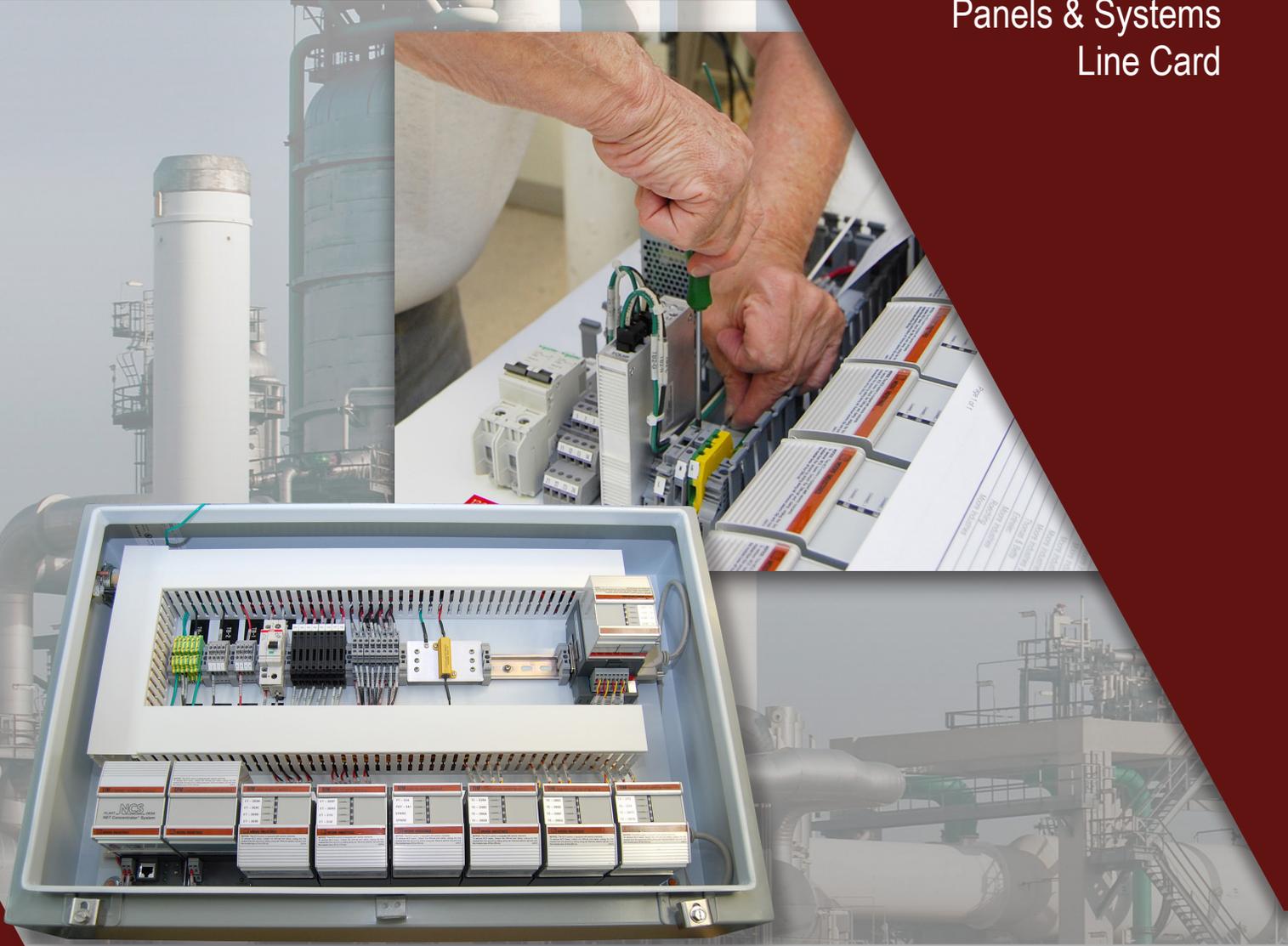


Panels & Systems
Line Card



Instrument Panels & Systems



Save Time and Money

Eliminate the time and expense required to specify, procure, and assemble multi-vendor instrumentation and hardware. Let Moore Industries integrate them for you into a ready-to-install instrument sub-system.

