

PowerView3 – HMI Module

Visualization of Ignition and Detonation Control



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MOTORTECH ENGINE INFORMATION MONITOR

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PowerView3 is a compact and flexible HMI module (Human-Machine-Interface) for visualization and operation of MOTORTECH's new generation control units. On more than 25 screens the 7" color display supports the full visualization of the most important operating data of ignition and detonation control as well as the adjustment of various parameters. Error diagnostics can be executed easily on-site without requiring a laptop.

The touchscreen guarantees an intuitive navigation through different display pages and menus. The relevant operating data can be easily recorded and stored via USB mass storage device or SD card. The visualization functions have to be activated for every single device. Additional activations or firmware updates are possible at any time.



General Features

- Visualization of ignition control, detonation control and temperature monitoring (available soon) via CAN bus
- Access control
- Display of CAN connection status
- Several display configurations (language, date, display calibration, etc.)
- For assembly in control panels
- Day and night mode
- CSA® certified

Detonation Control (DetCon2 / DetCon20)

Overview with status indication for

- Analog output signal
- Knocking intensity
- State of reduction

Fault message for

- Low speed
- Synchronizing pulse
- Defective knock sensor

Display of trend data

- Knocking intensity
- Output signal

Display of knocking intensity

Ignition Control (MIC4 / MIC5 series)

Overview with status indication for

- Pickup signals
- Active schedule
- Analog display of engine speed
- Ignition timing
- Spark plugs (operating hours)

Display of global ignition timing dependent on

- Base ignition timing
- Potentiometer adjustment
- Analog current and voltage input
- Speed curve

Displays the ignition of each cylinder

- Ignition voltage
- Misfires

Display of misfires

- Primary and secondary sided wiring errors
- Type of error (no connection / short circuit)

Display and adjustment of energy

- Spark duration
- Spark intensity

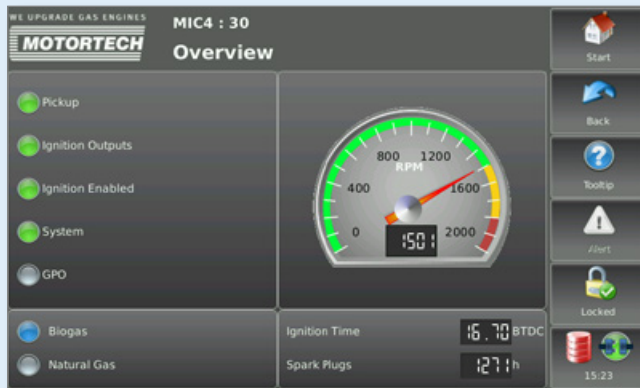
Display and adjustment of firing angles and ignition energy

Self-test activation

Warning, alarm and error messages

Sample Screens – Visualization MIC4 / MIC5

MIC Overview



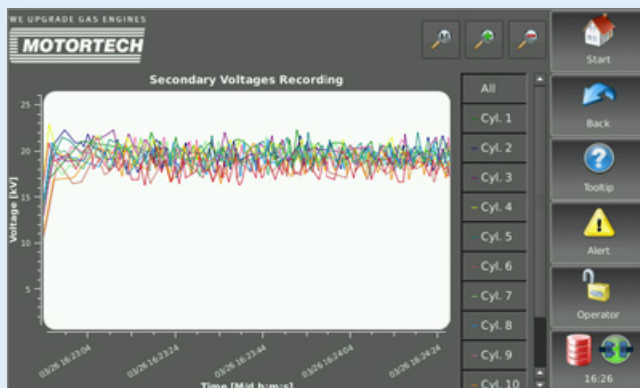
- Status displays (pickup, ignition outputs, ignition enabled, system status, schedule)
- Displays the current engine speed
- Shows the current global ignition timing in ° crankshaft
- Displays the previous operating hours of the spark plugs

Ignition



- Displays the estimated ignition voltage for each individual cylinder
- Display of current and past misfires of each individual cylinder

