



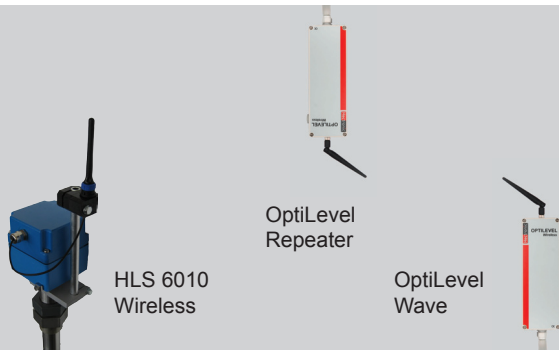
OptiLevel HLS Wireless System

The wireless system can be used wherever it is impossible or too complicated to route cables.

The wireless solution continually collects the fill level data and forwards them to higher level systems for processing and evaluation.



TECHNICAL DATA	HLS Wireless System
Wireless gauge	A wireless gauge consists of a standard HLS 6010 gauge (except for density gauges) with a factory-installed wireless extension kit. The wireless gauge characteristics are specified in the OptiLevel HLS 60110 gauge data sheet.
Wireless gauge protection class	IP68
Wave/repeater protection class	IP66
Wave Assist protection class	IP20
Wave Assist gauge protection class	IP68
Ambient temperature	-25 - 60 °C für Umgebung
Wireless gauge	-25 - 100 °C für Medium (for use in hazardous areas max. 60 ° C)
Wave/Repeater	-20 - 50 °C
Power supply	
Wireless gauge	3.6 V lithium battery (built into gauge head)
Wave/Repeater	100-240V / 50- 60 Hz, 150mA
Wave Assist gauge	3.6 V Lithium battery
Wave Assist	USB
Wireless transmission	2.4 GHz frequency band as per IEEE standard
Battery life	Approximately 2.5 years for 5 min. sampling rate
Communication protocols	HLS protocol, H protocol (optional) other protocols with additional controller
Approvals Certificates	ATEX, IECEx, VU + others locally OIML R85/2008
Media	Fuels, kerosene, Autogas LPG, AdBlue and many more



OptiLevel HLS Wireless System

Fields of application

The wireless solution can be used everywhere where it is impossible or too expensive to route cables, or retroactively install conduits for connecting conventional gauges.

The wireless solution removes the need for excavation work in order to continuously obtain fuel level data and forward the data to higher-level systems.

Mix configurations

Mix configurations of existing gauges wired to Supply and wireless radio gauges are possible. Thus retroactively installed tanks, e.g., for liquid gas, can be easily integrated into the filling station network.

The radio situation is measured locally using Wave Assist. This helps to determine the best location for OptiLevel Wave and whether any OptiLevel repeaters are required.

Features

To implement a radio link, you require the HLS 6010 gauge including the Wireless Extension Kit and OptiLevel Wave, the collection point which converts all radio data and serves the data to higher-level systems.

The HLS 6010 and Wireless Extension Kit are powered by a battery built into the head housing.

Thus, all the components are located in the gauge head housing. Only the wireless antenna is routed to the outside and can be mounted in the manhole in the best position for the wireless link.

This guarantees maximum protection - including to IP 68. Adverse environmental conditions thus have very little impact on the technology.

Setup

From a radio technology point of view, a tree structure is established, that is, all wireless gauges associate directly with the OptiLevel Wave or indirectly through OptiLevel repeaters, depending on the link quality.

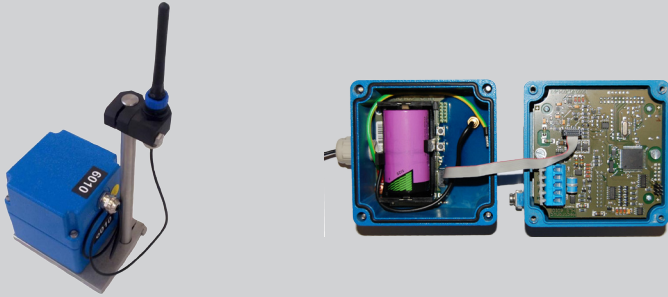
A wireless network can consist of up to 24 devices (sum of all wireless gauges, Wave and OptiLevel repeaters). Up to 10 wireless sensors and two additional OptiLevel repeaters can associate with each Wave or OptiLevel repeater.

At least 1 OptiLevel Wave is required for a filling station with up to 10 wireless gauges. If necessary, 2 additional OptiLevel repeaters can be connected directly to the Wave to amplify radio links or collate groups of tanks.

