



**FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

VIA ELECTRONIC MAIL

mhendrickx@charter.net

Mr. Marty Hendrickx
Component Specialists, Inc.
Hermes Close, Tachbrook Park
Warwick CV34 6UF UK

Subject: Approval of the Fozmula Limited
G/LL65 Liquid Level Contents Gauge, T/LL200 Series Liquid Level Sensor,
G/LL64 Liquid Level Contents Gauge, and T/LL130 Liquid Level Sensor
File No. EQ-831

Dear Mr. Hendrickx:

The Office of District and Business Support has concluded its review of the Equipment Approval request dated August 7, 2014, that was submitted for the Fozmula Limited G/LL65 Liquid Level Contents Gauge, T/LL200 Series Liquid Level Sensor, G/LL64 Liquid Level Contents Gauge, and T/LL130 Liquid Level Sensor, pursuant to Rules 62-761.500(5), 62-761.850(2), 62-762.501(2)(d), and 62-762.851(2), Florida Administrative Code (F.A.C.). The Fozmula Limited G/LL65 Liquid Level Contents Gauge, T/LL200 Series Liquid Level Sensor, G/LL64 Liquid Level Contents Gauge, and T/LL130 Liquid Level Sensor are tank level sensors or gauges that will provide tank product level information for the filling of underground or aboveground storage tank systems. The devices may be used as part of the overfill protection device so long as the product level information is provided to the product transfer operator. Department approval for inventory management purposes is not required.

Based on the information provided by Fozmula Limited, the G/LL65 Liquid Level Contents Gauge, T/LL200 Series Liquid Level Sensor, G/LL64 Liquid Level Contents Gauge, and T/LL130 Liquid Level Sensor provide environmental protection substantially equivalent to that provided by compliance with the requirements established in Rules 62-761.500(5), and 62-762.501(2)(d), F.A.C. The Fozmula Limited G/LL65 Liquid Level Contents Gauge, T/LL200 Series Liquid Level Sensor, G/LL64 Liquid Level Contents Gauge, and T/LL130 Liquid Level Sensor may be used as overfill protection devices associated with aboveground or underground storage tank systems.

Pursuant to Rules 62-761.850(2), and 62-762.851(2), F.A.C., the request for the use of the Fozmula Limited G/LL65 Liquid Level Contents Gauge, T/LL200 Series Liquid Level Sensor,

G/LL64 Liquid Level Contents Gauge, and T/LL130 Liquid Level Sensor is approved in the State of Florida as overfill prevention devices associated with aboveground or underground storage tank systems. The Fozmula Limited G/LL65 Liquid Level Contents Gauge, T/LL200 Series Liquid Level Sensor, G/LL64 Liquid Level Contents Gauge, and T/LL130 Liquid Level Sensor shall provide either an audible alarm that warns the product transfer operator that the maximum fill level is being approached or produces a product level reading of the storage tank capacity that is visible to the product transfer operator.

Please be advised that the above referenced DEP rules are subject to change. If the above rule standards are modified in the future, this order may be modified or rescinded for future upgrades and installations. Additionally, if the product(s) show a consistent pattern of failure(s), and therefore does not provide substantially equivalent environmental protection, the Department may rescind this order.

The Department's Order shall become final unless a timely petition for an administrative hearing is filed under sections 120.569 and 120.57, F.S., within **21** days of receipt of this Order. Persons who have filed such a petition may seek to mediate the dispute and choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement. The procedures for petitioning a hearing and pursuing mediation are set forth below.

Persons affected by this Order have the following options:

- A. If you choose to accept the Department's decision regarding the Order, you do not have to do anything. This Order is final and effective as of the date on the top of the first page of this Order.
- B. If you choose to challenge the decision, you may do the following:
 - 1. File a request for an extension of time to file a petition for hearing with the Department's Agency Clerk in the Office of General Counsel within **21** days of receipt of this Order. This request should be made if you wish to meet with the Department in an attempt to resolve any disputes without first filing a petition for hearing or negotiate an agreement to mediate; or
 - 2. File a petition for administrative hearing with the Department's Agency Clerk in the Office of General Counsel within **21** days of receipt of this Order.

