# ELECTRONIC Choices

## 1) What meter do I need in this application?

Meter choice is determined by: Level of accuracy required, flowrate, line size, viscosity, fitting type, pressure rating, temperature, chemical compatibility and etc. The general categories below provide some basic information about meter types.

| G Series Meters | G2 Series Meters | OM Series Meters |
|---|---|---|
|  Precision Meters | *"Look for the blue label!"*  Wide range of materials and sizes. |  Positive Displacement Meter technology in a variety of materials and sizes. |
| **TM Series Water Meters** | **A1 Commercial Grade Meters** | **Economy Meters** |
|  *"Look for the blue label!"* Water Meters |  *"Look for the silver label!"* Aluminum or Nylon Meters with display in a self-contained unit. |  *"Look for the red label!"* Water, fuel, lube and chemical meters with basic features. |

## 2) What type of output do I need from my electronics?

Output can be simple totals, rate of flow and various types of signal output.
GPI Electronics can be mounted to the meter or to a remote location and come with or without display.

| Local Display | GA Series Electronics | GG Series Electronics | GX Series Electronics | SC Series Electronics |
|---|---|---|---|---|
| 09 Electronics | 4-20 mA Output without Display | Pulse Output with Display | 4-20 mA Output with Display | Scaled Pulse Output |
| **RT40** | **RT12** | **EB10** | **E Series (E110 / E018)** | **F Series** |
| Total & Rate Display | 4-20 mA & Pulse Output with Display | Batch Controller | Total & Rate 4-20mA & Pulse Output Explosion Proof | Total & Rate 4-20mA & Pulse Output Alarms |

## 3) How do I place an order?

Are you buying your GPI Electronics as part of a **system** in combination with a meter or **stand alone** (as a replacement for an existing electronics)? Model numbers will vary depending on how the electronics unit is ordered.

Contact GPI Customer Support at: **888-996-3837** or **316-686-7361** for assistance.

Outside of the Americas, contact GPI Australia at: **+61 2 9540 4433** for assistance.

*Local Display for Turbine Meter*


*"Look for the blue label!"*

An excellent choice for most FLOMEC® Meters. Commonly used features are preprogrammed in the Computer Display. End-users can enable additional features by using a password available from the factory or on the GPI website. The 09 configuration provides a high degree of customization, matching customers' exact needs.

## 09 COMPUTER – SPECIFICATIONS

| | |
|---|---|
| **Std. Factory Configuration:** | 2 Totals (1 Resettable, 1 Cumulative); |
| | Factory Calibration in gallons and litres; |
| | User Calibration and Rate of Flow Indication. |
| **Computer Electronics:** | 09 Electronics can be used on G, G2, TM, A1, |
| | OM and DP Series Meters. |
| **Totalizing Registers:** | 0 to 3 available |
| **K-Factor Limits:** | Min: .01 pulses/unit Max: 999,999 pulses/unit |
| **Field Calibration:** | Field calibrate by user. Standard Method: |
| | Correction Factor. Six adjustable digits. Can be |
| | reconfigured to K-factor entry. |
| **Readout Totals:** | LCD with floating decimal |
| | Minimum Display = 0.01 units |
| | Maximum Display = 999,999 x100 units (6 digits) |
| **Input Pulse Rate:** | Minimum (Pulse-in Input) = DC (0 Hz) |
| | Minimum (Coil Input) = Approximately 10 Hz |
| | Maximum = Approximately 1,000 Hz |
| **Turbine Display:** | |
| **Internal Power Supply:** | 2 Lithium batteries at 3 volts each |
| **Lithium Battery Life:** | 5 Years |
| **Optional Power Supply:** | 7 to 30 VDC |
| **Oval Gear Display:** | |
| **Internal Power Supply:** | 9-volt battery |
| **Optional Power Supply:** | 10 to 18 VDC |
| **Operating Temperature:** | 0° F to +140° F (-18° C to +60° C) |
| **Storage Temperature:** | -40° F to +158° F (-40° C to +70° C) |

## APPROVALS (A1 & G2 MODELS ONLY)

FM · FM APPROVED · CE · ATEX · IECEx

Using a password-protected configuration process you can enable additional features. GPI Customer Service can provide the password and instructions to unlock and reset configuration settings. This information is also available on the GPI website.

