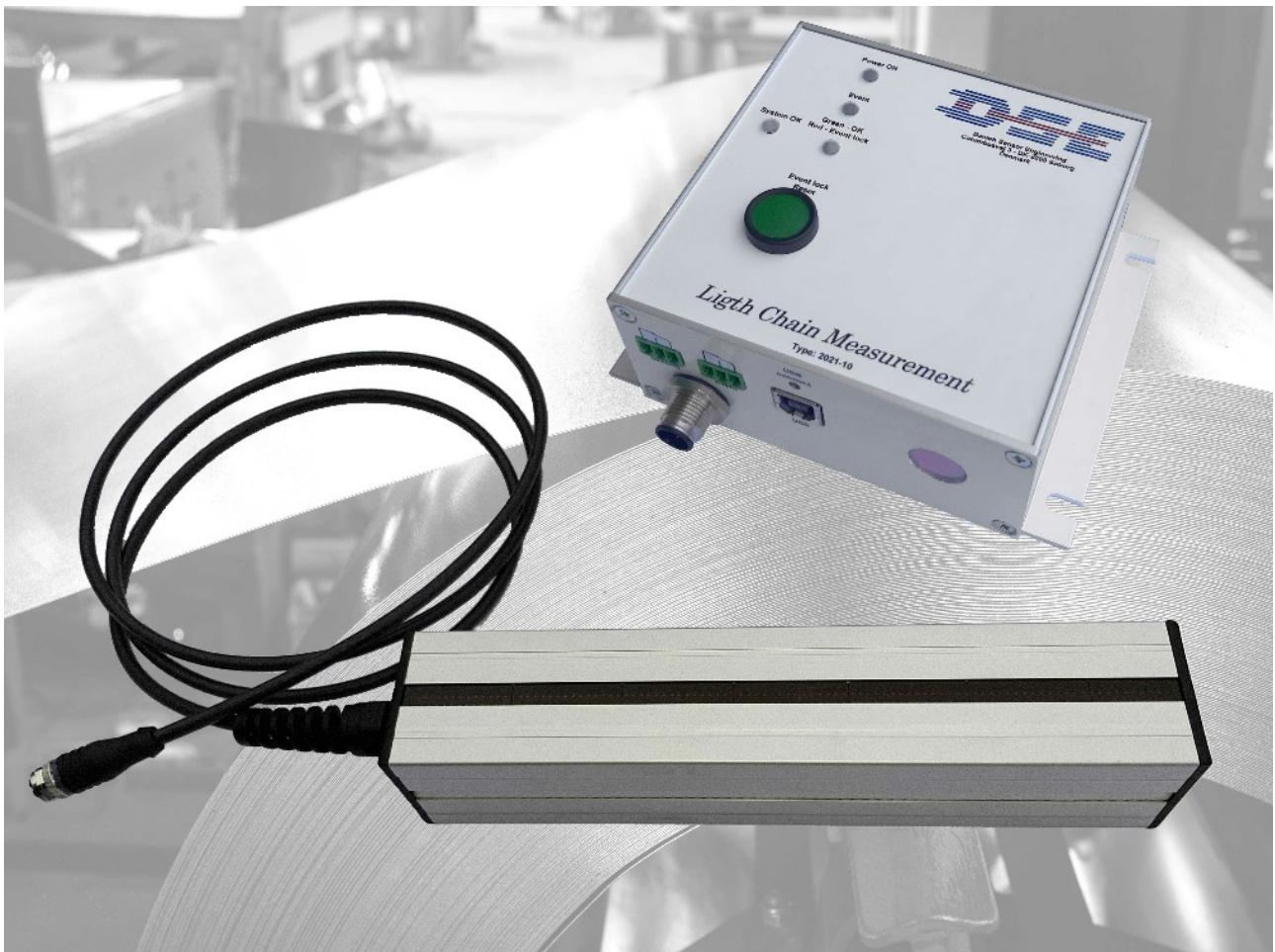


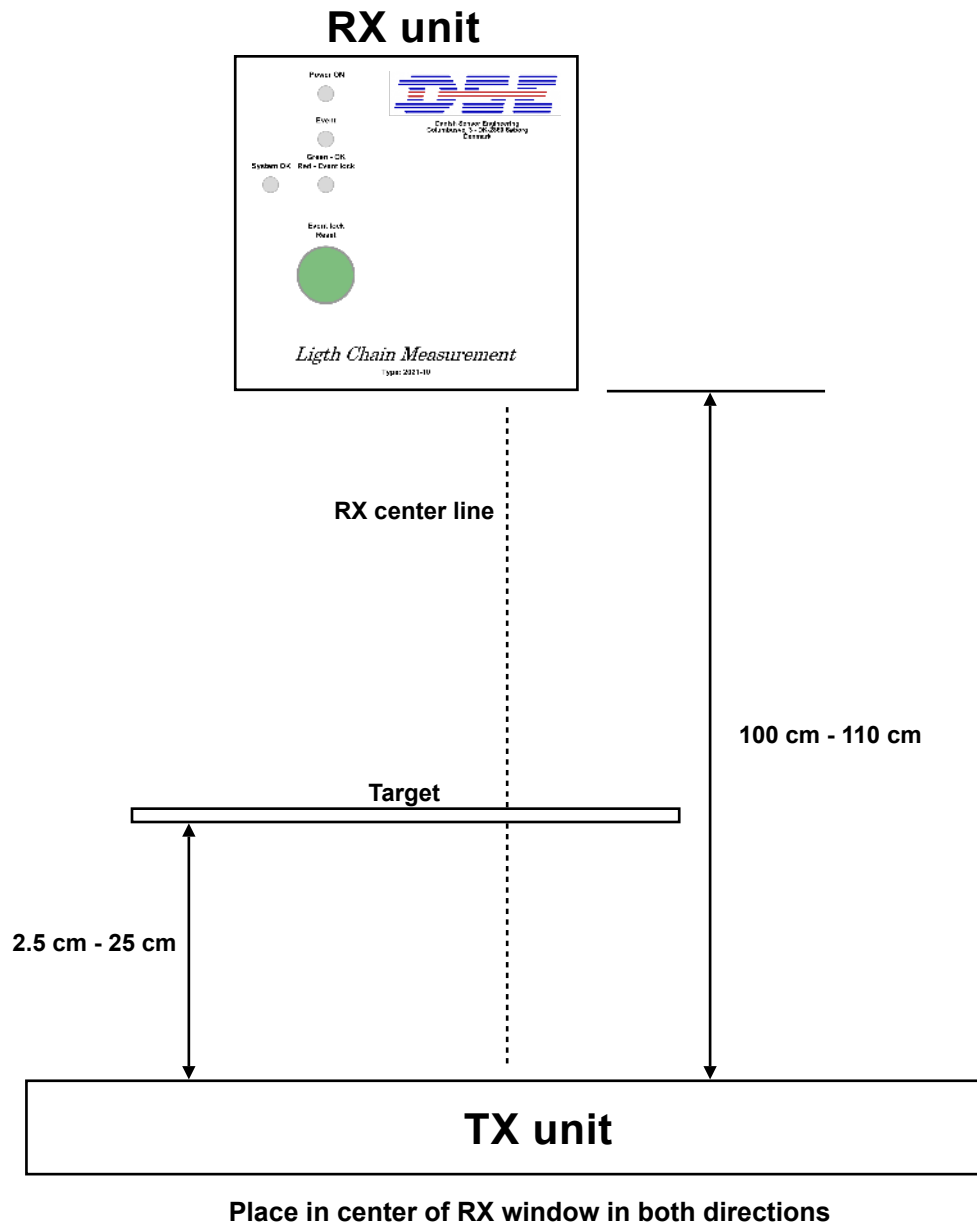
# *Ligth Chain Measurement*

Type: 2021-10



**Quick Guide for Prototype  
June 2021**

# Mounting:



## Placement of Transmitter and Receiver:

Distance between transmitter and receiver: 100 cm to 110 cm (39.4 inch to 43.3 inch).

The transmitter should be placed, so that the receiver window on the receiver is centred to the midpoint of the transmitter with in  $\pm 25$  mm ( $\pm 1$  inch).

The distance between the transmitter and strip should be from 25 mm to 250 mm (1 to 10 inch).

The periphery of the weld hole has to be placed with a minimum distance of 15 mm (0.6 inch) from the edge of the strip. The detector will work even if the strip don't cover the whole transmitter.

## Data:

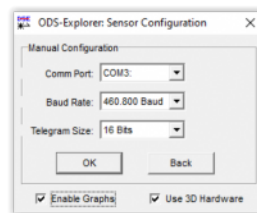
<b>Weld Hole Size:</b>	from 6 mm to 10 mm (0.25 to 0.39 inch).
<b>Maximum Strip Speed:</b>	150 km/h (93 mph).
<b>Minimum Time between two Holes:</b>	1 second.
<b>Time between Hole Detection and Relay Output:</b>	15 ms.
<b>"System" Relay and "Event":</b>	Max 24 VDC / 2 Amp.
<b>Contact for Relays:</b>	Wurth Elektronik type 3631.

## USB Connection:

The LCM will via USB output the total number of holes detected since power has been turned on. To monitor the USB output the "ODS Explorer" program can be used.

In the "ODS Explorer" program a virtual comport can be opened.

In the "ODS-Explorer Sensor Configuration Window" the "Baud Rate" should be set 460800 and the "Telegram Size" to 16 Bits.



Please note that "ODS Explorer" is a program that is made and used for our distance sensors, so the intended use is only to monitor the prototype's number of detected holes. The counter starts at 10.000 (this only applies for the prototype. The final version will start at zero).

## Indicator Diodes and Relay:

### *"Event" diode and "Event lock" diode:*

When an event (weld hole detected) has occurred the "Event" diode will turn on Green for 1 second and the "Event lock" will turn on Red and stay on with Red light until the "Reset" button has been pressed.

### *"System OK" diode:*

The "System OK" diode lights up Green when no Errors has been detected. If an error has been detected it will lights up Red and stay on Red until the "Reset" button has been pressed.

### *"USB connect" diode:*

This diode will light up green if a connection to Windows is establish (please use the cable that was send together with the prototype (other cables may have problems to connect to Windows).

### *"System" & "Event" relay:*

The "System" relay follows the "System OK" diode and the "Event" relay follows the "Event lock" diode.