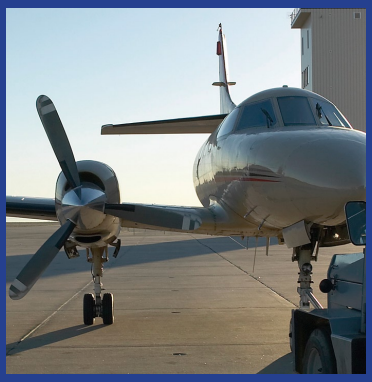
A member of the
Avery Weigh-Tronix Group

460, 560, 660 Series Indicators




Weight-Based
Indicators and Controllers

Flexible, Legal-For-Trade Weighing Solutions

To stay competitive, the industries of today are fast-paced and lean. They require equipment that provides intuitive operation for personnel at all skill levels. These programmable instrument models deliver exactly that with three levels of sophistication. The unique combination of automation technology supported by a worldwide network of factory trained Distributors make it simple for you to tailor one of these indicators to a wide range of applications.

Increase your process efficiency by improving accuracy. Our line of programmable instrumentation has helped people in nearly every industry improve weighing accuracy and ultimately their bottom line. GSE is dedicated to providing the most flexible, highest quality weight-based products for demanding applications, anywhere in the world.

The complete line of 460, 560, and 660 Series Indicators, with progressive levels of performance, allow you to select a model that best fits your needs. Whether you're on the farm or in a processing plant, our instruments are built and tested to withstand the most severe environments while delivering precision weighing accuracy.

Versatile Connectivity

Integrate weight and process data into your network. Versatile communication protocols allow devices to talk via point-to-point communications or standard industrial fieldbus networks which in turn provides the ability to exchange plant floor data in a variety of formats. This is of particular value to facilities and integrators that require communication options for a variety of machines and applications. Because our indicators have common communication modules and programming utilities, integration time is quicker and maintenance costs are reduced.

Via **Ethernet, RS232, RS485** and **20mA Current Loop...**

- Rabbet™ Software provides the ability to quickly customize incoming and outgoing data transmissions to virtually any peripheral device.
- Each independent Custom Transmit Table™ is easily configured to transmit weight data and process data to virtually any printer, computer, remote display or other device. These tables allow data formats, control codes and data strings to be customized for each application.
- To start a process or display a message upon receiving a character or data string, the Input Interpreter Table™ is programmed to analyze the incoming data and process it accordingly. The received data is normally transmitted from a computer, scanner or card reader to start an application or the received data is stored in specific data registers for future processing.

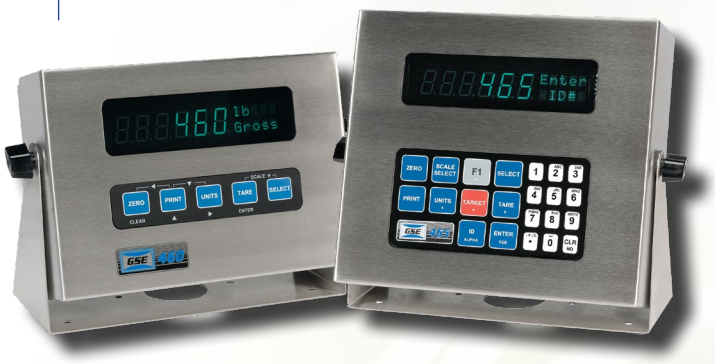
or an **Ethernet Module...**

- When communicating across an Intranet or Internet connection, the Custom Transmit Tables™ and Input Interpreter Tables™ provide the ultimate flexibility in system integration. These features permit the user to configure the weighing instrument to communicate in their network.
- The IP setup tool quickly establishes a static IP address or DHCP server compatible.
- To expedite setup, a dynamic on-board web server makes network configuration fast and simple.
- The Ethernet Module provides instant access to view the scale weight and process data remotely.
- Communicate via Telnet server or client, FTP client and Modbus TCP/IP protocols.

or **DeviceNet™** and **Profibus® Modules**

- Flexible I/O assemblies provide access to all weight data and user defined process data.
- An on-board auto configuration utility expedites setup by matching both EDS and GSD files.