**User Configuration** features include:

- Totalizers/Modes Enabled (Cumulative Total, Batch 2 Total, Flowrate Mode)
- Flowrate Timebase (Units per Minutes, Hours and Days)
- Factory Calibration Curve Units Enabled (Gallons, Imperial Gallons, Litres, Quarts, Ounces, Cubic Feet, Cubic Centimeters, Cubic Meters or Barrels (42 gal.)
- Dispense/Display or K-Factor Entry Calibration

## *Features and Benefits:*

- ✓ 2 Totals (Batch - Resettable, Cumulative - Not Resettable).
- ✓ Flowrate display updates every 5 seconds, readout is in units/minute.
- ✓ Factory Calibration in gallons and litres is standard. Can be field calibrated to adjust to various fluid thickness.
- ✓ Correction calibration lets end user calibrate by ± percent off.
- ✓ Small, compact and totally self contained with an internal power supply.
- ✓ Non-volatile totals means amounts are retained when batteries are replaced or power is lost.
- ✓ Lithium battery life: 5 years.

# GG500, GG510, G5 & 5 SERIES

## Display With Pulse Output


*GG500*
*Remote Mount*


*GG510*
*Local Mount*

The GG500 is a remote mount Pulse-Out Transmitter with battery powered display.

Choose the GG510 when a local mount is needed on the G2 series.

Choose the G5 when a local mount is needed on the OM series.

Choose the 5 when a local mount is needed on the G series.

### GG500/GG510 – SPECIFICATIONS

| | |
|---|---|
| **Accuracy:** | ± 0.1% of reading |
| **Output Options:** | |
| **Primary Output:** | Open Collector (NPN) |
| **Pulse-Out:** | |
| **Max. "OFF" Voltage:** | 60 V |
| **Max. "ON" Current:** | 200 mA |
| **Max. "ON" Voltage Drop:** | < 0.5 V @ 200 mA |
| **Electrical:** | |
| **Strain Relief:** | Hubble PG7 |
| **Strain Relief Thread:** | Female 1/2-20 UNF-2B |
| **Cable:** | *Remote:* Belden 9363 (500 Series only) |
| | *Local:* No cable provided |
| **Cable Length:** | 20 ft. (6 m) provided (500 Series only) |
| **Power Supply:** | 9-volt battery or externally powered |
| **Voltage Supply (Min.):** | 7 VDC |
| **Voltage Supply (Max.):** | 30 VDC |
| **Input Options:** | Hall Effect, Reed Switch, Open Collector or |
| | Low Level Sine Wave |
| **Remote Mounting:** | Pipe or wall |
| **Operating Temperature:** | +14° F to +140° F (-10° C to +60° C) |
| **Frequency Input:** | |
| **Low Level Coil (LLC):** | 0 - 1000 Hz |
| **High Level Low Freq.:** | 0 - 150 Hz |
| **High Level High Freq.:** | 0 - 1000 Hz |
| **Enclosure Rating:** | NEMA 4X / IP55 |
| **Shipping Weight:** | *Remote:* 2.0 lbs. (.90 kg) |
| | *Local:* 1.0 lbs. (.45 kg) |
| **Calibratable:** | K-factor Entry |

**ACCURACY: ±0.1% READING**

### *Features and Benefits:*

- ✓ Provides communication with process control equipment.
- ✓ Works with G Series, G2 Turbine Meters, OM and DP Meters.
- ✓ 2 Totals (Batch = Resettable, Cumulative = Non-Resettable); Rate of Flow. Factory calibrated in gallons and litres. Field calibratable. Allows user calibration. Includes non-volatile totals.
- ✓ Industry Standard Output: Unscaled Pulse.
- ✓ Easily mounted on pipe or wall.

