

DCT 4R-digital series
thermocatalytic
sensor



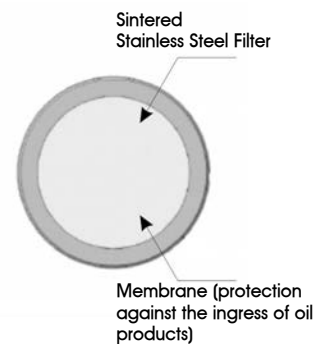
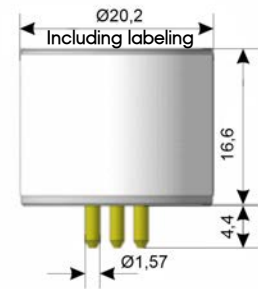
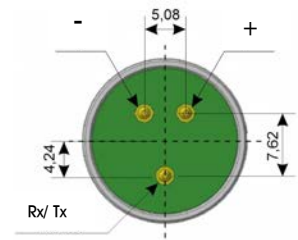
Leading
manufacturer
of instrumentation
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1997

The DCT 4R-digital series sensor is designed to **measure pre-explosive concentrations of hydrocarbons, including hydrogen (H₂)**, in the working area at the facilities of general industrial use and hazardous industries. The sensor includes a sensing element based on **patented technology** and provides **high resistance to overloading and poisoning by hydrogen sulfide (H₂S) and hexamethyldisilane (HMDS)**.

Features and Benefits

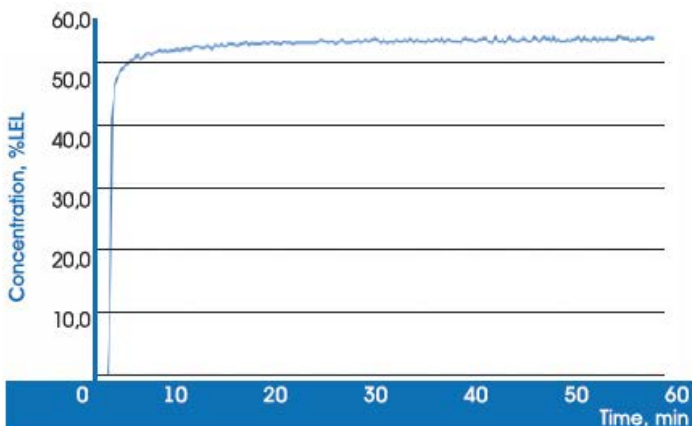


- Non-volatile memory stores the necessary sensor parameters and allows sensor's replacement in situ without its disassembly and additional operations to set and calibrate the transmitter
- High repeatability of measurement results due to patented sensing element technology
- Temperature stability. Temperature drift is less than 5% of the LFL
- Low response time in its sensor class. T90 is less than 10 seconds
- Resistant to catalytic poisoning and overloading
- Rugged construction resistant to shock (fall from a height of 8 m) and vibration loads (up to 150Hz).
- Compliance with the requirements of TR TS 012/ 2011 in potentially explosive atmospheres
- Ingress protection is IP65
- Estimated lifetime is 5 years

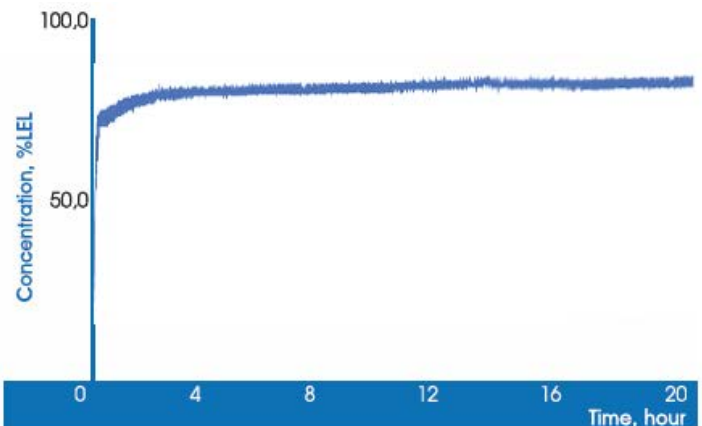


All measurements in mm.

Resistance to H25 is at least 50000 ppm/ hour
The deviation of the output signal after exposure to 50000 ppm H25 does not exceed 5%LEL



Resistance to HMDS is at least 6000 ppm/ hour
The deviation of the output signal after exposure to 300 ppm HMDS does not exceed 1%LEL



Technical specifications*



Temperature Range	-60°C to +65°C
Consumption Current	95±15 mA
Maximum Power	0,35 W
Indication Range	0-100% LEL
Supply Voltage	3±0.05 V
Resolution	1% LEL
Output Digital Signal	Modbus RTU protocol, interface UART
Maximum Output Deviation	5% LEL
Long Zero Drift	< 1 % LEL/ month
Long Term Sensitivity Drift	< 3% LEL/ month
Drift with Temperature Change	< 5% LEL
Permissible Humidity	0-98% (non-condensing)
Operating Pressure	80-120 kPa
Time T90	<10 seconds (methane)
Enclosure Material	Stainless steel
Linearity	0-50% LEL
Power Supply	Voltage stabilized line
Periodic Check	No more than one time per 6 months when operating in clean air
Protection Degree	IP65
Explosion Proof Enclosure	PO Ex da I Ma/ 0Ex da IIC T6Ga

* Specifications are valid at 20 ° C with 50% relative humidity and 101.3 kPa pressure. When operating conditions change, the output characteristics may change too.

** When the oxygen content in the air of the working area is not less than 10% vol.

Cross-sensitivity table for methane calibration

No	Gas	Cross Sensitivity Factor (Methan)
1	CH4	1.00
2	C3H8	0.76
3	C4H10	0.54
4	C5H12	0.43
5	H2	0.63
6	C6H14	0.52
7	C2H6	0.95
8	C2H5OH	0.46
9	C3H6	0.54
10	C2H3Cl	0.77
11	C6H12	1.08
12	CH3OH	0.80
13	C2H4	0.55
14	C6H6	0.59
15	C2H2	0.79
16	C4H6	0.72
17	C5H12O	0.73

ERIS has a policy of continuous development and improvement of its products.
As such the specification for the device outlined in the data sheet may be changed without notice.

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