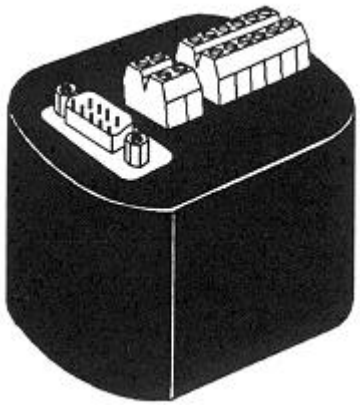
# J & S Instruments, Inc.

3071 State Route 72 South
Springfield, Ohio 45505-5023
Phone 937-325-7499
Fax 937-323-9588


# SINGLE POINT RTU
## SPM 9000 SERIES

**FEATURES:**

- Signal Conditioning
- Data Conversion to ASCII Text Format
- Math Functions
- 32K Data Storage.
- Year/Date/Time Stamp
- Supervisory Control
- On/Off, PID, Time Average Control
- Two Relay Outputs
- One Analog Output
- RD232 or RS485 Communication Port
- 9 to 17 VDC Operating Power
- Hermetically Sealed
- 7 Year Warranty
- Programmable Baud Rate 300-19200.



"SUPER-PUK"
SPM CASE 3.0" W, 2.5" H, 2.5"D

**APPLICATIONS:** For 'ON-SITE' stand-alone control, supervisory control, data logging, automatic alarms, poll or automatic data transmission of real time and logged data. Used by Control Systems Integrators involved with - Air/Water Pollution Monitoring - Reservoir Pumping - Hydrological Models - Agricultural Research - Solar Flux Studies - Weather Systems - Oil Well Drilling/Production Patch - Sewage Lift Stations - Industrial Process Studies.

**DESIGN:** The Single Point RTU is a micro-controller based data handling system similar to HPM series signal conditioning with the RS232/RS485 option. Sensor input options include, mvdc, madc, thermocouple, RTD bulbs, 0/5 amp AC/60HZ, strain gauge, pulse frequency, and pulse duration signals with corresponding input/output specifications. Power requirements are different, instead of being a two wire transmitter, "SUPER-PUK" uses a separate DC power supply of 9.0 to 17.0 VDC with a maximum current of 30madc during data transmission, 12madc during data collection mode and 0.2madc for sleep mode. Outputs include one analog and two relays.

**The SPM 9000** series design combines a standard HPM signal conditioning with A/D and D/A conversions to provide an RS232/RS485 output, 2 separate relay outputs for alarm and control, and an analog output for proportional control. The A/D and D/A serves a micro-controller system programmed to provide digital telemetry functions and a non-volatile 32k byte memory for data storage. The data storage is enhanced by a digital chronometer with a perpetual calendar for year, date, time that is unambiguous for 100 years to 1 second increments. EEPROM capacity up to 4k bytes is available for relay set points, communications protocol, and algorithms for automatic transmission modes. Support software is menu driven for configuring the EEPROM for easy programming at site or from a remote computer terminal.

A special, internal NiCAD battery maintains non-volatile memory and clock operation so that battery replacement is not necessary. The internal battery will maintain clock operation and the non-volatile RAM for a minimum of 1 year between connections to external power.