

# ERIS Group

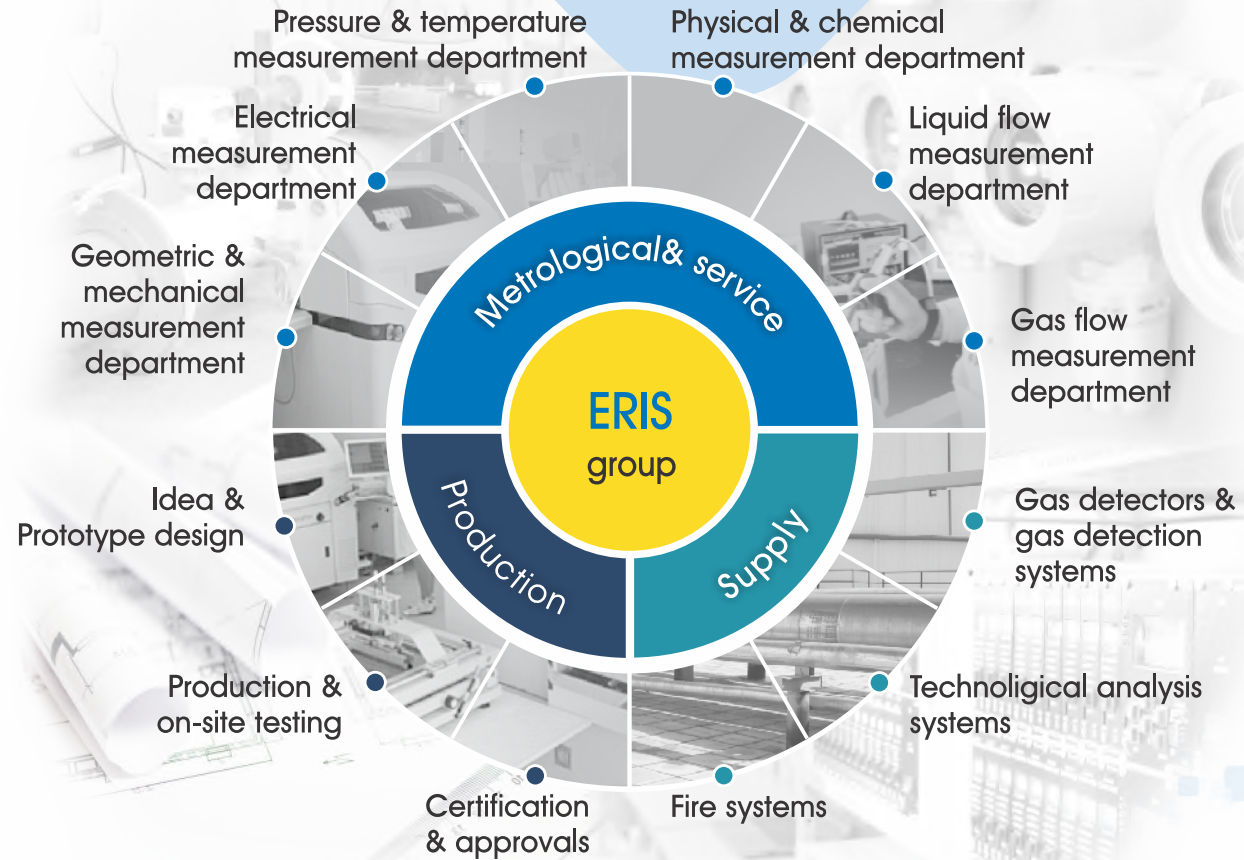
Innovative solutions  
in industrial safety



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## About



- Founded in 1997, certified to ISO 9001-2015;
- Production area - 5000m<sup>2</sup>
- Staff - more than 150 people

- Technologies: a powerful, modernly equipped production area;
- Experience: designing, manufacturing of means and systems of measurements, equipment delivery, installation works;

- Service: a reference equipment base of more than 250 units; accredited metrological service; Service of more than 20 000 devices a year;
- Partners: Russia, England, Canada, Germany, the USA, Switzerland, China, Mexico.

