



FUELLING SOLUTIONS

BY LIQUIP

SPARE PARTS CATALOGUE

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OVERFILL PROTECTION

LIQUID DETECTION PROBES - LDP Series

Liquip LDP series optic overfill sensors raise the bar in safety with true fail safe technology & individual 'optic-on' light.

Unlike other optic sensors, the Liquip Optic-On sensor has its own special LED in the rear of the sensor, and a visible optic light in the sensor tip to indicate whether it is dry and operational. Troubleshooting sensors couldn't be easier... simply look for the sensor with the lights in the tip or rear of the sensor not working.

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.



Technical Specifications

Variants:	LDP102 - 2 wire Probe LDP105 - 5 wire Probe
Electrical Parameters:	Ui = 30V, Ii = 500mA, Pi = 9W, Ci = 105pF, Li = 0mH
Operating Temperature:	-40°C to +65°C
IP Rating:	IP66
Level Repeatability:	+ 0.5mm
Design Pressure:	600kPa

Notes:

Power Limit (Pi = 9W) apply: Ii max = 500mA allowed at Ui max = 18V
or
Ii max = 300mA allowed at Ui max = 30V

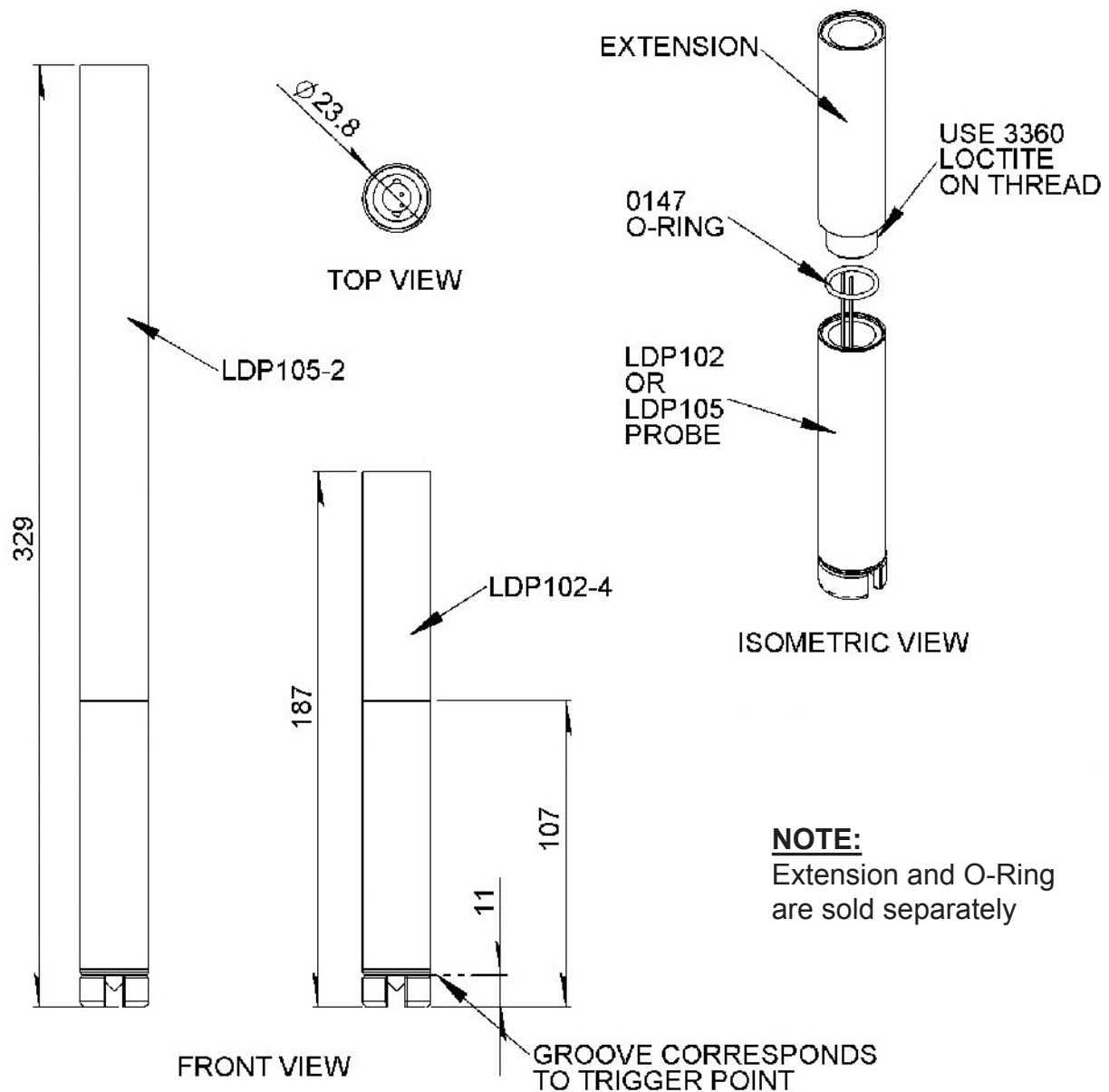
Safety Certification:	1. IECEx Certificate: IECEx TSA 05.0058X Marking: Ex ia IIA T4 IP66 Tamb = -40°C to +65°C
	2. ATEX Certificate: DEMKO 06 ATEX 140992X Marking: CE 0518 Ex II 1 G EEx ia IIA T4 Tamb = -40°C to +65°C

