

# CONGAUGE LB 6755

## Radiometric Detector for Steel and Powder Level Measurement

### Simultaneous steel and powder level measurement

- Measures the steel level and the powder level simultaneously.
- Ten individually controlled scintillators in an array configuration.
- Highly sensitive scintillation technology.
- State-of-the-art SiPM technology.
- Automatic calibration rig for steel and powder level supplied.
- Compatible with castXpert LB 452.
- Superior safety with automatic detection and compensation if a scintillation failure should occur.

Detector powered through control unit

Connects to the castXpert LB 452

10 individually controlled scintillators

High level of redundancy. A scintillation module failure is automatically detected and compensated for.

Fully backward compatible with LB 6752, using mechanical adapter set

Same sensitivity as LB 6752

Can be used with or without mounting flange



## Functional Description

CONGAUGE LB 6755 is a modern, high-tech radiometric detector, utilizing first-class sensing technology to continuously measure both the liquid steel level and the thickness of the casting powder layer in a mould during continuous casting.

CONGAUGE LB 6755 has been designed in cooperation with SMS Concast and enables also for controlling of automatic feeders for casting powder, reducing human intervention in a dangerous area.

## SiPM-technology

The superior SiPM technology replacing the conventional Vacuum Photomultiplier Tube (PMT), is characterized by a very small and compact design. With improved ruggedness, low power consumption, virtually no degradation and built-in redundancy, the SiPM technology is ideal for demanding mould level applications.

## Quality you can rely on

The excellent performance of this new detector has been approved under real casting conditions. In addition a 3rd party institute verified its qualification for extreme shock, vibration, and temperature environments.

## Technical Data CONGAUGE LB 6755

### Mechanical Information

Housing Material	Stainless steel 1.4301 (ANSI 304)
Weight	9.8 kg (Including adapter flange and hoses)
IP-class	IP 66
Humidity	Max. 99%
Operating Temperature	-20...+55°C (-4...131°F) Sensor internal temperature
Storage Temperature	-20...+70°C (-4...158°F)
Cooling Water	Water inlet pressure of max. 6 bar Water inlet temperature of max. 50°C

### Electrical Information

Power	24 (15...36) VDC, ≤6 W
Output Signals	Digital (RS485) and analogue pulse output
Cable	6 wires, max. 1.5 mm <sup>2</sup> , shielded, length max. 200 m.
Logging	All relevant detector data can be logged in the control unit (LB 452).

### Performance

Scintillators	10 x NaI(Tl)-crystals; 40 mm x 45 mm x 14 mm
Gain	Each scintillator is individually gain stabilized, meaning no temperature or aging effect.
Internal Cycle Time	5 ms standard steel level 500 ms for powder level
Damping	0.1 ... 99 s
Stability	At constant count rate ≤1%
Approvals	Shock according to ISO 13628-6 (Q1) Vibration according to ISO 13628-6 11.5.2.2, and CE certification
Redundancy	Fourfold calculation of the level value and result verification for maximal performance. A scintillation module failure is automatically detected and compensated for.

For technical details of castXpert LB 452, please refer to respective brochure.

## Accessory

Purpose built calibration rig for acquiring steel and powder calibration data can be supplied.

The calibration rig handles target weights up to 100 kg with a sub-milliliter accuracy.

