# zam servis

### Point Resistive Level Indicator - BOS-4L - Conductivity Rope Probe

Ex Certificate: ATEX



#### Use:

The BOS-4L point resistive level indicator is intended for the indication of the level height of electrically conductive materials. It can be used for all electrically conductive materials (e.g. cleaned coal, raw coal, intermediate product, damp gangue, coke, iron ore, water etc.), which do not cause damage to the level indicator by their properties and subsequently its malfunction and decrease in its life time.

#### **Description:**

The hinging rope probe is formed by the "Herkules" steel rope with the diameter of 12.5 mm, which is surface-coated with a PVC layer that increases the final total diameter of the rope to 16.5 mm.

On its lower end the rope is embedded with a tin-plumb solder into a cylindrical steel weight, whose circumference is equipped with a brass contact ring. The upper end of the rope is embedded with a tin-plumb solder in the conic hole of the body which is placed inside the head and it is insulated from the head by means of an alcamide ring.

BOS-4L is to be installed only in the vertical position by fixing it to a metal structure with two M12 bolts. When selecting the place, it is necessary to bear in mind the fact that the level indicator must not be placed in the flow of poured material.

The cable is conducted to the head through a P13.5-type gland bushing. After installation of the level indicator, it is necessary to check the length of the hinged probe with regard to the required height of the indicated level.

#### **Technical parameters:**

Model Simple apparatus according to ČSN EN 60079 - 11	Ex ia
Max. allowed voltage on terminals	24 Vss
Max. allowed current flowing through the current	1 mA
Operating position	Vertical ± 5°
Max. insulation state between the contact and the head cover	100 kΩ
Min. insulation state between the contact and the head cover	5 ΜΩ
Ambient temperature	-20°C - +35°C
Relative humidity	95%
Protection	IP 54
Max. length of the hinged probe	10m
Min. length of the hinged probe	0.5m
Weight at the max. length of the probe	10.5 kg

The catalogue has only those selected important parameters for your final decision. For project designs always ask for the user's guide for this product and any engineering consultation about possible uses.

ISO 9001 : 2009 ZAM-SERVIS s.r.o. Křišťanova 1116/14 702 00 Ostrava - Přívoz V140116 tel.: +420 596 135 422, email: zam@zam.cz, www.zam.cz



## Point Resistive Level Indicator – BOS-4T – conductive rod probe

Ex Certificate: ATEX



# Technical parameters:

Model Simple apparatus according to ČSN EN 60079 - 11	Ex ia
Supply voltage	Max. 24 V
Current consumption	Max. 1 mA
Operating position	Vertical ± 5°
Resistance on terminals (without level)	Min. 5 M $\Omega$
Ambient temperature	-20°C - +40°C
Relative humidity	max. 95%
Protection	IP 54
Min. produced length of the L probe	0.5m
Max. produced length of the L probe	3m
Weight	7-9 kg



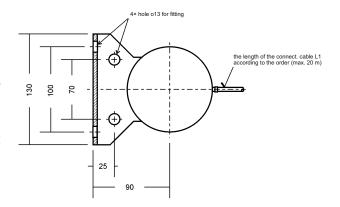
The probe is intended for the monitoring of the transfer point behind the belt conveyor and for the measuring of the level height on the principle of measuring of electric conductivity. The probe can be used for electrically conductive fluids and fine-grain bulk materials which do not cause damage to the level indicator by their properties (e.g. their abrasion, corrosion etc.).

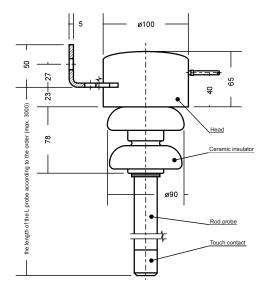
The probe works with the assessment electronics of the JPB-BOS intrinsic safe converter or of the BOS 21 electronic module only.

The probe may be used in common, humid or dusty environments as well as in an environment with the explosion hazard.

#### Description:

The probe is formed by the rod, finished by a conductive contact on the bottom side, and equipped with an insulator on the upper end. The insulator is embedded into the head. With its length the probe reaches directly to the measured containers (tanks, bins, silos).





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