



**Product Description**  
 The lcs+ sensor offers a non-contact measurement of the distance to an object which must be positioned within the sensor's detection zone. The switching outputs are set conditional upon the adjusted detect distances.  
 The sensors can be adjusted via Teach-in procedure using two buttons. Two LEDs indicate operation and the states of the switching outputs.  
 Optionally all Teach-in and additional sensor parameter settings can be made using the LinkControl adapter (optional accessory) and the LinkControl software for Windows®.

**Operating Manual**  
**Ultrasonic sensor**  
**with two switching outputs**  
 lcs+340/DD  
 lcs+600/DD

**Note**  
 The housing was updated with Batch number  
 ■ FA2304912 for lcs+340  
 ■ FA2304201 for lcs+600.  
 The assembly diagram and installation height are identical to the old housing.

**Safety Notes**  
 ■ Read the operating manual prior to start-up.  
 ■ Connection, installation and adjustment works should be carried out by expert personnel only.  
 ■ No safety component in accordance with the EU Machine Directive, use in the area of personal and machine protection not permitted

**Proper Use**  
 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, see Fig. 1.

	+U <sub>B</sub>	colour brown
	-U <sub>B</sub>	blue
	D2	black
	D1	white
	Sync/Com	grey

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

**Start-Up**  
 → Connect the power supply.  
 → Set the sensor parameters using the Teach-in procedure, see Diagram 1.

**Factory Setting**  
 ■ Switching outputs on NOC  
 ■ Detect distance D1 at operating range and D2 at half operating range

**Synchronisation**  
 If the assembly distance of multiple sensors falls below the values shown in Fig. 2, the internal synchronisation should be used to avoid mutual interference between them. To do this interconnect each pin 5 of the sensors to be synchronised (max. 10 sensors).

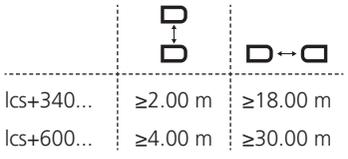


Fig. 2: Minimal assembly distances without synchronisation

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

**Notes**  
 ■ Pin 5 (Sync/Com) of the sensor may only be connected for synchronisation.  
 ■ 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.

■ In the normal operating mode, an illuminated yellow LED signals that the corresponding switching output is set.  
 ■ In the »Two-way reflective barrier« operating mode, the object has to be within the range of 0 to 85 % of the set distance.  
 ■ If no push-buttons are pressed for 5 minutes during parameter setting mode the made changes are discarded and the sensor returns to normal operating mode.  
 ■ In the »Set switching point – method A« Teach-in procedure the actual distance to the object is taught to the sensor as the detect point. If the object moves towards the sensor (e.g. with level control) then the taught distance is the level at which the sensor has to switch the output (see Fig. 3).

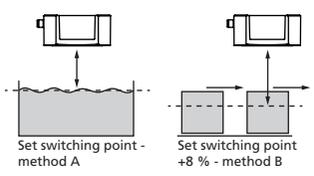


Fig. 3: Teach-in for different directions of movement of the object

