

CARDINAL CWIM LOAD CELL IN-MOTION SCALE

The Cardinal CWIM series in-motion scale is an intermediate speed, high performance, in-motion vehicle scale ideal for sorting applications. The CWIM consists of two independent platforms each supported by four 50,000 pound Cardinal compression load cells. The platforms are constructed from welded steel and are mounted in a steel framework. The complete scale is approximately 12 feet wide, 30 inches long and 12 inches deep and fits within a concrete foundation in the roadway. The compression load cells employed in this scale use proven strain gauge technology and are constructed entirely from stainless steel. This is the same type of load cell that is used in Cardinal vehicle and railroad track scales. The SCA series Cardinal load cell, approved both in the US and Europe, offers rugged corrosion-proof construction with very low deflection under load. The combination of rugged steel construction and low deflection result in a high resonant frequency thus reducing the effects of vibration and making it easier to



Figure 1 CWIM In-Motion Scale

detect the weight signal. The scale includes a loop detector to detect the beginning and end of a truck while optional off-scale sensors identify trucks that fail to pass completely over the scale.

The scale is designed for truck speeds from 5 to 50 mph. Scale performance equals or exceeds that for a Type III in-motion scale as specified in ASTM 1318E. The scale weight data includes single axle weights, axle group weights, gross vehicle weight, side-to-side unbalanced weights, truck speed, axle number and spacing and vehicle classification. All interface instrumentation is contained in an environmentally controlled



Road side cabinet. Data from the in-motion scale may be transmitted to peripheral equipment via fiber optic cable or other standard or special interfaces. All of the components, including the strain gauges used in the load cells, are manufactured by Cardinal for single source responsibility. Cardinal maintains a staff of engineering and software professionals ready to customize a system for your specific requirements. Should you ever need service, Cardinal's service technicians are only a phone call away, and, with Cardinal's specially equipped in-motion service vehicles, can be at your site within hours rather than days or weeks.

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