Materials:	Aluminium probe body, retainer & extension, Pyrex glass prism, and epoxy.
Maintenance:	Irreparable items, no routine maintenance required, replace with new if found faulty.

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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.
Wiring Method:	<ol style="list-style-type: none">1. 2 - Wire System for LDP102 Attached drawing shows a typical 6 channel compartment system based on Australian Standard. For 8 channel compartment system ask Liquip for more details.2. 5 - Wire System for LDP105 Attached drawing shows a typical 7 compartments tanker, the number of probes varies with the number of compartments in the tanker as the probes are connected in series.
Operational Parameters:	<p>Liquid properties must conform to the following:</p> <ul style="list-style-type: none">• Have refractive index between 1.10 and 1.47. If in doubt, carry out test with sample of liquid at working temperatures.• Not be reflective (e.g. milk will not trip probe as white reflects)• Be non-gelling and remain liquid at all operational temperatures. Viscosities up to 3500 cSt, work without suffering from clingage.• No particles in suspension which can form clinging opaque surface coating on prism.• Use with standard petroleum products and water-based compounds only. Any other chemical content must be checked with Liquip.• Not allow sunlight to access prism during operation.• Not install probe, or carry out routine tests adjacent to any reflective surface. (Incident light and reflections may cause false readings)
Handling Precautions:	Treat with care in particular protect tip until probe is installed. Protect open end of probe from moisture and chemicals. The probe prism is protected and light-shielded by the retainer.
Accessories:	<p>Extension bars of aluminium to suit various length applications. The following extension bars can only be used:</p> <p>LDP102-4 (80mm long) LDP105-2 (222mm long) LDP102-7 adaptor to suit LC99 extension bars.</p>
Associated Equipment:	<p>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)</p>

LIQUID DETECTION PROBES - LDP Series



Ordering Information:

Part No	Description
LDP102	Detection Probe (short)
LDP102Z	Detection Probe w/ Extension and O-Ring

PROBE HOLDERS

Probe Holder - PJB301WM

The Liquip PJB housing is designed to be mounted through a 50mm (2") hole and sealed with a gasket and locknut or screwed directly into a 50mm (2") BSP thread. Access to the height adjustment for the probe or the wiring is through the top of the housing. The probe can be adjusted by loosening the internal capscrews and sliding the probe up or down to the correct sensing height.

The body has provision for two M20 cable entries, eliminating the need to mount a tee with cover in the conduit line. This allows for better connections, easier fault finding and quicker installation.

Specifications

- Will accommodate probe dia. 22.3mm to 25.5mm with min. probe length 70mm.
- Maximum length of probe inside housing is 87mm.
- Maximum plate thickness for mount is 7mm
- Overall height is 101mm, overall dia. is 107mm.
- Weight 1.1 kg
- Mounting via 50mm (2") BSP male thread or into 62mm dia. hole.

Materials

Aluminium lid, body & compression bush, Nitrile seals, Zinc plated screws & washers.



Probe Holder - VOH200-5

The VOH200-5 is a lightweight aluminium junction box for direct mounting to "VOH" manhole covers, or via a weld flange VRB-13 direct to the tank top.

Ordering Information:

Part No	Description
PJB301WM	Probe Holder 2" male BSPP
VOH200-5	Probe Holder



MINI MONITOR

The Mini Monitor has been developed for sites or vehicles with one or two tanks or compartments only with the necessity for overfill protection and / or automatic re-order.

The MPP102 works with either:

1. a single electronic probe
2. via a truck plug connected to a standard gantry monitor
3. directly to a pump, control valve, alarm etc.

All sensor outputs are intrinsically safe. Output signal is by an integral relay rated at 24V DC 5A or 12V DC 5A. This signal is used in the tank control system to either stop liquid flow or sound an alarm. LED indicators show the condition of the system at all times.

