



Operating Instructions

Ultrasonic sensor with one analogue output

lcs+340/IU
lcs+600/IU

Product description

The lcs+ sensor offers a non-contact measurement of the distance to an object that has to be present within the sensor's detection zone. Depending on the set window limits, a distance-proportional analogue signal is output. The window limits of the analogue output and its characteristic can be adjusted with the Teach-in procedure. One 2-colour LED indicates the state of the analogue output. The sensor automatically detects the load put to the analogue output and switches to current output or voltage output respectively. Optionally all Teach-in and additional sensor parameter settings can be made using the LinkControl Adapter LCA-2 (optional accessory) and the LinkControl software for windows.

Safety instructions

- Read the operating instructions prior to start-up.
- Connection, installation and adjustments may only be carried out by qualified staff.
- No safety component in accordance with the EU Machine Directive

Use for intended purpose only

lcs+ ultrasonic sensors are used for non-contact detection of objects.

Installation

- Mount the sensor at the place of fitting.
- Connect a connection cable to the M12 device plug

Start-up

- Connect the power supply.
- Carry out sensor adjustment in accordance with the diagram.



		colour
1	+U _B	brown
3	-U _B	blue
4	-	black
2	I/U	white
5	Com	grey

Fig. 1: Pin assignment with view onto sensor plug and colour coding of the microsonic connection cable

Factory Setting

- Rising analogue characteristic curve.

- Window limits between blind zone and operating range.

Synchronisation

If under multiple sensor operation the assembly distance falls below the values shown in Fig. 2, the internal synchronisation should be used. For this purpose interconnect each pin 5 of maximum 10 sensors to be synchronised.



Fig. 2: Assembly distances

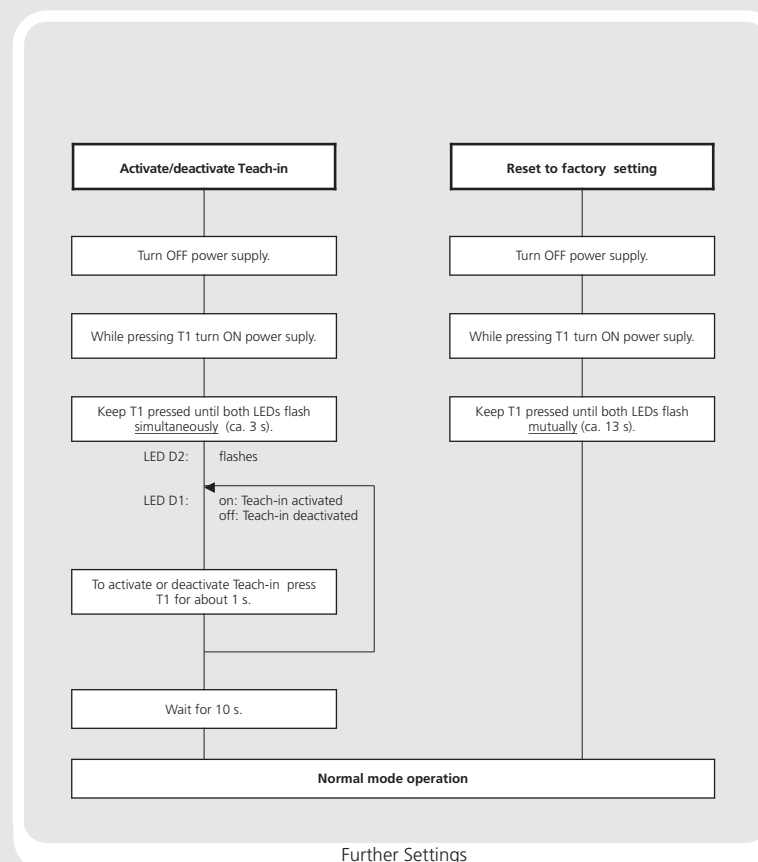
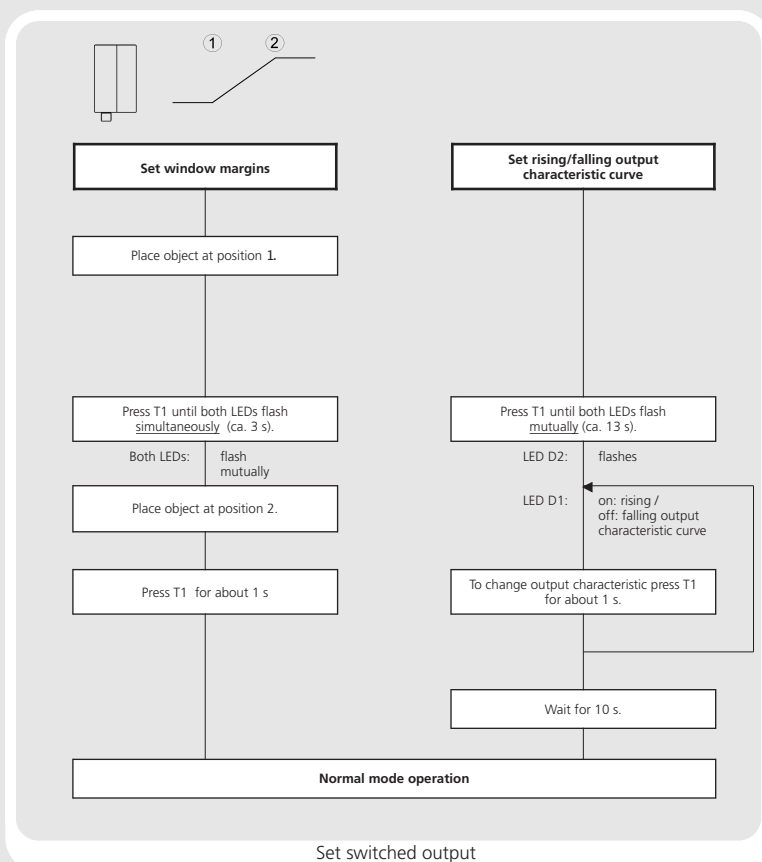
Maintenance

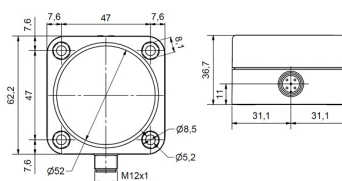
microsonic sensors are maintenance-free. In case of excess caked-on dirt we recommend cleaning the white sensor surface.

Notes

- The sensors of the lcs+ family have a blind zone, within which a distance measurement is not possible.
- The lcs+ sensors are equipped with an internal temperature compensation. Due to the sensors self heating, the temperature compensation reaches its optimum working-point after approx. 30 minutes of operation.
- The load put to the analogue output is detected automatically when turning power supply on.
- If an object is within the set window margins of the analogue output, then LED D1 lights up green, if the object is outside the window margins, then LED D1 lights up red.
- If no push-buttons are pressed for 20 seconds during parameter setting mode the made changes are stored and the sensor returns to normal mode operation.
- The sensor can be reset to its factory setting (see »Sensor adjustment with Teach-in procedure«).
- Optionally all Teach-in and additional sensor parameter settings can be made using the LinkControl adapter (optional accessory) and the LinkControl software for windows.

Sensor adjustment with Teach-in procedure





1) Can be programmed with LinkControl