If necessary, further repeaters can associate with an OptiLevel repeater to extend the wireless range.

At least 1 OptiLevel Wave and at least 1 OptiLevel repeater are needed for a filling station with between 11 and 20 wireless gauges. Depending on the location of the tanks or tank groups, further OptiLevel repeaters may be required.

OptiLevel HLS Wireless System



Wireless Extension Kit

The Wireless Extension Kit converts a 6010 HLS gauge into a wireless gauge. The Wireless Extension Kit includes the RF module, the battery and antenna, including fastening material. The components are housed in the gauge head cover and are connected to the 6010 gauge electronics. During commissioning (inserting the battery), the gauge independently associates with the OptiLevel Wave; it can then be addressed via radio and starts to send fill level data. The Wireless Extension Kit can only be ordered as part of an order for a new HLS 6010 gauge. The Wireless Extension Kit is not possible for gauges with density measurement.

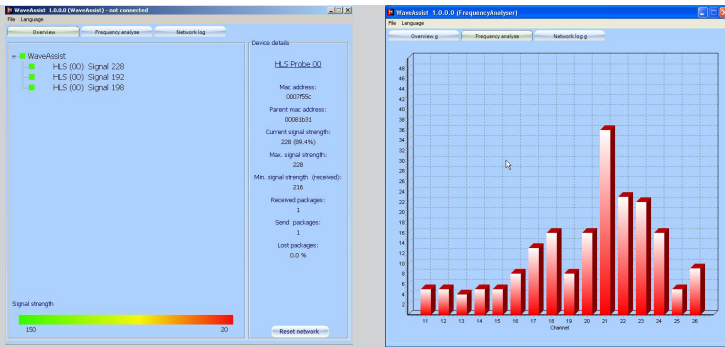
OptiLevel Wave

The OptiLevel Wave collects the data from all gauges. The Wave stores the last fill level data sent by the gauges and provides them to a higher level system via a wired serial connection. The Wave is powered by a 230 V connection. All OptiLevel devices and software solutions can be connected to the RS 232 interface on the Wave. Direct connections to POS systems and station controllers (requires HLS or H protocol compatibility) are also possible. In hybrid operation with wired and wireless gauges, the OptiLevel Supply and Wave are connected by a Mineo Controller. All gauge data can thus be forwarded centrally and in the same format.

OptiLevel Repeater

Acts as a range extender and is used anywhere applications where the RF signal between the OptiLevel Wave and the wireless gauges is not sufficient to ensure a reliable wireless connection. The OptiLevel Repeater is powered by a 230 V connection.

If more than 10 gauges are used, at least 1 OptiLevel Repeater is required. More OptiLevel Repeaters may be required to extend wireless links or connect groups of tanks to the Wave.



Service Komponenten



OptiLevel Wave Assist

Using the OptiLevel Wave Assist (including PC software) you can check if a wireless installation is possible, whether interference frequencies occur, and also identify the best installation positions for the OptiLevel Wave and OptiLevel Repeaters at the filling station to ensure the highest signal strength. OptiLevel Wave Assist is connected to the USB port of a notebook and supplied with power via USB extension cable (included).



During a walk-through in advance, OptiLevel Wave Assist and the OptiLevel Wave Assist gauge are used to check the local link quality and create an evaluation protocol.

OptiLevel Wave Assist Gauge

The device is the mating part to OptiLevel Wave Assist and acts as a gauge dummy in the manhole. The device consists of an RF module including a gauge head housing with antenna and fastener material. The two devices allow for a complete, fully functional radio link to be established.

It can thus be determined in advance whether a wireless installation is at all possible, or if interference occurs that needs to be examined and analysed in detail.



Hectronic GmbH
Allmendstrasse 15
79848 Bonndorf, Deutschland
Tel.: +49 (0) 77 03 - 93 88 0
Fax: +49 (0) 77 03 - 93 88 60
mail@hectronic.com

www.hectronic.com

Order numbers OptiLevel Wireless System

Wireless devices

Article number

HLS 6010 Wireless Extension Kit	5000.06 90 00 00
OptiLevel Wave	5000.10 05 00 00
OptiLevel Repeater	5000.10 05 01 00
OptiLevel Wave Assist	5000.10 05 02 00
OptiLevel Wave Assist gauge	5000.10 05 03 00
Lithium Batterie HLS 6010 Wireless	5000.06 90 00 10
HLS 6010 Wireless Antenna	5000.06 90 00 20
HLS 6010 Wireless Module Replacement	5000.06 96 70 10