

BEZBEDNOŠNA TEHNOLOGIJA  
ZA ZAŠTITU ŽIVOTNE SREDINE

SAFETY AND  
ENVIRONMENTAL  
TECHNOLOGY

**E.L.B.**  
FÜLLSTANDSGERÄTE



01-07-01E

## Detektori isticanja (Provodljivi), Tip ELH

sa opštim odobrenjem za  
konstruisanje Z-65.40-191

ELH detektori isticanja su odobreni od strane DIBt (Nemackog instituta za strukturni inženjering) za nadgledanje sudova za skupljanje, uređaja za skupljanje, kontrolu i ovore za ispunjavanje.

Veza zavrtnja u ELH je napravljena od PVC materijala, telo detektora ELH je napravljeno od materijala PE, PPH, PVC ili PVDH, u zavisnosti od zahteva. Vrhovi elektroda su napravljeni od neredjajuceg celika, 1.4571, Hastelloy B, Hastelloy C, tantala, Monell ili ugljenika. Zbog svega ovoga ELH je odgovarajuci za korišćenje sa visoko agresivnim supstancama. Dužina kabla može se podesiti na vezi zavrtnja u ELH.

Releji elektroda ER-107..., ER-207... ili ER-145... (suštinski sigurno kontrolno kolo) obezbeđuju merenje voltaže koje dozvoljava operativnoj struji da teče kroz otpor izgradjen u provodljivoj elektrodi kroz signalnu liniju. Ako se provodljiva supstanca podigne na nivo vrha elektrode senzornog nivoa, kolo se zatvara. Ovo izaziva promenu izlazne veze bez voltaže na releju elektrode.

Da bi se uzele u obzir razlicite provodljivosti tecnosti, releji elektroda ER-107..., ER-217... ili ER-145... mogu se obezbediti u dva razlicita nivoa reakcija (1...30 kΩ / 6...90kΩ). U okviru ovih nivoa mogu se podesiti vrednosti reakcija na potencijometru.

Ako se desi ometanje kabla, izlazne veze se menjaju (kao kada je alarm aktiviran postizanjem visine reakcije ili pada voltaže). Ako dodje do kratkog spoja u kابلu, to odgovara "alarmnom signalu" (kao kada se dostigne visina reakcije). Releji elektroda rade po principu zatvorenog kola, to jest, u slucaju nestanka struje izlazni kontakti se prebacuju kao kada se dostigne nivo reakcije.

- Visoka hemijska izdržljivost
- Varirajuće instaliranje, bez problema u sudu za skupljanje kroz "dizajn konopca".
- Mala visina reakcije
- Upotreba u kategoriji 2 (Ex zona 1) sa ER-145...
- Linijski nadzor za kratki spoj u kابلu / prekid kabla

## Konstrukcija sistema

Sistem za indikaciju isticanja sastoji se od ELH i releja elektroda ER-107..., ER-217..., ili ER-145... (vidite sekciju 10). Sistem za indikaciju isticanja može biti povezan sa našim "optično akustičnim alarmnim razglasom" tipa iz serije OAA-107 (vidite sekciju 01).

## Leak Detectors (Conductive), Type ELH

with general approval for  
constructions Z-65.40-191

The ELH leak detectors are approved by the DIBt (German Institute for Structural Engineering) for monitoring collecting basins, collecting devices, control and filling shafts.

The screw connection of the ELH is made of PVC, the detector body of the ELH is made of PE, PPH, PVC or PVDF, depending on requirements. The electrode tips are made of stainless steel, 1.4571, Hastelloy B, Hastelloy C, tantalum, Monell or carbon. Through this the ELH is suitable for use with highly aggressive media. The cable length can be adjusted on the screw connection of the ELH.

The electrode relays ER-107..., ER-217... or ER-145... (intrinsically safe control circuit) supply a measuring voltage which, allow an operating current to flow via the resistance built in the conductive electrode through the signal line. If the conductive medium rises to the height of the electrode tip of the level sensor, a circuit is closed. This causes a change-over of the voltage-free output contacts on the electrode relay.

