

Weight Controller

FEATURES

- Designed for NIST Handbook 44 compliance
- Canadian weights and measures and NTEP CoC
- Rate-by-weight (Mass Flow) operation
- Expansion slot for A-B remote I/O, Modbus Plus
- FM and CSA approved
- Up to 8 setpoint relay outputs
- Optional 16 bit analog output

APPLICATIONS

- Inventory systems
- Custody transfer scales
- Calibration standards

DESCRIPTION

LCm-200 "Expert" Series Controllers are specifically designed for Class III and Class IIIHD scale systems. Each unit meets NIST Handbook 44 (NTEP) and Canadian Weights and Measures legal-for-trade requirements. Tamperproof sealing combined with configuration menu locks ensures maximum security for LCm-200 based systems.

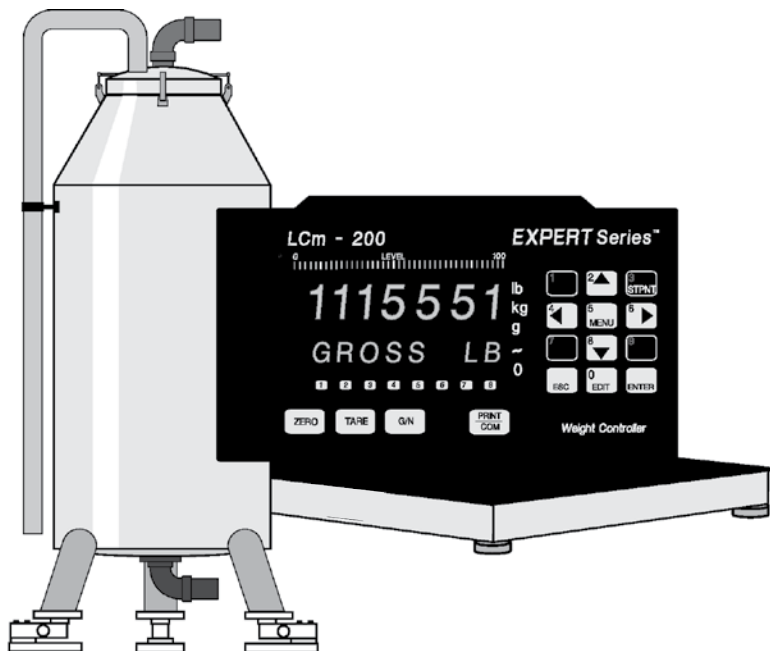
LCm-200s are compatible with all strain gage type load cells and interface easily with any PLC, PC, or DCS based supervisory control system. High performance "Expert" features include Plug-n-Weigh® quick calibration, rate-by-weight mass flow measurement, continuous on-line



diagnostics, and dynamic digital filtering. Process control options provide high resolution 16 bit analog output, eight solid state setpoint relay outputs, and various communication standard protocols such as Allen-Bradley Remote I/O, Modbus Plus, Modbus RTU, and Fisher Provox.

The integral Safe-Weigh® Software Operating System encompasses over 50 years of BLH application expertise. On-line diagnostics continuously monitor system performance and alert operating personnel to potential problems before they happen.

CONFIGURATION



Weight Controller

| SPECIFICATIONS | | PARAMETER | VALUE |
|---|--|---|--|
| PERFORMANCE | | Resolution | 1,048, 576 total counts |
| Displayed Resolution | | | 700.000 counts |
| Conversion Speed | | | 50 ms (20 updates per second) |
| Displayed Sensitivity | | | 0.05 mV per count |
| Noise | | | 0.4 µV per count (min. filt. setting) |
| Full Scale Range | | | 3.5 mV/V |
| Dead Load Range | | | 100% full scale |
| Input Impedance | | | 10 mΩ min. |
| Excitation Voltage | | | 10 VDC at 250 mA |
| Linearity | | | ±0.0015% full scale |
| Software Filter | | | multi variable up to 10,000 ms |
| Step Response | | | one conversion |
| Temp Coefficient Zero | | | ±2 ppm/°C |
| Temp Coefficient Span | | | ±7 ppm/°C |
| ENVIRONMENT | | | |
| Operating Temp | | | -10 to +55°C (15 to 131°F) |
| Storage Temp | | | -20 to +85°C (-5 to +185°F) |
| Humidity | | | 5 to 90% RH non-condensing |
| Voltage | | | 117/230 VAC ±15% @ 50/60 Hz |
| Power | | | 15 W max. |
| 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 |
| MATERIALS | | | |
| Aluminum Case/Bezel | | | overlay meets 94 V-O rating |
| Display | | | high intensity amber LED display |
| Weight Digits | | | 7-0.59 in high alphanumeric |
| Status Digits | | | 8-0.39 in high alphanumeric |
| REMOTE DIGITAL INPUTS (CONTACT CLOSURE OR DC LOGIC COMPATIBLE) | | | |
| Closed (Momentary) | | | logic low |
| Open | | | logic high |
| Cable Length | | | 100 ft maximum |
| | | PARAMETER | VALUE |
| | | DC SETPOINT OUTPUTS – 8 (STANDARD) | |
| | | Type | open collector (current sinking) |
| | | Operating Voltage | 5-35 VDC |
| | | ON Voltage | 1.2 VDC @ 40 mA or 0.8 VDC @ 1 mA |
| | | OFF State Leakage | 0.04 µA @ 40 VDC |
| | | Power | external supply required |
| | | AC SETPOINT OUTPUTS – 8 (OPTIONAL) | |
| | | Type | triac |
| | | Operating Voltage | 12-240 VAC |
| | | AC Frequency | 20-500 Hz |
| | | ON State V-Drop | 1.2 V _{RMS} |
| | | Min-Max Load Current | 5 mA – 1 A |
| | | Leakage Current | 1 mA @ full rated load voltage |
| | | Power | external supply required |
| | | COMMUNICATIONS (STANDARD) | |
| | | Serial RS-422/485 | full or half duplex ASCII, printer, Provox, Modbus, or BLH network protocols |
| | | Parity | odd, even, or none (selectable) |
| | | Addressing | 0-99 |
| | | SPECIAL INTERFACES (OPTIONAL) | |
| | | Allen-Bradley | Remote I/O = ¼ logical rack |
| | | Modbus RTU | slave |
| | | Fisher Provox | CL6921 weigh scale interface card |
| | | Modbus Plus | peer-to-peer |
| | | ANALOG OUTPUT (OPTIONAL) | |
| | | Conversion | 16 bit D-A |
| | | Current Selections | 4-20 or 0-20 mA @ 600 Ω, 0-24 mA @ 500 Ω |
| | | APPROVALS | |
| | | Can. Weights/Meas. | Class III/IIHD nmax 10000/20000 |
| | | NTEP | Class III/IIHD nmax 10000/20000 |
| | | CSA | C22.2 (all applicable sections) |
| | | FM (Factory Mutual) | 3611 |