The Challenge

Today’s mature power plants present unique challenges when performing maintenance, repair, replacements and upgrades. Often, companies that provided in-place instrumentation are long gone. Monitoring and control requirements may have changed. More, and better, process information is needed to improve operations and profitability.

The Interface Solution Experts

Moore Industries offers a full range of sensors, instrumentation and data communication systems that help you replace and link legacy instruments with existing equipment and with new control strategies.

Inside are just some examples of solutions we offer for power plant applications using:

- Signal Transmitters, Isolators and Converters
- Temperature Sensors, Transmitters and Assemblies
- Limit Alarms, Trips and Switches
- Fieldbus Device Couplers and Power Supplies
- Process Controllers, Monitors and Backup Stations
- Smart HART® Loop Interfaces and Monitors
- Distributed I/O and Data Communication Systems
- I/P and P/I Converters
- AC Power Transducers and Monitors

Specialized Instruments

The chances are we can meet your signal interface needs with one of our standard products.

But if we can’t, Moore Industries Special Needs And Products (SNAP) may be your answer when you need a signal interface instrument that’s a bit different, a lot different or something you just can’t get anymore. If we can modify a Moore Industries instrument to meet your requirements at a price that’s right for you, we will.

www.miinet.com/SNAP
### Signal Transmitters, Isolators and Converters

- Use temperature transmitters with **high excitation RTD** current to reduce input noise for 10 ohm Cu RTD stator temperatures.

- **Convert ±10V legacy signals** to today's modern 4-20mA signals.

- **Convert low level RTD and thermocouple signals** to high-level 4-20mA analog signals.

- Turn a valve actuator **slidewire (potentiometer)** input into a 4-20mA **signal** that can be readily accepted by a control system.

- **Monitor 125Vdc battery backups** that are used in the event of a line power outage.

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### NCS NET Concentrator System®

**Distributed I/O and Data Communications Network**

- **Avoid installing new wires by concentrating analog and discrete signals** in peer-to-host and peer-to-peer architectures.

- Continuously **monitor boiler tube temperatures** for efficiency, and provide alarms to warn of trouble in the event of overheating.

- Accurately **monitor burner tip temperatures** with industry-standard S-, R- and K-type thermocouples.

- Use OPC to interface directly with OSI PI or other historian packages for **data archiving**.

- Keep track of remote **cooling pump temperatures** even in high or low ambient conditions of –40°C to +85°C (–40°F to +185°F).

- **Track oil tank levels** in tank farms in oil fired power plants.

- Use communication port to **expand I/O capabilities** when the existing DCS/PLC has reached its maximum analog I/O limit.
Limit Alarm Trips and Switches

- Provide on/off control, warn of trouble, or provide emergency shutdown by sending one or more alarm (relay) outputs when a monitored process signal falls outside high and/or low limits.

- Monitor a pressure transmitter’s output signal and shutdown a feedwater pump on low pressure.

HART® Loop Interfaces and Monitors

- “Break Out” additional analog and discrete signals from smart HART transmitters and valves.

- Convert HART to MODBUS RTU to allow HART transmitters to interface directly with MODBUS-based monitoring and control systems.

- Monitor and provide continuous % or open/close valve status data for critical high pressure steam lines.

- Provide vital high/low process and fault diagnostic alarms for important process instruments and valves.

Process Controllers, Monitors and Backup Stations

- Use as hot PID backup for critical drum level measurements.

- Utilize as a remote manual station to facilitate maintenance and troubleshooting.

- Take control in the field over a damper drive when there is a problem with the control system or when loops need to be manually tuned.

Flexible Temperature Sensor

- Save money by using industry-standard WORM thermocouples, such as Type E, in place of expensive sheathed sensors.

- Easily bends into heat-induced sagging thermowells.
Automation and Instrument Solutions for Power Plant Applications

Fieldbus Physical Layer
Device Couplers and Power Supplies

- Deliver a fast and easy way to connect, protect, power and terminate multiple fieldbus devices.

- Create complete FOUNDATION Fieldbus™ H1 and PROFIBUS PA fieldbus physical layers.

- Safeguard important monitoring and controls signals by implementing cost-effective redundant fieldbus physical layers.

AC Power Transducers and Monitors

- Monitor motor loads to determine if a pump is on the operating curve with respect to flow and load.

- Monitor Watts, VARs, phase angle and current/voltage.

I/P and P/I Converters

- Convert a current signal to a pneumatic signal so a DCS, PLC or PC can control a valve or actuator.

- Convert pneumatic signals to current signals so remote pneumatic devices can interface with electronic instruments and computer-based monitoring systems.

Safety Instrumented Systems (SIS)

- Instruments with comprehensive FMEDA (Failure, Modes, Effects and Diagnostics Analysis) data available.

- Third-party approved IEC 61508 alarm trips for use in Safety Instrumented Systems up to SIL 2.

Let Us Do The Work.
Our application experts are ready to help. You'll get an answer within 24 hours or by the next business day!

Do You...
- Need help specifying a product?
- Need installation assistance?
- Have product certification questions?
- Have application questions?
- Need a price and delivery quotation?

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