# DGS ERIS-200

fixed gas detectors family

Designed for measurement oxygen, toxic  
and combustible gases in ambient air



# DGS ERIS-200

fixed gas detectors family

## Modifications and housing options



### DGS ERIS-210



### DGS ERIS-230



Painted aluminum housing with indication

- Bright color epoxy painted housing
- Ex certification: 1Exd [ia] IIC T6X
- Ingress protection: IP 67



Stainless steel housing with indication

- Resistant to corrosive atmospheres
- Ex certification: 1Exd [ia] IIC T6X
- Ingress protection: IP 67

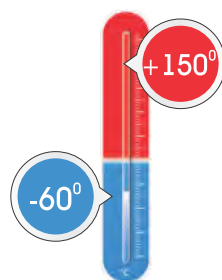
# DGS ERIS-200

fixed gas detectors family



## Technical parameters

Sensor types	<ul style="list-style-type: none"><li>- IR smart sensor (combustible gases, CO<sub>2</sub>, refrigerants)</li><li>- Catalytic smart sensor (combustible gases)</li><li>- High temperature Catalytic smart sensor (combustible gases)</li><li>- Electrochemical smart sensor (toxic gases, oxygen)</li></ul>
Output signals	<ul style="list-style-type: none"><li>- 4-20 mA</li><li>- RS-485 Modbus</li><li>- HART</li></ul>
HART interface	<ul style="list-style-type: none"><li>- over current loop 4-20 mA</li><li>- intrinsically safe connector on the device housing (optional)</li></ul>
Relay output	Alarm 1, 2, Fault (220V, 2A, as an option)
Indication	<ul style="list-style-type: none"><li>- ultra bright leds on front panel</li><li>- bright OLED display (only for DGS ERIS-230)</li></ul>
Configuration	<ul style="list-style-type: none"><li>- via magnet pointer</li><li>- via HART-communicator</li><li>- via free software using RS-485</li></ul>
Supply voltage	From 18 to 36 VDC
Input power	less than 2 W in measurement mode



### Temperature range

from -60°C to +65°C  
from -60°C to +150°C  
(with external sensor)