Instrumentation, cabinets, wiring, tubing, relays, power supplies—whatever is required—we can supply and assemble (see the back page for system solution details).

► One Instrument or Hundreds

Whether you need a single process instrument in a watertight enclosure, 10 on a rack, or hundreds wired into a high-density cabinet, the final product we deliver will match your project's quality, performance and cost requirements.

► Extensive Instrument Choices

You'll be working with Moore Industries. So you'll be able to mix and match from over 100 interface instruments available in literally thousands of field-mount and control room variations:

- **Signal Transmitters**
- **Isolators and Converters**
- **Temperature Transmitters**
- **I/P and P/I Converters**
- **HMI Panels**
- **Data Communications/Gateway Modules**
- **Remote I/O Modules**
- **Alarm Trips**
- **Data Recorders**
- **Indicators and Displays**
- **Frequency/Pulse Converters**
- **Power Transducers**
- **Computation/Special Function Units**
- **Instrument Power Supplies**

We know how to interface process sensors with your monitoring or control systems better than anyone in the industry. Draw from this same experience when you need to integrate our instruments into a panel or system.



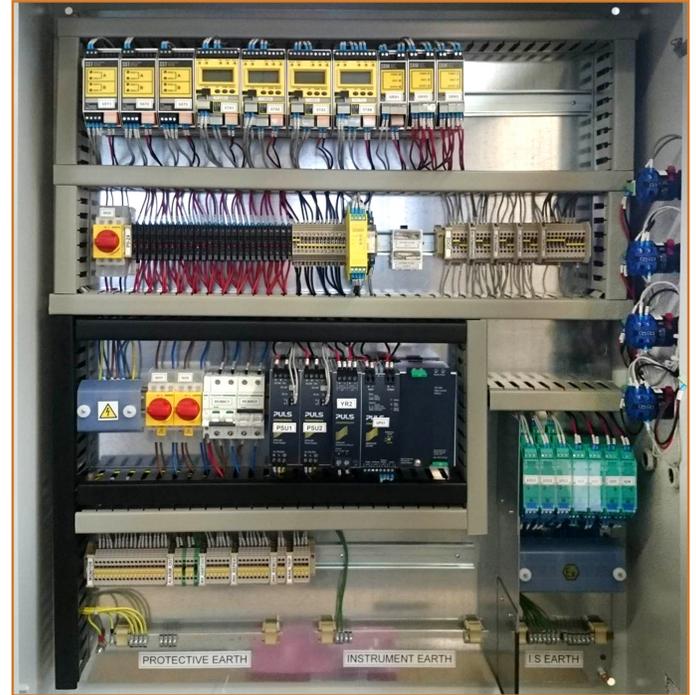
Moore Industries will save you time and money by specifying and assembling all of the components needed for your custom instrument panel or system.

- **Total Capability.** We'll specify, procure and package all of the components needed for your custom temperature, pressure, level, flow, power, alarm, remote I/O, safety panel or cabinet.
- **Complete Documentation.** Each system is delivered with full documentation including wiring diagrams, parts lists and test reports.
- **Expert Technical Assistance.** Our systems engineers work with you through every step to ensure the final product meets your specifications.
- **100% Testing.** Each component, along with every completed instrument panel, must pass a stringent battery of visual and functional quality control tests.
- **UL 508 Panel Shop.** Our panel shop is approved by UL to provide control panels that conform to the UL 508 standard and can carry the UL 508 label.
- **ISO 9001 and Local/Site Standards.** We utilize ISO 9001 standards to ensure your solution is built to the highest quality standards. Specific compliance with local and site standards are also followed as required.

► High-Density Panels

Moore Industries has long been an expert in developing compact, high performance instrumentation for temperature, pressure, level and flow applications.

We use this experience to package our instruments into specialized panels and systems that require minimum space. Whether its a standard monitoring panel or one for a specialized application, like Safety Instrumented Systems (SIS) or a hazardous area approved solution for intrinsically-safe or explosion-proof/flameproof areas, Moore Industries has the experience and expertise you need.



Our wide assortment of high-density instruments allow a modular approach to system design. We can install just one, a few, or hundreds of our DIN-style or plug-in instruments inside a standard or customized panel of your choosing.



