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The S2A, Alliance Sensors Group's CyberSecure Smart AC-LVDT Signal Conditioner

The Most Advanced LVDT Signal Conditioner for Power Generation Applications

Moorestown, New Jersey, April 24, 2018... [H.G. Schaevitz LLC dba Alliance Sensors Group](#) introduces its latest LVDT signal conditioner, the highly advanced S2A. This LVDT signal Conditioner offers smart and fast LVDT/RVDT setup and has been engineered to work with the widest range of LVDTs, RVDTs, and inductive half-bridge sensors including 3-wire GE LVRTs and GE gas turbine buck-boost style LVDTs. The signal conditioning module has cyber security tamper prevention and notification features that no other manufacturers have even considered, providing confidence that the unit has not been compromised.

S2A Operating Features:

- Push button calibration
- Built-In null indication
- 4 excitation frequencies, 8 analog DC outputs (6 DC voltage and 2 current loop outputs)
- 16 addresses for RS-485 digital communications
- Hot swap capability
- Advanced master/slave capability to reduce cross talk

"We are extremely excited about the release of the S2A", states Harold Schaevitz, President and CEO of Alliance Sensors Group. "The marketplace has asked Alliance Sensors for several enhanced features, and our engineering staff has exceeded expectations and delivered a superior product for the Power Gen market compared to other manufacturer's products.

The S2A has more system diagnostic capabilities than any stand-alone LVDT conditioner on the market. This LVDT Signal conditioner offers fault or failure detection for high reliability applications like nuclear power plant steam turbine controls. The S2A's diagnostics can detect at least eleven (11) fault conditions. See the list of features below.

S2A New Diagnostic Features:

- Shorted primary,
- Disconnected or open primary,
- Shorted or grounded secondaries,
- Disconnected or open secondaries,
- Analog output shorts or opens,
- Common hook-up errors that can occur during initial installation and setup.
- Cybersecurity to prevent tampering and notify main system operations of tamper attempt.
- Real-time recalibration to tweak the analog output after the mechanical system's warmup.
- Recalibration from the module's front panel or over the RS-485 bus.
- Differential input which common modes out most ground-loop developed noise signals.
- Backward Compatible to perform exactly as the legacy S1A conditioner.

The S2A offers push button calibration, reducing set up time by a factor of 10. In the past, AC-operated LVDT linear and rotary position sensors were difficult to calibrate because traditional signal conditioners required operators to adjust trimmer pots. With an S2A signal conditioner, the internal microprocessor eliminates any need to calculate jumper connections for gain, range, etc. The operator simply finds null, then moves the LVDT core to one end of the range and presses the front panel Zero button. Once set, the LVDT's core is moved to the other end of the specified range and the front panel Full Scale button is pressed. The S2A is then fully calibrated with the position sensor.

The new S2A DIN-rail-mounted module can be “hot swapped” into an existing installation, with original calibration data saved and then reloaded into a new module via its RS-485 port. Conventional signal conditioners would require a full calibration. The S2A also can be setup remotely using a computer connected through the digital communications link to the RS-485 bus, which simplifies operations if the module is already installed on a DIN rail in a cabinet.

For installations involving multiple position sensors, the S2As can be master/slaved to prevent cross talk between sensor signals. Should a master fail, conventional signal conditioners will revert to their own oscillators, opening them to cross talk the master/slave configuration was to prevent. If the master S2A fails, the first slave becomes a new master for all the other slaves.

Other significant features of the S2A include:

- Color coded plug-in connections which permit easy pre-wiring in a rack and hot swapping
- Self-diagnostics for LVDT winding failures or cable disconnection.
- Detected output errors or faults drive analog output out of range, which is especially important for applications using redundant LVDTs
- A two year warranty offers value to systems integrators who may purchase modules long before they will be put into service

For more information on the S2A AC-LVDT Signal Conditioner, please refer to the web site at [link to landing page here](#) or contact the factory at sales@alliancesensors.com .

About Alliance Sensors Group

Headquartered in Moorestown, New Jersey, Alliance Sensor Group (<http://www.alliancesensors.com/>) is an LVDT, LVIT and RVDT sensor manufacturing company offering engineering and application support in solving specific measurement challenges within the power generation, fluid power and manufacturing industries. Combining more than 150 years of sensors experience, our technical and application support staff have extensive experience in providing the right sensor for challenging rotary and linear position measurement applications. Follow us on Twitter [@Alliancesensor1](#).