Technical Data

High Frequency Pulse Generator

Model 351

General
The Single or Dual Output High Frequency Pulse Generator is a photo electric device used to provide two output signals proportional to unit volume while maintaining a mechanical meter-to-register link. Signal outputs are electrically 90 degree out-of-phase and are used primarily for pulse security. Although designed for use in meter proving, the Dual Phase generator can be used on any application requiring a high resolution signal indicating throughput or rate of flow.

Wiring

Power Requirements
12 to 24 Vdc +/- 10%
88 to 140 mA (Depending on Input voltage/Output configuration).
Load Impedance: 5 k ohms

Temperature Range
-40°F to 185°F (-40°C to 85°C)

Shipping Weight and Volume (Approximate)
8 lbs @ 0.122 CU. Feet
3.6kg @ 0.003 Cu. Meters

Maximum RPM
Pulser Shaft: 1000 rpm maximum gear changer: 250 rpm maximum

Signals
Pulse A&B: Dual Output 90° Electrically Out-of-Phase
Phase Error: 15 Maximum
Amplitude: 0 to V + (500 ohm Internal Pull-up, No Load);
0-5 Vdc +/- 0.2 Vdc (249 ohm Internal Pull-up, No Load)
Index: Open collector, 1 pulse per revolution 25 Vdc maximum
100 mA maximum
Pulse Duration: 90 +/- 10% of shaft rotation

Design Features
• Converts mechanical rotation into electrical pulses.
• Adapts to most meters.
• Self-contained, optical encoder module.
• Explosion-proof and weather tight (1/2” conduit)
• No calibration adjustment required
• Maintenance-free
• Temperature: -40°F to 185°F (-40°C to 85°C).
• Long Distance operation
• Low output impedance
• Low torque and low speed
• Open collector indexing output provides one pulse per revolution

Power Requirements
12 to 24 Vdc +/- 10%
88 to 140 mA (Depending on Input voltage/Output configuration).
Load Impedance: 5 k ohms

Connections
1/2” Conduit, or quick connect

Environmental:
NEMA 4
IP66

Hazardous area approvals:
Explosion-proof
UL: Class I, Groups C and D
CSA: Class I, Groups C and D
NEPSI (China) Ex d IIB T4 Gb

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Recommended Cable Length
The recommended cable lengths are based on 18 gauge tinned copper shielded cable with a load impedance of 5 k ohm (recommended minimum) and cable capacitance of 27pf/ft. When other type cables are used the factory must be consulted to determine permissible cable lengths.

<table>
<thead>
<tr>
<th>Pulse Output Frequency</th>
<th>Maximum Cable lengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000 Hz</td>
<td>3,700 ft.</td>
</tr>
<tr>
<td>2,000 Hz</td>
<td>1,850 ft.</td>
</tr>
<tr>
<td>3,000 Hz</td>
<td>1,185 ft.</td>
</tr>
<tr>
<td>4,000 Hz</td>
<td>925 ft.</td>
</tr>
<tr>
<td>5,000 Hz</td>
<td>740 ft.</td>
</tr>
</tbody>
</table>

Standard Pulse Rates

<table>
<thead>
<tr>
<th>Typical Accessory Block Gear Ratios</th>
<th>Pulses per revolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:1:1</td>
<td>100 or 256</td>
</tr>
<tr>
<td>1:2:1</td>
<td>200 or 512</td>
</tr>
<tr>
<td>1:4:1</td>
<td>400 or 1024</td>
</tr>
</tbody>
</table>

Note: Actual K-factor (Pulse per gallon) is dependent upon meter output.

Dimensions (For Certified Dimensional Prints - Consult Factory)

WARNING:
Do NOT operate this instrument in excess of the specifications listed. Failure to heed this warning could result in serious injury and/or damage to the equipment.

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