

# MIC100

MOTORTECH Ignition Controller



# MOTORTECH MIC100

The MIC100 is a microprocessor controlled ignition controller based on the capacitor discharge principle and was developed as a cost-effective solution specifically for use on small natural gas powered engines with up to 8 cylinders.

The MIC100 uses supplied input signals from a magnetic or inductive pickup to accurately determine the correct ignition timing of each output. The ignition timing can be influenced by different inputs, which can be realized with an analog input signal, a configurable speed curve or optionally with a serial connection (CAN bus).

Based on the information received, the MIC100 continuously monitors the system status of the pickup and the correct operation of the primary ignition circuit during operation. Depending on the errors detected, the controller will shut down or warn the operator. The status LED or the graphical user interface MICT support the operator in the rapid diagnosis of errors.

# MIC100

MOTORTECH IGNITION CONTROLLER



## General Features

- Max. 8 ignition outputs (controller versions available with 4, 6 or 8 outputs)
- 130 mJ max. primary energy
- 250 V DC max. primary voltage
- Triggered by 1 pickup (magnetic or inductive)
- Engine mountable

## Typical Engine Applications

- 1 to max. 8 cylinders
- Stoichiometric operation
- Operation with natural gas
- Power up to approx. 75 kW

# MOTORTECH Integrated Configuration Tool

The MICT is the graphical user interface for all controllers of the MIC100, MIC3+, MIC4, MIC5 and MIC6 series. With a laptop all configurations can be done and runtime data of the engine can be checked and adjusted.

- Language selectable (German/English/Chinese/Russian)
- Microsoft® Windows 7 and Windows 10 compatible
- Included data base offers engine information such as firing order, firing sequence, number of ignition coils per cylinder and typical number of teeth on flywheel for easy engine configuration
- Print function of a given moment in the operation can be used for external problem analysis, etc.
- Context sensitive online help
- Different access levels to avoid accidental misconfigurations

# MICT

MOTORTECH INTEGRATED CONFIGURATION TOOL



## Characteristics

### General

- For 2- and 4-stroke engines
- Multi-pulse capacitor discharge ignition
- Technical restriction to 6,000 rpm
- Max. trigger impulses 8+1 or 240-1

### Technical Data & Features

- Max. 8 ignition outputs
- 24 V DC nominal supply voltage
- 250 V DC max. primary voltage
- 130 mJ max. primary energy
- Ignition timing to 0.1° crankshaft
- Triggered by 1 magnetic or inductive pickup
- Multiple ignition timing control via
  - Speed curve
  - 0 to 20 mA analog input
  - CAN bus (optional)
- Programmable firing order
- Overspeed shutdown function
- Access controlled
- Adjustable energy limits during operation
- Programmable speed curve with max. 8 speed points (speed/ignition timing)
- System status display
- Protection class IP69K

### Ignition Diagnostics

- Runtime data
- Error detection via indication by status LED
- Primary misfire detection

### Interfaces

- CAN bus 2.0b interface – CANopen®/SAE J1939 protocol (device dependend)
- USB 1.1 interface

### Inputs

- Binary ignition release (start/stop)

### Outputs

- 1 Auxiliary Synchronization Output (ASO) which can support the DetCon detonation control system
- Go/NoGo output

### Configuration

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

### Certifications

- CE
- CSA – on request

### Scope of Supply

- Ground strap
- Fastening material

### Optional Controller Accessories

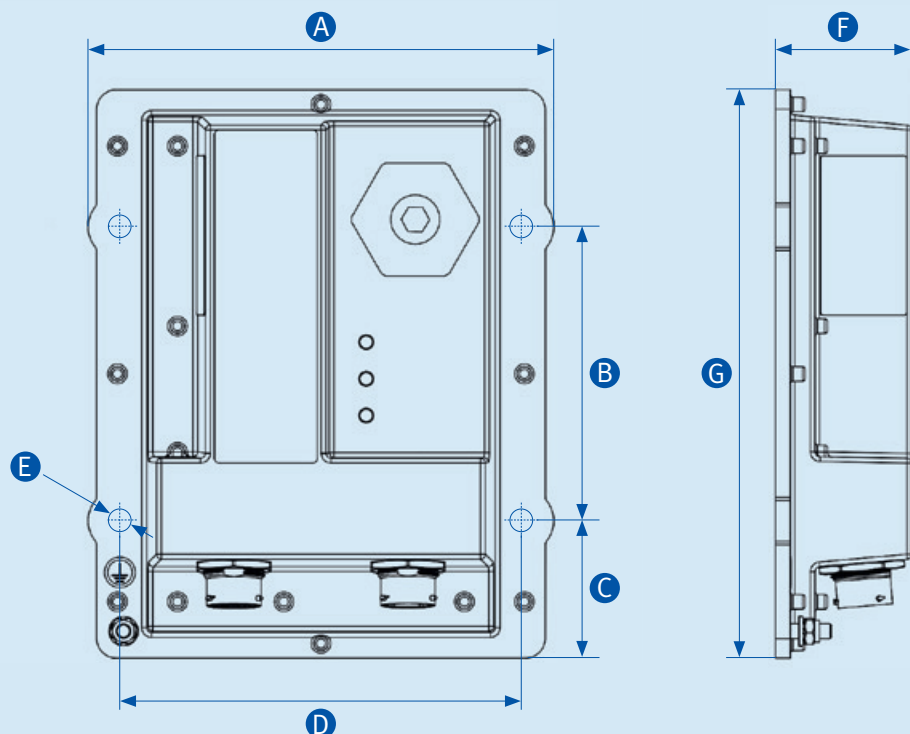
- MOTORTECH USB adaptor cable type 1
- Configuration software MICT (MOTORTECH Integrated Configuration Tool)
- Operating manual
- Vibration dampers (for use consult factory)

### Available System Accessories

- Input harnesses
- Pickups
- Prewired output harnesses for different engine versions
- Ignition coils
- Spark plugs leads

## Dimensions

- A 190 mm (7.5 in)
- B 120 mm (4.7 in)
- C 56 mm (2.2 in)
- D 164 mm (6.5 in)
- E Ø 9 mm (0.4 in)
- F 56 mm (2.2 in)
- G 232 mm (9.1 in)



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## GAS ENGINE TECHNOLOGY

Ignition Systems	Red
Spark Plugs & Accessories	Orange
Gas Engine Control Systems	Light Blue
Sensor Systems	Yellow
Air/Fuel Ration Control Systems	Green
Exhaust Gas Aftertreatment	Green
Gas Engine Accessories	Grey

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