

**LRC (Level Remote Control) for**  
**safe and efficient loading and**  
**unloading of tankers**  
**EX- and non-EX Deadman Systems**

**A proposal for our customers**

- Safe loading increases the effectiveness of tank vehicles
- Better utilization of tank vehicles, as effective each loading process saves time
- Easier handling and operator comfort
- All Remote Control functions are integrated into a single system



dead-man LRC EX



dead-man LRC3 non-EX

**February 2018**

The dead-man system LRC (Level Remote Control) can be used for loading and unloading of all tankers for EX- or non-EX applications independent from the product in the tanker (fuel, diesel, LPG, chemicals, technical gases, powder, amoniak, jet-fuel, etc.)

The system can be used with customer-specific dead-man times. The most used dead-man times are 30 seconds, 1 minute, 2 minutes or 4 minutes. Any other dead-man time as per customer specification can be programmed by our team.

The system can be installed stationary (loading tankers) or mobile, at the tanker (unloading to customers tanks).

On starting the loading or unloading procedure the operator has to activate the deadman (key-combination on the keyboard). Then the dead-man time is starting, for example: 30 seconds.

On the non-EX device the operator can see the left deadman-time on the display.

The operator needs to confirm by pressing a button on the display and then the dead-man time starts again. If the operator does not confirm during the dead-man time count-down he will get a signal after 20 seconds (EX-device: peep-tone / non-EX device: flashing display) for 10 seconds. When the operator is not confirming by pressing a button on the display during the last 10 seconds, the complete process is automatically stopped.

During the running process the additional remote control activated functions can be used (for example: rotational speed control up/down, Motor or Pump start/stop, emergency stop).

Emergency stop is always possible on the Remote Control during operation.

The system can be used as a safety system for driver and overfill-prevention.

The systems are **fail-safe-systems** that means they are always on the safe side and stop procedure of loading or unloading immediately if something is not o.k. within the system itself (for example: cable break between LRC-Charger and LRC-Receiver, weak or fall-down of radio signals, etc.)

The radio-signals are very stabil, narrow banded and unique and free from interferences and disturbances from outside.

The systems are tuned together so that systems next to each other do not interfere.

The radio-range is up to 300 m.

**Different Parts  
of EX-Deadman  
System**



**LRC-Small/Charger and Amplifier**

Small Quick Charger with integrated amplifier and receiver.  
Connections to pump, valve, etc.

Service-friendly, due to connector plugs.  
Easy installation

Charger/Amplifier placed into protected area out of EX-zone



**LRC-Small/Remote**

TÜV-Certified as per TRbF / VdTÜV EN 13616  
ATEX-, Radio- und CE-certified.

- Remote Control in Ex Zones
- Motor Start/Stop
- Rotational speed control
- Filling interruption
- Dead Man
- Battery operated (ATEX approved battery package) with lifetime of 5-7 years



**LRC-Receiver + Antenna Rod**

- Extremely narrow-band frequency range
- High range performance
- Highest temperature insensitivity

LRC Receiver and Antenna Rod placed into protected area out of EX-Zone

**Different Parts  
of non-EX-Deadman  
System**



**LRC3-Control – Amplifier with integrated Receiver**

Amplifier for LRC3 Dead-man System.  
Connections to pump, valve, etc.

Service-friendly.  
Easy installation.



Antenna for direct connection to LRC3-Control



**LRC3-RC – Deadman with Display**

**for easily watching the dead-man time on the display**

- Remote Control
- Motor Start/Stop
- Rotational speed control
- Filling interruption
- Dead Man
- Battery operated for lifetime of approx. 3 years



**LRC3-Charger**

**Loading Device for LRC3-RC Connection to 24 V**