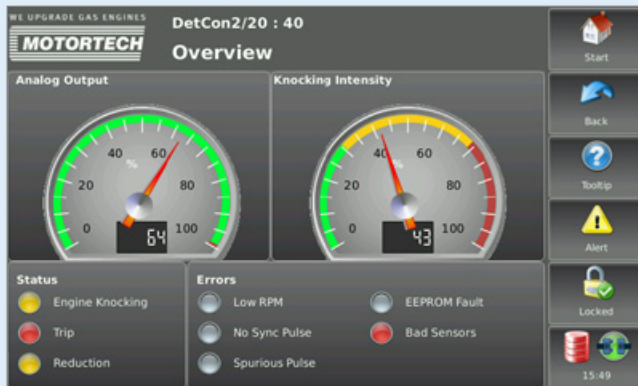
Secondary Voltage



- Display of estimated secondary voltage of all selected cylinders
- Cylinders can be displayed and hidden individually
- Zoom function for detailed view of secondary voltage
- Navigation within the timeline

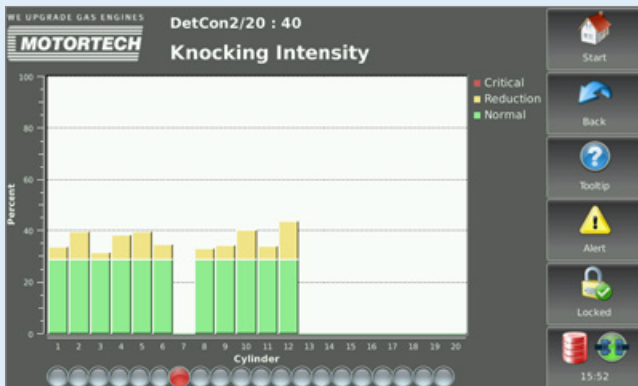
Sample Screens – Visualization DetCon2 / DetCon20

DetCon Overview



- Status displays (engine knocking, active load reduction, emergency shutdown, signal errors)
- Displays the analog output signal strength
- Displays the knocking intensity in percent
- Display of sensor errors

Knocking Intensity



- Display of knocking intensity for each cylinder
 - Green: The detonation control does not register any excessive knocking intensity
 - Yellow: Detonation control reduces knocking
 - Red: Critical engine state
- Additional status display for sensor errors at the cylinder

Trend Knocking Intensity



- Shows the knocking intensity progress of all selected cylinders
- Cylinders can be displayed and hidden individually
- Zoom function for detailed view of knocking intensity
- Navigation within the timeline

Technical Data

Memory

- Memory SD card slot
- USB 2.0 port

Communication Interfaces

- Network: 100 Mbit/s Ethernet (POE)
- CAN fieldbus: 1x CAN (ISO / DIS 119898)

Touchscreen

- Colors: 16 bit (65.536 colors)
- Touch technology: resistive
- Surface properties: 3H / anti-glare
- Display size: 7.0 in. / 178.0 mm
- Resolution: WVGA (800 x 480 pixels)

Housing

- Metal parts: 1.4016 high quality steel, 0.03 in. / 0.75 mm
- Protection rating: IP64 (front side)

Device Dimensions

- Width: 7.95 in. / 202.0 mm
- Height: 4.97 in. / 126.2 mm
- Depth: 1.16 in. / 29.5 mm
- Weight: 22 oz / 670 g

Power Supply

- Power supply: Nom. 24 VDC \pm 15%, max. 10 – 30 VDC
- Power consumption: Typ. 4.5 W

Typical Environmental Conditions

- Storage temperature: -4° F to 158° F / -20° C to +70° C
- Operation temperature: -32° F to 140° F / 0° C to +60° C
- Relative humidity: max. 95 % (without condensation)

Part Numbers / How to Order for new Installations

P/N	Description
06.05.085	PowerView3 – HMI module
06.05.086-F	PowerView3 activation code for visualization of MIC4 / MIC5 data. Code has to be ordered separately with each PowerView3 HMI module. Factory activation will be done with delivery.
06.05.087-F	PowerView3 activation code for visualization of DetCon2 / DetCon20 data. Code has to be ordered separately with each PowerView3 HMI module. Factory activation will be done with delivery.

Part Numbers / How to Order for Upgrades of installed PowerView3 HMI Modules

P/N	Description
06.05.086-U	PowerView3 activation code for visualization of MIC4 / MIC5 data. Only available for upgrade of an installed PowerView3 HMI module in the field. Activation will be done on-site.
06.05.087-U	PowerView3 activation code for visualization of DetCon2 / DetCon20 data. Only available for upgrade of an installed PowerView3 HMI module in the field. Activation will be done on-site.

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