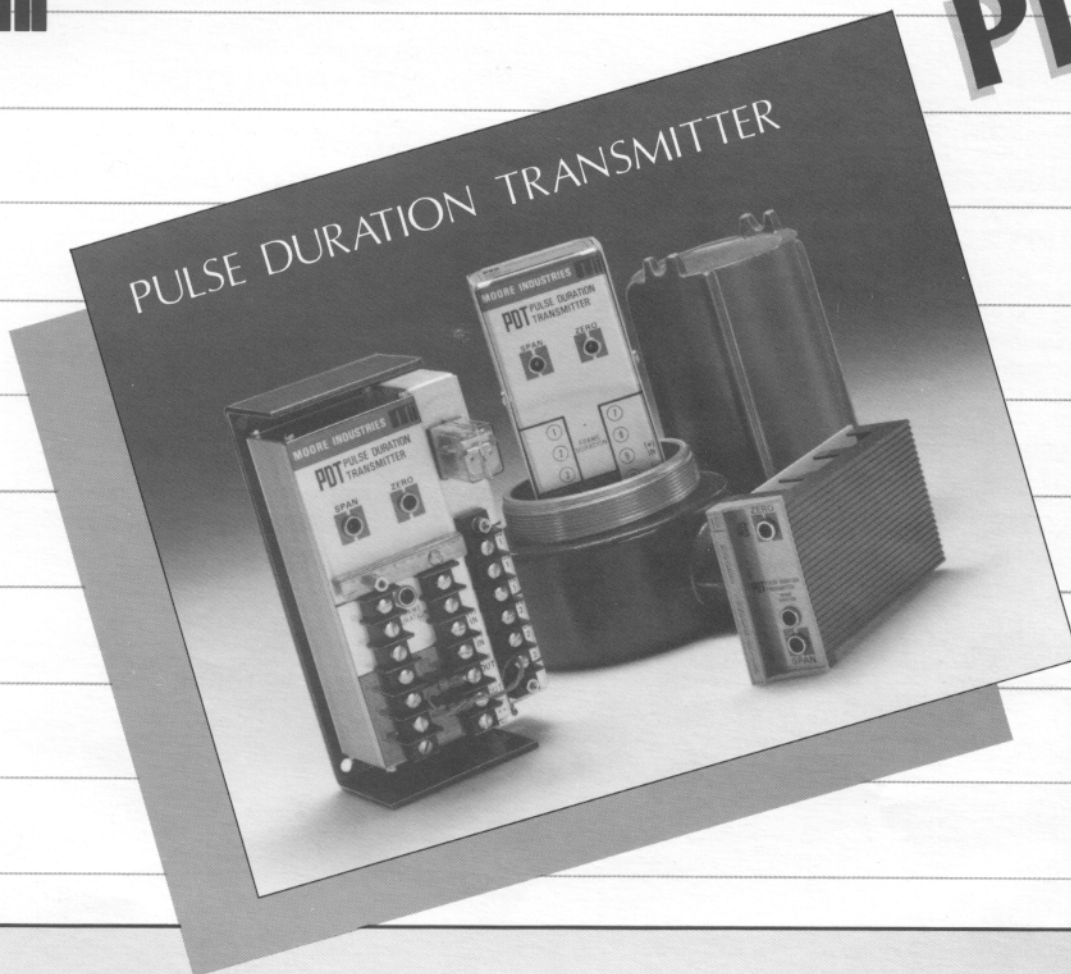


MOORE INDUSTRIES

# PDT



**FOR TRANSMISSION OR CONTROL**  
Telemetry or Proportional On-Off

**WIDE RANGE**  
0.2 Sec. to 100 Sec. Durations

**STANDARD PROCESS INPUTS**  
Replaces Electromechanical Converters

**HIGH ACCURACY**  
 $\pm 0.1\%$  of Span

The PDT, Pulse Duration Transmitter, converts any standard process signal into an output pulse or relay closure. The duration or "on" time is linearly proportional to the input analog signal amplitude with an adjustable repetitive time over a 5:1 preselected range.

The versatile PDT may be used as either on-off proportioning control device to operate solenoid valves or other similar final control elements, or as a transmitter for use in data transmission systems similar to the Durapulse (Honeywell), Teletax (Foxboro), or the Metameter (Bristol). In this data transmission application, a version of the PDR may be used as a receiving device to convert the "duration varying" data to a standard analog process signal.

