# Loop monitor opens multivariable transmitter doors

One difficulty when migrating to HART-based multivariable instruments is not all distributed control systems (DCSs) can take advantage of the digital data that "ride" on the 4-20 mA loop. According to Moore Industries' (Sepulveda, Calif.) Matt Moren, senior applications specialist, these problems often occur in plant upgrades.

Users are often faced with situations in which—say a multivariable mass flow transmitter—can send its mass flow analog signal to the DCS but needs an alternate variable such as density measurement. Additionally, the user may want contact closure alarm backups should process variables go high, or if the transmitter was not behaving properly. Often budgets (no surprise) do not allow a DCS upgrade.

One solution is a "smart" transmitter interface monitor, such as Moore Industries' SPA, that can extract digital information from the 4-20 mA smart transmitter loop. These devices mount transparently on a multivariable transmitter's 4-20 mA loop. The devices can break out required digital information and send a 4-20 mA signal proportional to the DCS. It can also be be configured to provide alarm outputs for various process variables as well as set to monitor the "health" of the multivariable transmitter. Mr. Moren continues, " By using the SPA to access HART digital data, users are able to get the additional information and protection they needed, yet keep their existing DCS in place."