

Application example

Sensor in plastic housing

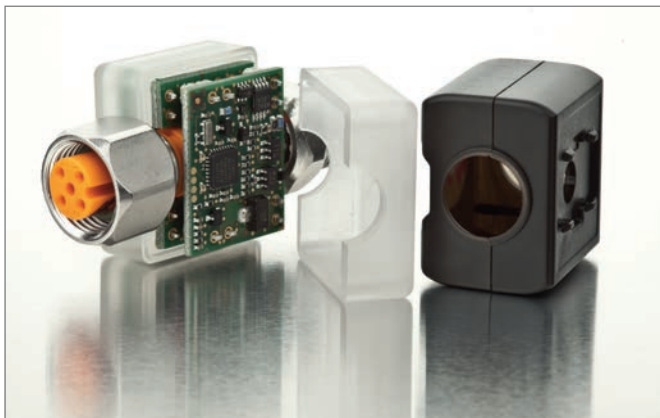
PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING



Task

A sensor with delicate electronics is to be installed in a two-part plastic housing. The joining process must not damage the electronic components on the PCB and the function of the sensor must not be impaired.

Solution

The application is carried out with a USP750 ultrasonic welding system or with components with a frequency of 35 kHz. The vibration load on the components is kept to a minimum thanks to an appropriate choice of material and joining seam design. The housing halves are made from ABS with an amorphous structure.

Configuration advantages

Amorphous plastics can be welded in both near-field and far-field processes with relatively low vibration amplitudes. The energy input can be minimised further with an appropriate joining seam design. In combination with the high vibration frequency of 35 kHz, the vibration load on the components remains low so that their functionality is not impaired. The TCS5 process controller offers high flexibility with regard to welding modes, configurable peripheral devices and comprehensive process and quality monitoring functions.



The application was produced on a USP750 35 kHz welding system and TCS5 controller, or with corresponding components integrated in a production system.