

LASERTRANS Level Transmitter

Very long range, highly accurate, noncontact Level Transmitter



LASERTRANS can be used for level measurement in many diverse applications such as Liquid, powder, sludge, chips, level measurement in a noncontact form. Therefore for hazardous areas or pressure vessels with highly corrosive atmosphere, standard enclosures, make it possible to use LASERTRANS.

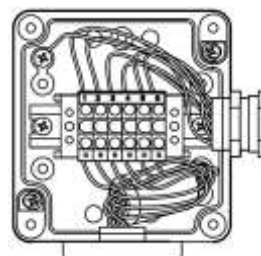
Technical specifications:

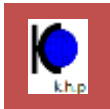
Range:0-15000 0- 50000 mm
Accuracy: 0,5% F.S.
Resolution: 3 mm
Power supply: 24VDC
Power consumption: 2VA / 1,8W max
Vessel Pressure range:(0-102KPa)-ATM Higher pressure is custom designed
Analogue output: 4-20mA or 0-10V
Digital output: RS232 , RS422
Output impedance: Max 7000 Ohm
Relay output: 2 – Alarm setting
Visual signaling: Color LED
Storage temperature: from –30 to +120°C
Working temperature: from –10 to +65°C
Relative humidity: from 0 to 95%
Installation: flange installation or bracket type
Sensing element dimensions 135(H) x 65(L) x 80(P) mm Note: sensing element can be enclosed by different enclosures, with various standards and dimensions

Applications:

Oil, Gas, and Petrochemical
Ferrous and nonferrous Metal
Food and dairy
Tank farms
Sewage
Cement
Automotive
Water
Pulp and paper

Cabling:

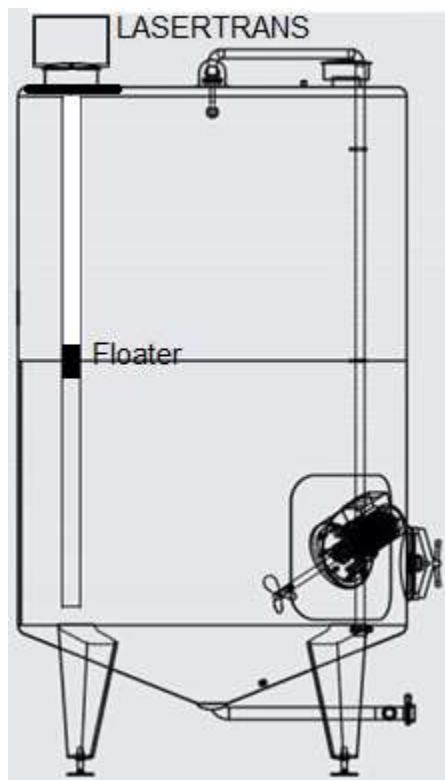




General Installation Requirements:

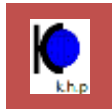
For various products with different requirements LASERTRANS can be used in applications such as agitating vessels, pressurized vessel, reactors, storage tanks, etc. For some products with low level of laser light reflectance, it is necessary to use a floater as shown in the following figure

Typical installation for agitating vessels



Typical installation for pressurized vessels





Standard Enclosures: L05P-Ex with side glass



•General operating conditions:

- Independent of pressure/vacuum inside the vessel
- Approved for use in Ex environments:
Gas: Zones 1 and 2; Dust: Zones 21 and 22

•Technical data Ex protection:

This luminaire meets the essential safety and health requirements by complying with the regulations for

a)Gas

EN 60079-0: 2009 General Requirements
EN 60079-1: 2007 Flame-proof Enclosures 'd'
Explosion group: IIC (includes IIA und IIB)
Temperature class: T3/T4/T6/120°C⁺

b)Dust

EN 60079-0: 2009 General Requirements
EN 60079-31: 2009 Protection by Enclosures 't'
Explosion group: IIIC (includes IIIA und IIIB)
Temperature class: T80/T120/T130/T195°C⁺

