



HR-0491

- capacitive limit value detection
- all media: solid or liquid, conductive or non-conductive
- approved for Ex-zones 0 and 10
- approved as part of an overspill prevention system (VbF and WHG)
- electrical connection accord. to DIN 19234 (NAMUR)

Function:

As the medium level rises into the electric field of the probe, the capacitance of the capacitor increases behind the active surface.

The switching characteristics depend primarily on the dielectric constant ϵ_r of the medium. Substances containing moisture or metal are detected at larger distances than dry or non-conductive substances.

The stainless steel version has been specially designed for use in explosive atmospheres (zone 0 and zone 10) and in overspill prevention systems for flammable (VbF) and non-flammable (WHG), water-contaminating liquids.

Use in explosive atmospheres and as part of an overspill prevention system

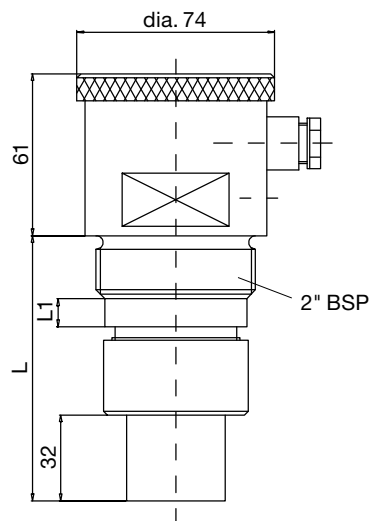
Ex - zone 0
 Ex - zone 10
 OSS: VbF / WHG

Order No.: **HR-0491 . 0** - Ex - zone 0
HR-0491 . 0 St. - Ex - zone 10

Version:

standard 0
 extended version 1

Dimensions:



		L 1	L
standard	HR-049100	11.5 mm	99 mm
extended version	HR-049110	L-87.5 mm	on request

please specify lengths if other than standard L = 99 mm

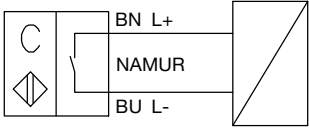
Use in explosive dust atmospheres (zone 10) has been tested and certified by the DMT.

The sensor is approved under § 8 ElexV (German ordinance on electrical equipment used in potentially explosive atmospheres) as well as under §12 VbF (German ordinance on flammable liquids) for use in hazard zone 0 of all explosion groups and temperature classes T1 to T5 in addition to zone 10.

The PTB requires the use of NAMUR relays **HR-1071** and **HR-1171** for use in zone 0 or as an overspill prevention system accord. to VbF, as well as the lightning arrester HR-9012 with above-ground tanks.

Issue date 04.10.95



<p>Technical Data</p>	
<p>Approvals / certificates</p>	<p>01 / PTB / Ex-79 / 2005 (Ex - zone 0 / VbF) dust Ex 10 / 83 (dust protected, dust and Ex - zone 10)</p>
<p>Supply Operating voltage Ripple Operating current Switching frequency max. self-inductance max. self-capacitance max. cable length</p>	<p>EEx ia IIC T5 accord. DIN 19 234 (NAMUR) DC 8.2 V ± 5% from the NAMUR relay ≤ 5% (DIN 41 755) ≤ 1 mA no medium detected ≥ 2,2 mA switched max. 1 kHz 1 mH 80 nF 2670 m</p>
<p>Environmental conditions Temperature and pressure Ex - zone / VbF WHG</p>	<p>253 K ... 333 K (-20°C ... +60°C) / 2 bar atmospheric conditions</p>
<p>Mechanical Terminal box Screw fitting Probe casing Type of protection</p>	<p>stainless steel 1.4571 (other materials on request) G2A, stainless steel 1.4571 (other materials on request) PTFE IP 65</p>
<p>Connection diagram</p>	<div style="text-align: center;">  <p>e.g: HR-1071 HR-1171 [EEx i] II C</p> </div>
<p>Accessories Lightning arrester</p>	<p>HR-901200 required when used in above-ground tanks</p>

Issue date 04.10.95