In addition to requesting an administrative hearing, any petitioner may elect to pursue mediation under Section 120.573, F.S., and must negotiate an agreement to mediate within **10** days after the deadline for filing a petition.

How to Request an Extension of Time to File a Petition for Hearing

For good cause shown, pursuant to Rule 62-110.106(4), F.A.C., the Department may grant a request for an extension of time to file a petition for hearing. Such a request must be filed (received) by the Agency Clerk in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000, within **21** days of receipt of this Order. Petitioner, if different from the applicant, shall mail a copy of the request

to the applicant at the time of filing. Failure to file a petition within this time period shall waive the right of anyone who may request an administrative hearing under Sections 120.569 and 120.57, F.S.

How to File a Petition for Administrative Hearing

A person whose substantial interests are affected by this Order may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) by the Agency Clerk in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, MS 35, Tallahassee, Florida, 32399-3000, within **21** days of receipt of this Order. Petitioner, if different from the applicant shall mail a copy of the petition to the applicant at the time of filing. Failure to file a petition within this time period shall waive the right of anyone who may request an administrative hearing under Sections 120.569 and 120.57, F.S.

Pursuant to Subsection 120.569(2), F.S., and Rule 28-106.201, F.A.C., a petition for administrative hearing shall contain the following information.

- a) The name, address, and telephone number of each petitioner; the name, address, and telephone number of the petitioner's representative, if any, the site owner's name and address, if different from the petitioner, the DEP facility number, and the name and address of the facility;
- b) A statement of when and how the petitioner received notice of the Department's action or proposed action;
- c) An explanation of how each petitioner's substantial interests are or will be affected by the Department's action or proposed action;
- d) A statement of the disputed issues of material fact, or a statement that there are no disputed facts;
- e) A concise statement of the ultimate facts alleged, including a statement of the specific facts the petitioner contends warrant reversal or modification of the Department's action or proposed action;
- f) A statement of the specific rules or statutes the petitioner contends requires reversal or modification of the Department's action or proposed action; and
- g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the Department to take with respect to the Department's action or proposed action.

How to Pursue Mediation

In addition to requesting an administrative hearing, any petitioner may elect to pursue mediation. The election may be accomplished by filing with the Department a mediation agreement with all parties to the proceeding (i.e., the applicant, the Department, and any person who has filed a timely and sufficient petition for hearing). The agreement must contain all the information required by Rule 28-106.404, F.A.C. The agreement, signed by all parties, must be received by the Agency Clerk in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000 within **10** days after the deadline

for filing a petition, as set forth above. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement.

Pursuant to Rule 28-106.404, F.A.C., an agreement to mediate must include the following.

- (i) The name, address, and telephone number of the persons who may attend the mediation, (also the DEP facility number, the name and address of the facility if applicable);
- (ii) The name, address, and telephone number of the mediator agreed to by the parties;
- (iii) How the costs and fees associated with the mediation will be allocated (the Department will not pay any of the costs of mediation);
- (iv) The agreement of the parties regarding the confidentiality of discussions and documents introduced during mediation to the extent authorized by law;
- (v) The date, time, and place of the first mediation session;
- (vi) The name of the party's representative who shall have authority to settle or recommend settlement; and
- (vii) The signature of the parties.

As provided in Section 120.573, F.S., the timely agreement of all parties to mediate will toll the time limitations imposed by Sections 120.569 and 120.57, F.S., for holding an administrative hearing and issuing a final order. Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. Persons seeking to protect their substantial interests that would be affected by such a modified final decision must file their petitions within **21** days of receipt of this notice, or they shall be deemed to have waived their right to a proceeding under Sections 120.569 and 120.57, F.S. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under Sections 120.569 and 120.57, F.S., are resumed.

