DST-2000C Direction Sensing Tachometer

The DST-2000C™ Direction Sensing Tachometer measures and monitors direction of rotation, speed, rate, flow, etc. Drives tachometers and up/down counters to provide rate information such as well as totalized net flow, length, and distance.

FEATURES

- Uses the signal from a Dynalco M343 bidirectional pickup to measure speed and direction of rotation.
- Provides output pulses for feeding up/down or up-only counters.
- Drives Dynalco analog and digital tachs including SPD-100, SPD-700, DS-800, and the new SPD-300 Direction Indicating Tach. (See next page) Also drives speed switches such as SST-2000A/H and SW-200B.
- Provides a relay output according to direction of rotation, i.e. one SPDT relay for clockwise (CW) and one SPDT relay for counterclockwise (CCW).
- Provides 10 mA drive current for two remote (customer-provided) LEDs to indicate CW or CCW direction.
- Avoids false indications by having the active relay automatically reset after a few seconds with no signal input.
- Provides a 0–1 mA output proportional to speed to drive Dynalco Controls analog meters such as the G-101 or digital meters such as the DPM-105.
- Provides regulated 8 Vdc (25 mA) auxiliary power to a Dynalco DPM-105 digital panel meter.

SPECIFICATIONS

Input Signal: Only from a Dynalco M343 bidirectional, direction–sensing pickup. *Minimum pulse rate:* 0.5 Hz. *Maximum pulse rate:* 20 kHz. *Minimum signal amplitude:* 25 mVrms. *Maximum signal amplitude:* 15 Vrms.

Input Power Options:

- 115 Vac and/or 12 Vdc (standard)*
- 115 Vac and/or 24 Vdc (optional)*
- 230 Vac and/or 12 Vdc (optional)**
- 230 Vac and/or 24 Vdc (optional)** *±10%, 50/60 Hz, **±10%, 2 watts maximum

Operating Temperature: –30˚F to +160˚F (–34˚C to +71˚C).

Output Relays: Only one of two SPDT output relays is energized at a time. The CW relay is energized for clockwise motion; the CCW relay is energized for counterclockwise motion. Contacts are rated 5 A, resistive, 115 Vac.

These relays can be used for indication of direction of rotation, for control purposes, or for converting the unidirectional proportional output into a bidirectional signal to drive zero-centered meters and instruments. The active relay de-energizes at near zero speed.

Output Pulses: One pulse per discontinuity or gear tooth for clockwise (CW) or counterclockwise (CCW)

SPECIFICATIONS (cont'd)

motion. Channels are never on at the same time. Pulses are referred to common. Output pulses are 0 to +8 V, 35 microseconds, nominal width.

Meter Output (Standard): A 0–1 mA analog output proportional to speed is standard.

SPD-300 Direction Indication Tachometer: Connects to a specially modified DST-2000C. Gives a visual indication of rotation direction via a separate red and green LED. Same size as an MTH-103D.

Remote LED Outputs: Two 10 mA (nominal) outputs are provided, at designated terminals, to drive external LEDs which indicate direction of motion.

Meter Output (Optional): The system can be used to drive a zero-centered analog meter. Other options include 0–5 Vdc into a load resistance of 1 kΩ or higher; 0–5 mV or 0–100 mV into recorders with input resistance of 50 kΩ or higher.

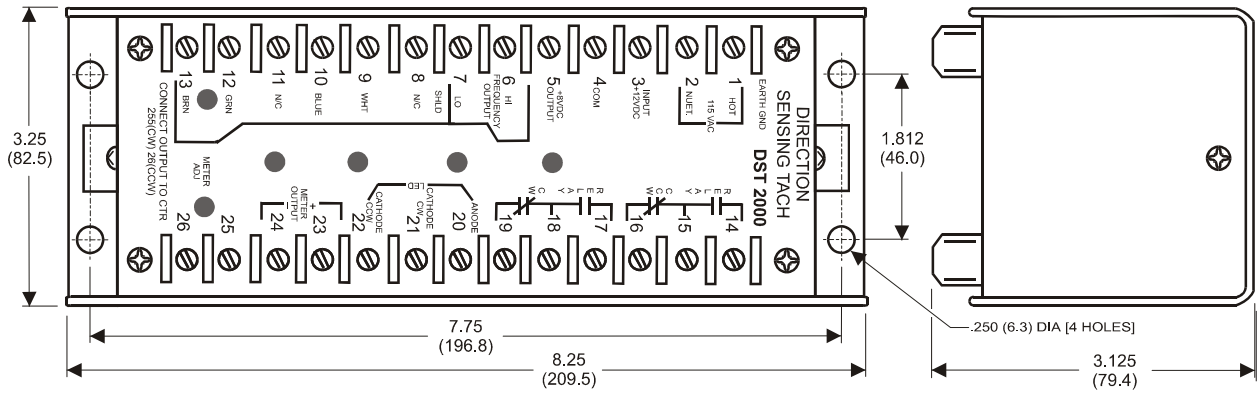
(Full-scale frequency must be specified for the mV analog output.)

Buffered Signal Frequency Output: Amplified square wave signal of approximately 8 V peak-to-peak to serve as a signal to digital speed indicators and speed switches, such as SPD-100, SW-200B.

The output frequency equals the frequency signal from the M343 pickup.

Weight: 2.4 pounds (1.1 kg)

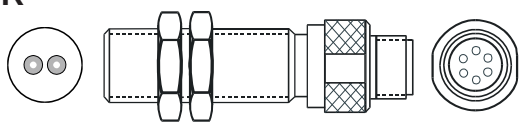
OUTLINE DRAWING



Dimensions in inches (millimeters)

M343 SENSOR

Magnetic pickup, bidirectional, dual outputs.
3/4-20 x 2.000 in. thread; 3.000 in. housing length.
Requires C917 cable.



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