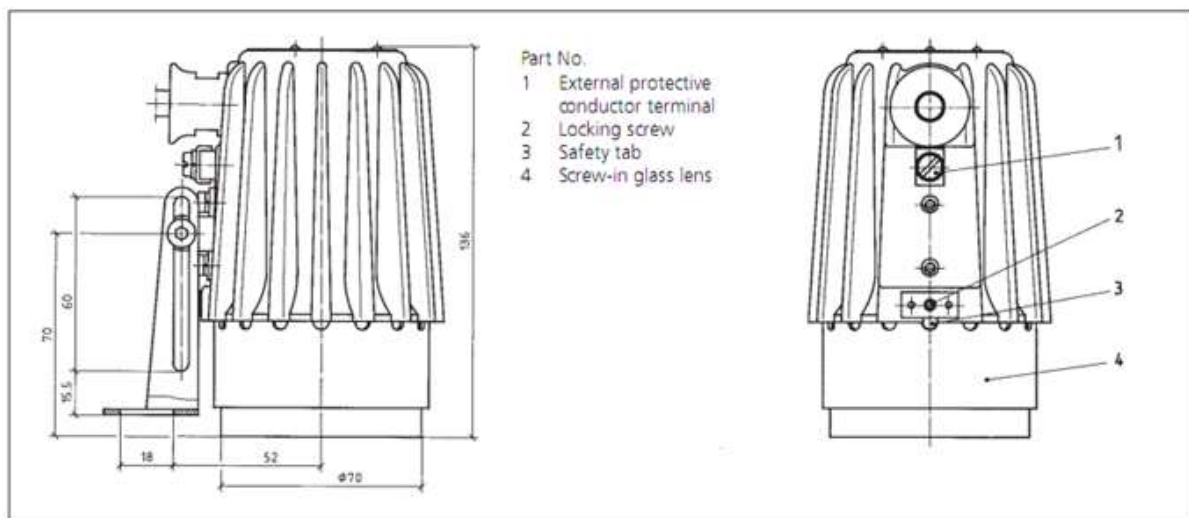
•Certification:EC Type-Examination Certificate BVS 08 ATEX E 133

II 2G Ex d IIC T3/T4/T6/120°C Gb⁺

II 2D Ex tb IIIC T80/T120/T130/T195°C Db⁺

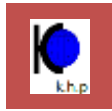
+ note: Working temperature of electronic parts: from -10 to +65°C

•Dimensions and electrical data L05P-Ex



CE 0158





L07P-EX

II 2G Ex de IIC T3/T4/T6/120°C Gb
II 2D Ex tb IIIC T80/T120/T130/T195°C Db

- Suitable for Gas (Zone 1) and Dust (Zone 21) Explosion hazardous areas
- Temperature Class: to T6 or T80°C (depending on power rating)
- Ambient temperature: up to 60 °C II C (all explosion classes)
- Suits circular sightglass fittings to DIN 28120/28121 or similar from size DN 50 and screwed sightglass fittings DIN 11851 from DN 100/125
- Operating Voltage: 12V, 24V, 120V, 230V, 240V
- Power, depending on voltage: up to 50W
- Electric connection: Version I: resin cast gland/cable tail Version II: terminal box and cable gland
- Secured to sightglass flange by twin brackets fastened
- (Ex) Zone 1, 2, 21, 22

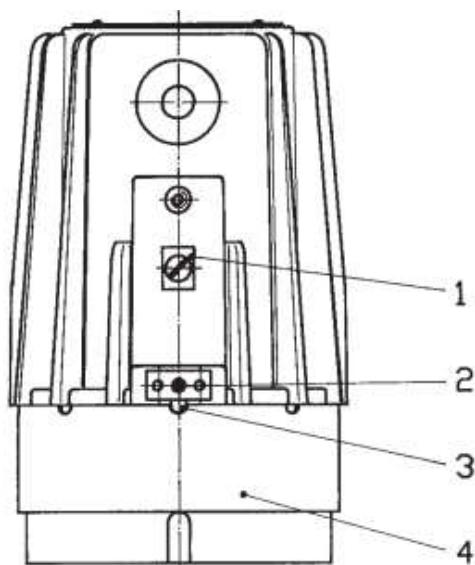
• General operating conditions:

- Independent of pressure/vacuum inside the vessel
 - Approved for use in Ex environments:
Gas: Zones 1 and 2; Dust: Zones 21 and 22
 - Approved for use in ambient temperatures of between
-20°C and +60°C or +40°C, +
- + note: Working temperature of electronic parts: from -10 to +65°C



