

Replacement of Sorrento 02810770-001 Power Supply

The Westinghouse Solution

To enable continued operation of installed monitoring equipment, Westinghouse has developed an equivalent replacement for the Sorrento 02810770-001 power supply used in low-level area monitor applications. The Westinghouse 10186D82G01 power supply is designed to replicate the electrical performance of the original unit, providing a regulated high-voltage output of 700 Vdc for loads up to 4 mA. This power supply supports Geiger-Mueller tubes used in low-level radiation monitoring systems, while maintaining the original form, fit, and function to eliminate the need for system modifications.

Designed for safety related applications, this solution has successfully completed seismic testing and qualification and is fully suitable for installation in existing plant equipment. Drawing on Westinghouse's experience in reverse engineering and qualification of legacy power supplies, this replacement provides a reliable, long-term solution for maintaining critical monitoring systems across the installed fleet.

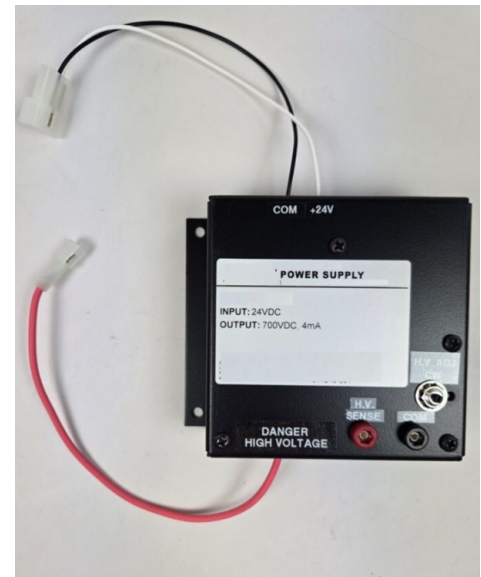
Customer Benefits

As legacy power supplies become obsolete and OEM support diminishes, facilities require replacement solutions that maintain system performance without introducing additional cost or qualification complexity. Westinghouse addresses these challenges with reverse engineered power supplies that support non-safety, augmented quality, and safety related applications. Reliable performance, competitive pricing, and consistent lead times are paired with supporting documentation to streamline equivalency evaluations and implementation.

Design Benefits

Westinghouse's replacement power supply delivers equivalent functionality while maintaining the original form and fit, eliminating the need for equipment modifications.

- Provides the same functionality as the original power supply without impacting form or fit
- Enhances reliability through improved input and output protection circuits
- Developed under an ISO 9001:2015 quality program, compliant with 10 CFR 50 Appendix B, and qualified to IEEE 323-1983 and IEEE 344-1987



Westinghouse Part Number: 10186D82G01

Power Supply, High Voltage, 700Vdc

Specifications Comparison

Design Characteristic	Original (03573100-001)	Replacement (10186D82G01)
Input	+24 Vdc	+24 Vdc $\pm$ 10%
Output	700 Vdc @4 mA	700 Vdc @4 mA
Power Consumption @Full Output Load	Not Specified	2.364 W
Line Regulation	Not Specified	0.1%
Load Regulation	Not Specified	0.2%
Ripple	Not Specified	0.2%, peak-to-peak
Input Protection	Not Specified	“Soft Start” circuit minimizes start-up stresses
Output Protection	Not Specified	Current regulation circuit protects power supply from short circuits, overload, and arcing
Connections	Input: Molex 3-pin Output: Molex 1-Circuit Straight Plug	Input: Molex 3-pin Output: Molex 1-Circuit Straight Plug
Dimensions (L x H x D)	4.08” x 5.07” x 1.5”	4.08” x 5.07” x 1.5”
Weight	0.8 lbs.	0.55 lbs.
Operating Temperature Range	Not Specified	-10 to 60 °C
Enclosure Coating	Anodized (black)	Anodized (black)

<https://info.westinghousenuclear.com/westinghouse-parts-business>

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