Monitor H_2

Battery charging and maintenance equipment

Maintenance-free hydrogen detection with continuous self-calibration

Monitor H_2

Hydrogen area monitor

amperis

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Hydrogen area monitoring for battery rooms, with no calibration over a 10-year-plus life.

Product overview

Compact enclosure for area monitoring

Hydrogen safety without maintenance

The AMPERIS hydrogen area monitor tackles the safety hazards of stationary battery installations with a hydrogen-specific sensor designed for battery-room environments. Continuous internal self-testing verifies sensor health and accuracy over its whole life, with no manual calibration and no board replacements, eliminating the drift, false alarms and early failures typical of catalytic-bead and metal-oxide sensors.

Compliance built in

The monitor keeps installations aligned with global fire and safety standards — IFC, NFPA 1, NFPA 2, NFPA 855, OSHA 1910, IEC 62485-2, IEC 62933-5-2 and IEEE 484 & 1635 — measuring hydrogen from 0.4 to 5 % with ±0.3 % accuracy and a response time of 50 to 70 seconds, and providing 1 % and 2 % concentration alarms.

Main features

- Continuous automated self-calibration; immunity to false alarms.
- Hydrogen-specific sensor with no cross sensitivity to other gases.
- Wall, DIN-rail, junction-box and magnetic mounting options.
- Modbus RTU (RS-485), 4-20 mA analog output and dry relay contacts.
- AC (85-264 V) and DC (15-60 V) power with automatic switchover.
- Service life above 10 years.

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Applications and models

Applications

- Standby-power and emergency battery rooms.
- Lead-acid and NiCad battery installations and cabinets.
- Telecommunications backup and data-centre standby power.
- Electrical substations, switchgear and SCADA systems.
- Hydrogen generation, forklift charging and fuel-cell applications.

Model range

Four models cover the communication needs of each installation: 8111 (Modbus RTU, 4-20 mA, dry contacts and fault indicator), 8110 (4-20 mA and dry contacts), 8101 (Modbus RTU and dry contacts) and 8100 (dry contacts with 1 % and 2 % alarms and fault indicator).

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Monitor H_2 — TECHNICAL SPECIFICATIONS

Detection range	0.4-5 % H_2; lower detection limit 0.4 %
Accuracy	±0.3 % H_2 (±1 % above 2 %)
Response time	50 to 70 seconds
Alarms	1 % and 2 % H_2 concentration; fault indicator
Communication	Modbus RTU (RS-485); 4-20 mA analog; dry relay contacts
Power	85-264 V AC; 15-60 V DC; automatic AC/DC switchover; 10 W max
Mounting	Wall, DIN-rail, junction box and magnetic
Service life	Above 10 years; maintenance-free, no calibration
Environment	15 to 40 °C; 0-95 % RH non-condensing
Dimensions and weight	132.5 × 130.5 × 52.9 mm; 0.5 kg
Models	8111, 8110, 8101 and 8100 (communication variants)

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