



Operating manual

Ultrasonic proximity switch with one switched output and IO-Link interface

Ics+340/F/A
Ics+600/F/A

Product description

The Ics+ sensor offers a non-contact measurement of the distance to an object which must be positioned within the sensor's detection zone. The switched output is set conditional upon the adjusted detect distance.

Via the Teach-in procedure, the detect distance and operating mode can be adjusted. One LED indicates operation and the state of the switched output. The Ics+ sensors are IO-Link-capable in accordance with IO-Link specification V1.1 and support Smart Sensor Profile like Digital Measuring Sensor.

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

Ics+ 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.

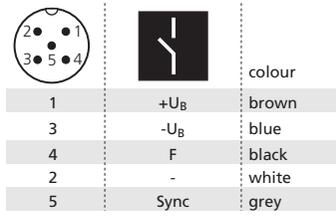


Fig. 1: Pin assignment with view onto sensor plug and colour coding of the microsonic connection cables

Factory setting

- Switched output on NOC.
- Detect distance at operating range.

Operating modes

Three operating modes are available for the switched output:

- Operation with one detect point
The switched output is set when the object falls below the set detect point.
- Window mode
The switched output is set when the object is within the set window.
- Two-way reflective barrier
The switched output is set when the object is between sensor and fixed reflector.

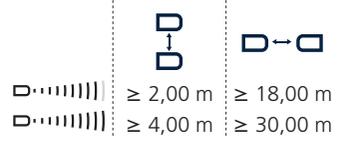


Fig. 2: Assembly distances

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 max. 10 sensors.

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 Ics+ family have a blind zone, within which a distance measurement is not possible.
- The Ics+ 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 switched output is switched through.
- The Ics+ sensors have a push-pull switched output.
- In the »Two-way reflective barrier« operating mode, the object has to be within the range of 0-85 % of the set distance.
- In the »Set detect 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.
- If the object to be scanned moves into the detection area from the side, the »Set detect point +8 % – method B« Teach-in procedure should be used. In this way the switching distance is set 8 % further than the actual measured distance to the object. This ensures a reliable switching distance even if the height of the objects varies slightly.