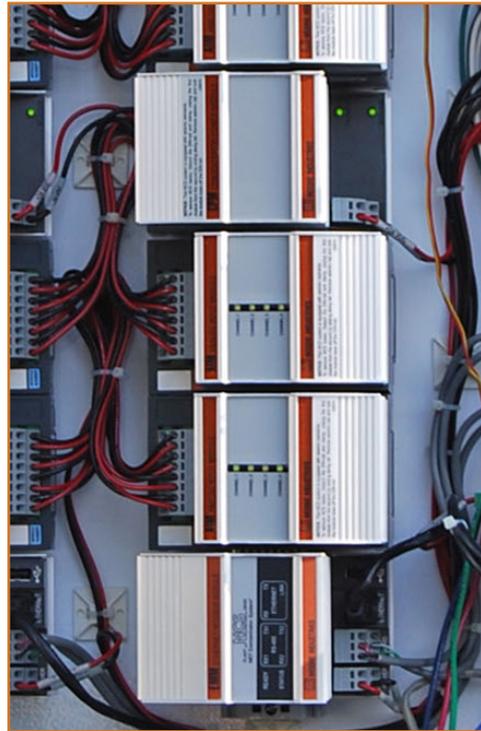
► **Data Communications and Remote I/O Systems**

If you have problems economically getting a large number of signals from remote locations to the control room, our family of single and multi-point data communication modules integrated into ready-to-install field cabinets may be the answer.

For example, the NET Concentrator System® (NCS) will save you time and money when you send many process signals long distances or over difficult terrains. The NCS provides a real-time signal gateway between the field or factory floor and your control strategy. Universal and modular, it programs to handle a wide range of signal input and control output possibilities including Current, Voltage, Discrete, Relay, RTD, Thermocouple, Resistance, Potentiometer.

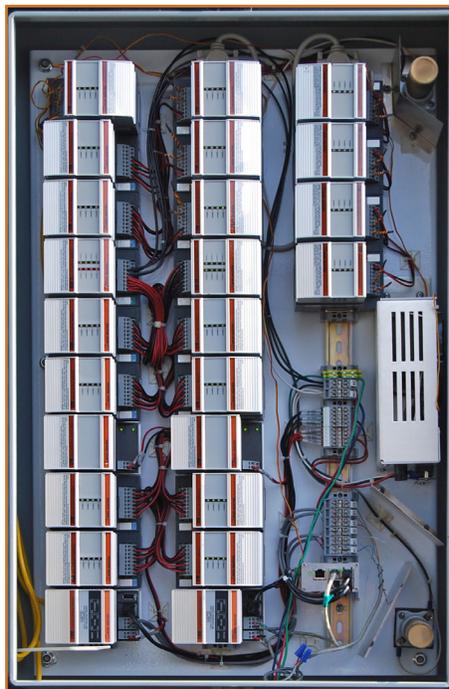
NCS solutions support MODBUS RTU and MODBUS/TCP as standard that allow seamless connection to most all historians, SCADA and host control systems.

FIELD-MOUNTED CABINET



FIELD-MOUNTED CABINET

A peer-to-peer distributed I/O system eliminates the need to run multiple twisted pairs (top) for new instruments

