ENAiKOON
weight-sensor

Product Summary

The ENAiKOON weight-sensor is one of the many revolutionary devices to be added to the ENAiKOON high-end telematics solution. With tried and tested accuracy and reliability it detects weight changes in truck load with a wide range of applicability.
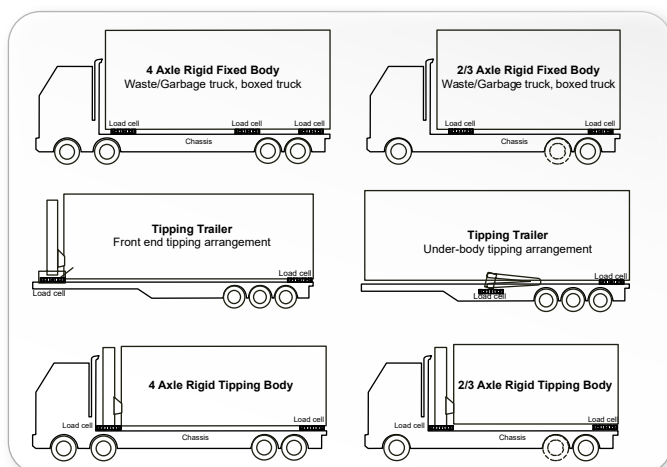
Ideal for fleet managers and entrepreneurs seeking to be able to effectively monitor their fleet in real time, weight changes in their trucks in-house and when they are deployed.

The ENAiKOON weight-sensor has a wide range of applicability and can be installed in variety of trucks including but not limited to waste trucks, tippers, tankers, flatbeds and van type structures mounted on either truck chassis or trailers.

It is ideally installed between the load-carrying body of the truck and the vehicle chassis and ensuring that there are no weight supporting structures such as braces or gussets are attached to the superstructure and payload.

Changes in weight are recorded directly by the sensor. This data is then sent to ENAiKOON inViu pro, where it is then processed to display on your computer, tablet or mobile phone web browser.

All components are proudly **"Made in Germany".**

Key features

- very precise: a group of 4 sensors provides an accumulated relative accuracy of ±20 kg / 44.10 lb @ up to 60 tons / 132 klb
- easy and trouble-free installation
- capacity of 7.5 t (16.5 klb) or 15 t (33 klb) per sensor
- corrosion resistant stainless steel
- environmental protection IP68
- no calibration is required by the end-user
- the device can be removed and placed onto a different truck (no permanent installation)
- waterproof sensor and connectors
- compatible with a wide range of ENAiKOON telematics devices
- accurate reading in adverse of weather conditions
- supports real time incident reporting
- suitable for a wide range of vehicles
- ultra-low power consumption
- field upgradeable firmware over the cellular network

Technical specifications

Load cell			
Maximum capacity	(Emax)	7.5 t (16.5 klb)	15 t (33 klb)
Accuracy class		GP	
Temperature effect on minimum dead load output	(TC0)	± 0.0400 (%*RO/10 ^{o}C)	
Temperature effect on sensitivity	(TCRO)	± 0.0200 (%*RO/10 ^{o}C)	
Combined error		± 0.15%	± 0.25%
Creep error (30 minutes) / DR	(RO)	± 0.0600 (%*RO)	
Rated Output	(RO)	2 ± 1% (mV/V)	
Zero balance		± 1.5 (or better) %*RO	
Excitation voltage		5 - 10 V	
Input resistance	(RLC)	800 ± 50 Ω	
Output resistance	(Rout)	700 ± 50 Ω	
Insulation resistance		≥5000 MΩ	
Safe load limit	(Elim)	200 %*Emax	
Ultimate load		300 %*Emax	
Safe side load		100 %*Emax	
Compensated temperature range		-10 °C – +40 °C (14 °F – 104 °F)	
Operating temperature range		-30 °C – +70 °C (-22 °F – 158 °F)	
Load cell material		stainless steel 17-4 PH	
Sealing		complete hermetic seal	
Protection in accordance with EN60 529		IP68 (up to 2 m (6.56 ft) water depth)	
Cable		UV protected	