460 Series Indicators



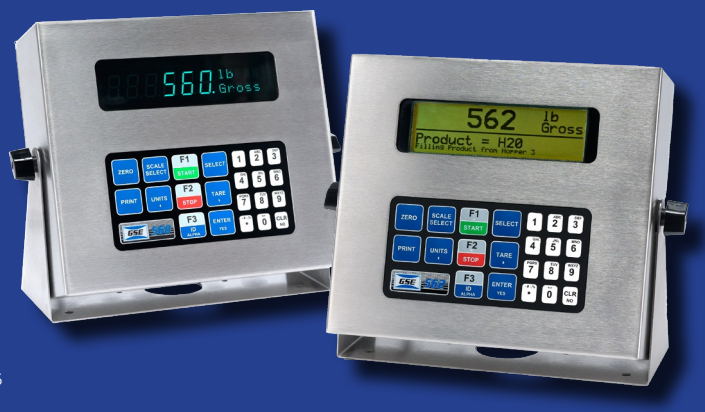
For applications that require an elevated level of flexibility over elementary weighing indicators, the Model 460 and 465 Indicators are the perfect solution.

- 15 Variable Data Registers
- 2 Scale Input Signals
- 4K Byte Database Memory
- 8 I/O, Variable Activation and Deactivation States
- 15 Independent Programmable Database Structures
- Programmable in C or with Rabbet™ Software

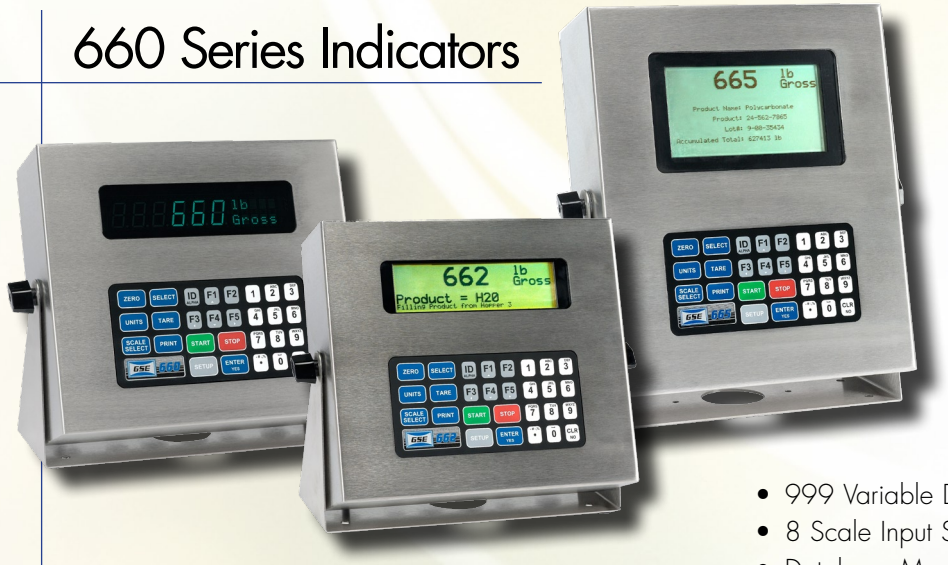
560 Series Indicators

When your applications require a more sophisticated operator interface and process control capability, the Model 560 and 562 Indicators deliver enhanced performance and value. These are Programmable in C or with Rabbet™ Software.

- 100 Variable Data Registers
- 4 Scale Input Signals
- Database Memory expandable to 256K
- 32 I/O, Variable Activation and Deactivation States
- 100 Independent Programmable Database Structures



660 Series Indicators



Model 660, 662, 663, and 665 Indicators are specifically designed to meet the most demanding applications. Three enclosure configurations and multiple display choices allow you to select the operator interface and controller to best suit your application requirements.

Ultimate Flexibility and Process Control.

- 999 Variable Data Registers
- 8 Scale Input Signals
- Database Memory expandable to 2M
- 128 I/O, Variable Activation and Deactivation States
- PDIO, Programmable Digital Input & Output, controls up to 7 vibratory feeders, accepts input from flow meters and encoders
- 250 Independent Programmable Database Structures
- Programmable in C or with Rabbet™ Software

Features

Data Management
Use Rabbet™ Software or User C to define database structure. The database is then managed using the 18 available functions that include; Create, Delete, Recall, Sort, Upload and Download to name a few. The independent databases are specifically useful for applications that recall information from one database and require the transaction or process data to be recorded in a separate database file.