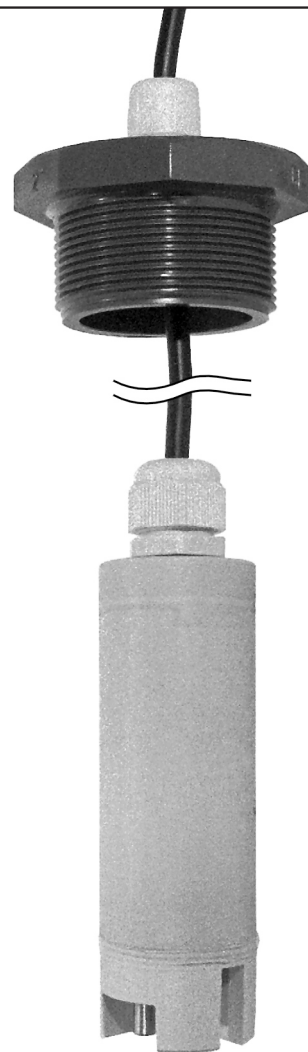
In order to take into account different conductivities of the liquids, the electrode relays ER-107..., ER-217... or ER-145... can be supplied in two different response ranges (1...30 kΩ / 6...90 kΩ). Within these ranges the responding value can be adjusted by means of a potentiometer.

If a cable interruption occurs the output contacts are changed over (as for an alarm caused through reaching the response height or a voltage breakdown). If a cable short-circuit occurs this corresponds to an "alarm signal" (as when the response height is reached). The electrode relay works according to the closed-circuit principle, i.e. in case of a power failure the output contacts switch as when reaching the response height.

- High chemical resistance
- Problem-free, variable installation in the collecting basin through "rope design".
- Low response height
- Use in category 2 (Ex-zone 1) with ER-145...
- Line monitoring for cable short-circuit / cable break

## System Construction

The leakage indication system consists of the ELH and the electrode relays ER-107..., ER-217... or ER-145... (see section 10). The leakage indication system can be connected to our "optical acoustic alarm annunciator" of the type series OAA-107 (see section 01).



ELH

ÜBERFÜLLSICHERUNGEN • LECKAGESONDEN / OVERFILL CUT-OUT DEVICE • LEAK DETECTOR



## Tehnicki podaci

**Sistem zaštite** EN 60529 IP 68  
**Materijal tela sonde** PPH, PE, PVC, PVDF  
**Precnik tela sonde** 15mm, 25mm, 40mm  
**Materijal veze zavrtnja** PVDF  
**Kabl** TPK  
*(Tehnicki polimer plastike)*  
**na zahtev** FEP (Teflon)  
 EX (YM2, mešavina na PVC bazi, plava)  
**Dužina kabla** Na zahtev (standardna 3m)  
**Materijal senz.** Nerdjajuci celik (1.4571),  
 Hastelloy B, Hastelloy C,  
 Titanijum, tantal, Monell,  
 ugljenik  
**Operativna temperatura** atmosferska  
**Operativni pritisak** atmosferski  
**Otpor linije za nadgledanje** 22 kΩ / 100 kΩ  
 u zavisnosti od tipa

## Kljuc tipa

Osnovna oznaka  
 Materijal šipke  
 VA = Nerdjajuci celik (1.4571)  
 TA = Tantal  
 HB = Hastelloy B  
 HC = Hastelloy C  
 TI = Titanijum  
 MO = Monell  
 KO = Ugljenik  
 Veza  
 0 = bez kutije, bez veze zavrtnja,  
 1 = kutija instalirana, sa vezom zavrtnja  
 2 = bez kutije, sa vezom zavrtnja  
 3 = uticnica  
 Dužina kabla u m (standardni TPK)  
 1 = 1 m  
 2 = 2 m itd.  
 Otpor linije za nadgledanje  
 000 = nema otpora  
 022 = 22 kΩ  
 100 = 100 kΩ  
 Dimenzije detektora za isticanje  
 bez indikacija = Ø 40 mm  
 15 = Ø 15 mm  
 25 = Ø 25 mm  
 Velicina zavrtnja fasunga  
 bez indikacija = G1½"  
 1" = G1"  
 125" = G1¼"  
 2" = G2"  
 GF = G2¾" obrtni navoj  
 Materijal detektora za propuštanje  
 bez indikacija = PE (Polietilen)  
 PP = Polipropilen  
 PV = Polivinil hlorid  
 PVDF = Polivinilidenfluorid  
 Materijal kabla  
 bez indikacija = TPK  
 FEP = Teflon  
 EX = YM2, (YM2, mešavina na PVC bazi, plava)



Moguće izmene bez prethodne najave.

