

“Expert” Weight Transmitter

FEATURES

- 1 Million count resolution, 20 updates per second
- Plug-n-Weigh® set-up for easy installation
- Dynamic digital process filtering
- Real time system & loop diagnostics
- Optional
 - Expansion slot for DeviceNet, Modbus Plus, Modbus RTU, Profibus DP, or AB Remote I/O interface
 - High resolution (16 bit) analog output
 - Optional 120 updates per second

APPLICATIONS

- Batch & mix systems
- Reactor vessels
- Ribbon blenders
- Process weighing and control systems

DESCRIPTION

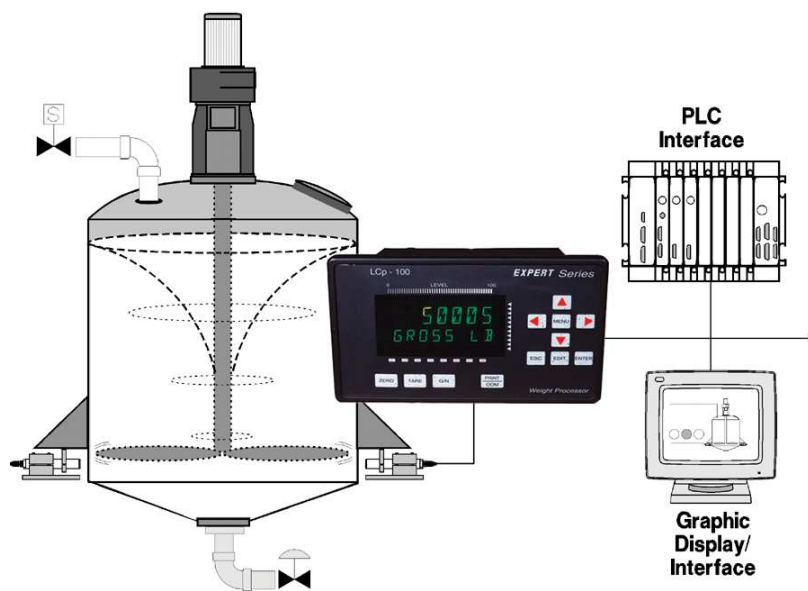
The LCp-100 is a high performance weight indicator and transmitter with features and options focused on the requirements of precision, high-speed process weighing applications. It is compatible with all strain gage type load cells and is designed to easily connect to any PLC, DCS, or PC based process control system. Special design emphasis has been placed on simplicity, reliability, and expandability. Transmitter outputs offered include an RS-422/485 digital serial communication port, and 16 bit derived analog current output.



Units are equipped with an expansion slot for installing a wide range of specialized digital interfaces such as DeviceNet, Profibus, AB Remote I/O, and Modbus Plus.

The LCp-100 Safe-Weigh® Software System encompasses over 50 years of BLH Nobel application expertise. Plug-n-Weigh® quick calibration and setup procedures save time, money, and even field service calls. Internal diagnostics continuously monitor weigh system performance and alert service personnel to potential problems, before they happen.

CONFIGURATION



Available Outputs

- DeviceNet
- Profibus
- Modbus Plus
- Modbus RTU
- Allen-Bradley Remote I/O
- Digi-System Plus Network
- ASCII Serial
- 4–20 mA Analog

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DESCRIPTIONS OF FEATURES

Plug-n-Weigh® Technology

Plug-n-Weigh® technology minimizes start-up time while significantly reducing the operator learning curve. Intuitive configuration menus, self-configuration of many set-up parameters, and simple push-button type digital calibration combine together to make the LCp100 easy to install and operate.



Safe-Weigh® Software System

Safe-Weigh® Software System advantages include Expert System Diagnostics, Dynamic Digital Filtering, and a wide range of proven DCS/PLC connectivity options. Expert System Diagnostics generate on-line preventative maintenance signals, which quickly identify potential electrical/mechanical failures. Dynamic Digital Filtering ensures stable weight data and precise, repeatable setpoint control in dynamic process environments.