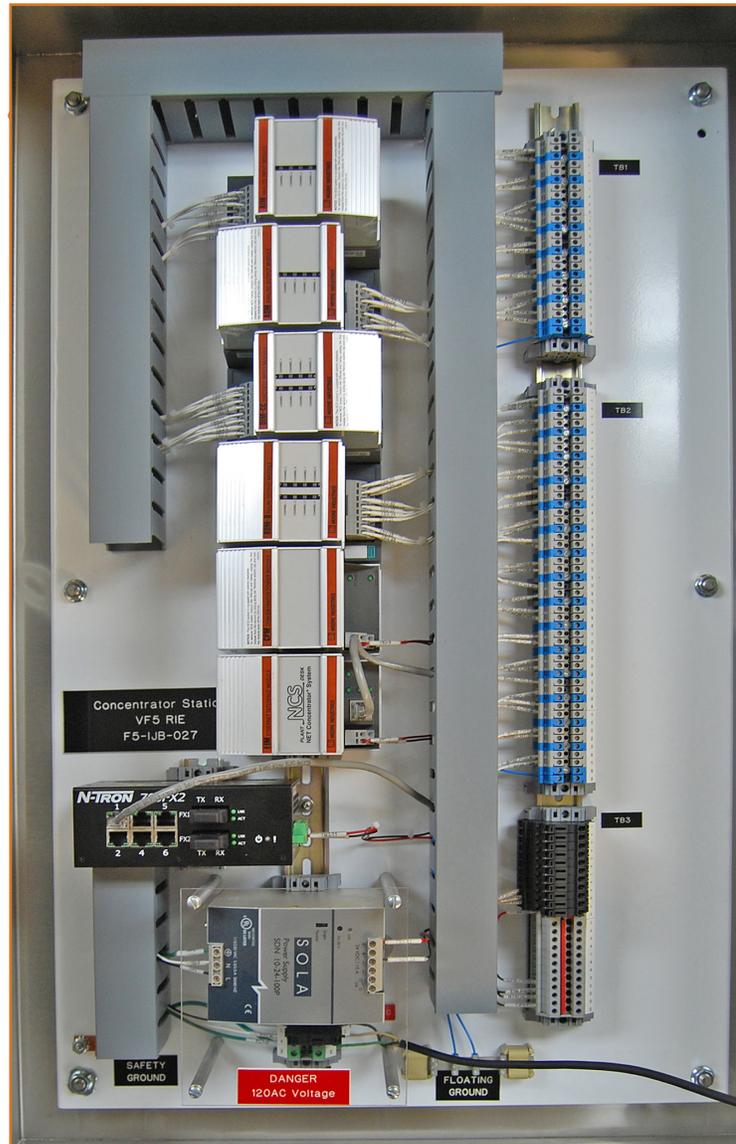


The instruments are wired into an input module in the field, which connects via a single twisted pair to a peer module in the control room.

Ethernet or Shielded Twisted Pair

CONTROL ROOM CABINET

Signals are digitally multiplexed and can be transmitted any distance, over any terrain, using shielded twisted pair, Ethernet, modems, fiber optic, or via wireless network links



Ethernet or Shielded Twisted Pair

The control room modules output 4-20mA and discrete or relay output signals, which are wired into the control system's I/O cards

► **Pneumatic Instrument Interface Panels**

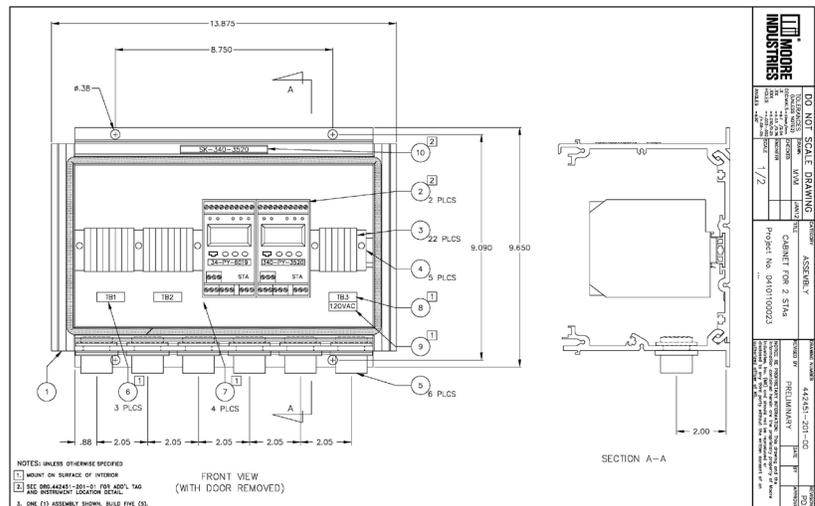
For interfacing monitoring or control systems with valves and other pneumatic devices, we offer pneumatic interface panels.

Our pneumatic systems feature our industry standard DIN-style I/P and P/I converters, solenoid valves, and pressure alarms. Expert assembly combined with the highest quality fittings, tubing, wiring, and gauges ensure maximum performance with a long service life.