## Display With 4-20 mA Output


*GX500*
*Remote Mount*


*GX510*
*Local Mount*

The GX500 is a remote mount 4-20 mA Output Transmitter with display.

Choose the GX510 when a local mount is needed on the G2 series.

Choose the G6 when a local mount is needed on the OM series.

Choose the 6 when a local mount is needed on the G series.

### GX500/GX510 – SPECIFICATIONS

| | |
|---|---|
| **Accuracy:** | ± 0.1% of reading |
| **Output Options:** | |
| **Primary Output:** | Loop (4-20 mA or 0-20 mA) |
| **Minimum:** | 1.5 mA |
| **Maximum:** | 25 mA |
| **Auxiliary Outputs 0-5 V:** | Single Ended |
| **Minimum:** | 0.1 V |
| **Maximum:** | 4.9 V |
| **Pulse-Out:** | |
| **Max. "OFF" Voltage:** | 60 V |
| **Max. "ON" Current:** | 200 mA |
| **Max. "ON" Voltage Drop:** | < 0.5 V @ 200 mA |
| **Electrical:** | |
| **Strain Relief:** | Hubble PG7 |
| **Strain Relief Thread:** | Female 1/2-20 UNF-2B |
| **Cable:** | *Remote:* Belden 9363 (500 Series only) |
| | *Local:* No cable provided |
| **Cable Length:** | 20 ft. (6 m) provided (500 Series only) |
| **Power Supply:** | 2-wire, loop powered |
| **Voltage Supply (Min.):** | 8.5 VDC |
| **Voltage Supply (Max.):** | 35 VDC |
| **Input Options:** | Hall Effect, Reed Switch, Open Collector or |
| | Low Level Sine Wave |
| **Remote Mounting:** | Pipe or wall |
| **Operating Temperature:** | +32° F to +140° F (0° C to +60° C) |
| **Frequency Input:** | |
| **Low Level Coil (LLC):** | 0.25 - 1000 Hz |
| **High Level Low Freq.:** | 0.25 - 150 Hz |
| **High Level High Freq.:** | 0.25 - 1000 Hz |
| **Optically Isolated HLLF:** | w/2500 V optical isolation |
| **Optically Isolated HLHF:** | w/2500 V optical isolation |
| **Enclosure Rating:** | NEMA 4X / IP55 |
| **Shipping Weight:** | *Remote:* 2.0 lbs. (.90 kg)*Local:* 1.1 lbs. (.5 kg) |
| **Calibratable:** | K-factor Entry |

**ACCURACY: ±0.1% READING**

### *Features and Benefits:*

- ✓ Provides communication with process control equipment.
- ✓ Works with G Series, G2 Turbine Meters, OM and DP Meters.
- ✓ 2 Totals (Batch = Resettable, Cumulative = Non-Resettable); Rate of Flow. Factory calibrated in gallons and litres. Field calibratable. Allows user calibration. Includes non-volatile totals.
- ✓ Now available with Lockout feature.
- ✓ Microprocessor-based electronics have extremely low power requirements.
- ✓ Easy to set 4-20 mA endpoints under actual flow conditions.
- ✓ A signal conditioner with industry standard current loop output.
- ✓ Easily mounted on pipe or wall.

# GA500, GA510, G7 & 7 SERIES

## 4-20 mA Output


*GA500*
*Remote Mount*


*GA510*
*Local Mount*

The GA500 is a remote mount 4-20 mA Output Transmitter without display.

Choose the GA510 when a local mount is needed on the G2 series.

Choose the G7 when a local mount is needed on the OM series.

