



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.

Operating Manual
Ultrasonic sensor
with one analogue output

lcs+340/IU
 lcs+600/IU

Note
 The housing was updated with Batch number
 ■ FA2303759 for lcs+340
 ■ FA2303783 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.

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

		colour
1	+U _B	brown
3	-U _B	blue
4	-	black
2	I/U	white
5	Sync/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
 ■ Filter at F02
 ■ Filter strength at P01

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.

	D	D ↔ D
lcs+340...	≥2.00 m	≥18.00 m
lcs+600...	≥4.00 m	≥30.00 m

Fig. 2: Assembly distances

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.

■ The load put to the analogue output is detected automatically when turning power supply on (the load must be connected to the analogue output before turning power supply on).

■ If an object is within the set window limits of the analogue output, then LED D1 lights up green, if the object is outside the window limits, then LED D1 lights up red.

■ 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.

■ The sensor can be reset to its factory setting (see Diagram 1).

■ Optionally all Teach-in and additional sensor parameter settings can be made using the LinkControl adapter (optional accessory) and the LinkControl software for Windows®.

Diagram 1: Set sensor parameters via Teach-in procedure



