

KiTrafic Digital

Complete WIM system for (direct) weight enforcement

Type 9845A...

The KiTrafic Digital WIM (weigh in motion) system is based on new Lineas Digital sensors in combination with a Switch and PC for signal processing. KiTrafic Digital enables unsurpassed WIM accuracy.

- Most accurate WIM data in open road (inter-lane) traffic
- Highest rate of enforceable WIM data records
- Automatic detection of single and dual tires
- Vehicle Classification
- Vehicle presence detection included (no loops required)
- Quick and easy installation of sensors into road pavement
- Based on proven quartz sensor technology

Description

The KiTrafic Digital system (type 9845) consists of Lineas Digital sensors (type 9181) which are connected to industrial grade standard electronics with Kistler Software. There is no WIM controller/data logger required.

The Lineas Digital WIM sensors provide digitized signals from quartz elements and vehicle presence for measuring wheel, axle and gross weight, as well as speed of road vehicles. These signals contain additional position information to determine tire type (single/dual), tire dimensions and lateral driving position.

The Power over Ethernet (POE) Switch provides power to all sensors in the road and make sensor signals available to the local PC. The WIM system is accessed via a router. All relevant WIM data is provided on a graphical User Interface (GUI) and a machine-readable REST API (pull communication) and data stream via web hooks (push communication). The simple web-based GUI enables system configuration and calibration as well as visualization of measurement data.

For enforcement applications, the KiTrafic Digital system can be upgraded with vehicle identification (ANPR cameras) and additional 3rd party technology. The system is fully compatible with Kistler Enforcement Software solutions "Kistler Check-point" and "Kistler Studio"

Note: Lineas Digital WIM sensors have a proprietary interface which only works with Kistler software on preconfigured electronics to ensure proper performance of the certified WIM measuring chain.



Technical data

Lineas digital sensor

Load range	kN	0...124
At a reference tire contact area of	mm	200 x 320
Operating temperature range	°C	-40 ... 80
Degree of protection		IP68
Sensor length	m	1.5/1.75/2.00
Cable length	m	40/90
Grouting compound		Type 1000A1

KiTrafic Digital System

Number of inputs: WIM sensor		unlimited
Number of ANPR cameras		unlimited
CE conformity		yes
User Interface:		Graphical UI, REST API, Webhooks
Measuring error*	% of GVW	<±3%
Measuring range axle loads	tons	0...25
Measuring range GVW	tons	unlimited
Speed range	km/h	3...250
Speed measurement accuracy	km/h	<1
	%	<1
Operating temperature range (inside cabinet)	°C	-20 ... +70**
Max. humidity (inside cabinet)	%	90
Dimensions of the backplane	mm	699 x 1096

* excellent road conditions and calibration mandatory

** ventilation required

Applications

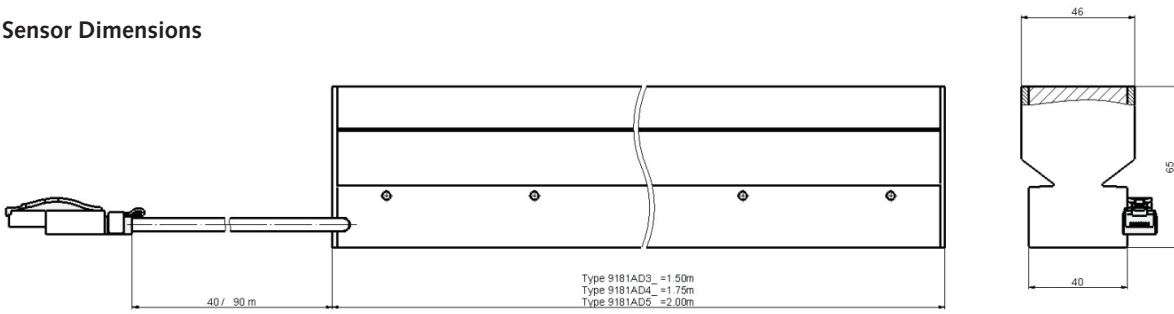
The KiTrafic Digital system is intended for use in applications where highest accuracy on open roads is crucial. Weight enforcement according to national legal frameworks is the most typical application. In addition, KiTrafic Digital enables toll by weight and highly efficient truck weighing in industrial and port applications.

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This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.

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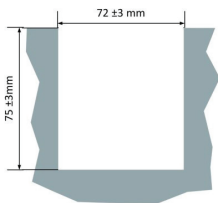
Sensor Dimensions



Sensor Installation

Lineas Digital WIM sensors are quick and easy to install. They are laid in self-hardening epoxy grout (type 1000A1). The corresponding Installation Instruction describes all relevant steps. The installation of Lineas Digital sensors requires the supervision of a Kistler engineer or an engineer certified by Kistler for Lineas Digital installation.

Sensor Slot Dimensions



Sensor layout of KiTrafic Digital

Depending on required WIM accuracy, Lineas Digital sensors can be installed in staggered layout (2 sensors per lane), 2 rows (4 sensors), 3 rows (6 sensors) or 4 sensors (8 sensors) per lane. KiTrafic Digital Systems do not require position sensors (tilted sensors) or inductive loops.

System electronics

The electronics of a KiTrafic Digital system come pre-wired and on a backplane with preconfigured POE Switch, PC and Router for easy installation without any mistakes into a roadside cabinet.

Optional Kistler checkpoint end-user interface



Included accessories

- Lineas Digital sensors
- Prewired electronics

Type/Art. No.
9181A
9845AB

Mandatory accessories

- Grouting compound

Type/Art. No.
1000A1

Optional accessories

- Lineas Digital installation toolkit (specific tools for the sensor installation)
- Upgrade to KiTrafic Plus with additional 3rd party technology and end-user GUI

Type/Art. No.
Z22227

Ordering key

		Type 9845A
9181AD31 (1.5 m / 40 m)	Qty of sensors (0 ... 43)	↑
9181AD32 (1.5 m / 90 m)	Qty of sensors (0 ... 43)	↑
9181AD41 (1.75 m / 40 m)	Qty of sensors (0 ... 43)	↑
9181AD42 (1.75 m / 90 m)	Qty of sensors (0 ... 43)	↑
9181AD51 (2 m / 40 m)	Qty of sensors (0 ... 43)	↑
9181AD52 (2 m / 90 m)	Qty of sensors (0 ... 43)	↑
Number of connected devices (= Sensors + cameras)	A: backpanel for max. 21 devices B: backpanel for max. 43 devices	↑
Number of the lanes at the site	0...x lanes	↑

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