Choose the 7 when a local mount is needed on the G series.

| GA500/GA510 – SPECIFICATIONS | |
|---|---|
| **Accuracy:** | ± 0.1% of reading |
| **Output Options:** | |
| **Primary Output:** | Loop (4-20 mA or 0-20 mA) |
| **Minimum:** | 1.5 mA |
| **Maximum:** | 25 mA |
| **Auxiliary Outputs 0-5 V:** | Single Ended |
| **Minimum:** | 0.1 V |
| **Maximum:** | 4.9 V |
| **Pulse-Out:** | |
| **Max. "OFF" Voltage:** | 60 V |
| **Max. "ON" Current:** | 200 mA |
| **Max. "ON" Voltage Drop:** | < 0.5 V @ 200 mA |
| **Electrical:** | |
| **Strain Relief:** | Hubble PG7 |
| **Strain Relief Thread:** | Female 1/2-20 UNF-2B |
| **Cable:** | *Remote:* Belden 9363 (500 Series only) |
| | *Local:* No cable provided |
| **Cable Length:** | 20 ft. (6 m) provided (500 Series only) |
| **Power Supply:** | 2-wire, loop powered |
| **Voltage Supply (Min.):** | 8.5 VDC |
| **Voltage Supply (Max.):** | 35 VDC |
| **Input Options:** | Hall Effect, Reed Switch, Open Collector or |
| | Low Level Sine Wave |
| **Mounting:** | Pipe or wall |
| **Operating Temperature:** | +32° F to +140° F (0° C to +60° C) |
| **Frequency Input:** | |
| **Low Level Coil (LLC):** | 0.25 - 1000 Hz |
| **High Level Low Freq.:** | 0.25 - 150 Hz |
| **High Level High Freq.:** | 0.25 - 1000 Hz |
| **Optically Isolated HLLF:** | w/2500 V optical isolation |
| **Optically Isolated HLHF:** | w/2500 V optical isolation |
| **Enclosure Rating:** | NEMA 4X / IP55 |
| **Shipping Weight:** | *Remote:* 2.0 lbs. (.90 kg) |
| | *Local:* 1.1 lbs. (.5 kg) |

**ACCURACY: ±0.1% READING**

### *Features and Benefits:*

- ✓ Provides communication with process control equipment.
- ✓ Works with G Series, G2 Turbine Meters, OM and DP Meters.
- ✓ Now available with Lockout feature.
- ✓ Microprocessor-based electronics have extremely low power requirements.
- ✓ Easy to set 4-20 mA endpoints under actual flow conditions.
- ✓ A signal conditioner with industry standard current loop output.
- ✓ Easily mounted on pipe or wall.

## Scaled Pulse Output


*SC500*
*Remote Mount*


*SC510*
*Local Mount*

The FLOMEC® Scaled Pulse Module is a switch-programmable multi-stage counter/divider with multiple inputs. The module provides selectable K-factor to convert input frequency to scaled pulse output. The SC500 connects via a 20 foot input cable. The SC510 connects directly to the 1 inch MNPT conduit connector.

Choose the 8 when a local mount is needed on the G series.

### SC500/SC510 – SPECIFICATIONS

| | |
|---|---|
| **Accuracy:** | ± 0.1% of reading |
| **Power Source:** | DC powered 5 to 30 VDC |
| **Input Signal:** | Hall Effect, Reed Switch or Open Collector (NPN) or Sine Wave |
| **Output Signal:** | Open Collector (NPN) |
| **Frequency Range:** | Coil, HF = 0-1500 Hz; LF = 0-150 Hz |
| **Operating Temperature:** | -40° F to +185° F (-40° C to +85° C) |
| **Cable:** | *Remote:* 20 ft. (6 m), 3-conductor, tinned drain wire, 22 AWG, PVC jacket .212 dia. Ref. Belden 9363.<br>*Local:* No cable provided |
| **Mechanical Connections:** | *Remote:* Wall or pipe mountable with standard U-bolts.<br>*Local:* Unit is mounted to meter body, 1" NPT. |
| **Electrical Connections:** | *Remote:* Two strain relief ports<br>*Local:* One strain relief port; one threaded plug |

**ACCURACY: ±0.1% READING**

### *Features and Benefits:*

- ✓ Converts input frequency to scaled pulse output.
- ✓ Provides communication with process control equipment.
- ✓ Works with G Series, G2 and A1 Turbine Meters, OM and DP Meters.
- ✓ Remote model mounts on pipe or wall.