"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

FM APPROVED

APPLICATIONS

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

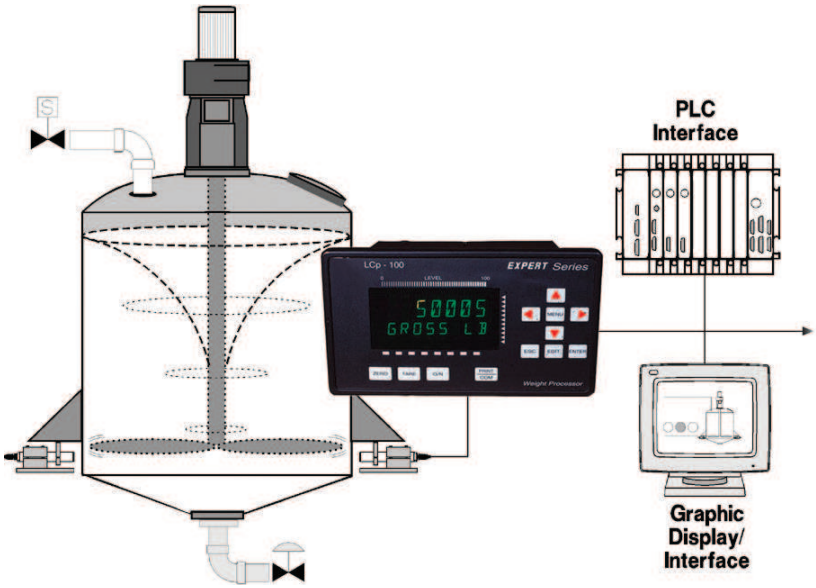
DESCRIPTION

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

BLH NOBEL
A VPG Brand

"Expert" Weight Transmitter

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

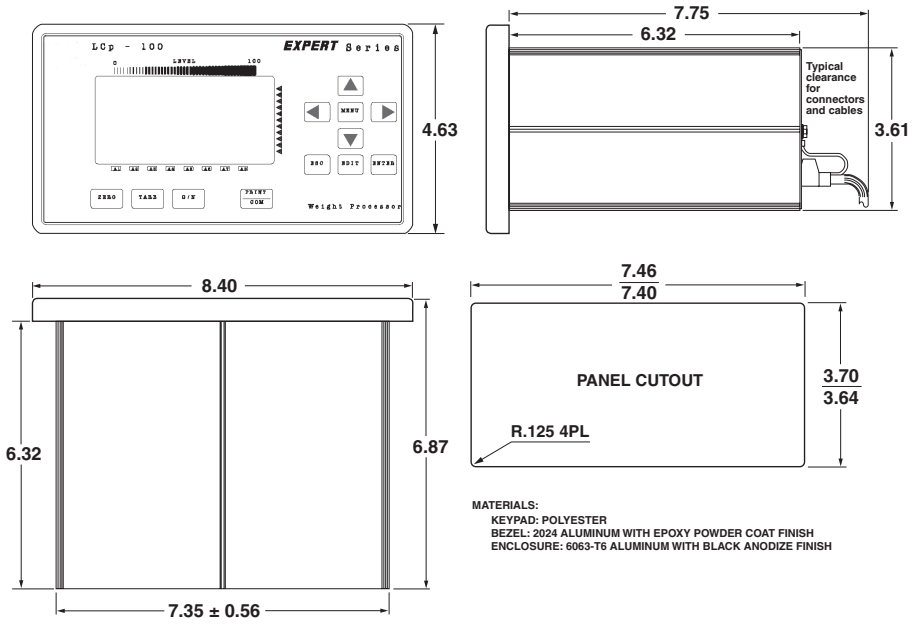
Communications and Interfacing

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



"Expert" Weight Transmitter

SPECIFICATIONS

PARAMETER	VALUE
PERFORMANCE	
Resolution	1,048,576 total counts
Displayed Resolution	700,000 counts
Conversion Speed	50 ms
Displayed Sensitivity	0.05 µV per count
Full Scale Range	±3.5 mV/V
Dead Load Range	100% full scale
Linearity	±0.0015% full scale
Excitation Voltage	10 VDC @ 250 mA
Software Filter	Multi-variable up to 10,000 ms
Temp Coefficient Zero	±2 ppm/°C max.
Temp Coefficient Span	±7 ppm/°C max.
Step Response	One conversion cycle
ENVIRONMENT	
Operating Temperature	–10 to 55°C (15 to 131°F)
Storage Temperature	–20 to 85°C (–5 to 185°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 ±15% @ 50/60 Hz
Power	15 W max.
Input Impedance	10 mΩ min.
Noise	0.4 µV/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 – ¼ Logical Rack
Modbus RTU	Slave
Modbus Plus	Peer-to-peer (supports global data)
Profibus	Slave
DeviceNet	Slave
ENCLOSURE	
Dimensions (Std.)	4.63 × 8.40 × 6.5 in H × W × D
NEMA 4/4X, 12 (Opt.)	8.5 × 13.5 × 10.45 in H × W × D
Weight	5.4 lb
MATERIALS	
Aluminum Case & Bezeloverlay meets 94V-0 rating	
APPROVALS	
FM (Factory Mutual)	3611

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