DuoSeries Level Transmitter LB 470

Cutting-edge radiometric level system in real 2-wire technology

Sophisticated level system in 2 wire technology

§ Unique: Radiometric system with intrinsically safe power supply (Full Ex-i)

§ Real 2-wire technology, only 2 wires in the field

§ Advanced self diagnostics and monitoring features

§ Easy to use touch screen panel for local display and operation

§ Integrated gas density compensation feature

§ Direct replacement of predecessor model LB 440

§ Interfaces with all 2-wire detectors LB 44xx, LB 54xx and LB 4700

Detector powered through trans-mitter

Only two wires required in the field

Monitored current output ensures highest measure-ment reliability

Service interfaces via Ethernet and USB

Compatible to all 2 wire detectors (LB 44xx, LB 54xx and LB 4700)

Easy handling and operation through 3.5" TFT touch panel

Diagnostics according to Namur NE-107 with event log, change log and data log

BERTHOLD TECHNOLOGIES

Gas Properties Compensation

A varying gas density and even a varying hydrogen content of the gas phase can affect the accuracy of the level reading. To ensure a constantly high accuracy - even under these conditions the LB 470 level transmitter offers a Gas Propoerties Compensation feature. The signal of a second radiometric detector, measuring the gas phase only, is fed to the transmitter, where it goes into equation of the level calculation.

Multitudes Ways of Operation

The LB 470 level transmitter incorporates a robust 3.5" TFT Touch Panel with industrial design for local operation. USB-keyboard and mouse can be connected as well.

In addition the transmitter offers full remote operation and data logging through Ethernet connection.

Dynamic Adjustment Time of Constant

The transmitter recognizes quick process changes (jump in count rate signal) and automatically reduces the time constant to speed up the measurement. When process conditions normalize again the time constant automatically returns to its standard value.

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Operating data

Power supply	100...240 VAC ±10 %, 50 ... 60 Hz, 30 VA (Master) or 15 VA (Slave) 24 VDC (18 ... 30 VDC), 30 W
Ambient temperature	Operation: -20 ... +60°C (-4 ... +140°F), no condensation Storage: -20 ... +85°C (-4 ... +185°F), no condensation
Design	Master: 19" module 3HE, 21TE, protection IP 20 Slave: 19" module 3HE, 7TE, IP 20
Processor	Dual Core CPU
Installation	In wall-mounted cabinet (2x Master or 1x Master + 3x Slave) In 19" rack (4x Master or 2x Master + 6x Slave) further assemblies on request

Signal inputs and outputs

Signal output	4 ... 20 mA, potential-free / max. impedance 500 Ω
Digital inputs	2 inputs, configurable for hold, external adjust
Digital outputs	1 relay (SPDT) for failure event 2 relays (SPDT and SPST) for min./max. alarm, detector temperature or others Permissible ohmic load: Max. 30V 1A AC/DC
Interfaces	USB (for software update, data backup, keyboard, mouse) RS 485 (for Master-Master communication) Ethernet (for remote access)
Data backup	internally: in non-volatile memory externally: USB memory device

Software

Menu languages	English, German, others on request
Features	- Gas Properties Compensation - Dynamic Adjustment of Time Constant - Calibration Adjust: Automatic adjustment of calibration curve - Radiation Interference Detection - Automatically generated message for pending source exchange - Diagnostics according to Namur NE-107 with event log, change log, data log

For technical details of detectors please see DuoSeries detector LB 4700 brochure

Accessories

As an option the transmitter can be installed in our robust wall-mounted cabinet made from metal (IP 65).