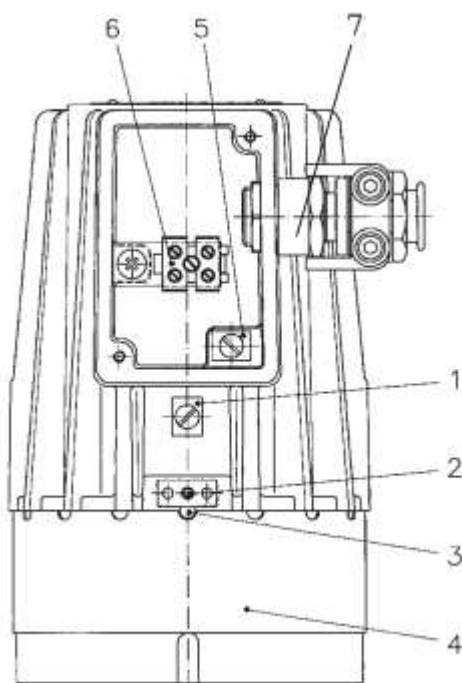
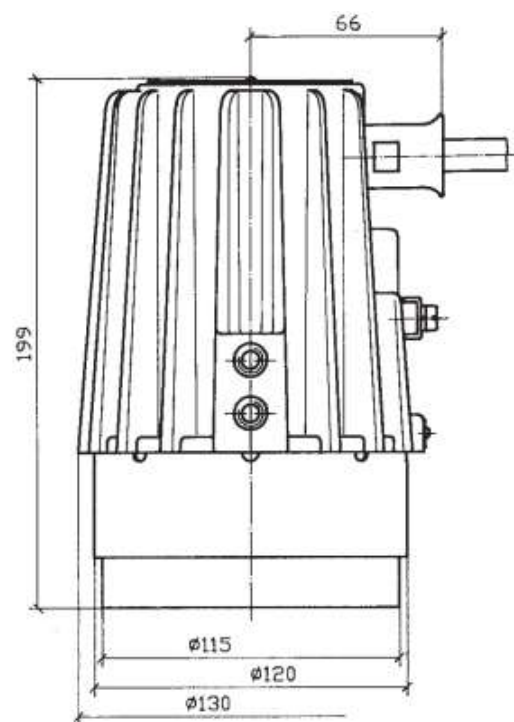


•Dimensions and electrical data L07P-Ex



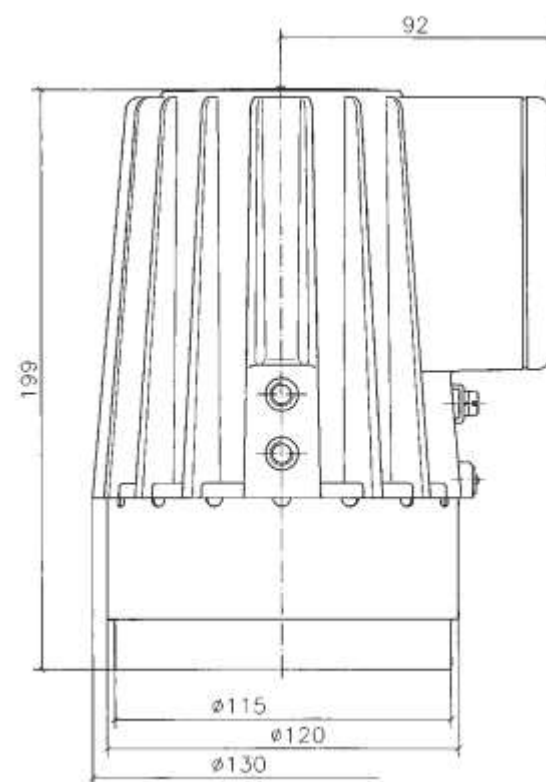
Part :

- 1 External grounding terminal
- 2 Locking screw
- 3 Safety tab
- 4 Screw-in glass lens

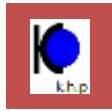


Part:

- 1 External grounding terminal
- 2 Locking screw
- 3 Safety tab
- 4 Screw-in glass lens
- 5 Internal grounding terminal
- 6 Ex terminal block
- 7 Cable entry gland



M20 x 1.5



W15-EX

Explosion protection

Gas explosion protection : II 2 G Ex D IIB T3 Gb

Dust explosion protection: II 2 D Ex tb IIIC T190°C Db IP66

Certificates: LCIE 06 ATEX 6020 ; IECEx LCI 08.0007

Conformity to standards: EN 600079-0 , EN 600079-1 , EN 600079-31
IEC 600079-0 , IEC 600079-1 , IEC 600079-31

