

CT 159.05

Pressure transducer and TDC sensor for CT 153



The illustration shows a similar pressure transducer: 1 spark plug with pressure transducer, 2 socket wrench, 3 connecting cable

Description

- micro pressure transducer with modified spark plug as carrier
- pressure measurement in the combustion chamber of an engine
- an optical proximity switch serves as TDC sensor

For experiments using cylinder pressure indication on the CT 153 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 159.01 electronic indication system.

The optical proximity switch 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 proximity switch as a TDC sensor
- [4] only to be used with CT 159.01 and CT 153

Technical data

Pressure transducer

- measuring range: 0...100bar
- max. operating temperature: 200°C
- max. allowable pressure: 250bar

LxWxH: 30x50x130mm (spark plug)
Weight: approx. 1kg

Scope of delivery

- 1 modified spark plug with pressure transducer
- 1 optical proximity switch
- 1 socket wrench
- 1 open-end wrench
- 1 connecting cable
- 1 manual

CT 159.05

Pressure transducer and TDC sensor for CT 153

Required accessories

| | |
|-----------|---|
| CT 159 | Modular test stand for single-cylinder engines, 3kW |
| CT 153 | Two-stroke petrol engine for CT 159 |
| CT 159.01 | Electronic engine indicating system for CT 159 |