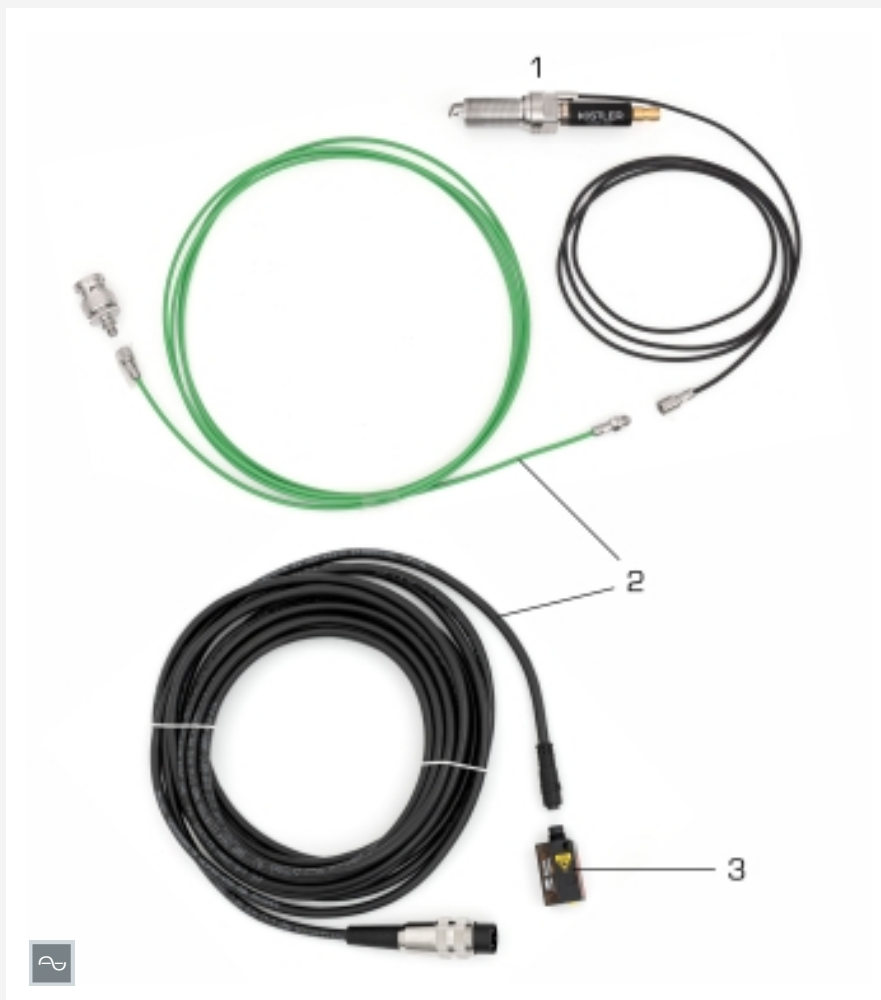


CT 400.16

Pressure transducer and TDC sensor for CT 400.01



1 spark plug with pressure transducer, 2 connecting cable, 3 optical reflex sensor as TDC sensor

Description

- micro pressure transducer with modified spark plug as carrier
- pressure measurement in the combustion chamber of an engine

For experiments using cylinder pressure indication on the CT 400.01 test engine, the normal spark plug is exchanged for a modified spark plug. This modified spark plug is fitted with a micro pressure transducer. The pressure transducer is directly exposed to the combustion chamber pressure when the spark plug is inserted.

The spark plug itself retains its full functionality. The core component of the pressure transducer is a heat resistant piezo-electric quartz crystal, which outputs a charge signal proportional to the pressure. The pressure transducer is connected to the measuring amplifier in the CT 400.09 electronic indication system.

The optical reflex sensor supplied serves as a TDC sensor.

Learning objectives/experiments

- cylinder pressure measurements on internal combustion engines

Specification

- [1] modified spark plug carrying the actual pressure transducer
- [2] quartz pressure transducer
- [3] optical reflex sensor serves as TDC sensor
- [4] only to be used with CT 400.09 and CT 400.01

Technical data

Pressure transducer

- measuring range: 0...200bar
- max. operating temperature: 350°C
- sensitivity: 15pC/bar
- max. tightening torque: 1,5Nm

Spark plug: max. tightening torque: 20Nm

TDC sensor, optical reflex sensor

- max. output power: 1mW
- wavelength: 630...680µm
- operating voltage: 10...30V
- scanning range: 3...150mm

LxWxH: 30x50x130mm (spark plug)

Weight: approx. 1kg

Scope of delivery

- 1 modified spark plug with pressure transducer
- 1 optical reflex sensor
- 2 socket wrench
- 3 connecting cable
- 1 set of tools
- 1 manual

CT 400.16

Pressure transducer and TDC sensor for CT 400.01

Required accessories

CT 400	Load unit, 75kW, for four-cylinder engines
CT 400.09	Electronic engine indicating system for CT 400
CT 400.01	Four-cylinder petrol engine for CT 400