DuoSeries LB 47x / 4700
2-WIRE MEASURING SYSTEM

Robust & resistant

Optional lead collimator protects against background radiation. Corrosion-resistant stainless steel housing and extremely robust design.

Allrounder

Ideal for all standard applications, but also for complex measuring tasks.

Reliable & safe

Monitored current output and comprehensive diagnostic function according to Namur-107. Event log, change log and data log.

Various detector types

The optimal solution for every application.

Explosion protection

Protection at the highest level with all common Ex approvals. Optional: intrinsically safe power supply (full Ex-i).

Simple & intuitive operation

Touch display enables simple and direct operation directly on the device.

QUALITY
MADE IN
GERMANY

BERTHOLD

TECHNICAL DATA & FACTS

DuoSeries LB 47x / 4700

Transmitter

Applications (type)		Level (LB 470), Bulk Flow (LB 472), Level Switch (LB 473), Density (LB 474), Level+ (LB 476)
Power supply		100 ... 240 V AC, 50/60 Hz, 22 VA (Master), 6 VA (Slave),16 VA (Current Output Card) 24 V DC (21 … 32 V DC), 15 W (Master), 5 W (Slave), 5W (Current Output Card)
Ambient temperature		Standard: –20 ... +50 °C (–4 ... +122 °F), wall housing max. 40 °C (max. 104 °F) Intrinsically safe: –20 ... +50 °C (–4 ... +122 °F), wall housing max. 45 °C (max. 113 °F)
Design		Master: 19" module 3 HE, 21 TE Slave or Current Output Card: 19" module 3 HE, 7 TE
Installation		19" rack or wall housing (IP65)
Outputs	Analog	4 … 20 mA potential-free, max. impedance 850 Ω, active or passive Current Output Card: 4x 4 … 20 mA potential-free, HART, max. impedance 600 Ω, active
	Digital	1 relay (SPDT) for failure signal 2 relays (SPDT and SPST) for min./max. alarm, detector temperature and further alarms Permissible load at ohmic load: max. 33 V AC, 46 V DC, max. 1 A
Inputs	Analog	LB 472: Pulse input or 0/4 … 20 mA for speed signal LB 474: 0/4 … 20 mA for speed signal for mass flow, or for temperature compensation
	Digital	2 inputs, configurable LB 470: for hold and external adjust LB 472: for hold, external tara, belt stop, reset toal mass and product changeover LB 474: for hold and product changeover
Interfaces		USB for software update, data-backup, keyboard, mouse
		RS 485 for Master-Master communication
		Ethernet for remote access
IP protection		IP20
Explosion protection		ATEX, IECEx

Detector

Type	LB 4700
Power supply	Power supplied by transmitter
Housing Material	Stainless steel ISO 1.4301/AISI 304 (others upon request)
Measuring range	Point detectors: 25/25 … 150/150 mm Rod detectors: 500 … 2000 mm; cascading up to 17 detectors possible
Ambient temperature	–40 … +60 °C (–40 ... +140 °F)* –40 … +100 °C (–40 … +212 °F) due to additional water cooling*
Temperature stability	≤ 0.002 %/°C (–40 ... +60 °C (–40 ... +140 °F)) for CrystalSENS ≤ 0.01 %/°C (–40 … +60 °C (–40 ... +140 °F)) for SuperSENS and UniSENS ≤ 0.02 %/°C (–40 … +60 °C (–40 ... +140 °F)) for TowerSENS
Water cooling	optional
Collimator for background suppression	optional
Analog signal input	PT100 for temperature compensation (in combination with LB 474)
IP protection	IP66/IP67
Explosion protection	ATEX, IECEx, NEC/CEC, INMETRO, EAC, KCs

Special Features

- X-ray Interference Protection (XIP)
- Radiation Interference Disrimination (RID)
- Product Buildup Compensation (PBC)
- Gas property compensation (GPC)
- Continuously monitored current output
- In-depth diagnostics
- Source life management

*Observe possible temperature restiction for explosion protection!

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