MOORE INDUSTRIES WORLDWIDE

# Problem Solvers

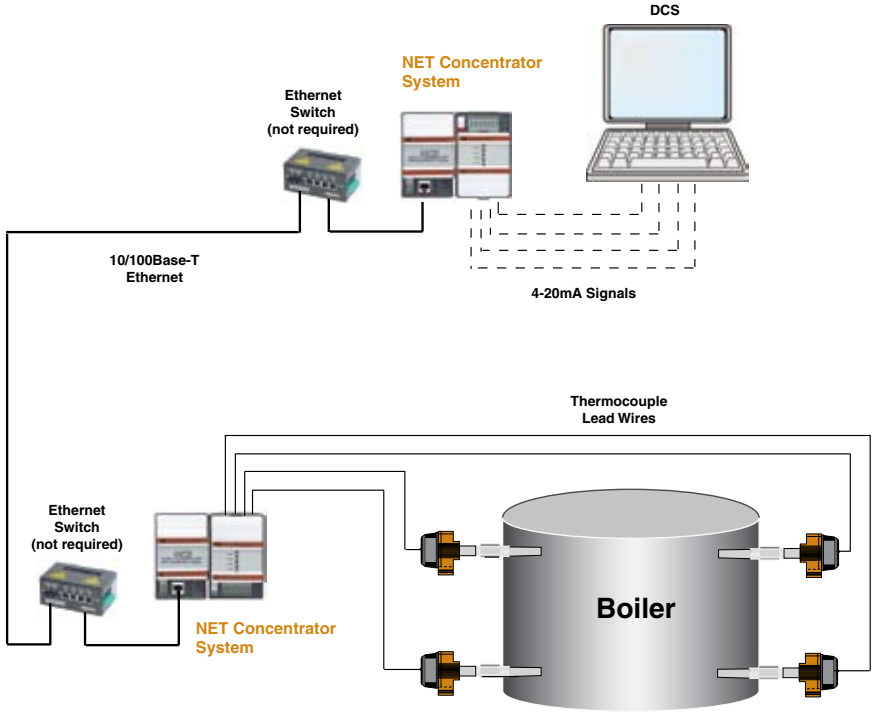
## Practical Application Ideas and Technical Information

**Process Control and Distributed I/O Networks**

### Temperature Sensor-to-Ethernet-to-Analog Signal Conversion

**Problem:** We've added a small boiler on the far side of the plant and we would like to historically trend the steam temperature profiles with our DCS historian. There are plenty of spare 4-20mA inputs on our DCS. Unfortunately, we have run out of twisted wire pairs to get the signals from the field to the DCS. We do, however, have a newly-installed Ethernet backbone. Do you have a way to convert the temperature sensor signals to Ethernet, and then convert the signals from Ethernet to 4-20mA signals for our DCS input cards?

**Solution:** Our NCS NET Concentrator System® allows sensor inputs to be converted to a digital signal and then transmitted over Ethernet. Using our channel-mapping capabilities enabled by the ISaGRAF Control Engine Software, any input channel can be assigned to any output channel in the network. In this application, the NCS essentially becomes an Ethernet temperature transmitter.




**Model Number Examples**

**EMM / COM / SM / 20-30DC**
**TIM / IO / TI4 / IP [DIN]**
**AOM / IO / AO4 / IP [DIN]**

Go to the Process Control and Distributed I/O Networks Systems Selection Guide