

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.



TECHNICAL DATA & FACTS

DuoSeries LB 47x / 4700

Transmitter

Applications (Type)	Level (LB 470), Bulk Flow (LB 472), 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 output 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 output 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 VDC, max. 1 A
Inputs	Analog input 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 input 2 inputs, configurable LB 470: for hold and external adjust LB 472: for hold, external tara, belt stop, reset total 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 Discrimination (RID)
■ Gas property compensation (GPC)	■ Continuously monitored current output
■ Source life management	■ In-depth diagnostics

*Observe possible temperature restriction for explosion protection!

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