conformity (EMC) EN 61000-6-1 to 6-4 / EN 61326-1 / EN 61326-2-3

Communication KELLER-BUS and MODBUS RTU, 9600 baud and 115200 baud

Options - Extended lightning protection (only for 4...20 mA and digital; Minimum supply increased by 2 V):

Line-Line: 10 kA @ 8/20  $\mu s$   $\,$  Line-Case: 2 kA @ 8/20  $\mu s$ 

- Different housing material

## RS485 current consumption details:

Without termination, the current during communication is typ. + 2 mA. Using terminated RS485 lines, the current during communication may reach up to 40 mA. Typically, termination of the RS485 lines is only needed for applications where the operating environment is noisy, or for long cable lengths which exceed 100 m.

<sup>&</sup>lt;sup>2)</sup> With no load on the analog output and no RS485 communication. For RS485 current consumption see details below.

<sup>3)</sup> Includes linearity (BFSL), hysteresis and repeatability

<sup>4)</sup> Includes accuracy as well as temperature coefficients of zero and span tolerance