This Order is final and effective as of the date it is clerked and filed (see page 5). Timely filing a petition for administrative hearing postpones the date this Order takes effect until the Department issues either a final order pursuant to an administrative hearing or mediation settlement.

Judicial Review

Any party to this Order has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the Agency Clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department (see below).

Mr. Marty Hendrickx

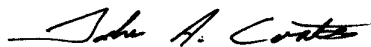
EQ-831

Page 5

Questions

Any questions regarding the Department's review of your equipment approval should be directed to John Svec at (850)245-8845. Questions regarding legal issues should be referred to Rebecca Robinette, Office of General Counsel, at (850)245-2242. Contact with any of the above does not constitute a petition for administrative hearing, a request for a time extension to file a petition for hearing or an agreement to mediate.

Sincerely,



John A. Coates, PE, Assistant Director
Division of Waste Management

JAC/js

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52 Florida Statutes,
with the designated Department Clerk, receipt of
which is hereby acknowledged.

10/17/2014

X



Judith Pennington

Signed by: Penningto_JA

Clerk
(or Deputy Clerk)

Date

TECHNICAL DATA

G/LL65 Liquid Level Contents Gauge

FOZMULA
INNOVATION IN SENSORS



The **G/LL65** vertical spiral gauge is a mechanically operated liquid level gauge with a local display and two electrical outputs. Suitable for connection to a typical controller or remote level indicator the outputs are; a variable resistance proportionate to the liquid level and a volt-free switch to trigger an alarm when the liquid reaches a prescribed level.

To avoid a potential leak path, the gauge features a magnetic coupling between the float driven spiral and the level indicator.

SPECIFICATION

Liquid Types

Liquids compatible with the construction materials, typically fuels, oils and water.

Dimensions

Length: Min. 150 mm, Max. 1200 mm.
Thread: 1½" BSPT or 1½" NPT.
Weight: 0.36 Kg (Gauge Length, A = 600 mm)

Materials

Header: 30% Glass Filled Nylon 66.
Guide Rail: Anodised 6005-T5 Aluminium.
End Cap: 30% Glass Filled Nylon 66.
End Cap Screw: A2 Stainless Steel.
Spiral: Brass / 316 Stainless Steel.
Float: Polypropylene.
Dial Capsule: Polycarbonate.
Leads: XLPE Sheathed.

Electrical

Supply Voltage: 9-32 VDC.
Supply Current: 15 mA @ 12 VDC.
Supply Protection: Over voltage 80 VDC for 2 minutes. Reverse polarity.
Connections: 4-off 500 mm long 18AWG leads:

Red	Supply, V+
Black	Ground (0V)
Green	Signal, Ω
White	Switch to ground

Resistive Output: Between 3-750 Ω or 750-3 Ω .
 Resolution 3 Ω . Max. dissipation 250 mW.
Alarm Output: Switch to ground. Max 100 mA.
 High or low level between 10% and 90% of gauge length.
 Default setting: low level alarm at 12% of gauge length,
 Minimum 10 mm travel from end-stops.

