

MIC3+

MOTORTECH IGNITION CONTROLLER

MIC3+ Ignition Controller

Efficiency-enhanced engines, stricter emission regulations, highly compressed mixtures, as well as the use of a great variety of gas types are putting even greater demands on the entire ignition system. Based on its already known MIC3 series, MOTORTECH provides a new enhanced version to customers to also fulfill these greater demands in the future.

With 300 mJ primary energy, the new MIC3+ series provides a reliable combustion on engines up to 12 cylinders even with weakest or fluctuating caloric values of the gas. Next to high variable ignition energy (MOST*) an accurate spark timing and diversified online diagnostics help to improve engine efficiency, spark plug life and availability of the equipment under the strictest emission regulations.



- Adjustable spark duration and intensity
- Constant spark intensity via adjusted duration
- 300 mJ primary energy (500 mJ boost for start phase)
- Ignition diagnostics (primary and secondary)
- Fault memory with trend data
- Integrated CANopen and Modbus RTU interface
- Easy access per USB port
- Simple upgrade of existing plants through full compatibility with MIC3 series

Technical Data & Features

- 10 to 32 VDC supply voltage
- 6 / 12 ignition outputs
- 250 VDC primary voltage
- 300 mJ primary energy (500 mJ boost)
- 0.1° crankshaft accuracy
- Triggered by 1 or 2 pickups (magnetic, Hall effect or inductive / configurable)
- Multiple timing control via
 - o Speed curve
 - o 0-20 mA analog input
 - o 0-10 V analog input
- Multiple energy control via MOST (MOTORTECH Output Stage Technology)
- Programmable firing order
- 1 multipurpose output (GPO)

- 1 Auxiliary Synchronization Output (ASO) which can support a detonation control system (e.g. DetCon) or fuel injection pump controllers
- Ignition release input
- Go/NoGo output
- Overspeed shutdown function
- Access controlled

Ignition Diagnostic

- Run time data
- Alarm and error messages
- Data logging
- Primary and secondary misfire detection
- Cylinder individual high voltage calculation (kV)
- 5 LEDs provide a quick system state overview

Interfaces

- CAN Bus 2.0b interface (CANopen/SAE J1939-protocol)
- RS485 interface (Modbus RTU)
- USB 2.0 interface

Configuration

- Using the graphic user interface MICT (MOTORTECH Integrated Configuration Tool)

MOST

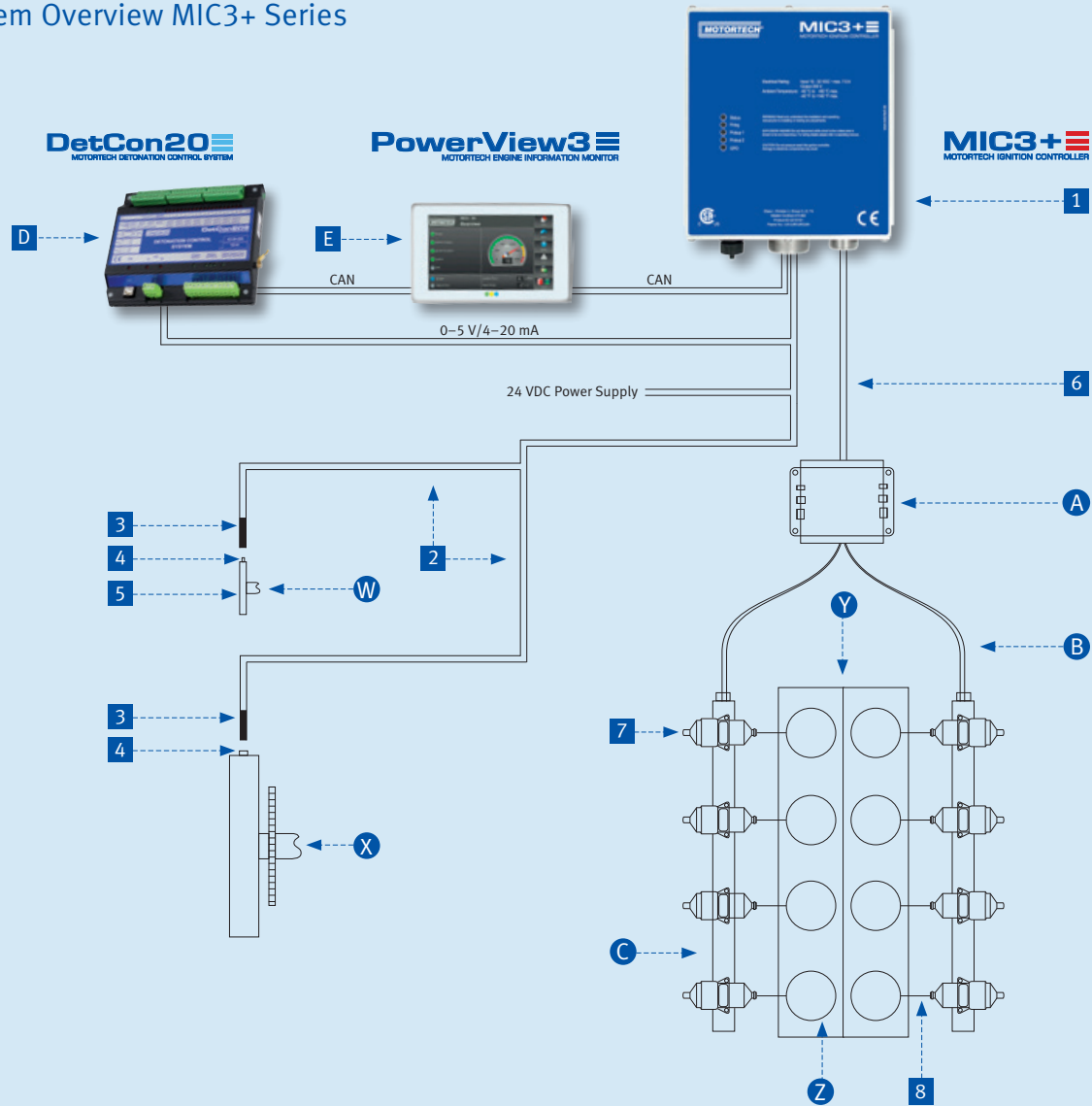
MOTORTECH OUTPUT STAGE TECHNOLOGY

MOST* works with the following principles:

- adjustable ignition spark duration with different available ignition voltages
- constant spark intensity via adjusted ignition spark duration

*Patent No.: US 8,893,692 B5

System Overview MIC3+ Series



Necessary Components

- 1 MIC3+ ignition controller
- 2 Pickup lead*
- 3 Pickup*
- 4 Trigger pins/magnets

alternative

- 5 Trigger disc

alternative

Trigger drive

- 6 Output harness*
- 7 Ignition coil*

- 8 1 primary lead/spark plug lead per ignition coil*

Accessories

- A Junction box
- B Harness to connect the ignition wiring rails and the junction box
- C AlphaRail*/LiteRail ignition wiring rail

System Enhancement

- D DetCon20 – Detonation controller
- E PowerView3 – HMI module

Description

- W Camshaft
- X Crankshaft
- Y Engine
- Z Cylinder

* Shielded and unshielded versions available.