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

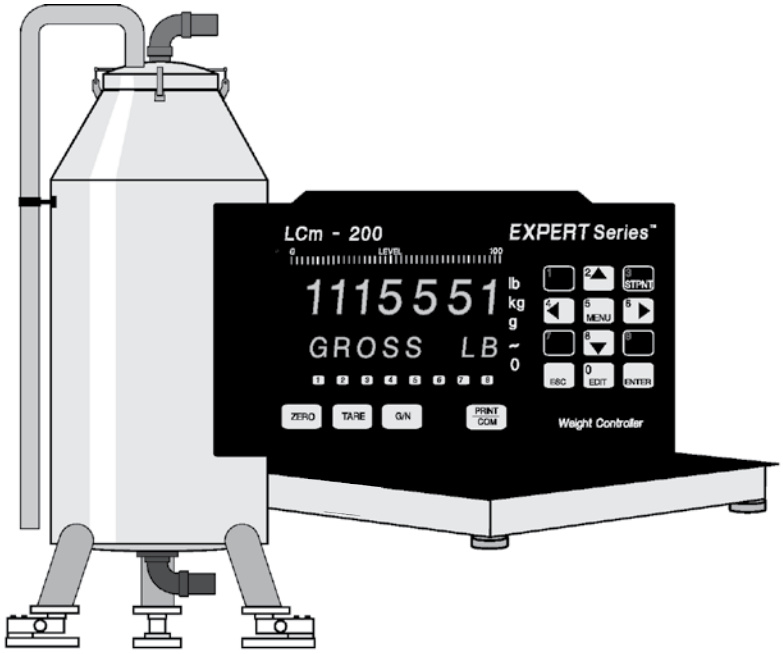
DESCRIPTION

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/IIIHD nmax 10000/20000
NTEP	Class III/IIIHD nmax 10000/20000
CSA	C22.2 (all applicable sections)
FM (Factory Mutual)	3611

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