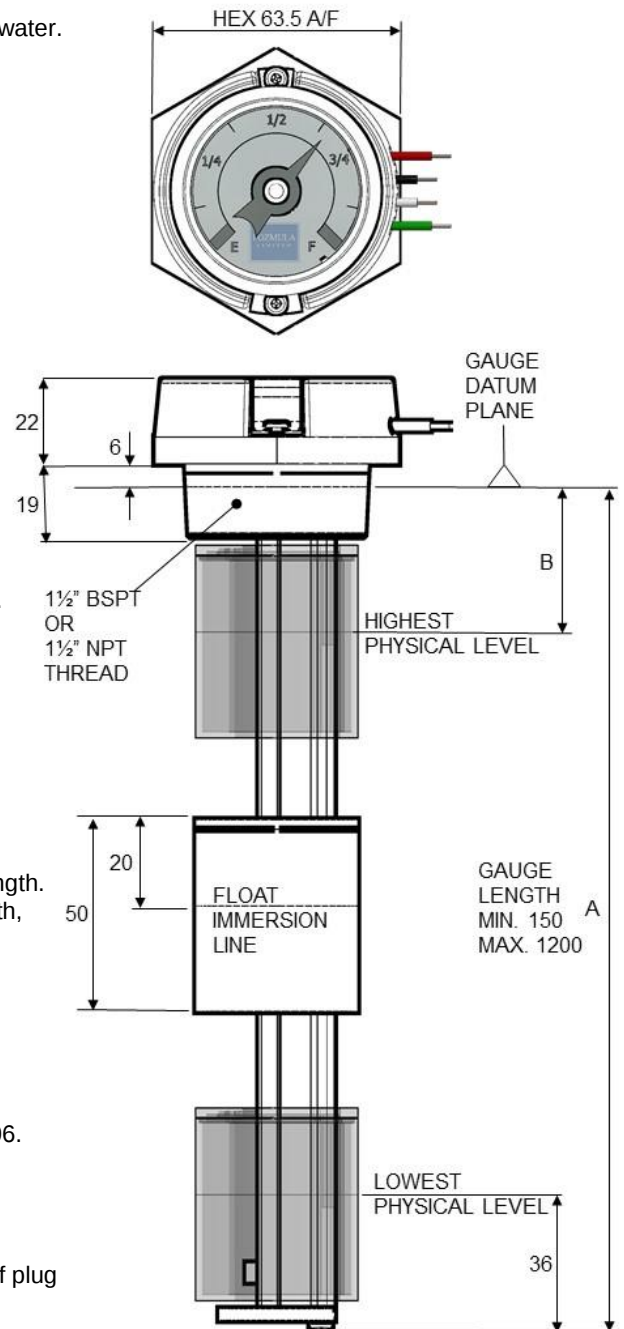
Environmental Ratings

Designed to meet:

Ingress: IP67.
Operating Temp: -15 °C to 66 °C.
Max tank pressure: 1 bar.
EMC: Type approval in accordance with EN ISO 13766:2006.
Vibration: 1.88 Grms BS EN 60068-2-4:1995.
Shock: 500 m·s⁻², 11 ms, BS EN 60068-2-27:1993.

Options

Connector: The G/LL65 can be supplied with any suitable style of plug or receptacle.



Hermes Close | Tachbrook Park | Warwick | CV34 6UF | United Kingdom
 Tel: +44 (0)1926 466700 | Fax: +44 (0)1926 450473 | sales@fozmula.com

www.fozmula.com

E. & O. E. © Fozmula Limited.

Since the suitability of these products depends upon a wide range of factors not in our control, Fozmula Limited expects and understands that you will conduct the testing and evaluation necessary to determine that these products are suitable for your application. Whilst every effort is made to ensure the above details are correct at the time of printing, Fozmula Limited reserves the right to make material changes, and or technical changes without notification.

8.6/52 Rev 0

TECHNICAL DATA

G/LL64 Liquid Level Contents Gauge

FOZMULA
INNOVATION IN SENSORS



The **Model G/LL64** series vertical spiral gauge is an electromechanical operated liquid level gauge designed to continuously display the fluid level and provide a volt free contact as a high or low level alarm.

The gauge operates so that as the liquid level changes the float follows that change and uses a magnetic coupling to transfer that motion from the float to the level indicator dial.

A latched reed switch is positioned at a customer specified height and actuates when the float falls or rises past it to make or break an alarm circuit.

SPECIFICATION

Liquid Types

Liquids compatible with the construction materials, typically fuels, oils, water.

