SENTRAN

ModConnect
DeviceNet
ETHERNET

460
465

PROCESS WEIGHT CONTROLLERS

applications

▸ Process Control

▸ Truck Scale I/O Weighing

▸ Filling and Batching

▸ Inventory Monitoring & Control

▸ Set Point Control

▸ Fieldbus/Ethernet Connectivity

▸ Multiple Weighing Systems

▸ Peak Weight Hold

Model 460 - 5 Key   Model 465 - 22 Key

features

IP66 **NEMA 4/4X**

- Programmable Macros

- Programmable Databases

- Programmable Data Registers

- 20-Bit A/D Resolution

- 100,000 LED Display Digits

- 16-Bit D/A Analog Output

- RS-232/422/485 Interfaces

- Stainless Panel Mount Option

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Simply Unbeatable Performance, Versatility and Value!

- Resolution, accuracy and speed all contribute to the versatility of the 460 Series Process Weight Controllers. Choose the simple 5-key Model 460 when parameters changes are infrequent, or choose the Model 465 for the convenience of frequent data entry and control.

- Standard programs include: Single or dual speed Batch Control of up to 8 ingredients with Pre-Act; Checkweighing w/ targets and tolerances; Remote Display Mode (slave device).

- Communication with the 460 Series is simplified using the standard Modbus® protocol or the optional ProfiBus, DeviceNet ot Ethernet modules. Using the Custom Transmit Tables, transmissions can be programmed to send ASCII control codes, data registers or weight data. Receiving data via RS232 into the Input Interpreter Tables provides a means to invoke specific programmed tasks.

Programmable Flexibility... Easy Operation!

- Equipped with the industry's most sophisticated parameter mapping capabilities and programmable features, the 460 Series delivers flexibility and easy to use operation.

- 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.

- 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 included 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.

Innovative Measurement Solutions

performance

Primary Display (Measurement Values):	VFD (Vacuum Florescent); 6-Digit; .75" High; 7-Segment; Bright Blue Green
Secondary Display (Status & Prompts):	VFD (Vacuum Florescent); 2 Lines X 5 Digit; .30" High; Dot Matrix; Bright Blue Green
Display Resolution:	100,000d
Internal Resolution:	20-Bit; (+/- 500,000)
A/D Conversion Rate:	60 Hz
Flash Memory:	512k Bytes
Calibration:	Selectable: Signal Capture w/ 5 point linearization; or Digital Keypad Calibration
A/D Filtering:	FIR (Finite Input Response); Filter with selectable display update rate
Units of Measure:	4; User selectable
Custom Units:	2; User selectable (i.e. Tons)
Pushbutton Zero:	Keypad; Selectable Range; 0.01—100% FS[1]
Span Range:	Selectable: 0.1 (min) to 20mV/V (max)
Non-Linearity:	0.005% FS (max)
Operating Temperature Range:	-10°C - +40°C
Excitation Power:	Up to 12 - 350 ohm bridges
Input Signal Connect:	4 conductors; 6 conductors with remote sense leads
Excitation Current:	350 mA; Short circuit protected
Excitation Voltage:	10VDC; Short circuit protected
Time/Date Clock:	Volatile; Battery backed (optional)
Warranty:	1 Year limited
	[1]Full Scale Output

electrical

Power:	AC: 90 - 250VAC; 50/60Hz, or
	DC: 10 - 32VDC
Fuse:	0.5A Slo-Blow (when using AC power)

relay I/O (options)

I/O Scan Rate:	16ms (max)
Number of I/O:	8 physical (max); 4 Internal/4 Remote; Option to expand to 16 (8 physical, 8 logical)
Output Voltage Rating:	AC: 20 - 240 VAC @ 1A
	DC: 30 - 60 VDC @ 2A
Input Voltage Rating:	AC: 60 - 135 VAC; 200 - 250 VAC
	DC: 3 - 30 VDC
I/O Timer Resolution:	10ms
Remote Contact Input:	2 total for remote operation of function keys (TARE, PRINT, START, STOP, etc.)
	Invokes macros 6 & 7 if programmed.

communication

Port 1:	RS232 Full Duplex; or RS485 Multi-Drop (option); or 20mA Current Loop (option)
Port 2:	RS232 Full Duplex; No RTS on COMM 2
Protocols:	Modbus™
Baud Rates:	150 - 58,300 bps
Custom Transmit Tables:	4 - user defined RS232 output tables
Input Interpreter Tables:	15 - user defined RS232 input tables

options [1]

The SBM Serial Bus Module are modules that are interconnected on a serial communication bus.

• **Multi-Scale Module** [SBM] -	Allows for simultaneous monitoring of an additional signal input.
• **Analog Output Module** [SBM] -	Isolated 16-bit analog signal output; Output formats: 0-10VDC, 0-20mA or 4-20mA; Software adjustment of zero and gain settings; Up to 2 analog modules can be installed.
• **I/O Relay Module** [SBM] -	8 Variations of Quad I/O boards; (AC & DC versions configured for 4 Output, 4 Input or 2 Input/ 2 Output). Specifications above.
• **RS485 Module** -	Isolated serial communication module replaces RS232 on Port 1; Multi-drop with 251 devices (max); Half or full duplex up to 4000 feet; 56K bps (max).
• **20mA Current Loop** -	Isolated serial communication module replaces RS232 on Port 1; TX - Active or Passive; RX-Passive; 9600 bps (max); 12 VDC; 1000 foot loop (max).
• **Alpha Keyboard** -	Allows alpha character entry into data registers; Examples are product names, part number, and similar alpha data.
• **Dura-Shield** -	0.020" layer of weather resistant Lexan® film with adhesive backing; Applied to the front of the indicator, Dura-Shield keeps the display and keypad clean in hostile environments.
• **GSE ReFlash Software** -	Facilitates the downloading of firmware enhancements via the RS232 port.
• **BDM Flash Software** -	Facilitates the downloading of firmware enhancements via the BDM port.

[1] Note: Only 1 Serial Bus Module (SBM) and 1 communication module mount in the enclosure. Additional expansion supported externally.

dimensions

	Model 460 Indicator	Model 465 Indicator
Keypad:	5 key, durable elastomeric (rubber)	22 key, durable elastomeric (rubber)
Size:	11.01" W (27.98cm) x 7.24" H (18.39cm)	11.01" W (27.98cm) x 8.96" H (22.76cm)
Weight:	6.5lb (2.95kg)	7 lb (3.18kg)

SENTRAN periodically introduces product enhancements. Specifications are subject to change without notice. Certified drawings are available upon request.

465 B&W-02.0805