ITOS Scale

ITOS is a road integrated high speed WIM with a resolution according to OIML R134 F10 working up to a maximum speed of 80 km/h. DIGI SENS vibrating wire technology makes it possible.

General

The scale consists of 5 weighing modules which are fully integrated into the road connected to a weighing computer placed close by. The slim mechanical construction in addition to the modular concept let this system fit almost in every road. Cached and supported by a metal frame embedded in the surface of the road the system is designed to last for years. Due to the very robust materials it resists against rough environments like water, acids, biological active substances, etc.

Installation

The installation of the weighing system is quiet simple. The scales are tightened by screws into the pit. All modules are connected in daisy-chain mode together. No on-site calibration is required. After the installation it will be ready for immediate and daily use. The installation of the scale can be done in less than half a day. According to this easy installation process, also the preventive maintenance can be performed in less than two hours. This allows a service with minimal impact to the daily circulation traffic.

Applications

Among others the ITOS system is mainly designed for the following applications:

- Vehicle monitoring in toll gates.
- Road and infrastructure maintenance estimation.
- Screening for legal control of overload vehicles.
- Safety check for special transport
- Indication of speed

Interfaces

The configuration is done over an easy structured web interface.

For connection to other systems different protocols over Ethernet, CAN, or serial interface can be implemented.

For high speed transmission signals, several digital inputs and outputs are available.

Additional

The special construction principle as well as the oscillating wire technology makes it possible to get interesting features like:

- Super fast axle detection with less than 5ms
- Indication of driving direction
- Load distribution left right

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Technical Data

Instrument	Unit	Value
Nominal load per module	[t]	10
Overload protection	[%]	100
Minimal detection weight	[kg]	50
Maximum capacity of the instrument	[t]	50
Axle measurement tolerance	[%]/[kg]	4 / 50
Vehicle measurement tolerance	[%]/[kg]	5 / 50
Functioning speed range	[km/h]	0... 80
Size per module	[mm]	600 x 297 x 38
Weight per module	[kg]	43
Number of modules	[-]	5
Material		Carbon steel with anti corrosion coating
Top surface treatment		Heavy duty anti slip treatment
Configuration		Independent modules with exchangeable connection cables

Electronic	Unit	Value
Power supply	[V]	12-40
Power consumption	[W]	11
Configuration interface		Ethernet
Communication interface		Ethernet
Detection signal	[ms]	<5
Axle detection rate	[%]	>99.5
Environment	**Unit**	**Value**
Norm conformity		IEC 60721-3-4 4K2 / 4Z7 / 4B1 4C2 / 4S3 / 4M4
Protection class		IP68 (200 days immersed)
Operating temperature range	[°C]	-20...+70
Lifetime		10 years or 10 million axles
EMC		According to EN 61000-6-2:2005

