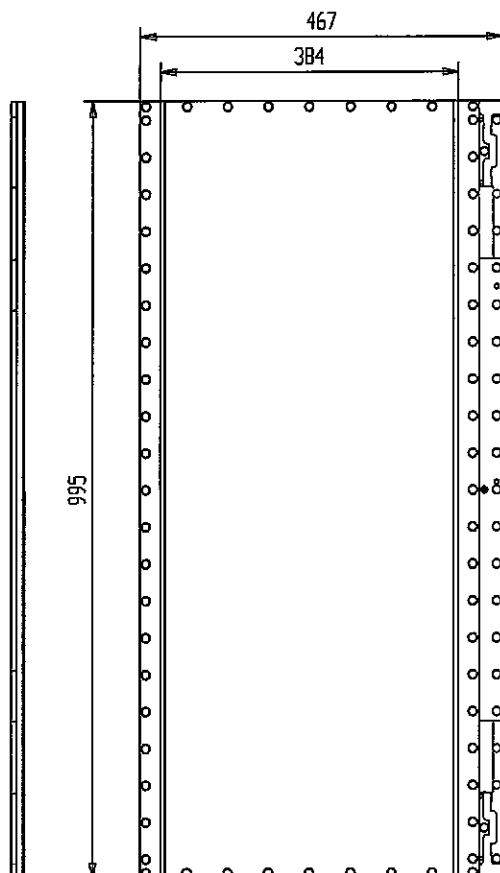


Static/Dynamic Wheel Load Scale WL 104

Dimensions



Construction and Function

The wheel load scale WL 104 comprises of a flat weighing platform with an integrated micro controller system.

The measuring system in the form of a grid of tubular sensing elements is mounted between the base and the cover plate of the weighing platform. Each element changes its resistance proportionally to the applied load. The resulting signal is amplified and converted to digital.

For compensation of all kind of temperature effects the platform is equipped with a temperature sensor.

The signals of the measuring system and of the temperature sensor are processed by the micro controller. It calculates the weight and, in the dynamic mode, also the speed which are accessible via the data bus.

At switch on of the scale a self test routine is activated and the weight is set to zero. In service the weight is kept at zero automatically as long as the platform is not loaded, so there is no need for an external zero setting device.

The weighing mode (static or dynamic) is selected by configuring the firmware correspondingly. If the static mode is selected the actual weight is calculated twice per second and sent via the data bus. In the dynamic mode the weight and the speed are calculated and sent together with the time after a wheel has passed.

Depending on the abilities of the used processing unit different output is possible. In the minimum configuration only the weight is indicated on the display. A full evaluation comprises of automatic classification and weighing of the vehicle including the determination of the speed and axle spacings.

Technical Data

Range	0...10 t
Speed (dynamic weighing)	0...20 km/h
Division	50 kg
Accuracy static weight ²⁾ at first calibration	±25 kg (up to 2,5 t)
	±50 kg (2,5 t...10 t)
in operation	±50 kg (up to 2,5 t)
	±100 kg (2,5 t...10 t)
Accuracy dyn. weight ³⁾ at first calibration	± 0.5 % of the measured weight
in operation	± 1 % of the measured weight
speed	± 2 km/h
Loading limit	15 t
Permissible load per area	12 kg/cm ²
Loading limit per area	24 kg/cm ²
Operating temperature	-20°C +60°C
Storage temperature	-30°C +60°C
Electromagnetic susceptibility	according OIML No. 76 1)
Zero tracking, test etc..	automatic according OIML No. 76 1)
Type of protection (IEC 144)	IP 65
Overrunable	completely overrunable incl. cable
Operating site	Firm and level ground, max. 10 mm bend through, max. 5% slope (≈3°)
Active surface	995 x 384
Over all dimensions	995x467x17
Power supply / consumption	DC 11.5...16 / 1.5W V@12V
Interface	CANopen

1) OIML is the abbreviation for Organisation Internationale de Métrologie Légale.

2) The given values are intrinsic errors (difference between the measured weight and the real applied load) Additional errors in the range of 1...3% may occur depending on various external factors: quality of the levelling and the site. Refer to P1196.

3) Same as 2), but 2 to 5% for speeds up to 10 km/h, at higher speeds up to 20 km/h even 10% are possible!