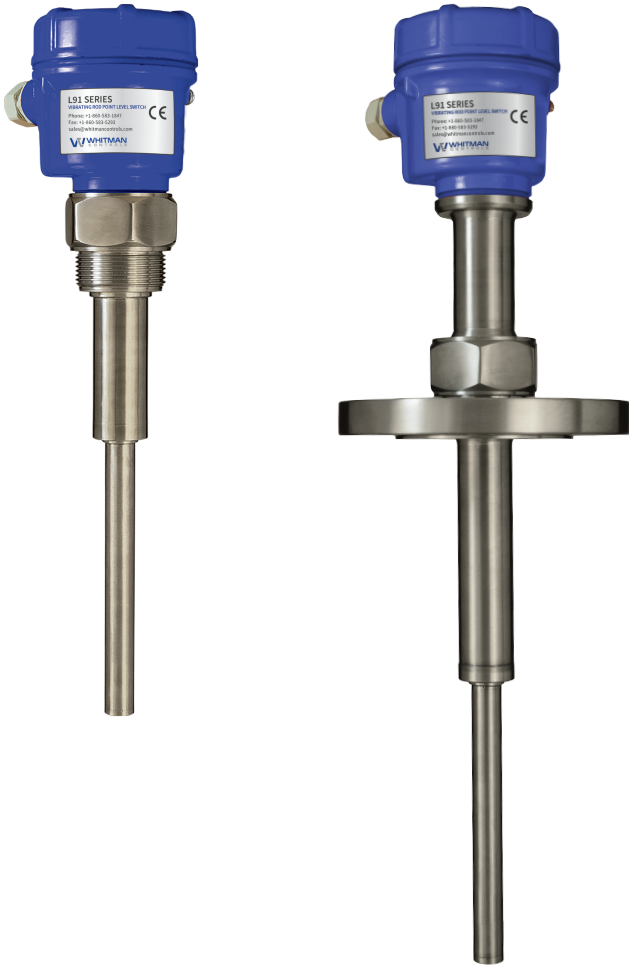# L91 SERIES
VIBRATING ROD POINT LEVEL SWITCH

DESCRIPTION

The L91 Series Vibrating Rod Point Level Switch is a heavy-duty stainless steel vibrating rod ideal for measuring the presence of solids and powders across a wide range of media and applications. When materials come into contact with the measuring rod, the frequency of vibration falls relative to the natural resonance frequency in free air, sending an electronic signal detecting the presence of material. These durable, yet compact, devices come with a wide range of electrical connections, outputs, fittings, and a number of other selections to meet any end-user demands. These devices are ideal in free flowing powders and granules, most commonly found in the agriculture and cement industries. They can be mounted on the top or side of tanks or grain elevators, and can operate in temperatures up to 392°F and pressures up to 215 PSIG.

KEY FEATURES

- Durable for high pressure / high temperature environments
- Wide range of sensing surface materials to meet any media
- Fast Switching Response
- Ingress protection : IP 68/66
- Vibration complied as per IEC 60068 part 2-6
- Low power consumption
- Settable switching delays

WHITMAN™
CONTROLS

SPECIFICATIONS

Electrical

EIUD / ERUD
Supply & Output

Integral / Remote Electronics DPDT Output
Universal Power Supply, DPDT Relay Output
15 to 80 VDC and 15 to 260 VAC 50/60Hz

Relay Type and
Rating

Potential Free DPDT Relay Output
5 A each @ 24VDC or 220VAC

EIDP / ERDP
Supply & Output
Output Limit

Integral / Remote Electronics for PNP Output
12 to 60 VDC, PNP
250mA max. Short Circuit Safe

EIUSP / ERUSP
Supply & Output

Integral / Remote Electronics SPDT + PNP output
Universal Supply for SPDT output
15 to 80 VDC
15 to 260 VAC 50/60Hz
DC Supply for PNP Output
15 to 60 VDC

Relay Type and
Rating

Potential Free SPDT Relay Output
5 A each @ 24VDC or 220VAC
250mA max. Short Circuit Safe

EIDL
Supply & Output

Integral Electronics 4-20mA Loop Powered
Two Wire DC 8 / 16 mA
15 to 60 VDC

Output Limit

8mA (±1mA max) / 16mA (±1mA max)

Other

Sensor Cable

Remote electronics require special
cable from fork to controller
10 meter standard length
(Custom Lengths available on demand)

Min. Density | >=350 gram/litre, not fluidized
Ambient Temp. | -20°C - 70°C (-4°F - 158 °F)
Process Temp. | -20°C - 80°C (-4°F - 176 °F)
Extended Process | -30°C - 250°C (-22°F - 482 °F)
Temperature | (extensions & heat sinks required)
Process Pressure | absolute / max. 15 bar
Wetted Parts | SS 316 or SS 316L
Mountings | NPT / BSP 1", 1.", 1ó", 2" etc
 | Flanged : ANSI/JIS/DIN/ASA/custom
Extensions Tube | SS 304, SS 316, SS 316L

Vibration Test | As per IEC 60068 part 2-6 sinusoidal,
 | 10-55Hz, 0.15mm
Material & Length | 250mm to 3,000mm
Power Consumption | 0.5 VA max.

Typical Mountings

Special
interconnection
cable

wall/pipe mounting
remote electronics

ORDER GUIDE
L91 Series

L91 —	Hxx —	Tx —	Sx —	Gx —	Px —	Cx —	Exxx —	Lxxxx —	FLxx
	Enclosure	Material Temperature	Sensing Surface Material	Sensor Extension Material	Process Connection Type	Process Connection Material	Electronics (See Page 2 for Description)	Insertion Length	Flange Type and Bore Size

Enclosure

HAN: Aluminum Non-Hazardous IP-66/68

HAX: Aluminum Flameproof IIa, IIb and IIc

HSN: Stainless steel

HPN: Polycarbonate (Plastic)

HES: Specially designed as per customer requirement

Material Temperature

T1: max 80°C

T2: max 200°C

TS: Customer specified - Special designed

Sensing Surface Material

S4: SS-304

S6: SS-316,

SL, SS-316L,

SS: Special surface

Sensor Extension Material

G4: SS-304,

G6: SS-316,

GL: SS-316-L,

GS: Special surface

Process Connection Type

PFL: Flanged Type (See end of order code)

PB1 1" BSP

PB2 1 1/2" BSP

PB4 1 1/4" BSP

PB5 2" BSP

PN1 1" NPT

PN2 1 1/2" NPT

PN4 1 1/4" NPT

PN5 2" NPT

PT1 Triclover/ Triclamp 1½"

PT2 Triclover/ Triclamp 2"

PCS Special Process Connection

Process Connection Material

C4: SS-304

C6: SS-316

CL: SS-316L

CS: Special Material

Electronics (See Page 2 for Description)

EIUD
EIDP
EINL
EIUSP
EIDL
EIFS
ERUD
ERFS

Insertion Length

250mm to 3000mm

Flange Type and Bore Size

As specified for ASA / ANSI / JIS / DIN / Custom

WHITMAN™
CONTROLS