Level Transmitters with Kynar®-Diaphragm Series 36KyX

For Sewage Applications / Non-Fouling

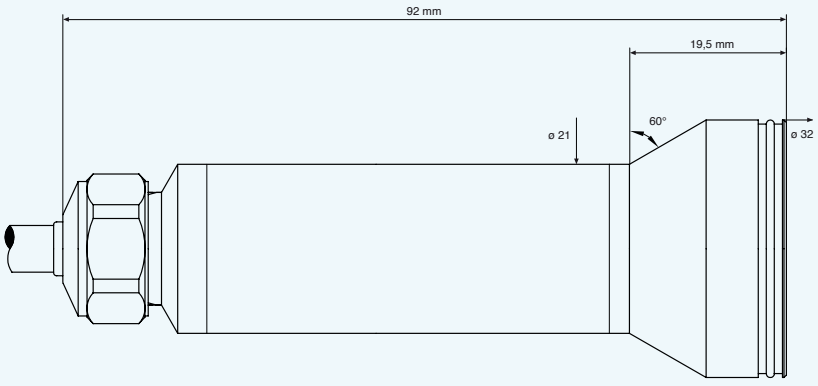
Specifically designed for extended service in sewage lift station environments, the 36KyX by KELLER features a relatively wide sensing diaphragm yet small overall size. The 36KyX incorporates a monolithic diaphragm formed from Kynar®, which combines the non-stick quality of Teflon with superior toughness 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 KELLER'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: KELLER's enhanced lightning protection makes this transmitter ideal for installation in areas prone to chronic damage due to transients caused by lightning.

Using the KELLER CCS30 software and appropriate adapter cable, the user can scale the analog output of the 36KyX, display and record pressure and temperature readings, and access a variety of other available functions. All of the available functions are defined in the Series 30 Communications Protocol. The CCS30 and Series 30 Communications Protocol are available free of charge from the company website.

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 4…20 mA	OUT/GND	White
	+Vcc	Black
3-wire 0…10 V	GND	White
	OUT	Red
	+Vcc	Black
Digital	RS485A	Blue
	RS485B	Yellow
Transmitter housing		Shield

RoHS CE

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Subject to alterations
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Specifications

Standard Pressure Ranges (FS)				
PR-36KyX	1	3	10	bar
Overpressure	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).

Type	**RS485**	**4…20 mA** (2-wire)	**0…10 V** (3-wire)	**0…5 V** (3-wire)	**0…2,5 V** (3-wire)	**0…2,5 V** (3-wire)
Digital Interface	RS485	RS485 [1]	RS485	RS485	RS485	RS485
Supply (VDC)	8…32 V	8…32 V	13…32 V	8…32 V	6…32 V	3,2…32 V
Current Consumption [2]	< 8 mA	3,2…22 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] **0…50 °C**	+/- 0,5 %FS	+/- 0,5 %FS	+/- 0,5 %FS	+/- 0,5 %FS	+/- 0,5 %FS	+/- 0,5 %FS

[1] During RS485 communication the analog signal will be influenced.
[2] With no load on the analog output and no RS485 communication. For RS485 current consumption see details below.
[3] Includes linearity (BFSL), hysteresis and repeatability
[4] Includes accuracy as well as temperature coefficients of zero and span tolerance

Load Resistance	< (U–8 V) / 25 mA (2-wire) > 5 kΩ (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 MΩ / 300 V
Lightning Protection in EN 61000-4-5	Line-Line: 50 A @ 8/20 µs Line-Case: 200 A @ 8/20 µs
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 µs Line-Case: 2 kA @ 8/20 µs - 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.