

Inductive proximity sensors

These sensors detect the presence of metal objects without contact. The electromagnetic field they generate is attenuated by the proximity of a metal target and this then triggers a change of state at the sensor output.

Principle

On the sensing face of the sensor, a ferrite core concentrates a high-frequency electromagnetic field generated by a coil by means of an LC oscillating circuit.

When a metal object enters this field currents are induced in it which draw energy from the oscillator and cause a reduction in the amplitude of the oscillations.

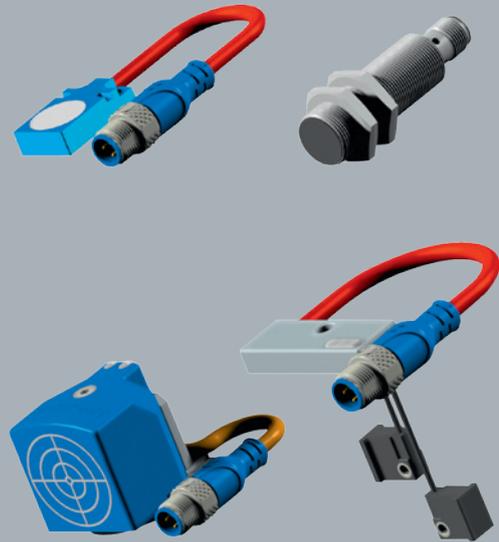
Consisting of a Schmitt trigger, a signal-shaping stage evaluates the amplitude of the signal delivered by the oscillator. Depending on the voltage attenuation measured, it triggers a change in the state of its output which controls the output stage of the sensor.

Overview of the SENSTRONIC RANGE

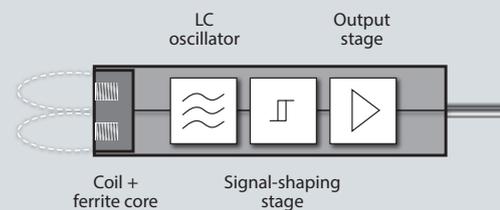
Body shape	
Cylindrical	from L04 to M30
Rectangular	from Q08 to Q80
Main features*	
Connection type	2-wire or 3-wire
Operating distances	standard or increased
Voltage type	DC or AC/DC
Allowable temperature	up to 120°C
Allowable pressure	up to 500 bar
Materials	stainless steel, teflon, nickel-plated brass, ceramic, specific plastic
Connection	cables, connectors

* depending on the application and environment

Some examples:



Schematic diagram:



Special products

SENSTRONIC is at your disposal to discuss special applications or development requests. Do not hesitate to contact our sales department.