Technical specifications

Load cell signal digitizer / amplifier

Linearity (percentage of full scale)	<0.005 %
Load cell excitation (6 wire technique)	5 V DC
Minimum load cell impedance	350 Ω (87.5 Ω at power supply 12...14 V DC)
Maximum analogue input range	± 11 mV (bipolar, for weighing applications, force and torque measurements)
Minimum input sensitivity (µV/count)	0.1
Resolution internal/external (counts)	± 130000 / ± 100000
Conversion rate in meas. per second internal / external	90 / up to 90
Digital filter (Hz)	0.02 - 5 / 8 steps
Filter Mode	Bessel
Calibration	software calibration and set up
Computer interface	RS485 or RS422, full duplex, 9600 ... 115200 Baud; bus capability up to 32 devices (RS485)
Weighing functions	zero, gross, tare, net, filter, etc.
Digital inputs, opto-isolated, 10...30 V DC, max. 3 mA	2
Digital outputs, open collector, < 30 V DC, max. 200 mA	2
Temperature effects on zero, typical / max. (/°C)	25 ppm / < 50 ppm
Temperature effects on span, typical / max (/°C)	15 ppm / < 30 ppm
Operating temperature range (compensated)	-15 °C – + 50 °C (5 °F – 122 °F)
Storage temperature range	-30 °C – + 70 °C (-22 °F – 158 °F)
Enclosure	tinned steel enclosure, protection IP20, special housing IP 65 on request
Dimensions and Weight	82 x 31 x6 mm (3.22 x 1.22 x 0.23 in), weighs approx. 30g (1 uz) /with adaptor board: (3.0 x 1.6 x 0.47 in), approx. 50g(1.76 uz)
Power supply	12 ... 24 V DC ±10%, <100 mA, not galvanically isolated
Options	adaptor board UA 73.2 (RS485 / RS422) or UA 77.1 (RS422 to RS232)
EMC	OIML R-76-1:2006 and DIN EN 45 501:1992/AC1993

Products and prices

Product	Part no.	Product description	Price			
			1-9 units	>10 units	> 25 units	>100 units
ENAiKOON truck weighing system 30 t	EWT-16-30	ENAiKOON truck weighing system – 30 t (66 klb) consisting of ● 4 low profile load cells @ 7.5 tons (16.5 klb) (total: 30 tons (66 klb)) ● 1 splitter (4x in, 1x out) ● 1 load cell signal amplifier ● 1 load cell signal digitizer ● all required cables can be connected to ENAiKOON locate-06	€ 4.290	€ 4.090	€ 3.890	€ 3.790
ENAiKOON truck weighing system 60 t	EWT-16-60	ENAiKOON truck weighing system – 60 t (132 klb) consisting of ● 4 low profile load cells @ 15 tons (33 klb) ● total: 60 tons (166 klb)) ● 1 splitter (4x in, 1x out) ● 1 load cell signal amplifier ● 1 load cell signal digitizer ● all required cables can be connected to ENAiKOON locate-06	€ 4.490	€ 4.290	€ 4.090	€ 3.990
ENAiKOON weight sensor installation	EWT-16-01	Weight sensor installation ● Installation of 4 weight sensors on one vehicle ● Installation of 1 analogue amplifier on one vehicle ● Installation of 1 tracking device on one vehicle full functional test with inViu pro	On request			
ENAiKOON locate-06 complete package	LOC-07-06	Basic device GPS / GPRS ● GSM / GPS window antenna and connection cable (power suppy and I/O) ● camera connector ● backup battery 560 mA/h ● 1-wire connector for ENAiKOON driver-id ● configurable	€ 249.00			
ENAiKOON device setup	M2M-03-01	Device setup ● activation and unlocking of the SIM card ● insertion of the SIM card into the device ● software configuration and installation on device ● production of harness according to customer needs ● device configuration ● registration with the ENAiKOON M2M-commserver ● registration with inViu pro / web ● full functional test of the device ● full functional test with inViu pro / web (must be ordered along with the device)	€ 99.00			

Software

Product	Part no.	Product description	Monthly Fee		
			1-9 units	> 25 units	>100 units
inViu pro web service		Internet based software for the management and monitoring of trackables ● any time access to the web portal ● OpenStreetMap© is used ● establishment of main and sub-accounts with separate management ● creation of geofences in main and sub-accounts ● report generator for evaluations ● detailed online manual ● automatic sending of reports ● use of the ENAiKOON M2M-commserver			
	EFC-04-48 EFC-04-24	minimum contractual duration: 48 months minimum contractual duration: 24 months	€ 19.90 € 24.90	€ 17.90 € 22.90	€ 14.90 € 19.90
ENAiKOON weight-tracker web service		Enhancement of inViu pro by ENAiKOON weight-tracker			
	EWT-16-48 EWT-16-24	minimum contractual duration: 48 months minimum contractual duration: 24 months	€ 17.90 € 19.90	€ 15.90 € 17.90	€ 14.90 € 16.90