

Extended Product Information

Multifunctional Fill- and Overfill Prevention LRC4 via radio or cable with many functions



Not only an Overfill-Prevention!

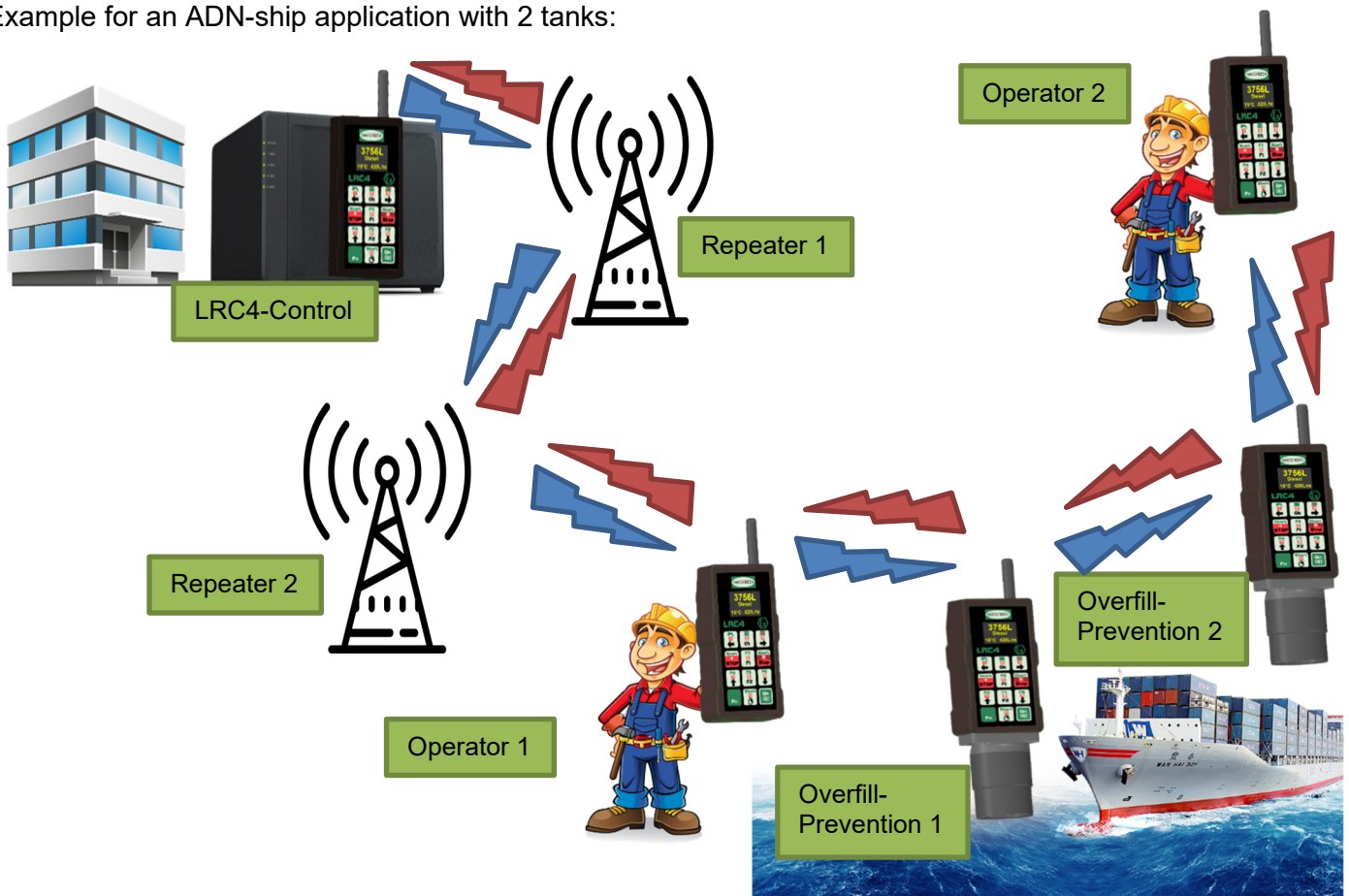
The LRC4 system is based on a complete new and innovative concept. Yes, it is primarily an overfill-prevention but also much, much more.

