

COMPTROL

Over 35 years of connecting rod weighing experience

DIGITAL RODCELL SYSTEM

for reliable, precision, high speed connecting rod weighing and balancing

The Right Choice for In-line or Off-line Weight Verification and Inspection

Comptrol Digital Rodcell Systems provide the reliable weighing accuracy required for pre-process and post-process weight verification. The simplicity of their rugged, modular design adds to the reliability of the system. It also allows each system to be configured to match customer part specifications and installation requirements for high volume automated production lines or stand-alone inspection stations.

A More Precise Method of Weighing Comptrol Digital Rodcell Systems simultaneously weigh the pin and crank end of a connecting rod to determine the precise off-balance weight of each end. Unlike total weight verification or shadowgraph systems, Comptrol Rodcell systems measure the difference between the actual weight and the desired ideal weight for each end. The deviation is converted to an electrical signal directly proportional to the amount of over or under weight.

Digital Signal Conditioning. At the heart of the microprocessor electronics is Comptrol's powerful signal processing firmware. This program features a unique "best weight" algorithm which continuously samples, captures, and updates the pin and crank end outputs to the CRI-4000 digital display. This signal processing technique enhances the ability of the overall electronics package to minimize the effects of vibration and electromagnetic interference on the accuracy of the weighing process.

Pushbutton Calibration In Just Minutes. There are no potentiometers to tweek, knobs to turn, or dials to adjust. Everything is done with the push of a button, making the system easy to setup and operate.

Connect to a PC, PLC, Drive, or Controller Two ± 3 VDC outputs are available from the CRI-4000 indicator for interfacing with a PLC or system controller. The RS-232 and RS-422 serial communication ports are provided for transmitting data. The Rodcell firmware automatically selects, combines, and outputs the pin and crank "best weight" values into an ASCII formatted string when the connecting rod is lifted off the cradle. This eliminates any possible errors added by PLC analog card and PLC timing logic.

CRI-4000 Indicator features pushbutton setup, digital meters, two ± 3 VDC outputs, RS-232 & RS-422 serial ports.

Cradle Assembly designed and manufactured for proper connecting rod locating.



Pin and Crank End Rodcell Bodies with stainless steel covers house microprocessor electronic

Mounting Base designed and manufactured to meet customer mounting requirements.

Automatic Weight Transfer Compensation eliminates weighing inaccuracies caused by weight transfer inherent in any balancing application. During operation, the microprocessors housed in the rodcell bodies communicate weight data back and forth, and factor in the compensation value stored in nonvolatile EEPROM during setup.

Automatic Rezero after each cycle insures accuracy by negating the effects of temperature, dirt, and chip buildup on the cradle and rodcell assembly. Each time a connecting rod is lifted off the cradle the system rezeroes itself automatically.

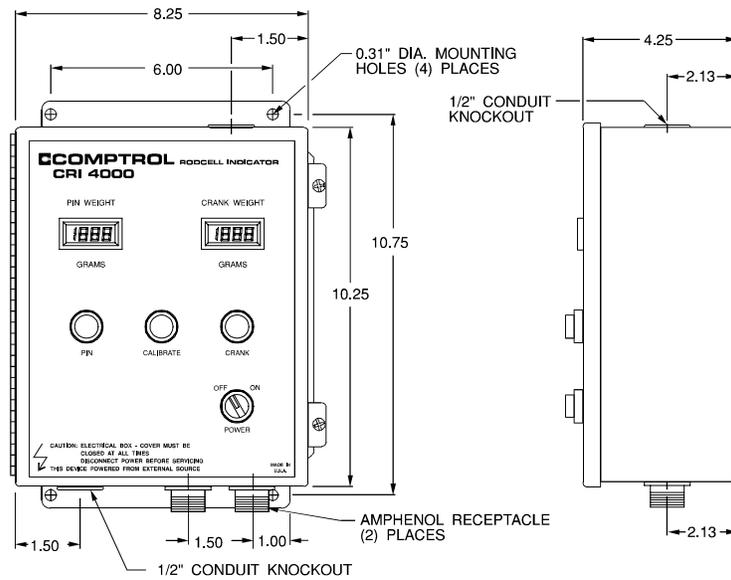
Made in the U.S.A.



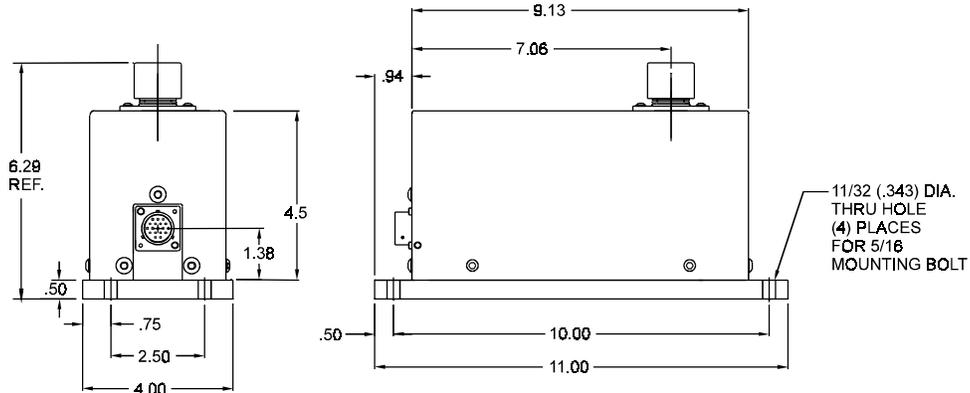
An ISO 9001 Certified Company

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CRI-4000 RODCELL INDICATOR DIMENSIONS



RODCELL BODY DIMENSIONS



SYSTEM SPECIFICATIONS

Input Power to Indicator	
CRI-4000-1	120 VAC, 1ph., 50-60Hz, @ 12 Watts
CRI-4000-2	240 VAC, 1ph., 50-60Hz, @ 12 Watts
Settling Time (automatic load)	3 seconds
Manual load	10 seconds
Minimum Cycle Time	3 seconds
Meter Scale (standard format)	±XX.X gram
Outputs	
Pin End Analog Output	±3 VDC (0.05 VDC/g or 0.025 VDC/g available)
Crank End Analog Output	±3 VDC (0.05 VDC/g or 0.025 VDC/g available)
Serial Outputs	RS-232 and RS-422 (19.2kbps, NP, 8, 1 stop bit)
Average Repeatability	±0.1g not accumulative for Rod weighing < 1kg
Temperature Drift	negligible due to Auto Zero
Linearity	0.015%
Hysteresis	0.01%
Ambient Temperature	32-150°F (0-60°C)
Maximum Part Weight	per customer specification

Dimensions and specifications subject to change without notice.