



**P4600 INDISYST -
4 CHANNEL
COMPREHENSIVE
ELECTRONIC ENGINE
INDICATING & COMBUSTION
ANALYSIS SYSTEM**

INTRODUCTION

Cussons P4600 Indisyst is a flexible and powerful measurement system for IC engine testing. With its compact design, the modular hardware and software and with, functionality-enhanced control and display software, the Indisyst is a versatile, high-speed data acquisition system suitable for everyday use, as well as an in-depth analysis tool on test beds and in vehicles.

The P4600 Indisyst's modular amplifier plug-in system and the user-friendly graphics interface allow quick installation in any application. The way data is collected, calculated in real-time and displayed on screen can be determined intuitively with no restriction on the range. All data can be stored at a click of the mouse.

Plug-in amplifier modules for the P4600 Indisyst are available for voltages, for 4 - 20mA current loop and for piezoelectric, piezo-resistive, inductive (Hall, Wolff, etc.), capacitive or strain gauge sensors. Special modules are also available for ignition timing, crank angle conversion from toothed wheel / disk or for rotational analysis.

AREAS OF USAGE

- Research and development of combustion engines
- Component testing (ignition or injection systems, shaft oscillation, valve timing, etc.)
- Engine monitoring (display/measurement of irregular combustion)
- Real-time knock detection and analysis

- Knock alarm for automated test bed operation
- Transient measurement of dynamic signals
- Multiple injection analysis (common rail)
- Recording of time-based signals

FEATURES

- **IndiCom** - the powerful software for data acquisition, calculation and presentation
- Modular hardware and software for easy installation
- 8 free slots for amplifier integration
- Various possibilities for data storage (I-File, ASCII, raw data, real-time data, etc.)
- Synchronous operation of knock detection and real-time calculation of IMEP, peak pressure, etc.
- IMEP or peak pressure monitoring
- Crank angle or time-based data acquisition
- Remote control from test bed via serial interface
- Designed for both SI and diesel engines

TECHNICAL FEATURES

- Can be operated as data acquisition system, oscilloscope or multi-channel digital voltmeter
 - Multiple windows for graphical, numerical or statistical display of measured and calculated data
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- Real-time calculation and on-line tabular display of various results per engine cycle
- Cycle by cycle selection or zoom-in of several cycles
- Collection of results values for several 1000 cycles
- Event monitoring and single event measurement
- Measurement table technique (variable resolution)

TECHNICAL DATA

Bench top/rack mount cabinet	3 HU / 19"
Indicating input channels	4 extendable to 8 (12 or 16)*
On -board data memory	8 (16)* MB
Channel resolution	12 Bit
Throughput rate	1 (2)* MHz
Angle and measurement resolution	0.1 °CA max.

(...)* values for extension with a second data acquisition card

PRODUCT LIST

SUITABLE FOR GASOLINE AND DIESEL ENGINES:

P4600 4 Channel Comprehensive Electronic Engine Indicating & Combustion Analysis System comprising:

- P4611 Latest spec PC (desk mounted or laptop)
- P4612 Multi Channel rack and power supply
- P4613 Piezo cylinder pressure transducer
- P4614 Piezo amplifier
- P4615 Ignition time module
- P4616 Ignition pick-up
- P4617 Pulse-magnetic pick-up (2 off)
- P4618 Crank angle calculator
- P4619 Fast link interface card
- P4620 Spark plug adaptor
- P4621 Glow plug adaptor

- P4622 Standard injector, needle lift transducer
- P4623 Needle lift amplifier
- P4624 Strain gauge fuel pressure transducer

SUITABLE FOR GASOLINE ENGINES ONLY:

P4605 4 Channel Basic Electronic Engine Indicating & Combustion Analysis System comprising:

- P4611 Latest spec PC (desk mounted or laptop)
- P4612 Multi Channel rack and power supply
- P4613 Piezo cylinder pressure transducer
- P4614 Piezo amplifier
- P4615 Ignition time module
- P4616 Ignition pick-up
- P4617 Pulse-magnetic pick-up (2 off)
- P4618 Crank angle calculator
- P4619 Fast link interface card
- P4620 Spark plug adaptor

SUITABLE FOR DIESEL ENGINES ONLY:

P4610 4 Channel Basic Electronic Engine Indicating & Combustion Analysis System comprising:

- P4611 Latest spec PC (desk mounted or laptop)
- P4612 Multi Channel rack and power supply
- P4613 Piezo cylinder pressure transducer
- P4614 Piezo amplifier
- P4617 Pulse-magnetic pick-up (2 off)
- P4618 Crank angle calculator
- P4619 Fast link interface card
- P4621 Glow plug adaptor
- P4622 Standard injector, needle lift transducer
- P4623 Needle lift amplifier
- P4624 Strain gauge fuel pressure transducer

OPTIONS

- P8809 Kistler Pressure Transducer for Hydra engine applications only

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