DESCRIPTION OF OPTIONAL FEATURES

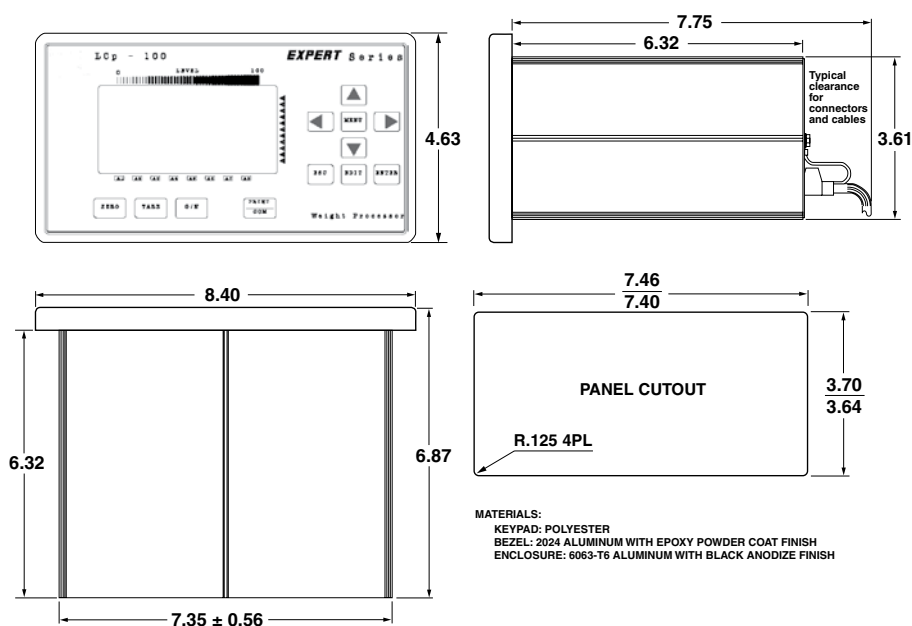
Communications and Interfacing

LCp-100 instruments are designed for fast, easy interfacing with virtually any PLC or DCS system. LCp-100 instruments are the first weight transmitters available with

Schneider, Modbus Plus Network communication. Also, as a licensed partner in the Allen-Bradley Encompass program, BLH Nobel offers Remote I/O capability in all LCp products. Other easy digital interfaces are available for DeviceNet, Siemens Profibus, Honeywell TDC 3000, GE series 90 PLC's, and Fisher Rosemount (Provox).

For cost effective local area network applications, units may be ordered with BLH Nobel Digi-System Plus protocol for communication to a PLC or DCS via an LCp-400 Gate-Weigh controller.

OUTLINE DIMENSIONS



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SPECIFICATIONS		PARAMETER	VALUE
PERFORMANCE		Resolution	1,048,576 total counts
		Displayed Resolution	700,000 counts
		Conversion Speed	50 ms
		Displayed Sensitivity	0.05 μ V per count
		Full Scale Range	\pm 3.5 mV/V
		Dead Load Range	100% full scale
		Linearity	\pm 0.0015% full scale
		Excitation Voltage	10 VDC @ 250 mA
		Software Filter	Multi-variable up to 10,000 ms
		Temp Coefficient Zero	\pm 2 ppm/ $^{\circ}$ C max.
		Temp Coefficient Span	\pm 7 ppm/ $^{\circ}$ C max.
		Step Response	One conversion cycle
ENVIRONMENT		Operating Temperature	-10 to 55 $^{\circ}$ C (15 to 131 $^{\circ}$ F)
		Storage Temperature	-20 to 85 $^{\circ}$ C (-5 to 185 $^{\circ}$ F)
		Humidity	5 to 90% rh, non-condensing
DISPLAY		Type	High intensity amber LED display
		Active Digits	7 digit alpha numeric 0.59 in high for weight; 8 digit alphanumeric 0.39 in high for status
ELECTRICAL		Voltage	117/230 VAC \pm 15% @ 50/60 Hz
		Power	15 W max.
		Input Impedance	10 m Ω min.
		Noise	0.4 μ V/count (min. filt. setting)
ANALOG OUTPUT		Conversion	16 bit D-A
		Current Selectable	4–20 mA or 0–20 mA — 600 Ω max., 0–24 mA — 500 Ω max.
		PARAMETER	VALUE
		REMOTE DIGITAL INPUTS (OPTICALLY ISOLATED) (CONTACT CLOSURE OR DO LOGIC COMPATIBLE)	
		Closed (Momentary)	Logic low
		Open	Logic high
		Cable Length	100 feet max.
		COMMUNICATIONS (STANDARD)	
		Serial RS-422/485	Full or half duplex BLH Nobel Digi-System Plus Network, ASCII
		Optional Protocols	Provox, or Modbus RTU odd, even or no parity-selectable
		Baud Rates	300, 1,200, 2,400, 4,800, 9,600, or 19,200
		Addressing	0–99
		SPECIAL INTERFACES (OPTIONAL)	
		Allen-Bradley	Remote I/O – 1/4 Logical Rack
		Modbus RTU	Slave
		Modbus Plus	Peer-to-peer (supports global data)
		Profibus	Slave
		DeviceNet	Slave
		ENCLOSURE	
		Dimensions (Std.)	4.63 x 8.40 x 6.5 in H x W x D
		NEMA 4/4X, 12 (Opt.)	8.5 x 13.5 x 10.45 in H x W x D
		Weight	5.4 lb
		MATERIALS	
		Aluminum Case & Bezel overlay meets 94V-0 rating	
		APPROVALS	
		FM (Factory Mutual)	3611
		CSA	C22.2 (all applicable sections)

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