**CAUTION**

Do not install M780's (or any other rotating equipment) where liquids will be sprayed or hosed onto them. If necessary, provide a shield.

DO NOT connect grounded oscilloscopes or any grounded instrument to M780 output.

DO NOT connect oscilloscope or any instrument common to any pulse generator connection other than common.

**INSTALLATION**

The pulse generator must be driven by a positive driver rather than a friction drive. The following means of coupling are acceptable when properly installed: Direct Coupling, Timing Belt/Pulleys, Chain/Sprockets.

With a direct drive, use a flexible coupling and align the shafts as accurately as possible. The pulse generator should not be subjected to any axial thrust. Overhung loads should also be minimized. Installations using timing belts/pulleys should have just enough belt tension to eliminate belt sag. Excessive tension will shorten belt and bearing service life. If a rubber slinger disc is used, position it on the shaft so it will rotate freely.

**CAUTION**

Do not force or drive the coupling onto the shaft, or damage to the bearings may result. The coupling should slide easily on the shaft. Remove nicks or rust if necessary. Consider driving shaft endplay when positioning coupling.

For more details and special considerations in specifying and installing drive components, refer to separate installation instructions, Avtron Rotary Pulse Generators.

**SPECIAL APPLICATION NOTES**

Units of 15 PPR or less have phase related signals and may be used in direction sensing applications. The signal available in the connector closest to the housing end
cover will lead the signal in the other connector for clockwise rotation. Clockwise rotation is defined as viewed from the anti-drive end or end cover end of the housing. This assumes, on dual shaft units, the driven shaft is the shaft at the Nema 56C face end of the housing.

Each output box consists of two connectors each having its own output signal. The signals on units with 16 through 22 PPR are not phase related. All output signals are totally isolated. The wiring diagram shown is for each signal output.

Interconnection cables specified in the wiring diagrams are based on typical applications. Refer to the system drawing for specific cable requirements where applicable.

Physical properties of cable such as abrasion, temperature, tensile strength, solvents, etc., are dictated by the specific application. General electrical requirements are: stranded copper, 22 thru 16 gauge, braid or foil with drain wire, 0.05 MF maximum total mutual or direct capacitance, outer sheath insulator, 1,000 ft. max.

NOTE: AVTRON STANDARD WARRANTY APPLIES.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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<table>
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<th>M780 SPECIFICATIONS:</th>
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DO NOT open an M780. This will void the warranty.

REPAIR of defective units requires returning the unit to the factory, where there is special test equipment. Turnaround time is minimal, and charges are nominal for out-of-warranty units.

Units of 15 PPR or less have phase related signals and may be used in direction sensing applications. The signal available in the connector closest to the housing end.

DESCRIPTION
The Model M780 Pulse Generator is a zero-speed rotary transducer, allowing operation down to zero RPM. The M780 generates a specific number of pulses for each full rotation of its shaft. When coupled to a machine, its output is directly proportional to process travel (pulse count) or speed (pulse rate). The output signal is generated by a large, non-breakable disc rotating in a slot of a magnetic sensor. A rugged cast aluminum housing, steel shaft, and heavy-duty sealed bearings provide mechanical ruggedness required for industrial applications.

The M780’s second output is electrically independent and totally isolated. For many applications, this feature provides a running spare by simply interchanging output connectors.

Various M780 options and how they are indicated in the M780 part number are shown below:

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