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LDP100 Series Liquid Detection Probes

DATA SHEET

PART N°: LDP102
LDP105

- TITLE:** Liquid detection probes for use as overfill protection on road tankers and in storage tanks.
- PURPOSE:** To provide a probe that is compatible with existing gantry monitors and interchangeable with current probes.
To improve safety by giving the probe a self-checking design. Probe can be checked for operation independently.
- OPERATION:** Sensing mechanism used is the different behaviour of a light beam in a glass prism when the prism is wet instead of dry. There is a very large difference in refractive index of air compared with petroleum liquids and this difference provides a very well defined and reliable switching point. With the probe dry, the light beam reflects back internally in the prism and in liquid the beam is refracted out into the liquid and "lost". Electronics in the probe are designed to create the light beam, detect its return or disappearance and pass that message to the Rack Monitor for appropriate response.
- VARIANTS:** LDP102 - 2 wire Probe
LDP105 - 5 wire Probe
- SPECIFICATION:** Electrical Parameters: $U_i = 30V$, $I_i = 500mA$, $P_i = 9W$, $C_i = 105pF$, $L_i = 0mH$
Operating Temperature : $-40^{\circ}C$ to $+65^{\circ}C$
IP Rating : IP66
Level Repeatability: $\pm 0.5mm$
- Notes:
Power Limit ($P_i = 9W$) apply: $I_i \text{ max} = 500mA$ allowed at $U_i \text{ max} = 18V$
or
 $I_i \text{ max} = 300mA$ allowed at $U_i \text{ max} = 30V$
- SAFETY CERTIFICATION:**
- IECEX
Certificate: IECEX TSA 05.0058X
Marking: Ex ia IIA T4 IP66 Tamb = $-40^{\circ}C$ to $+65^{\circ}C$
 - ATEX
Certificate: DEMKO 06 ATEX 140992X
Marking:  0518  II 1 G
EEx ia IIA T4
Tamb = $-40^{\circ}C$ to $+65^{\circ}C$
- MATERIALS:** Aluminium probe body, retainer & extension, Pyrex glass prism, and epoxy, Viton "O"-rings
- WEIGHT:** approx 160g.



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INSTALLATION:

It is the requirement of the ATEX Approval that the probe is installed in such a way that the probe is Electrostatically Grounded.

It is recommended to use Liquip PJB302 junction box which is compatible with Liquip manhole covers. Probe can be removed from tank top without having to access interior to remove a hood.

Installation should be in accordance with APPLICABLE standards SUCH AS EN60079-14 and EN60079-25 or IEC60079-14 and IEC60079-25 OR EQUIVALENT.

Users shall avoid ignition hazards due to impact or friction on the apparatus when used in Zone 0 areas.

Any free ends of cable not terminated shall be appropriately terminated to ensure no contact with additional sources of power is possible as per EN 50014 :1998 clause 14.1.

ACCESSORIES:

Extension bars of aluminium to suit various length applications. The following extension bars can only be used:

LDP102-4 (80mm long)

LDP105-2 (222mm long)

ASSOCIATED EQUIPMENT:

AGP202, 2 wire Glass Probe

AGP205, 5 wire Glass Probe

RM100 Series Rack Monitor.

TP Series "Ground Boss" truck plug.

DP250N Dummy Probe

PJB302 probe junction box

VOH200-5 Probe holder (not suitable for European market)

Overall dimensions shown on the drawing overleaf.

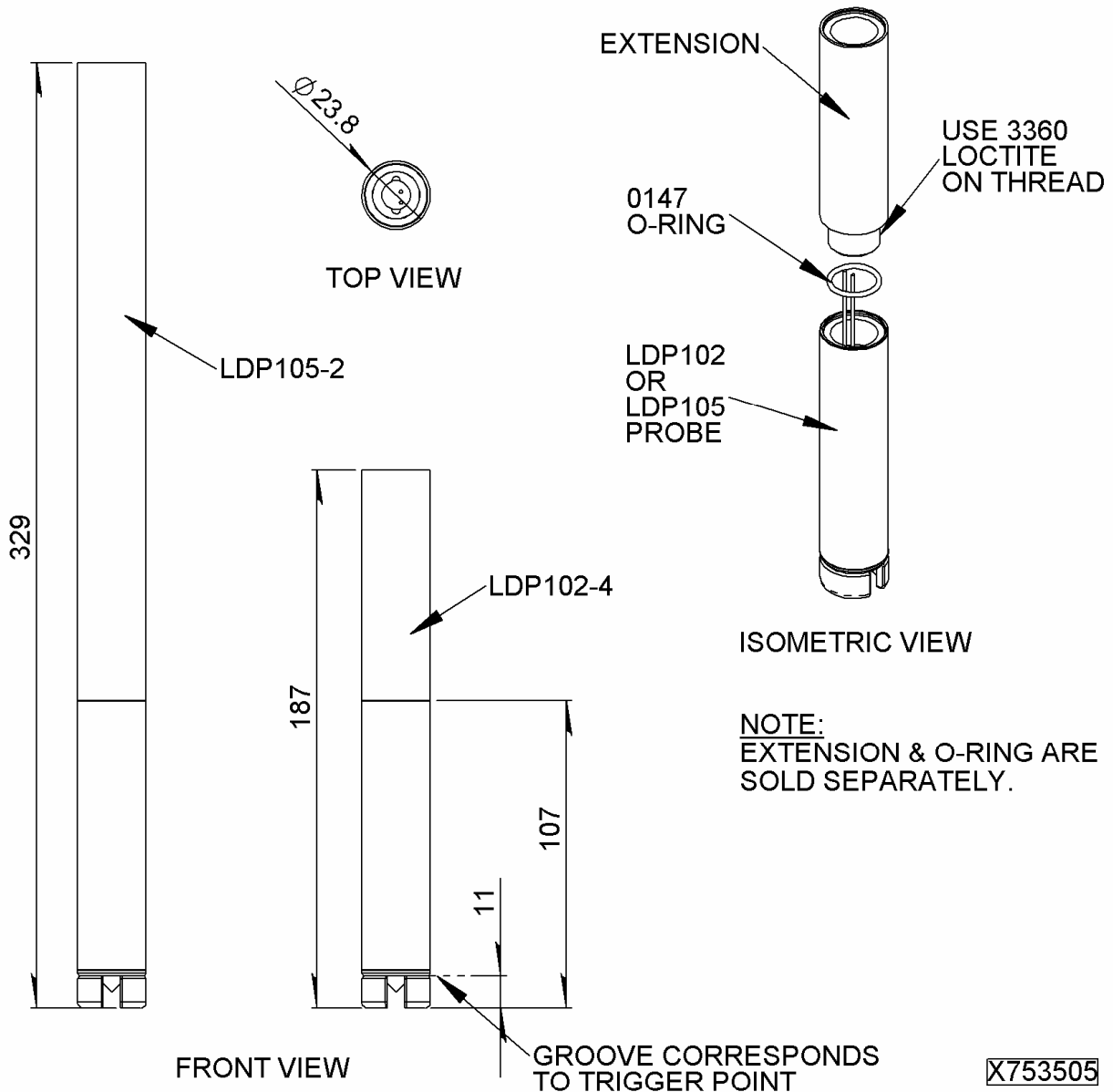


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LIQUIP

LDP102 & LDP105



X753505

Issue: D

METERS - VALVES - VENTS - MANHOLES - PUMPS - HOSEREELS - OVERFILL PROTECTION - LOADING ARMS - ELECTRONIC DIPSTICKS



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