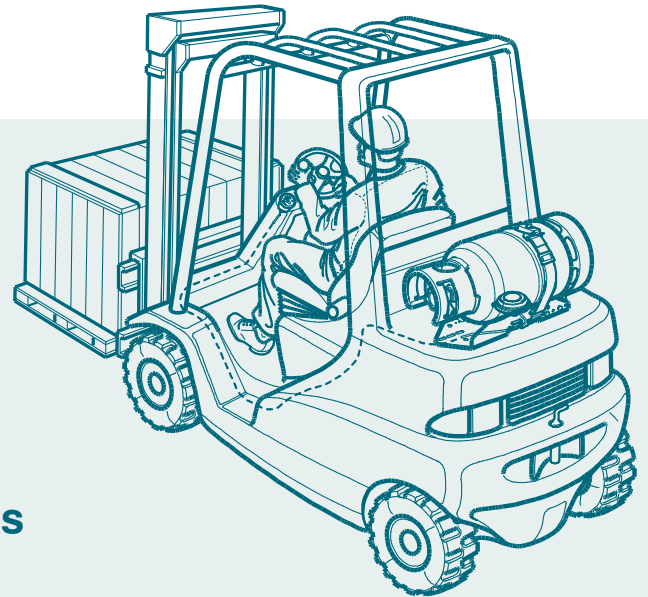


ready for action, definitely

FLT

Ultrasonic fuel measurement for LPG cylinders in forklift trucks



viaSonic's FLT sensor enables accurate liquid level fuel monitoring and control for LPG powered forklift trucks. Benefits to the operator include:

Increased operational reliability

One of the biggest disruptions in everyday warehouse life occurs, when a forklift truck runs out of gas. This brings the process of loading and unloading to a halt causing needless downtime and blockage transportation routes. With FLT sensor the operator knows the fuel level at all times. The exchange of cylinders can be accurately timed, thus increasing productivity and operational reliability.

Additional safety

Forklift trucks can unexpectedly run out of fuel while lifting heavy goods onto high shelves or while crossing roads or rails. These accident-prone situations can be avoided easily with the viaSonic LPG fuel level gauge.

Reduced costs

The FLT sensor displays the fuel level on the forklift dashboard. Thus, the LPG cylinder change can be precisely timed by the operator. The premature exchange of incompletely emptied cylinders, can thus be avoided. In addition, time is saved by changing cylinders at the right time. Just by cutting these operating costs the FLT sensor will quickly pay for itself.

Improved convenience

The convenience of having the fuel gauge on the forklift dashboard, results in avoiding the need for carrying heavy empty and full LPG cylinders from and to a stalled forklift. Stuttering with the starter and interruption of workflows are eliminated. FLT sensors thus enable LPG forklift truck fuel level monitoring to provide as much convenience for the operator as to that always available on diesel and electric powered forklifts.

reflect the limits

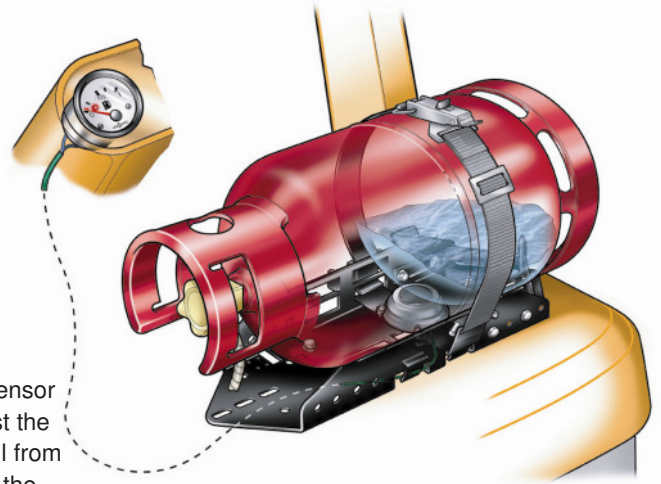


Maintenance free measurement

The FLT sensor has been developed by viaSonic especially for heavy industrial material handling operations. All components are robustly manufactured and the electronics and transducer are fully encapsulated. The measurement principle is performed via ultrasonic signals through the gas cylinder wall (no moving parts). The FLT sensor therefore works without wear and tear and is maintenance free.

For LPG cylinders


To be effective the FLT sensor need only to touch against the LPG cylinder external wall from underneath. It thus offers the flexibility of use with virtually all conventional commercial forklift fuel cylinders. The sensor dry coupling technology provides a secure coupling of the sensor to the cylinder and measurement is achieved without additional coupling devices. The exchange of empty for full cylinders thus requires no more effort than as currently.



*Principle of measurement:
Dynamic ultrasonic echo sounder
(pulse-echo method)*

The transducer emits ultrasonic pulses from the bottom of the LPG cylinder through the wall into the LPG. The signal penetrates the liquid until reflected back from the liquid surface (liquid/gas interface). The sensor receives the returning pulses, which are then electronically analyzed. Even extreme liquid sloshing movements are recognized and filtered, providing stable readings – temperature influences are also compensated for.

Technical data

minimum measurable level	20 mm equals approx. 0,3 kg to approx. 0,6 kg LPG
resolution	0,5 %
dimension	Ø 105 mm pitch circle diameter for drill hole
height	47 mm
interface	4- or 6-pole
• operating voltage	12 V DC
• output voltage	0,5 V to 4,5 V
• calibration	closed contact
operating temperature	-20°C to +60°C
robust for	EMC, ESD, shock, vibration
resistant for	industrial operation inside and outside
cylinders	commercial forklift fuel cylinders
• material	steel and aluminum
• content	LPG
IP rating	IP 67
approval	CE 

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