

MODEL 460 + 465



Now programmable:

- 15 Macro Programs
- 2 RS 232 C, Duplex, Standard
- 1 RS 485 Communication, optional
- 2 Analog Outputs, optional
- 2 Scale Module, second scale opt.
- 8 Setpoints I/O, optional
- 1 Remote Display, optional



PTO Profibus Trade Organization

DeviceNet
CONFORMANCE TESTED

Ethernet Interface Module



A member of the
Avery Weigh-Tronix Group

ISO 9001

www.averyweigh-tronix.com

SPECIFICATIONS

Performance

Resolution	100,000 d (\pm 500,000 internal)
A/D Conversion	60 Hz
Flash Memory	1M Bytes
Calibration	Selectable, 5 point linearization or enter Load Cell mV/V Full Scale
A/D Filtering	GSE FIR (Finite Input Response) Filter with selectable display update rate
Units Measure	4 user defined per scale
Custom Units	2 user defined per scale (ie. Tons)
Zero Adjustment	Selectable, 0.01 - 100% Full Scale
Span Adjustment	0.1 - 20 mV/V
Non-Linearity	0.005% Full Scale, Load Cell Dependent
Operating Temp	-10 °C- + 40 °C
Excitation Power	12-350 ohm bridges
Input Signal Connect	4 or 6 conductors with sense leads
Excitation Current	350 mA, short circuit protected
Excitation Voltage	10 VDC short circuit protected
Time/Date Clock	Volatile, battery backed optional
Warranty	2 Year limited

Electrical

Power Input	AC, 90-250 VAC, 50/60 Hz
	DC, 10-32 VDC
Fuse	0,5 A slow blow (when using AC power)

Setpoint I/O

I/O Scan Rate	16 ms maximum
Number of I/O	8 maximum physical, optional 16 Total (8 physical, 8 logical)
Output Voltage Rating	20-240 VAC@1A 30-60 VAC@2A
Input Voltage Rating	60-135 VAC 200-250 VAC 3-30 VDC
I/O Timer Resolution	10 ms
Remote Contact Input	2 total for TARE, PRINT, START, STOP, etc. Invokes macros 6 & 7 if programmed.

Communications

Port 1	RS 232 Full Duplex or RS 485 Multidrop optional or 20 mA Current Loop optional
Port 2	RS 232 Full Duplex, no RTS on COMM 2
Protocols	Modbus™ (Ethernet, DeviceNet™, Profibus opt.) Ethernet provides an intranet or internet connection. DeviceNet™ up to 500K Baud ODVA approved. Profibus up to 12M Baud PTO approved. Ethernet, DeviceNet™ and Profibus mount in SBM slot and use COMM 1
Baud Rates	150-58,300 bps
Custom Transmit Tables	4-userdefined RS 232 output tables
Input Interpreter Tables	15-userdefined RS 232 input tables

Exceptional Features Common to 460/465

Macros
15 programmable macros, applies the principles of boolean logic in a sequential structure, provides a method of performing repetitive keystrokes and operations, simplifies indicator use by automating indicator operation

Note: 1 serial bus module (SBM) and 1 communication module mount internal to the enclosure.

Multi-Scale Module^(SBM)
allows for simultaneous monitoring of an additional signal input

Analog Output Module^(SBM)
isolated 16-bit signal output, 0-10 VDC, 0-20 mA or 4-20 mA, software adj.zero/gain (2 analog modules max.)

I/O Relay Module^(SBM)
8 Variations of Quad I/O boards. (AC & DC-4 Output, 4 Input or 2 In/2 Out)

RS 485 Module
isolated serial communication module replaces RS 232 on Port 1, multi-drop with 251 devices max half or full duplex up to 4000 feet, 56 K bps max

Database

15 programmable databases are used to manage critical application data, this powerful feature stores weight information and other user defined Data Registers such as part numbers, formulas, etc., 18 functions include store, recall, sort, upload

Data Registers

15 programmable data registers can be defined as an integer, unsigned integer, float or string, common data registers include part number, lot #, Operator ID, commodity code, etc.

Communications

a factory default transmission will send: Gross, net and tare weights. Using the Custom Transmit Tables, other transmissions may be programmed to send weight data, Data Registers or ASCII control codes for application specific labels, reports, etc.

Input Interpreter Tables

are programmed to receive RS 232 serial data and perform a specific task, ie. a bar code scanner scans a formula #, the data is received into an input interpreter table and invokes a macro that recalls target weights.

Enclosure

NEMA 4X (IP 66), stainless steel

Display

bright 6 digit, 75" (20,3 mm) Vacuum Fluorescent (VFD) with 2 x 5 (10 character) dot matrix for scale status and operating prompting

Remote Display Mode

allows any GSE 60 series indicator to operate as a remote display (slave device), keypad can be enabled or disabled

Checkweigh

set target weight(s) and tolerances, indicator identifies out of specification weighments, database can be utilized to quickly recall product target weights and tolerances

Batching-Single Speed

1-8 ingredients with Pre-Act. Two Speed 1-4 ingredients with dribble

Truck Weighing

truck weighing in/out routine provides a minimum 200 truck ID's, additional truck routines may be programmed per requirements.

Average Piece Weight (APW) Recall

key in a part number and recall the association APW for quick, efficient parts counting, provides storage of a minimum 200 APWs

Model 460 Indicator

Keypad
5 key, durable elastomeric (rubber)

Size
11.01" W (27.98 cm) x 7.24" H (18.39 cm)

Weight
6.5 lb (2.95 kg)

Model 465 Indicator

Keypad
22 key, durable elastomeric (rubber)

Size
11.01" W (27.98 cm) x 8.96" H (22.76 cm)

Weight
7 lb (3.18 kg)

20 mA Current Loop

isolated serial communication module replaces RS 232 on Port 1, TX-Active or Passive, RX-Passive, 9600 bps max, 12 VDC, 1000 foot loop

Alpha Keyboard

allows alpha character entry into data registers such as Product Name, Part Number, etc.

Dura-Shield

0.020" layer of weatherable film lexan with adhesive backing, applied to the front of the indicator, keeps display and keypad clean in extreme environments

GSE ReFlash Software

download firmware enhancements via RS 232 port

BDM Flash Software

download firmware enhancements via BDM port