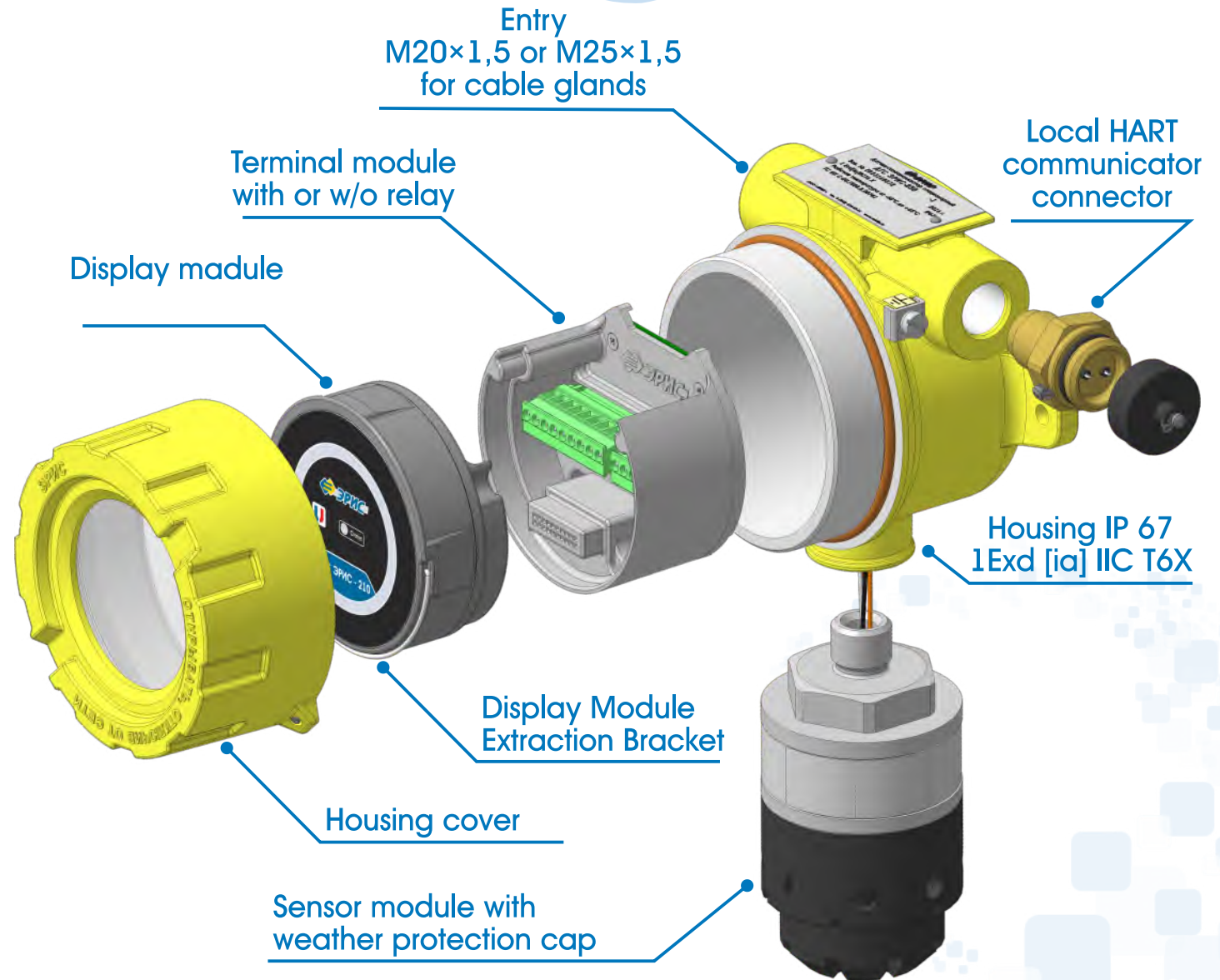


Warranty (up to)

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## Internal structure



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## SMART sensor

What is it?

- Unified architecture of all types of sensors

What is it for?

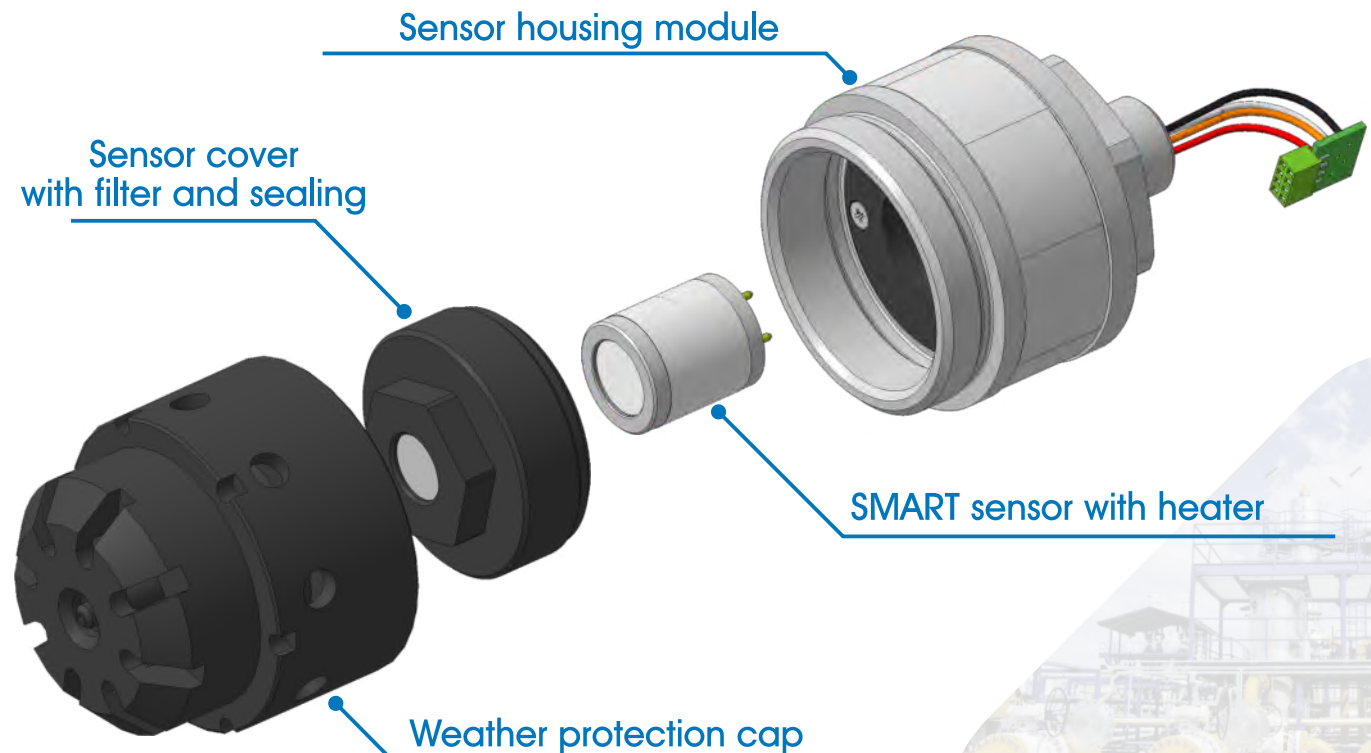
- Convenience of replacing a sensor of one type with another type

What are the benefits?

