

DCS IS Intrinsically Safe Capacitive Liquid Level Sensor

The DCS IS is an intrinsically safe capacitive level sensor which is a reliable alternative to our range of float switches, specifically designed for use in cryogenic applications.



II 1GD

Ex ia IIC T(*) Ga

Ex ia IIIB T₂₀₀(*) Da

-40°C ≤ Ta ≤ +70°C

* Temperature class options to suit environment and process temperatures:

T4 / T145°C for process temperatures ≤ 125°C

T3 / T200°C for process temperatures ≤ 190°C

ATEX Certificate: SGS 21ATEX0002X

IECEX Certificate: IECEX BAS 21.0002X

Features Include:

- ATEX & IECEX Intrinsically Safe Approved
- Microprocessor Based Pulse – Counting Technology
- Probe Lengths can be made to measure to suit specific applications – maximum 6m
- Suitable for non-conductive liquids only.
- Easy Push Button Set-up of Span and Zero Points.
- Temperature ranges from -200°C to +200°C available.

Specifications

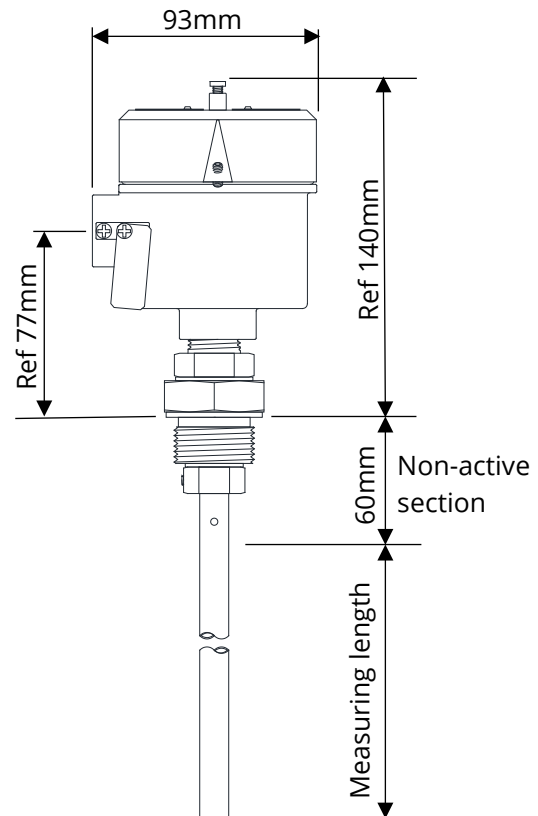
ELECTRICAL DATA	
Operating Voltage	15 – 25.2VDC (a minimum of 24V should be applied to the barrier)
Operating Current	< 50mA
Intrinsic Safety Parameters	
Ui	25.2V DC
Ii	155 mA
Pi	1.2 W
Ci	0
Li	0
Resolution	< 2mm +/- 0.5mm
Operating Temperature (Head)	-40°C to +70°C
Stem Minimum Operating Temperature	
Standard Version	-40°C
Low Temperature Version	-200°C
Stem Maximum Operating Temperature	
T4/T145°C	+125°C
T3/T200°C	+190°C
Output Accuracy	±1% @ 50% full scale deflection (20°C)
Current Output Signal 1 two wire	4 - 20mA
Voltage Output Signal 2 two wire	0 - 5Vdc
Calibration (Zero, Span)	Stored in NVM
Response time (currently)	1000ms
Response time (enhanced)	250ms / 500ms

MECHANICAL DATA	
Weight	1.90Kg
Enclosure Rating	IP66 / IP68
Electrical Connections	Screw Terminals
Head Material	316L
Stem Material	316L Stainless Steel
Other wetted parts	PTFE
Maximum Stem length	Up to 6m
Stem Diameter	12mm
Mounting Orientation	Vertical or horizontal
Cable Entry	M20 x 1.5p or 1/2"NPT
Mounting Thread	1" BSP Parallel (standard, other threads and flange mounting available)
EMC Standards	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-4-2
ATEX Standards	EN IEC 60079-0:2018 EN60079-11:2012
IECEX Standards	IEC 60079-0:2017 Edition 7 IEC 60079-11:2011 Edition 6

Dimensions

The DCS can be ordered with any length of sensor stem up to 5975mm (19' 7¼"). The stem length is the active measuring length of the sensor and should not be confused with the stem depth. The stem depth is 60mm longer and includes the non-active section above the measuring length. The stem depth (measuring +60mm) is the length from the shoulder of the mounting thread to the end of the stem probe.

Non-standard mounting may have a different length of non-active section.



Operation

The DCS IS is suitable for measuring non viscous liquids with a dielectric constant (also known as relative permittivity) shown in the tabulated data above. Viscous liquids may produce a delayed level reading, block the sensor stem and eventually dislodge the internal stem spacers.

The sensor stem is constructed from a stainless steel 316 tube around a stainless steel 316 solid rod. The rod is held centrally inside the tube using a PTFE spacer with cut outs to allow the liquid to flow inside the tube. A breather hole at the top of the stem equalises the air pressure.

Ordering Code

Please contact the sales office at sales@deeter.co.uk or +44 (0)1494 566 046 to discuss this product further.

All electrical equipment should be installed by a qualified/certified electrician.

Deeter Electronics Ltd follows a policy of continual development of its products and reserves the right to change specifications and/or features without notice.