

# SPD-100

## Signal-Powered Digital Tachometer



### FEATURES

- Signal and power derived totally from magnetic pickup or pulser.
- Intrinsically safe. Can be used in hazardous environments with approved Dynalco pickups. (See THIRDPARTY APPROVALS, next page.)
- No power supply connections. High immunity to electrical noise.
- Can be field-calibrated.
- High accuracy: 1 rpm resolution.
- High shock and vibration resistance.
- Standard SAE case size fits panels with 3-3/8 inch (86 mm) openings.
- Gasketed and spray-proof.
- Ideal for OEM use.
- Can be paralleled with governors and/or speed switches.
- Can share existing pickups or pulsers; draws only microamperes.
- Ground-free terminals have no polarity; easy installation.

**2-Year  
Warranty**

#### \*THIRD PARTY APPROVALS SPD-100 and SPD-108



LR45322

Canadian Standards Association (CSA): Class I, Division 1, Groups A, B, C, & D with M134, M135, M139, M203, M204, M205. Class I, Division 1, Groups C & D with M160, M201, M202, M231, and M233.

## SPECIFICATIONS

### External Power Requirements:

All models are signal-powered. Lighted versions: 12 or 24 Vdc, depending on model.

### Display:

Four active digits (0 to 9999), non-blinking LCD display; character height of 0.5 inches (14 mm). Display contrast increases with increasing ambient light.

### Input Valve Voltage:

From pickups, pulsers, shaft encoders, etc.  
◆ Minimum signal amplitude: 2.5 Vrms.  
◆ Maximum permissible signal: 15 Vrms.  
The SPD-100 automatically limits pickup signals at approximately 10 volts peak-to-peak. Input impedance is 100  $\Omega$  in series with a 6 volt Zener diode.

### Input Signal Frequency:

Maximum input signal frequency of 20,000 Hz. Lowest frequency range limited by gate time and corresponding numerical display.

### Isolated Circuit:

All circuitry is totally floating, i.e. totally isolated and insulated from the case and from ground.

### Operating Temperature Range:

-5°F to +175°F (-20°C to +80°C).

### Storage:

-40°F to +195°F (-40°C to +90°C).

**Vibration:** MIL STD 810C; Method 514.2; Curve Q; Procedure V; Modified to 500 Hz upper limit. 5 Hz to 10 Hz @ 0.2 inches D.A.; 10 Hz to 18 Hz @ 1.0 g (peak); 18 Hz

to 57 Hz @ 0.06 inches D.A.; 57 Hz to 500 Hz @ 10 g (peak).

### Accuracy:

One rpm resolution; within 0.5% (0.1% typical at room ambient) under all combined environmental conditions.

### Gate Time Ranges:

**SPD-100 Series :** field-selectable from 0.26 to 5.7 seconds.

**SPD-108 Series:** field-selectable from 0.13 to 2.85 seconds.

This accommodates calibrations for an extremely broad range of corresponding pulses per second.

### Magnetic Pickups:

Dynalco Magnetic Pickups M102 and M107 are used with the SPD-100 Series in most applications. *Refer to Dynalco Magnetic Pickup brochure for various types and characteristics.*

For low-speed applications, or to permit operation with larger gaps, the ultrahigh sensitivity M142 can be used.

For intrinsically safe applications Dynalco Controls offers various models, with the M202 and M134 the most frequently used.

**Weight:** 1 lb (0.45 kg)

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