- Reduction of the spare parts inventory and maintenance costs
- Reducing the cost of technical re-equipment
- Your gas analyzers will be relevant ALWAYS !!!

How much does it cost?

- This technology is used already in the basic version, therefore it is not an option and does not require additional payment



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## Capabilities

- Built-in protection from false alarms and control pollution of the optics
- Bright LED indication
- Modifications with wireless communication and autonomous power supply
- Permanent self-diagnosis (when switched on and during operation)
- Checking the operability and setting directly at the place of operation with a magnetic key or a HART communicator
- Indication on OLED display (for DGS ERIS-230): measured gas, current concentration in% vol%, % LEL, ppm, mg/m<sup>3</sup>, total more than 50 parameters

### List of gases and vapors to be determined

- Methane
- Ethane
- Cyclopentane
- Ethylene oxide
- Isopropyl alcohol
- Propane
- Ethylene
- Cyclohexane
- Propylene oxide
- Acetic acid
- Butane
- Ethanol
- Vinyl chloride
- Dimethylsulfide
- Dimethylhydrazine
- Butene
- Benzene
- Cyclopropane
- Methylpropanol
- Hydrogen cyanide
- Butanol
- Propene
- Chlorobenzene
- Hydrogen sulfide
- Carbon monoxide
- Butanone
- Octane
- Ethylbenzene
- Hydrazine
- Carbon dioxide
- Isobutane
- Octen
- Isopropylene
- Hydrogen chloride
- Hydrogen fluoride
- Pentane
- Nonan
- Isobutylene
- Nitric oxide
- Dimethyl ether
- Hexane
- Heptane
- Acrylonitrile
- Nitrogen dioxide
- Diethyl ether
- Hexen
- Arsine
- Ethyl acetate
- sulphur dioxide
- MTB aired
- Acetone
- Chlorine
- Butyl acetate
- Monosilane
- Sum of hydrocarbons
- Acetylene
- Fluorine
- Butadiene
- Formaldehyde
- Petroleum products
- Toluene
- Ozone
- Dichloroethane
- Ethyl mercaptan
- R12
- R22
- R113a
- Styrene
- Phosphine
- Paraxylene
- Methylmercaptan
- R125
- R134a
- R227a
- Methanol
- Ammonia
- Orthoxilol
- Carbonyl chloride
- Oxygen
- Hydrogen



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## Benefits

- ◆ A wide range of applications  
High operational flexibility, no overpayments for unnecessary options
- ◆ High level of accuracy (methane error of only 3% LEL)  
The rapid setting of the readings (T0.9 for the IR sensor for less than 5 seconds)
- ◆ High reliability (IEC 61508-2-2012, 61511-3-2011 (SIL2))  
Application in all climatic zones of Russia (adaptive heating)
- ◆ Low cost of ownership due to:
  - Verification interval and warranty - 3 years (for IR sensor)
  - calibration at the place of operation (reduction of maintenance costs)
  - application of SMART-sensor (reduction of re-equipment costs)
  - effective power consumption (2W)
  - the possibility of working without secondary devices
  - free configuration software
  - operative service
  - short terms of delivery of components



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## Additional options

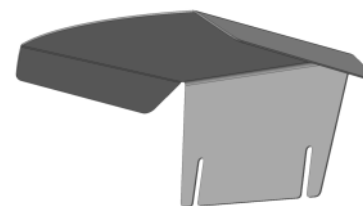


For gas detectors:  
DGS ERIS-210  
DGS ERIS-230  
DGS ERIS-PID

Pipe mounting kit



Sunshield



Calibration cap



Duct mounting kit



Connector for the  
HART Communicator



Light and sound  
alarm module



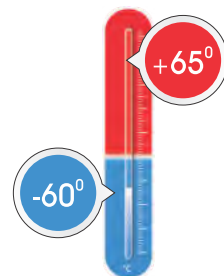
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## Light and sound alarm

Light alarm	Customizable colors and algorithms. 16 multidirectional super-bright LEDs
Sound alarm	110 dB, adjustable sound signal
Acknowledgment of a signal	Is, by means of a magnetic key
Interface connection and settings	RS-485 (Modbus)
Compatibility	DGS ERIS-210 (with indication), DGS ERIS-230, DGS ERIS-FID
Supply	From the gas analyzer, a separate line is not required
Power Consumption	0,1 W in standby mode 5 W in alarm mode
Housing material	painted aluminum or stainless steel
Ex	1Exd [ia] IIC T6X



Temperature  
from  $-60^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$   
Ingress protection  
IP67

