



Custom design

Since entering this market in 1956, we have continually evolved our design and manufacturing capabilities to produce high-quality, custom drilling detectors.

- We have built detectors up to 2.25" (57.15 mm) in diameter, and up to 12" (304.8 mm) in length
- With fill pressures from 60 to 180 psia (0.4–1 MPa)
- We also optimize gas mixtures using a variety of quenching gases to ensure the right balance between sensitivity and operating voltage.
- We offer a wide array of electrical terminations and mechanical interfaces to suit virtually any downhole application.

Benefits

- Plateau slope <4% per 100 V over a minimum 200 V range.
- At least 100 V common plateau between room temperature and +175°C (347°F) with <2% count rate shift.
- Our patented anode suspension minimizes shock-induced false counts.

Neutron Detectors

Built to operate in extreme environments including high pressures, shock and vibration.

› Enhanced formation evaluation

Our Helium-3 (^3He) filled detectors offer the optimal combination of high efficiency and sensitivity, with excellent gamma discrimination and vibration response, all in the most compact package possible.

› Time-tested reliability

Our ^3He filled neutron detectors incorporate the operational experience gained from the design and manufacture of more than 67,000 units over 70 years.

This experience and the associated proprietary processing techniques that have evolved from it have resulted in detectors that are regarded by many as the industry standard for neutron detection.

› Precision performance

We have developed proprietary ^3He purification techniques, gas mixtures, and manufacturing process controls to ensure precise matching of operating characteristics among large batches of detectors.

This permits parallel operation of multiple detectors without need for separate power supplies or gain matching.

Configurations

| Part # | Application | Diameter (in.) | Operating voltage range | Plateau length >175°C | Resolution (%) | Sensitivity (cps/nv) | Active length (in.) | Overall length (in.) | Total pressure (PSIA) |
|----------------|-------------|----------------|-------------------------|--------------------------|----------------|----------------------|---------------------|----------------------|-----------------------|
| RS-P4-0604-225 | Drilling | 0.75 | 1050-1300 V | 4%/100 V 150 V length | 17 | 11.5 | 4.0 | 6.5 | 170.0 |
| RS-P4-0606-209 | Drilling | 0.75 | 1150-1625 V | 4%/100 V 150 V length | 15 | 18.7 | 6.0 | 8.2 | 178.1 |
| RS-P4-0803-241 | Wireline | 1.00 | 1100-1400 V | 4%/100 V 150 V length | 20 | 10.0 | 3.0 | 4.9 | 66.0 |
| RS-P4-0803-264 | Drilling | 1.00 | 1250-1700 V | 3%/100 V 150 V length | 25 | 12.4 | 2.7 | 5.9 | 181.3 |
| RS-P4-0804-250 | Wireline | 1.00 | 1000-1600 V | 3%/100 V 200 V length | 10 | 16.9 | 4.0 | 7.6 | 149.0 |
| RS-P4-0806-211 | Wireline | 1.00 | 1250-1500 V | 3%/100 V 250 V length | 10 | 22.5 | 5.9 | 9.6 | 90.0 |
| RS-P4-1004-219 | Wireline | 1.25 | 1000-1700 V | 3%/100 V 150 V length | 12 | 17.5 | 4.1 | 5.8 | 60.0 |
| RS-P4-1206-219 | Wireline | 1.25 | 1050-1300 V | 3%/100 V 150 V length | 16 | 42.0 | 6.0 | 7.6 | 150.0 |
| RS-P4-1208-204 | Wireline | 1.50 | 1200-1600 V | 3%/100 V 150 V length | 15 | 52.0 | 8.0 | 11.5 | 100.3 |
| RS-P4-1406-219 | Wireline | 1.75 | 900-1250 V | 3%/100 V 150 V length | 15 | 49.0 | 6.0 | 8.5 | 147.7 |
| RS-P4-1408-205 | Wireline | 1.75 | 1100-1600 V | 3%/100 V 200 V length | 15 | 62.1 | 8.0 | 9.9 | 91.5 |
| RS-P4-1606-219 | Wireline | 2.00 | 1000-1600 V | 3%/100 V 150 V length | 15 | 45.0 | 6.0 | 9.4 | 59.6 |
| RS-P4-1808-229 | Wireline | 2.25 | 1300-1600 V | 2%/100 V 200 V length | 15 | 90.0 | 8.0 | 10.3 | 150.0 |
| RS-P4-2012-204 | Wireline | 2.50 | 1100-1700 V | 2%/100 V 200 V length | 15 | 130.0 | 12.0 | 15.9 | 61.5 |

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Contact us for customization

If your application requires unique specifications, our engineers can design a custom solution for your project.

Get in touch with a Reuter-Stokes representative to dig in to the customization process.

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