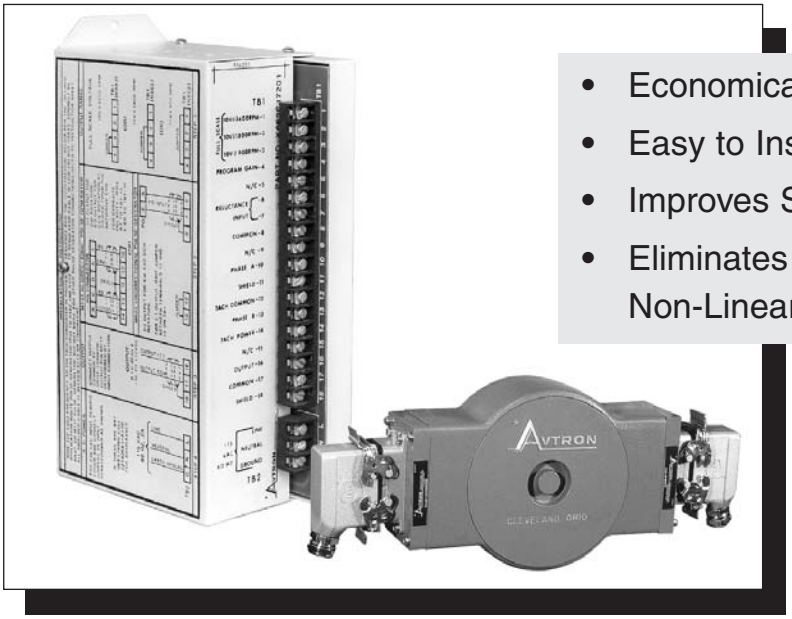
Model K662

Bulletin 303

Brushless Tachometer for New Drive Systems



- Economical
- Easy to Install
- Improves Speed Regulation
- Eliminates Drift and Non-Linearities

Application

Since conventional tachometer generators are the weakest link in industrial type analog speed regulated drive systems, users of drive systems routinely replace analog tachometers with Brushless Tachometers to get improved drive system performance and/or to reduce acquisition and maintenance costs.

Prior to introduction of the Model K662, Avtron introduced the popular Model K661 Brushless Tachometer that features a 50, 100, or 200 volt DC output at 1000 RPM. The voltage range of the K661 is a convenience feature provided to the user when replacing analog tachometer generators with the same voltage rating. (See Avtron Bulletin 301 for a description of the Model K661 Brushless Tachometer.)

The Model K662, rated at ±10 volts DC at 900, 1800, or 3600 RPM, eliminates the high voltage section of the popular Model K661. The result is a more cost-effective Brushless Tachometer that is provided in a smaller enclosure. Since most speed regulated analog drive systems operate at a 10 volt DC control level, the control voltage level of the K662 with the drive system is accomplished by merely bypassing the resistor inputs used to reduce the tachometer generator's high voltage to the nominal 10 volt control level. The output of the K662 is a ±10 volt signal when the pulse generator is specified as the bidirectional zero-speed type.

Additional cost savings are obtained by specifying the Avtron SLAPtach™, which eliminates the need for conventional flange adapters and zero backlash rotary couplings.

K662 Specifications

Operating Power: 115 Volts, ± 15%, approx. 0.25 AMP

Output Power: Sufficient power for any Avtron pulse generator which requires power.

Output Signal: 10V full scale @ 900, 1800, and 3600 RPM. 10 volts max., 20 ma max., output polarity determined by rotation direction and bi-directional input, such as Avtron Model M485.

Full Scale Voltage: a) Bidirectional ± 10 ±0.1 VDC
b) Unidirectional 10 ±0.1 VDC

Linearity: 0.002% or better, from zero to max. RPM

Offset: None. All units interchangeable.

Reversing Error: Zero

Stability: Maximum ±0.02% of full scale over 30 days.

Response: 0.01 second Time Constant for step change.

*** Operating Temperature:** **K662:** 0 - 60°C
pulse generator: 0° - 70°C

*** Drift:** **K662:** 0.05% / °C Max.
pulse generator: Zero

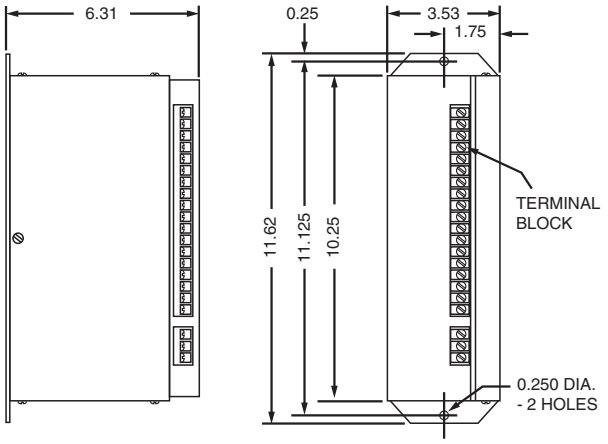
Construction: Barrier terminal strips with 3/8" centers for ease of installation. Circuit boards coated for corrosion protection. Steel enclosure removable for easy access.

Output Ripple: Volts peak to peak depends upon the input speed. Open loop ripple at 10V full scale at 3600 RPM is 0.1 VRMS at 25 RPM, 0.015 at 250 RPM and 0.003 VRMS at 2500 RPM. This is significantly lower than conventional brush type generators above 25 RPM. The ripple amplitude is comparable to DC generators below 25 RPM but at a higher frequency, which has less effect on speed.

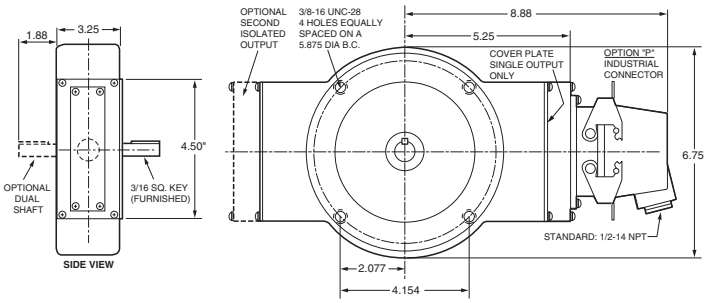
*** NOTE:** All K662 tachometers are thermal cycled for 48 hours prior to shipment to assure adherence to these specifications.

Outline Drawings

K662 Brushless Tachometer



M485 Pulse Generator



Installation

Avtron Pulse Generators directly displace analog tachometers, whether foot or flange mounted. For directional output, specify Avtron Model M485 or M193B. On drives which never require speed regulation below 50 RPM or in reverse direction, any of Avtron's SMARTachs™ or THIN-LINE™ encoders may be used.

Output Compatibility

Although analog tachs can produce more than 20ma., drives seldom, if ever, draw more than this. The K662 is suitable for (a) solid state static drives and (b) rotating drives with electronic regulators.

All dimensions are in inches.
Printed in U.S.A. Rev. B

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