Control applications for this unit lie particularly in areas where regularly pulsed solenoid valves are used to inject additives into a process stream. It is especially useful in pH control work where it is desirable to have greater amounts of reagent (valve "on" longer) added to the stream as the pH increases. For control of decreasing pH applications, specifying the "reversed output" option will cause the transmitter's function to be reversed such that the maximum "on" time will occur with minimum input. The following are typical examples of industry applications for this type of pulsed control:

- Sugar Refining
- Pulp and Paper
- Food Processing
- Metals & Mining
- Water Treatment
- Liming Process
- Bleaching
- Cream and Butter Processing
- Ore Flotation Process
- Flocculating

# PDT - Pulse Duration Transmitter

3-12

## INPUT:

### Current:

- 1-5mA into 200 ohms
- 4-20mA into 50 ohms
- 10-50mA into 20 ohms

### Voltage:

- 0-5V, 1-5V standard
- 10 megohms minimum input impedance
- Other voltages optional

**FRONT PANEL ADJUSTMENTS:** With any combination of Span & Zero adjustment, the output span must be greater than 50% of frame time.

**Span:** With full scale input (i.e. 20mA), adjusts output pulse duration from 70% to 100% of any frame time within selected frame duration range.

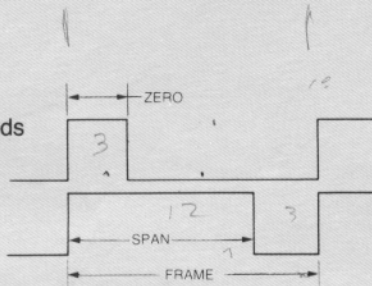
**Zero:** With minimum input (i.e. 4mA), adjusts output pulse duration from 0% to 30% of any frame time within duration range.

**Frame Duration:** Adjusts pulse period over the pre-selected output frame duration range.

**OUTPUT:** 24 volt pulse whose duration is proportional to the amplitude of the input. The 50mA maximum pulse current may be used for driving an external power relay.

### Frame Duration:

- 0.2 through 1 second
- 1 through 5 seconds
- 5 through 25 seconds
- 25 through 100 seconds



## PERFORMANCE:

**Calibration Capability:**  $\pm 0.1\%$  of span (linearity and repeatability)

### Ambient Temperature:

- Range:  $-18^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  ( $0^{\circ}\text{F}$  to  $+140^{\circ}\text{F}$ )
- Effect:  $\pm 0.01\%/^{\circ}\text{F}$  over above range

**Isolation:** Power input isolation is maintained on both ac- and dc-powered models. Input to output isolation may be achieved by using the relay output option.

## POWER INPUT:

- 24Vdc, 45Vdc,  $\pm 10\%$
- 117Vac, 220Vac, 240 Vac, 50/60Hz,  $\pm 10\%$
- 5 watts nominal

**Line Voltage Effect:** ac or dc:  $\pm 0.005\%/1\%$  line change

## OPTIONS:

- PR** External solid-state power relay 5A at 117Vac only inductive
  - RE** DPDT relay externally mounted 5A at 28Vdc or 117Vac non-inductive
  - RF** Patented filter assembly for RFI/EMI protection
- For other options, see Housings, Options, & Accessories brochure

## HOUSING:

- AB** Angle bracket mounting
- CP** Conduit plate for use with standard units
- EX** Explosion-proof enclosure, Single Unit—Div. 1
- GP** General purpose enclosure, Single Unit—NEMA 1
- OT** Oil-tight enclosure, Single Unit—NEMA 12
- PC** Plug-in card—See Data Sheet 350-710-01
- PM** Panel mount enclosure
- STD** Standard enclosure as illustrated
- WT** Water-tight enclosure, Single Unit—NEMA 4

**CERTIFICATION:** CSA

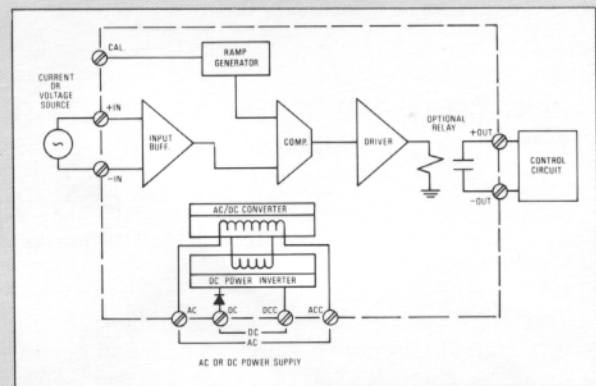
**WEIGHT:** Approximately 2 lbs. (908 grams)

**ORDERING INFORMATION:** Specify the following:

1. Input—range of voltage or current
2. Output—frame duration span as listed
3. Power input
4. Options
5. Housing

## EXAMPLE MODEL NUMBER:

PDT/4-20MA/5-25S/45DC/-RF [STD]



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