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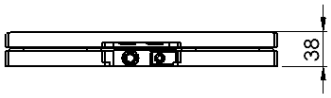
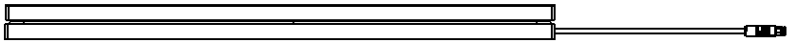
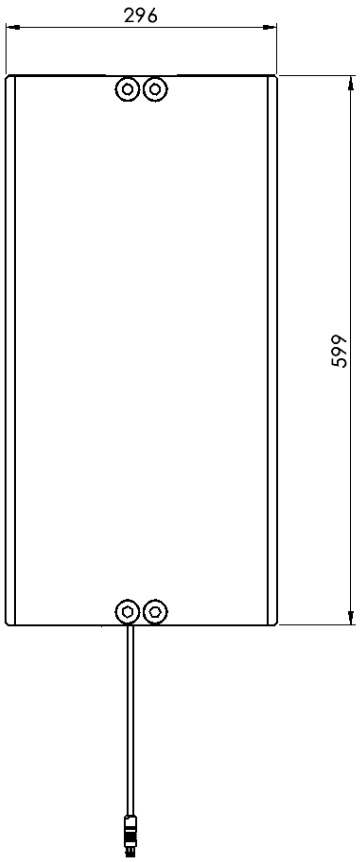
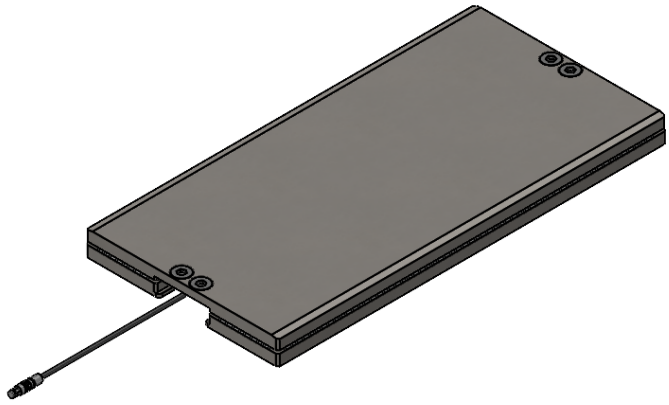
Drawing









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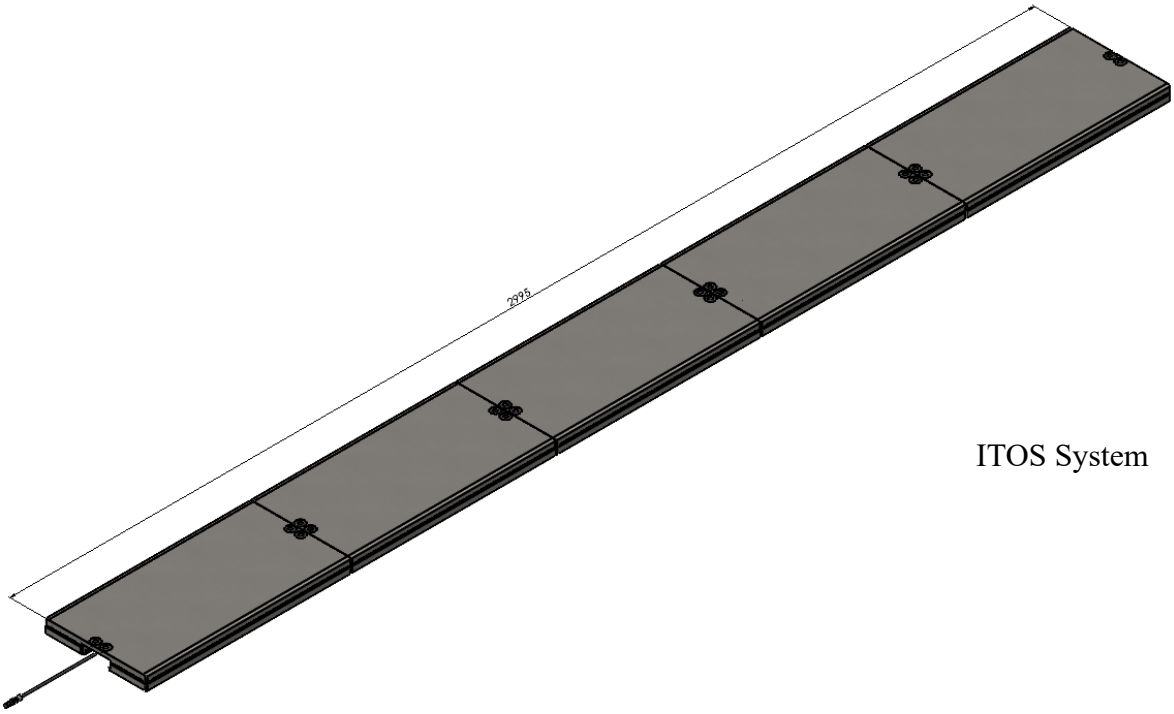

ITOS System

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