## Technical Data

**System of protection** EN 60529 IP 68  
**Material probe body** PE, PVC, PPH, PVDF  
**Diameter probe body** 15 mm, 25 mm, 40 mm  
**Material screw connection** PVDF  
**Cable** TPK  
*(Technical polymere plastic)*  
**On request** FEP (Teflon)  
 EX (YM2, mixture on PVC basis, blue)  
**Cable length** on request (standard 3 m)  
**Material sensor rods** Stainless steel (1.4571),  
 Hastelloy B, Hastelloy C, Tita-  
 nium, Tantalum, Monell, Car-  
 bon  
**Operating temperature** atmospheric  
**Operating pressure** atmospheric  
**Resistance of the line monitoring** 22 kΩ / 100 kΩ  
 according to the type

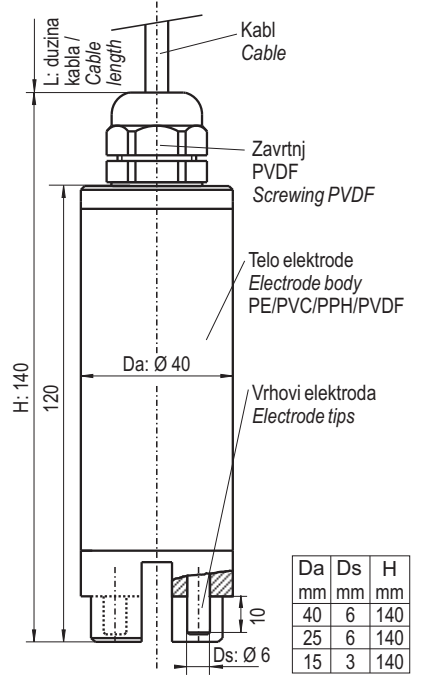
## Type Key

**Basic designation**  
 Rod material  
 VA = Stainless steel (1.4571)  
 HB = Hastelloy B  
 HC = Hastelloy C  
 TI = Titanium  
 TA = Tantalum  
 MO = Monell  
 KO = Carbon  
 Connection  
 0 = without box,  
 without screw connection  
 1 = box installed, with screw connection  
 2 = without box, with screw connection  
 3 = plug connector  
 Cable length in m (standard TPK)  
 1 = 1 m  
 2 = 2 m etc.  
 Resistance of the line monitoring  
 000 = no resistance  
 022 = 22 kΩ  
 100 = 100 kΩ  
 Leak detector dimensions  
 without indication = Ø 40 mm  
 15 = Ø 15 mm  
 25 = Ø 25 mm  
 Size of screwed socket  
 without indication = G1½"  
 1" = G1"  
 125" = G1¼"  
 2" = G2"  
 GF = G2¾" swivel nut  
 Material of the leak detector  
 without indication = PE  
 (Polyethylene)  
 PP = Polypropylene  
 PV = Polyvinylchloride  
 PVDF = Polyviniliden-  
 fluoride  
 Cable material  
 without indication = TPK  
 FEP = Teflon  
 EX = YM2, based on  
 PVC, blue



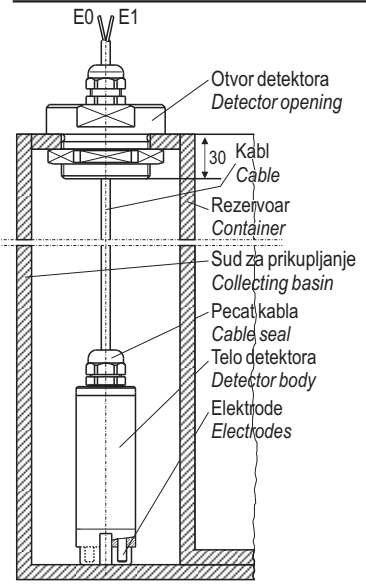
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## Dimenzioni crtez Dimensional Drawing



Dimenzije u mm / Dimensioning in mm

## Instalacija Installation



Uzmite kabl i pazljivo spustite detektor za isticanje sa visine u sud za prikupljanje. Zbog svog dizajna, detektor za isticanje treba da vertikalno visi o svom delimicno zategnutom kablju. Ipak, detektor za isticanje ce raditi cak i ako lezi na dnu suda.

*Take hold of the cable and carefully lower the leak detector from above into the collecting basin. Due to its design, the leak detector should hang vertically from its slightly tensioned cable. However, the leak detector will work even when lying at the bottom of the basin.*