Technical Specifications

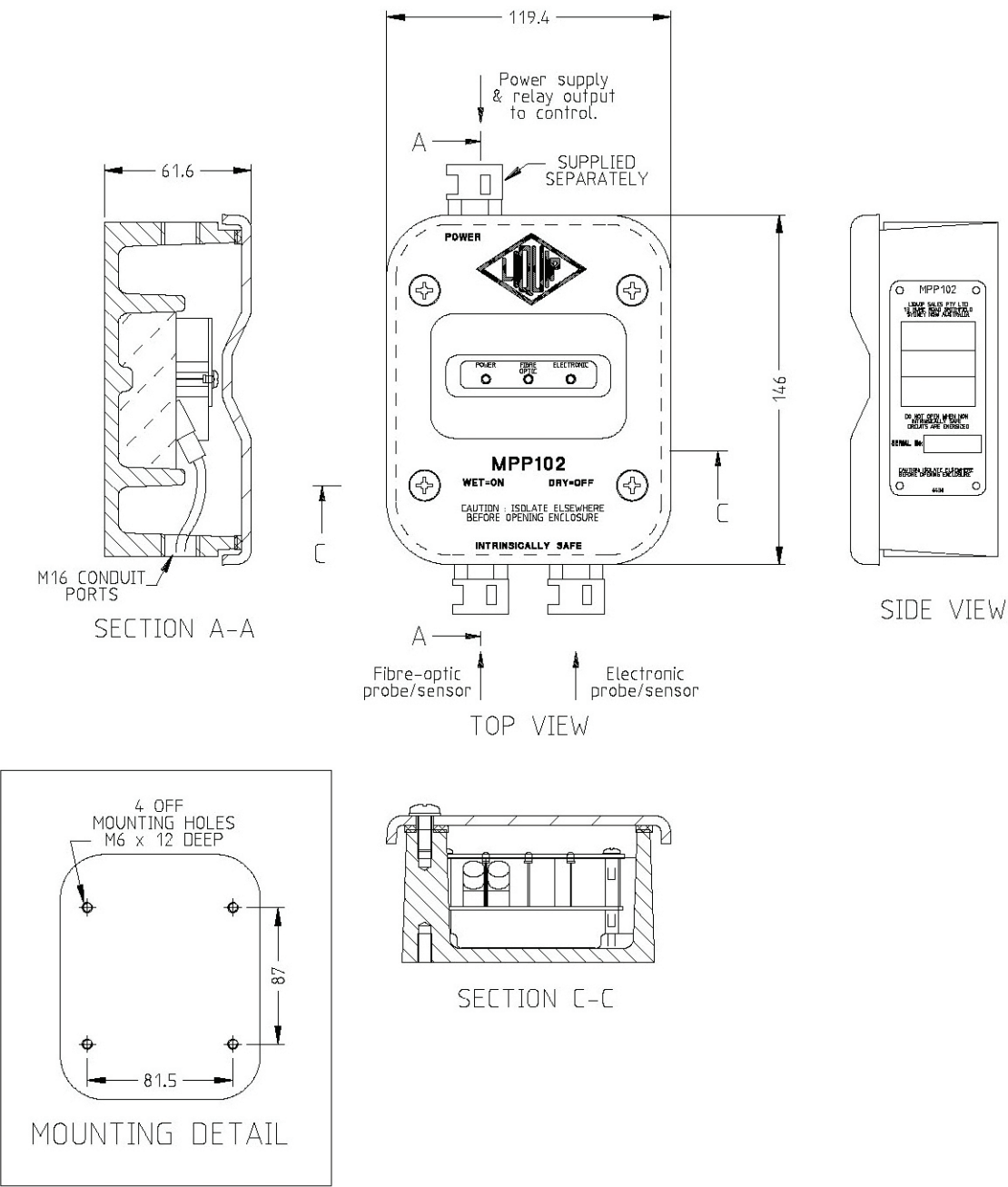
Weight:	1.35kg
Dimensions:	146mm x 119.4mm x 61.6mm (Height/Width/Depth)
Max Voltage:	+11.5Vdc to +30Vdc
Max Current:	200mA maximum
Temperature range:	-25 to +55°C
Probe Interface:	1 x 2-Wire electro-optical overfill probe output. 1 x Fibre-optic overfill probe input/output.
Relay Output:	30Vdc @ 3A Common/Normally-Open/Normally-Closed.
Mounting:	Four mounting M6 holes in rear of body. Conduit ports threaded M16.
Materials of Construction:	Housing is made from cast aluminium Polycarbonate cover Wiring and conduit to be to IP66 minimum.
Associated Equipment:	Probes: FOT100, FOB100, AGP102 & LC99A Fibre-optic cable Fibre-optic cable joiner kit Fibre-optic polisher kit EAC201 earth assurance clamp, JB100 junction box & DP250N dummy probe (Note: Part numbers may change without notice)



MINI MONITOR

Ordering Information:

Part No	Description
MPP102	Mini Monitor



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