Excellent Radio Concept:

LRC4 is still working in the industrial radio band of 433MHz, just like its previous versions. This is a big advantage against other systems which are working in 800MHz, 900MHz or even in 2,5GHz. The higher the frequency, the more difficult it is to overcome walls or other obstacles.

A LRC4-system is composed of a master device LRC4-Control, which is placed for example on a tanker-truck or a control room, up to four hand devices as overfill-prevention and/or remote controls and up to two repeater modules. Each device is working in addition as a repeater. For example a remote device which is working as a dead-man, is in the radio range of the LRC4-Control, but the overfill-prevention device is out of range. The remote device is repeating the messages from control to the overfill-prevention device as well as opposite.

Example for an ADN-ship application with 2 tanks:



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Modularity:

The hand device LRC4-Remote can be used in different ways and with different interfaces.

The classical remote control:

You can control a lot of LRC4-Control outputs and functions from the far.

Example:

- Engine start
- Engine stop
- Increase flow
- Decrease flow
- Functions 1, 2, ... 6
- Flow stop
- Flow start
- Dead-man function
- Display of the delivered litres and the flow rate
- Display of the product name
- Internal GPS module stores the location, date and time of operation into the internal log protocol
- Radio signal analyses of all devices of the system
- And much more



Overfill prevention for optical probes:

Into the most tanks in Switzerland and into ship-tanks, optical probes are very common.

After installing the optical interface module into the LRC4-Remote, you get an overfill prevention for optical probes.

The complete functionality of the LRC4-Remote is still available.



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Overfill prevention for thermistor probes:

Thermistor probes are very common in Europe, Asia and Africa. After installing the interface module for thermistor probes into LRC4-Remote, you get an overfill prevention for the most common probes.

The complete functionality of the LRC4-Remote is still available. It is possible to combine different devices with different interfaces within one system.



Overfill prevention with product identification:

More and more petrol stations are equipped with cross-over-prevention (COP) systems according to EN14116. If there are thermistor probes installed for overfill prevention, the product identification device (PID) is also connected to the overfill-prevention plug (listener).

After installing the interface module for thermistor probes into LRC4-Remote, you get an overfill-prevention and PID reader according to EN13616. You can install the fixed adapter to the LRC4-Remote or you can use the adapter cable.



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Intelligent Battery:

Our company has long-time experiences with the handling of rechargeable NiMh-batteries. LRC4-Remote is using the intrinsic safe battery-pack SECU ExBatt with four AA cells. There are a lot of advantages from NiMh against Lithium batteries. You never get problems on transport. It is not necessary to label the parcel with UN 3481 stickers or similar. The used NiMh cells have 10 times more charging cycles as Li-Io batteries.

The battery-pack SECU ExBatt is designed as an intelligent device which has internal stored all important data, like actual capacity, charging behaviour in relation to cell temperature and cell voltage, etc.

If you change the battery from one to another device, all battery relevant data are moving with it. The battery is communicating with the LRC4-Charger as well as with the LRC4-Remote and the battery is asking for the optimal charging current according to the actual battery and environment condition.

Perfect Usability:

All devices are equipped with a bright OLED graphic display and with a keyboard with 12 keys. All functions can be easy released by pressing directly the according key or over the second function-layer.

If it necessary to enter a number, the keyboard is switching automatically into the number-enter-mode and you can enter the number by pressing directly the numerical keys.

There are 3 extra keys to enter the menu and to navigate there. For that reason, it is still possible to release all remote functions if you are into the menu structure.

The main display is showing all relevant information for the operator. There are also additional pages to get more detailed information.

Different display-languages are possible.

Flexible interfaces:

To communicate with external systems like electronic meters, the LRC4-Control can be configured with different interfaces like CAN, ModBus, RS232, etc.

Additional Equipment:

In near future there will be additional equipment available.

- Simple Dead-Man-Handle for application where not so many functions are necessary
- Battery extension box to increase the operation time