



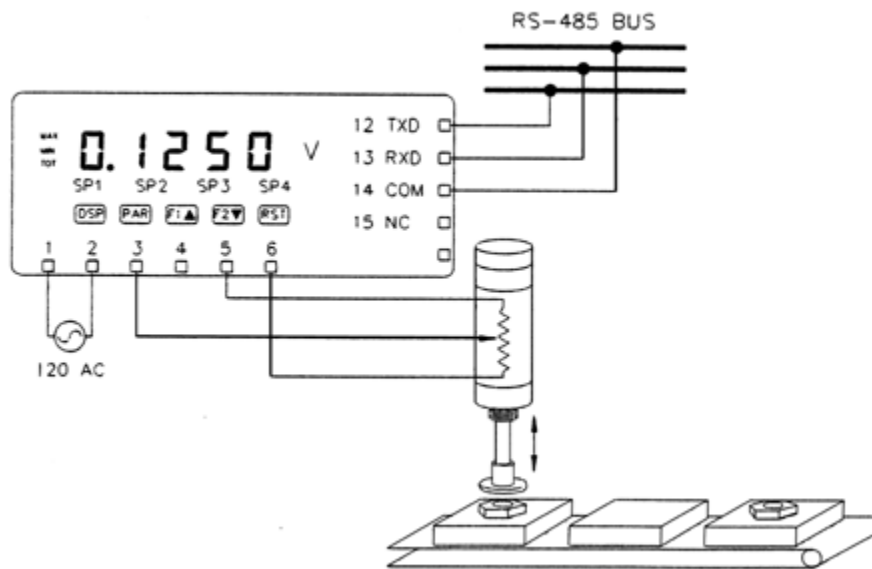
# Technical Bulletins

## DPM Application Example - Quality Inspection Device

### Quality Inspection Device utilizing PLC and RS-485 Communication

**Desired Result:** In line process control verification to determine if parts meet required specifications.

The DPM is used in conjunction with a PFC cylinder to verify part specifications during an assembly process, ensuring quality of parts. RS-485 communications are used to monitor the PFC displacement remotely from the DPM. (The RS-485 protocol allows up to 32 devices to be connected to one port, and is less susceptible to signal noise since the analog to digital conversion is done in the DPM controller, utilizing the same power supply and ground planes as the PFC.) This information will be read by a PLC. The PLC determines what should be done to the part based on the displacement values read. (i.e., Send part on to the next process, or divert to rework station.)



### Example:

Use the DPM/PFC combination to verify if nuts are present and tightened correctly by checking the height of the nut. Calibrate the DPM using four calibration points: zero, LCL (lower control limit), UCL (upper control limit), and full scale. Refer to the Quick Start Guide or the DPM manual for instructions. Configure the PLC with an RS-485 communication port. Program the PLC ladder logic according to your particular application. The ladder logic can be written to accommodate different sets of specifications for different product lines, making set up for the different products much easier and less time consuming.

**Equipment:**

<b>Model Number</b>	<b>Description</b>
Bimba <i>PFC-091-LP</i> or <i>PFCN-091-L</i>	One inch stroke Position Feedback Cylinder with plug connector and low friction option.
Bimba <i>C5</i>	2 Meter Shielded Cable
Bimba <i>DPMS</i>	Model DPMS digital set point controller with RS-485 serial communication card

The information presented is in Bimba's best engineering opinion and should be used for reference only. Recommendations derived should be verified under actual operating conditions. Bimba reserves the right to change specifications without prior notice.

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