Materials

Header:	30% Glass Filled Nylon 66
Guide Rail:	Anodised 6005-T5 Aluminium
End Cap:	30% Glass Filled Nylon 66
End Cap Screw:	A2 Stainless Steel
Spiral:	Brass / 316 Stainless Steel
Float:	Polypropylene
Dial Capsule:	Polycarbonate
Leads:	PVC Sheathed

Environmental Ratings

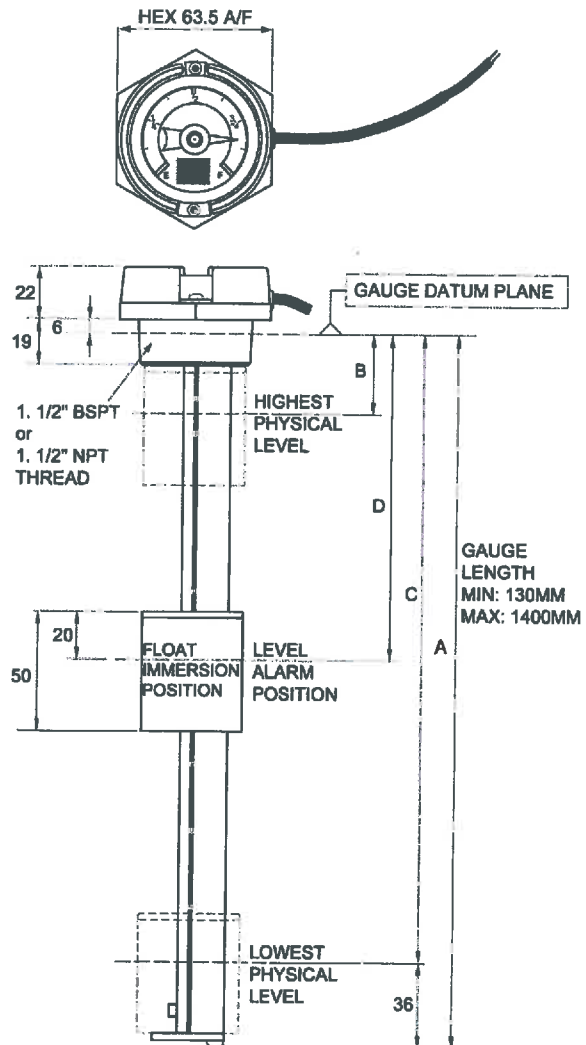
Ingress:	IP67
Operating Temp:	-15 °C to 66 °C
Vibration:	1.88 Grms BS EN 60068-2-4:1995
Shock:	500 m·s ⁻² , 11 ms, BS EN 60068-2-27:1993

Alarm switch

Type:	N/O or N/C
Max Power:	10 VA
Max Current:	0.5 A
Max Voltage:	100 VAC/VDC (Peak)
Leads:	2 off 7 x 0.2 mm (0.22 mm ²)

Options

Dial Capsule:	Fozmula or Blank marking
Thread:	1½" BSPT or 1½" NPT
Alarm Level:	Within range (C-10) mm to (B+10) mm
Connector:	The GLL64 can be supplied with any suitable style of plug or receptacle as required.



Hermes Close | Tachbrook Park | Warwick | CV34 6UF | United Kingdom
Tel: +44 (0)1926 466700 | Fax: +44 (0)1926 450473 | sales@fozmula.com

www.fozmula.com

E. & O. E. © Fozmula Limited.

Since the suitability of these products depends upon a wide range of factors not in our control, Fozmula Limited expects and understands that you will conduct the testing and evaluation necessary to determine that these products are suitable for your application. Whilst every effort is made to ensure the above details are correct at the time of printing, Fozmula Limited reserves the right to make material changes, and or technical changes without notification.

8.6/5 Rev 1

TECHNICAL DATA

T/LL130 Liquid Level Sensor

FOZMULA
INNOVATION IN SENSORS



The **Model T/LL130** series is designed for use in water, coolant or fuel/oil tanks and provides a factory set variable resistive, voltage or PWM (Pulse Width Modulated) output suitable for driving industry standard fuel gauges or connecting into PLCs.

The device has no moving parts and can be mounted at any angle above horizontal as long as it covers the whole depth of the tank. The unit cannot be inverted. An optional manual calibration feature is available.