CAD System Drawings

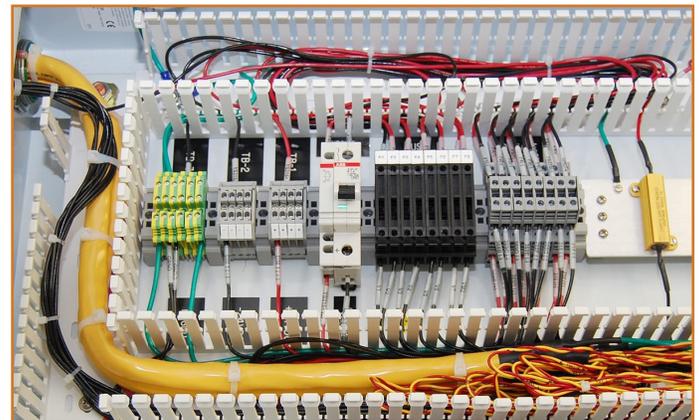
Moore Industries uses an advanced CAD system to create detailed and highly accurate panel/system drawings. We archive all electronic copies for future reference if you need to duplicate or upgrade the system.



Typical System Components

Every instrument system is based on unique customer needs. We offer a wide range of components that are integrated with our instruments to meet your individual requirements:

- **Enclosure/Racks**
NEMA 1 (IP10), NEMA 3 (IP54), NEMA 3R (IP14), NEMA 4 (IP56), NEMA 4X (IP56), NEMA 6 (IP67), NEMA 7, and NEMA 12 (IP52); E.I.A. racks, 19" and 24"
- **Enclosure Finish**
Gray primer, custom finish (acrylic enamel, epoxy powder coat, etc.), stainless or custom silk screening
- **Field Terminators**
Terminal panels and relay panels, I/O panels, and pneumatic connector panels
- **Wire and Lugs**
P.V.C. and non-P.V.C. insulated multi-pair and shielded cable; ring, fork and locking fork lugs; strain reliefs and cable tie downs; low smoke, toxicity and halogen-free solutions available
- **Terminals and Wireways**
Standard and high density wire duct and Electrical Metallic Tubing, liquid tight conduits
- **Plumbing (pneumatic panels)**
Polyethylene and copper tubing; brass and stainless fittings
- **Filters/Regulators (pneumatic panels)**
Single filter/regulators, dual isolated filter/regulators
- **Cooling/Heating**
Fans, louvers, air conditioners and heaters
- **Power Supplies**
A.C. distribution, D.C. linear and switching supplies; and fail-safe power supply systems
- **Control Equipment**
Temperature and process controllers, motor and valve controllers, solenoid valves
- **Manual Controls**
Switches, push buttons, timers step switches, indicators and annunciators
- **Accessories**
Enclosure lights, convenience plugs, horns and buzzers, gland plates, special instrument and wire tagging, modems and lightning protection devices



Step-by-Step Approach

Our Systems Engineers work with you through our logical 10-step approach, with quality control applied throughout:

1	Project Estimate	An estimate for instrumentation, associated hardware and labor along with a panel/system drawing will describe exactly what you get and what it will cost.
2	Engineering Design & Detailed Specifications	Our Systems Engineers are highly skilled at meeting specialized requirements and specifications using innovative layout and functional designs. If you already know what you want we'll work to the plans you provide, otherwise we can assist with writing project specifications.
3	CAD System Plans	Advanced Computer Aided Design techniques provide precise panel layout and wiring diagrams for your approval.
4	Manufacturing/Assembly	All of the equipment necessary to correctly fit, wire, and assemble our systems to meet strict regulatory and safety standards is located on-site. If your requirements change or expand, we can respond quickly to your modifications in a controlled manner.
5	Comprehensive Testing	Every component and each completed system must pass a battery of stringent visual and functional quality control tests.
6	Customer Acceptance	If desired, you can personally take part in the final visual and operational testing. Additionally, hands-on training can be offered if required.
7	Complete Documentation	Each Moore Industries system is shipped to you with complete documentation including operation manuals for each integrated instrument, layout and wiring diagrams, spare parts lists, and test reports.
8	Packing and Shipping	All systems are professionally packed to protect them from rough handling during shipment to the installation site.
9	Installation Assistance	If required, we will send technical personnel to your site to supervise installation or provide expert system training.
10	After-Sales Support	As with all Moore Industries products, we stand behind our products and are here to provide you with responsive technical assistance.

Get a quote on your project today

Call 800-999-2900 (in the United States or find the nearest sales office listed below), or send your project specs to us at info@miinet.com to get started.



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