Installation : flange type (any type of flanges)

Range : 0-15000 mm

Suitable for use in hazard area

Temperature Class: to T6 or T80°C (depending on power rating)

Ambient temperature: up to 60 °C II C (all explosion classes)

Operating Voltage: 12V, 24V

Analogue output: 4-20mA



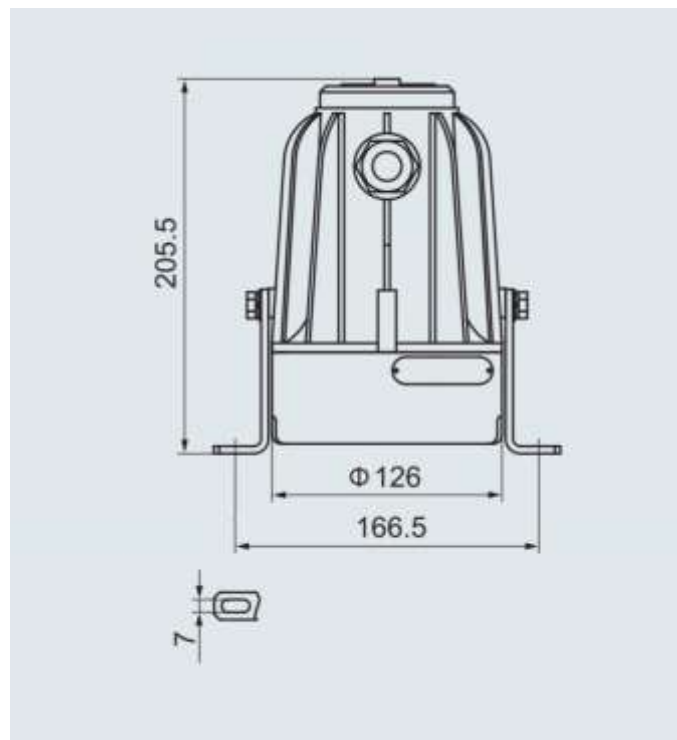
Material

Enclosure : Copper-free aluminium , powder coated surface , yellow (RAL 1021)

Glass cover : Toughened glass , impact resistance and high light transmission

Exposed fastener : Stainless steel

Dimension





The LASERTRANS is suitable for use with sight glasses in the following nominal sizes using the appropriate mounting:

Type of fitting	from DN	Hinged bracket	Flanged adapter collar
Circular sightglass fitting DIN 28120 DIN 28121	50 ...	+	–
	50 ...	+	–
Visual flow indicator	50 ...	+	–
Screw-type sightglass fitting similar to DIN 11851	65	–	+
	80	–	+
	100	–	+
	125	+	+



Applicable Third Party Standards:

UL Standard: 886
Suitable for wet locations.
ANSI C33.84 and C33.27
ASTM A-153-73 Class A
Fed. Spec: W-C 586C
Mil. Spec: 100 and 130
CSA Standard C22.2, No. 30

Third Party Certification:



Series GUB, NGUB, GUBDC

UL Listed: E-30513, E-85310

Series GUBSW, NGUBSW

UL Listed: E-113735, E-103220



Series GUB, NGUB, GUBDC

CSA Certified: 43437, LR20945

Series GUBSW, NGUBNWN

CSA Certified 43437

Compliances:

Class I, Div. 1, 2, Groups B $\diamond$, C $\diamond$, D
Class I, Zone 1, 2, Groups IIA, IIB $\diamond$ +H $\diamond$
Class II, Div. 1, 2, Groups E, F, G
Class III
NEMA 4, 4X $\dagger$, 7B $\diamond$ C $\diamond$ D, 9EFG

Materials:

- GUB series - Cast iron box with copper free aluminum cover; Buna-N Gasket
- NGUB-A series - Copper-free aluminum box and cover Neoprene O-Ring

Finishes:

- Hot dip galvanized on cast iron.
- Gray epoxy powder coat on aluminum

CLASSIFICATIONS

NEC & CEC:

Gas Explosion Protection

Class I, Division 1, Groups A,B,C, &D

Class I, Zone 1, Groups IIC, IIB & IIA

Dust Explosion Protection

Class II, Division 1, Groups E,F, & G

Class III

Environmental Protection

Type 3, 4, 4X, 7 & 9



Notes