SPECIFICATION

Liquid Types

Liquids compatible with the construction materials, typically diesel, kerosene, petrol, water.

Not suitable for fuels which contain Toluene.

Dimensions

Probe Length: Min. 200 mm, Max. 1000 mm mobile / 2000 mm static

Threads: ½" BSPT, 1" BSPT, ½" NPT

Optional Flange: Fozmula F/T1 SAE 5 Hole

Electrical

Supply Voltage: 9-34 VDC

Supply Current: 30 mA

Supply Protection: Over-voltage 80 VDC for 2 minutes.
Reverse polarity.

Signal Output: Resistance range; 0-250 Ω or 250-0 Ω, 2 Ω steps, 0.4 W max.
Voltage source range; 0-5 V or 5-0 V, 20 mV steps, 10 mA max.
PWM 8 kHz on a 5 VDC rail.

Alarm Output: Switch to ground. Max 100 mA. High or low level.
Default setting is 12.5% of full level.
Minimum 30 mm from sensor end.

Connections: 4 Way Delphi Packard Metri-Pack 150 Series.

Mating Connector: Fozmula C/K1 (Delphi Packard Metri-Pack 150)
To fit 0.8-1.0 mm² conductor, Ø1.6-2.15 mm sleeve.

Performance

Accuracy: ±2% of depth @ 20 °C

Materials

Enclosure: 30% glass filled nylon

Internal Electrode: PTFE

Sensor Tube: 316 stainless steel

Internal Spacers: Polypropylene

End plug: PTFE

Wetted Seals: Viton (FKM)

Environmental Ratings

Sealing: IP67 with mating connector

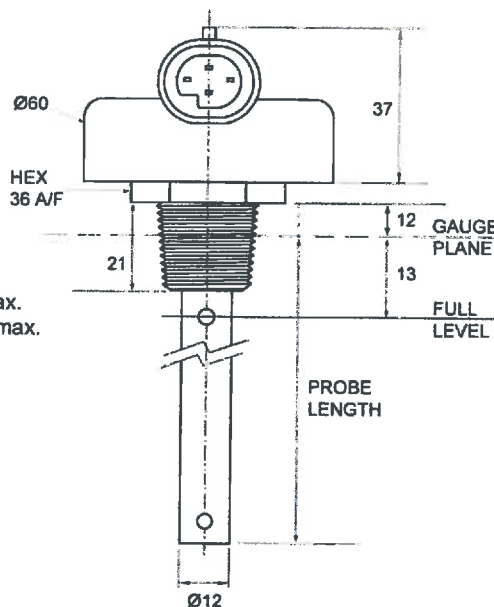
Max Pressure: 1 bar

Operating Temp: -20 °C to +85 °C

Shock: 50 g, 6.3 ms

Vibration: 15.3 Grms BS EN 60068-2-64:1993

Weight: 300 g (1 m long sensor)



Model	Output	User Calibration
T/LL130	Resistive	No
T/LL131	Voltage	No
T/LL132	PWM	No
T/LL133	Resistive	Yes
T/LL134	Voltage	Yes
T/LL135	PWM	Yes

Hermes Close | Tachbrook Park | Warwick | CV34 6UF | United Kingdom

Tel: +44 (0)1926 466700 | Fax: +44 (0)1926 450473 | sales@fozmula.com

www.fozmula.com

E. & O. E. © Fozmula Limited.

Since the suitability of these products depends upon a wide range of factors not in our control, Fozmula Limited expects and understands that you will conduct the testing and evaluation necessary to determine that these products are suitable for your application. Whilst every effort is made to ensure the above details are correct at the time of printing, Fozmula Limited reserves the right to make material changes, and or technical changes without notification.

8.6/33 Rev 1

TECHNICAL DATA

T/LL200 Series Liquid Level Sensor

FOZMULA
INNOVATION IN SENSORS



The **T/LL200** series is designed for use in vented tanks requiring continuous level measurement of their contents and provides a factory set linear* voltage or 4-20 mA output suitable for connecting into a PLC or process related applications. (The **T/LL200** is not a loop powered sensor).