Variable Data Registers
No application is identical. For that reason, user defined Variable Data Registers (VDR) can be setup as alpha-numeric strings, floats, integers and unsigned integers with variable character length. Label names for VDR's are infinite so you are only limited to your application requirements and your imagination when configuring the VDR's.

Flash Memory Updates
As new features are added to the firmware, your instrument can be updated with the latest enhancements using GSE Reflash Software. Application files can also be transmitted over any communication connection including Ethernet for installations with multiple instruments in various locations.

Turn-Key Applications
Common weighing applications such as Batching, Checkweighing, Discharge, Filling and Truck In/Out are resident in the instrument's memory. These full featured applications can be easily modified to better accommodate your needs or a custom program can be written by factory trained Distributors.

Operator Interface (OI)
Intuitive equipment operation is important for improving production efficiencies. To guide operators through a series of tasks, custom displayed prompts are easily programmed using Rabbet™ Software or User C. To further improve the OI, key functions can be defined to perform a single task or execute multiple tasks with one keystroke.

Options

Multi-Scale Module: Add additional scale input signals.

Analog Output Module: 0-10VDC, 0-20mA or 4-20mA, absolute zero and full scale values are programmable, 16 bit resolution.

Database Modules: Three modules provide 256K, 1M or 2M bytes of additional database memory for data management.

RS485 Module: Multi-drop up to 251 devices in half or full duplex to a distance of 4000 feet (1200m), replaces RS232 Port 1.

I/O Relay Modules: Optically isolated, 20-240 VAC & 3-60 VDC Input and Output Modules, 1-3A rating.

20mA Current Loop: TX active or passive, RX-Passive, 9600bps, 12VDC, 1000 feet (300m), replaces RS232 Port 1.

SCR Module: Vibratory feeder control, 1.75A RMS maximum load, 20-280VAC, zero cross detection.

User C Development Kit: Includes all software and hardware required to write applications in C.

Rabbet™ Software: A Windows® GUI designed to expedite development; configure the instruments and program in the GSE Macro Language. This intuitive software guides you through the general instrument setup parameters and more advanced program development.

Wedge Plus™ Software: Real time data collection/data logging in the background operation; powerful ActiveX controls for Windows®

RF Comm Modules: Wireless connection to single or multiple devices. 900 MHz; Short Range and Long Range. 2.4 GHz conforms to European requirements.

DeviceNet™, Profibus®, Ethernet Modules: Provide(s) fieldbus communications.

Dura-Shield & Splash Guards: Keep the instrument clean in dirty environments.

Excitation Current Booster: Boosts excitation power on 60 Series Controllers to operate a total of 32-350 Ω load cells.

DeviceNet™ CONFORMANCE TESTED ETHERNET PROFIBUS PROCESS FIELD BUS

Maximize Capabilities with User C

The User C Advantage... Application developers can write and compile routines in the C programming language which maximizes capabilities and reduces development time. This capability provides the execution speed and flexibility required in many processing applications.

- **Execution Speed:** The compiled C code executes faster than interpreted code.
- **Extensive Function Library:** The standard C library and an extensive list of functions are provided to assist in integrating the intended application with our existing firmware routines.
- **Quick Results:** The only source code you write is specific to the application routines required to control the specific process and operator interface.
- **Security:** The final compiled output object code file is the only file put into the field. The source code remains secure.
- **Flexibility:** User C provides standard weighing features that link to your custom application source code. For example, an application can send out data by formatting the transmission and calling a User C library function. Similar degrees of freedom apply to the processing of received data, use of databases, process control functions, and other aspects of the instrument operation.
- **User C Development Kit Tools (**Option**):**
  GSE User C Function Library
  GNU Compiler
  Insight GDB Windows® Debug Utility
  Emulation Memory Module
  BDM Interface Cable with High Speed Extension Cable

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Please call us or visit *www.gse-inc.com* for your nearest GSE Distributor

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