




S2G2-800 - OEM
series

**Setting New Standards
in Complex Eddy
Current Array
Inspection**



Through innovation,
we surpass standard expectations





Harnessing Power and Affordability for Exceptional Electromagnetic Tube & Surface Eddy Current Array Inspection.



The S2G2-800-OEM is SG NDT's flagship Eddy Current

testing solution, designed to meet the needs of advanced, high-density array inspections. With the capacity to drive up to 512

Eddy Current channels, this device is engineered for precision, flexibility, and seamless integration into complex inspection systems. Available in 128-channel, 256-channel, and 512-channel configurations, the S2G2-800-OEM is ideal for a wide range of applications, from aerospace to power generation and beyond.

Key Advantages

Several important improvements and advantages can be seen in the S2G2-800-OEM leading to greater capabilities and functionality in this already field proven solution.

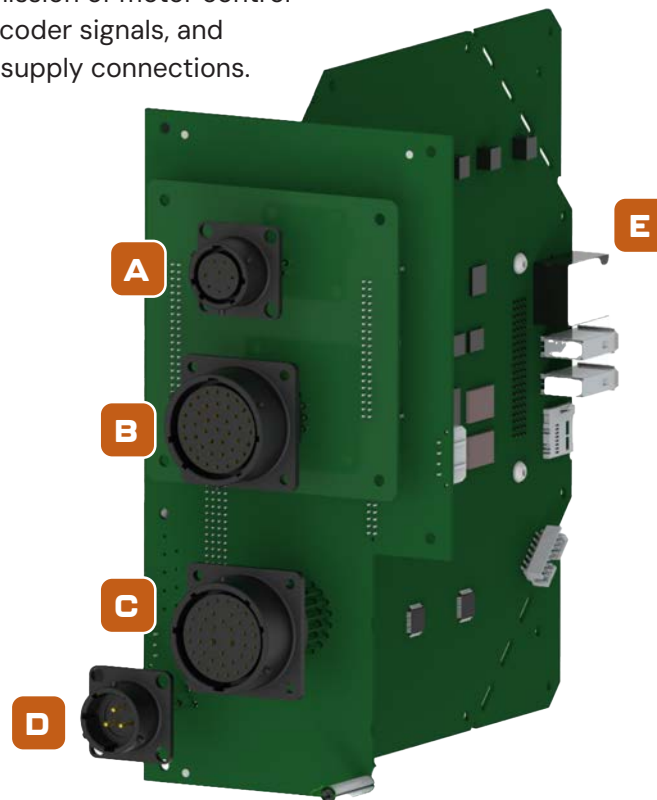
- **Channel Configurations:** 128, 256, or 512 Eddy Current channels.
- **Advanced Signal Processing:** Utilizes a high-resolution 24-bit converter for superior Signal-to-Noise Ratio (SNR).
- **Compatibility:** Supports a wide range of Eddy Current Array (ECA) probes, including custom and commercially available probes.
- **Flexible Integration:** Interfaces with external multiplexers to expand compatibility and simplify system design.
- **EMMA Software:** Seamless integration with SG NDT's EMMA software for advanced data visualization, analysis, and reporting.



A

Motor Controller Connector

- The Motor Controller Connector facilitates the connection of rotating eddy current probes to the S2G2-800-OEM. It supports the transmission of motor control signals, encoder signals, and DC power supply connections.

S2G2-800 -OEM
series**B**

Extended ECT Probe Connector

- This connector features an industry-standard 41-pin Amphenol interface, ensuring compatibility with all probe types, including Eddy Current Array (ECA) surface probes and tube inspection probes. Techniques including ECT/ECA, RFT/RFA, NFT/NFA, MFL/. Its adaptability is further enhanced with simple 41-pin to 19-pin or 41-pin to 4-pin adaptors.

D

DC Power Connector

- The S2G2-800-OEM can operate using either an external 24 VDC mains power supply/adaptor or an external 24 VDC battery pack, offering flexibility in power sourcing.

E

Ethernet Connector

- A standard Ethernet connector enables seamless communication between the electronic boards and a PC or tablet computer.

I/O Connector

C

- The 39-pin Amphenol I/O Connector supports multiple input/output functionalities, including:
 - Driving automatic sequencing processes
 - Encoder signal integration
 - Four real-time alarm inputs/outputs



S2G2-800-OEM Specifications

Technical Specifications

Number of Channels	128, 256, or 512
Signal Processing	24-bit Analog-to-Digital Converter
Frequency Range	10Hz to 2MHz
Output Voltage	Up to ± 10 V
Operating Modes	<ul style="list-style-type: none">• Eddy Current Testing (ECT)• Eddy Current Array (ECA)• Remote-Field Testing (RFT)• Remote-Field Array (RFA)• Near-Field Testing (NFT)• Near-Field Array (NFA)• Magnetic Flux Leakage (MFL)
Multiplexing	External multiplexer support
Communication Interfaces	Ethernet, USB, RS-485
Power Requirements	100–240 V AC, 50/60 Hz
Operating Voltage	24 Volts DC Power
Operating Temperature	-10°C to +50°C
Dimensions	9.8cm(3.9") x 25.1cm(9.9") x 20cm(7.8")
Weight	0.55kg (1.2lbs) (approx.)

Applications

Aerospace: Inspection of aircraft structures and engines.

Power Generation: Non-destructive testing of turbines, boilers, and heat exchangers.

Oil & Gas: Corrosion detection and pipeline inspections.

Manufacturing: Quality assurance in automotive and industrial production lines.

Benefits

High Density Inspections: Enables advanced ECA inspections with up to 512 channels.

Enhanced Signal Clarity: The 24-bit converter delivers exceptional SNR for detecting low-amplitude signals.

Customizable Configurations: Available in multiple channel configurations to match specific application needs.

Ease of Integration: Compact design and multiple interface options simplify integration into existing systems.

Software Support: EMMA software enhances data analysis, visualization, and reporting capabilities.

Package Includes

S2G2-800-OEM device (configured as per order)

Power supply and interface cables

API documentation and mechanical step file

User manual

visit us online at: sgndt.com

North America Canada

Head Office – SG NDT Inc.

425, 3e Avenue, Suite 200, Lévis,
Québec G6W 5M6
Canada

Tel: 1 (418) 830-8808

info@sgndt.com

Europe France / UK

Subsidiary – SG NDT SARL.

Algo Business Centre, Glenearn Road,
Perth PH2 0NJ
United Kingdom

Tel: 33 6 51490036

info@sgndt.com

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