The device has no moving parts and utilises hydrostatic technology incorporating a pressure transducer to measure the height of liquid. The flexible tube allows the sensor to be fitted easily and to tanks where a swing arm device is not practical.

*Contact Fozmula for non-linear applications.

SPECIFICATION

Liquid Types

Liquids compatible with the construction materials; typically diesel, kerosene, petrol, water.

Dimensions

Liquid Depth Diesel:	Min. 400 mm, Max. 4000 mm
Liquid Depth Water:	Min. 400 mm, Max. 3500 mm
Threads:	½" BSPT, 1" BSPT, ½" NPT
Flange Option:	Fozmula F/T1 SAE 5 Hole

Electrical

Supply Voltage:	9-32 VDC (Voltage output), 18-32 VDC (Current output)
Supply Current:	30 mA
Supply Protection:	Over-voltage 80 VDC for 2 minutes. Reverse polarity.
Signal Output:	Current Range. 4-20 mA or 20-4 mA. Max. 250 Ω load. Voltage source range. 0-5 V or 5-0 V. Max. 10 mA.
Alarm Output:	Switch to ground. Max 100 mA. Default setting is 12.5% of full level. Minimum 50 mm from sensor end.
Connections:	4 Way Delphi Packard Metri-Pack 150 Series.
Mating Connector:	Fozmula C/K1 (Delphi Packard Metri-Pack 150) To fit 0.8-1.0 mm ² conductor, Ø1.6-2.15 mm sleeve.

Performance

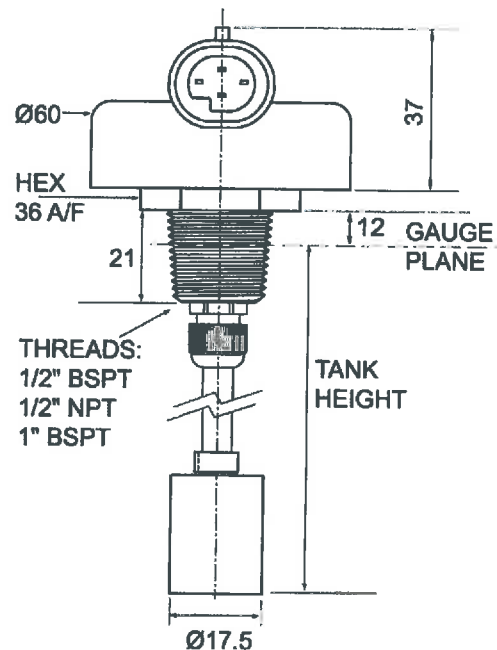
Accuracy:	±1.6% for 2000 mm fluid depth @ 25 °C
------------------	---------------------------------------

Materials

Enclosure:	30% Glass Filled Nylon
Gland:	Nylon
Sensor Tube:	Polyurethane
Sensor Body:	316 Stainless Steel
Retaining Clip:	304 Stainless Steel
Wetted Seals:	Viton (FKM)

Environmental Ratings

Sealing:	IP67 with mating connector above tank surface (excluding tank venting hole).
Operating Temp:	-20 °C to +85 °C
Vibration:	4.3 Grms BS EN 60068-2-64:1993
Weight:	300 g (1 m long sensor)



Hermes Close | Tachbrook Park | Warwick | CV34 6UF | United Kingdom
Tel: +44 (0)1926 466700 | Fax: +44 (0)1926 450473 | sales@fozmula.com

www.fozmula.com

E. & O. E. © Fozmula Limited.

Since the suitability of these products depends upon a wide range of factors not in our control, Fozmula Limited expects and understands that you will conduct the testing and evaluation necessary to determine that these products are suitable for your application. Whilst every effort is made to ensure the above details are correct at the time of printing, Fozmula Limited reserves the right to make material changes, and or technical changes without notification.

8.8/36 Rev 1